1.1.1 The Institution ensures effective curriculum delivery through a well-planned and documented process.

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1.1.1 The Institution ensures effective curriculum delivery through a well-planned and documented process.

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Step I- Receipt of programme wise curriculum & Academic Calendar for the session from university

University Academic Calendar for First Year

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA

(University of Technology of Madhya Pradesh)

ACADEMIC CALENDAR FOR THE YEAR 2023 – 2024

FOR ALL DEGREE PROGRAMMES AND POST GRADUATE PROGRAMMES
(EXCEPT PHARMACY)

(Revised)

S.No.	Particular	Ist Semester Schedule	IInd & IVth Semester Schedule
01.	Duration of Semester	July – December 2023	January – June 2024
02.	Commencement of Classes	04th September 2023	26th February 2024
03.	Student Induction Program (SIP) 21 Days Undergraduate	04th September 2023	----
04.	I Sessional Exam/Mid/Sem.	16th – 21st October 2023	01st - 06th April 2024
05.	Dussehra Holiday	22nd - 25th Oct. 2023	----
07.	Diwali Vacation	11th – 15th Nov. 2023	----
05.	II Sessional Exam/Mid/Sem.	28th Nov. – 04th Dec. 2023	08th - 16th May 2024
06.	Submission of Examination Form i. Without late fee ii. With Late Fee	01st – 16th December. 2023 18th – 23rd December 2023	20th - 30th June 2024 01st - 08th July 2024
07.	Last date of Teaching	16th December 2023	27th June 2024
08.	Submission of internal marks to University	Upto 23rd December 2023	Upto 06th July 2024
09.	End Semester Examination (Theory & Practical)	26th Dec. 2023 – 25th Jan. 2024	09th – 31st July 2024
10.	Internship/End Sem. Break	--	--
11.	Date of Result Declaration	End of February 2024	End of August 2024

Note:

- During Mid Semester Examination, classes in the remaining periods will be conducted as per schedule.
- Depending upon monthly progress of syllabus extra classes would be organized by department during official holidays.
- III Mid Semester examination is optional. Students intending to appear in the III Mid Semester exam will contact their respective HODs for the examination.
- In case of late admission of lateral admission students, the institutions are advised to conduct extra classes to complete the syllabus within stipulated time.
- Winter vacation applicable for students only.

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14/07/2023

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA

(University of Technology of Madhya Pradesh)

ACADEMIC CALENDAR FOR THE YEAR 2023 – 2024 [REVISED]

FOR ALL DEGREE PROGRAMMES AND POST GRADUATE PROGRAMMES

S. No.	Particular	III & V Semester Schedule	II Semester (Except B.Pharm & M.Pharm) & IV Semester Schedule
01.	Duration of Semester	July – December 2023	January - June 2024
02.	Commencement of Classes	01st August 2023	19th February 2024
03.	I Sessional Exam/Mid/Sem.	15th – 22nd Sep. 2023	01st – 06th April 2024
04.	II Sessional Exam/Mid/Sem.	26th Oct. – 01st Nov. 2023	01st – 07th May 2024
05.	Dussehra Holiday	22nd - 25th Oct. 2023	-----
06.	Submission of Examination Form i. Without late fee ii. With Late Fee	 01st – 17th Nov. 2023 18th – 27th Nov. 2023	 06th – 23rd May 2024 24th – 29th May 2024
07.	Diwali Vacation	11th – 15th Nov. 2023	-----
08.	Last date of Teaching	18th November 2023	30th May 2024
09.	Submission of Mid Semester & Sessional Marks to University	16th – 26th Nov. 2023	22nd - 31st May 2024
10.	End Semester Examination (Theory & Practical)	28th Nov. - 27th Dec. 2023	03rd June – 05th July 2024
11.	Submission of Practical marks to University	On the date of Practical Examination	On the date of Practical Examination
12.	End Semester Break / Internship	----	06th - 20th July 2024
13.	Winter* Vacation for teachers	23rd – 31st December 2023	06th - 20th July 2024
14.	Declaration of Result	In the Month of January 2024	In the Month of August 2024

Note:

- During Mid Semester Examination, classes in the remaining periods will be conducted as per schedule.
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- Winter vacation applicable for students only.

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University Academic Calendar

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA

(University of Technology of Madhya Pradesh)

ACADEMIC CALENDAR FOR THE YEAR 2023 – 2024

FOR DEGREE PROGRAMMES AND POST GRADUATE PROGRAMMES

S.No.	Particular	VII & IX Semester Schedule	VI, VIII & X Semester Schedule
01.	Duration of Semester	July – December 2023	January-June 2024
02.	Commencement of Classes	03rd July 2023	05th January 2024
03.	I Sessional Exan/Mid/Sem.	21st to 26th August 2023	12th – 17th February 2024
04.	II Sessional Exam/Mid/Sem.	16th to 21st October 2023	18th to 23rd March 2024
05.	Dussehra Holiday	22nd to 25th October 2023	-----
06.	Submission of Examination Form i. Without late fee ii. With Late Fee	 25th Oct. – 13th Nov. 2023 13th – 19th November 2023	 01st – 19th April 2024 20th – 26th April 2024
07.	Diwali Vacation	11th – 15th November 2023	-----
08.	Last date of Teaching	10th November 2023	19th April 2024
09.	Submission of Mid Semester & Sessional Marks to University	13th to 20th November 2023	20th – 27th April 2024
10.	End Semester Examination (Theory & Practical)	20th Nov. – 22nd Dec. 2023	30th April – 31st May 2024
11.	Submission of Practical marks to University	On the date of Practical Examination	On the date of Practical Examination
12.	End Semester Break / Internship	----	01st – 30th June 2024
13.	Winter*/Summer Vacation for Teachers	23rd to 31st December 2023	01st – 30th June 2024
14.	Declaration of result of final Year	In the Month of January 2024	In the Month of June 2024

Note:

- During Mid Semester Examination, classes in the remaining periods will be conducted as per schedule.
- Depending upon monthly progress of syllabus extra classes would be organized by department during official holidays.
- III Mid Semester examination is optional. Students intending to appear in the III Mid Semester exam will contact their respective HODs for the examination.
- Winter vacation applicable for students only.

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University provided programme wise curriculum

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

VI Semester **Bachelor of Technology (B.Tech.) Computer Science and Engineering/ Computer Engineering/Computer Science & Technology]** *(w.e.f. Jan. 2020)*

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted: Theory: End Sem.	Theory: Mid Sem. Exam.	Theory: Quiz/ Assignment	Practical: End Sem	Practical: Term work / Lab Work & Sessional	Total Marks	Contact Hours per week: L	T	P	Total Credits
1.	CS601	DC	Machine Learning	70	20	10	30	20	150	2	1	2	4
2.	CS602	DC	Computer Networks	70	20	10	30	20	150	2	1	2	4
3.	CS603	DE	Departmental Elective	70	20	10	-	-	100	4	-	0	4
4.	CS604	OE	Open Elective	70	20	10	-	-	100	4	-	0	4
5.	CS605	D Lab	Data Analytics Lab	-	-	-	30	20	50	-	-	6	3
6.	CS606	O/E Lab	Skill Development Lab	-	-	-	30	20	50	-	-	6	3
7.	CS607	IN	Internship-III	To be completed anytime during Fifth/Sixth semester. Its evaluation/credit to be added in Seventh Semester.									
8.	CS608	P	Minor Project II	-	-	-	-	50	50	-	-	4	2
9.	Additional Credits*	*Additional credits can be earned through successful completion of credit based MOOC's Courses available on SWAYAM platform (MHRD) at respective UG level.											
			Total	280	80	40	120	130	650	12	2	20	24

Departmental Electives	Open Electives
603 (A) Advanced Computer Architecture	604(A) Knowledge Management
603 (B) Computer Graphics & Visualization	604(B) Project Management
603 (C) Compiler Design	604 (C) Rural Technology & Community Development

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

III Semester **Bachelor of Technology (B.Tech.) [Computer Science and Engineering/ Computer Engineering/Computer Science/Computer Science & Technology]**

For batches admitted in July, 2020 (w.e.f. July, 2021)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted: Theory: End Sem.	Theory: Mid Sem. Exam.	Theory: Quiz/ Assignment	Practical: End Sem	Practical: Term work / Lab Work & Sessional	Total Marks	Contact Hours per week: L	T	P	Total Credits
1.	ES301	HSMC-3	Energy & Environmental Engineering	70	20	10	-	-	100	3	1	-	4
2.	CS302	DC-1	Discrete Structure	70	20	10	-	-	100	3	1	-	4
3.	CS303	DC-2	Data Structure	70	20	10	30	20	150	3	-	2	4
4.	CS304	DC-3	Digital Systems	70	20	10	30	20	150	3	-	2	4
5.	CS305	DC-4	Object Oriented Programming & Methodology	70	20	10	30	20	150	3	-	2	4
6.	CS306	DLC-3	Computer Workshop	-	-	-	30	20	50	-	-	4	2
7.	BT107	DLC-1	Evaluation of Internship-I completed at I year level	-	-	-	-	50	50			4	2
8.	BT307	DLC-4	90 hrs Internship based on using various softwares –Internship -II	To be completed anytime during Third/ fourth semester. Its evaluation/credit to be added in fifth semester.									
			Total	350	100	50	120	130	750	15	2	14	24
9.	BT308	MC	Indian Constitution	Non-credit course									
			NSS/NCC										

*Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

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Branch- Common to All Discipline

ES301	**Energy & Environmental Engineering**	**3L-1T-0P**	**4 Credits**

The objective of this Course is to provide *an introduction to energy systems and renewable energy resources, with a scientific examination of the energy field and an emphasis on alternative energy sources and their technology and application.*

Module 1: Introduction to Energy Science:

Introduction to energy systems and resources; Introduction to Energy, sustainability & the environment; Overview of energy systems, sources, transformations, efficiency, and storage; Fossil fuels (coal, oil, oil-bearing shale and sands, coal gasification) - past, present & future, Remedies & alternatives for fossil fuels - biomass, wind, solar, nuclear, wave, tidal and hydrogen; Sustainability and environmental trade-offs of different energy systems; possibilities for energy storage or regeneration (Ex. Pumped storage hydro power projects, superconductor-based energy storages, high efficiency batteries)

***Module2*: Ecosystems**

- Concept of an ecosystem; Structure and function of an ecosystem; Producers, consumers and decomposers; Energy flow in the ecosystem; Ecological succession; Food chains, food webs and ecological pyramids; Introduction, types, characteristic features, structure and function of the following ecosystem (a.)Forest ecosystem (b) Grassland ecosystem (c) Desert ecosystem (d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

***Module 3*: Biodiversity and its conservation**

- Introduction – Definition: genetic, species and ecosystem diversity; Bio-geographical classification of India; Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values; Biodiversity at global, National and local levels; India as a mega-diversity nation; Hot-sports of biodiversity; Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts; Endangered and endemic species of India; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

***Module 4:* Environmental Pollution**

- Definition, Cause, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards; Solid waste Management: Causes, effects and control measures of urban and industrial wastes; Role of an individual in prevention of pollution; Pollution case studies; Disaster management: floods, earthquake, cyclone and landslides.

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Module 5: **Social Issues and the Environment**

- From Unsustainable to Sustainable development; Urban problems related to energy; Water conservation, rain water harvesting, watershed management; Resettlement and rehabilitation of people; its problems and concerns. Case Studies
  Environmental ethics: Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies Wasteland reclamation; Consumerism and waste products; Environment Protection Act; Air (Prevention and Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act; Issues involved in enforcement of environmental legislation; Public awareness.

Module 6: Field work

- Visit to a local area to document environmental assets-river/forest/grassland/hill/mountain
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc.

REFERENCE

1. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc.
2. Clark R.S., Marine Pollution, Clanderson Press Oxford (TB).
3. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumabai,
4. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
5. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards', Vol I and II, Enviro Media (R)
6. Boyle, Godfrey, Bob Everett, and Janet Ramage (Eds.) (2004), Energy Systems and Sustainability: Power for a Sustainable Future. Oxford University Press.
7. Schaeffer, John (2007), Real Goods Solar Living Sourcebook: The Complete Guide to Renewable Energy Technologies and Sustainable Living, Gaiam

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, III-Semester

CS302 Discrete Structure

Objective-This course introduces the applications of discrete mathematics in the field of computer science. It covers sets, logic, proving techniques, combinatorics, functions, relations, Graph theory and algebraic structures. These basic concepts of sets, logic functions and graph theory are applied to Boolean Algebra and logic networks while the advanced concepts of functions and algebraic structures are applied to finite state machines and coding theory.

Course Contents

Set Theory, Relation, Function, Theorem Proving Techniques : Set Theory: Definition of sets, countable and uncountable sets, Venn Diagrams, proofs of some general identities on sets Relation: Definition, types of relation, composition of relations, Pictorial representation of relation, Equivalence relation, Partial ordering relation, Job-Scheduling problem Function: Definition, type of functions, one to one, into and onto function, inverse function, composition of functions, recursively defined functions, pigeonhole principle. Theorem proving Techniques: Mathematical induction, Proof by contradiction.

Algebraic Structures: Definition, Properties, types: Semi Groups, Monoid, Groups, Abelian group,
properties of groups, Subgroup, cyclic groups, Cosets, factor group, Permutation groups, Normal
subgroup, Homomorphism and isomorphism of Groups, example and standard results, Rings and Fields: definition and standard results.

Propositional Logic: Proposition, First order logic, Basic logical operation, truth tables, tautologies, Contradictions, Algebra of Proposition, logical implications, logical equivalence, predicates, Normal Forms, Universal and existential quantifiers. Introduction to finite state machine Finite state machines as models of physical system equivalence machines, Finite state machines as language recognizers

Graph Theory: Introduction and basic terminology of graphs, Planer graphs, Multigraphs and weighted
graphs, Isomorphic graphs, Paths, Cycles and connectivity, Shortest path in weighted graph, Introduction to Eulerian paths and circuits, Hamiltonian paths and circuits, Graph coloring, chromatic
number, Isomorphism and Homomorphism of graphs.

Posets, Hasse Diagram and Lattices: Introduction, ordered set, Hasse diagram of partially, ordered set,

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, III-Semester

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Objective-This course introduces the applications of discrete mathematics in the field of computer science. It covers sets, logic, proving techniques, combinatorics, functions, relations, Graph theory and algebraic structures. These basic concepts of sets, logic functions and graph theory are applied to Boolean Algebra and logic networks while the advanced concepts of functions and algebraic structures are applied to finite state machines and coding theory.

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Algebraic Structures: Definition, Properties, types: Semi Groups, Monoid, Groups, Abelian group,
properties of groups, Subgroup, cyclic groups, Cosets, factor group, Permutation groups, Normal
subgroup, Homomorphism and isomorphism of Groups, example and standard results, Rings and Fields: definition and standard results.

Propositional Logic: Proposition, First order logic, Basic logical operation, truth tables, tautologies, Contradictions, Algebra of Proposition, logical implications, logical equivalence, predicates, Normal Forms, Universal and existential quantifiers. Introduction to finite state machine Finite state machines as models of physical system equivalence machines, Finite state machines as language recognizers

Graph Theory: Introduction and basic terminology of graphs, Planer graphs, Multigraphs and weighted
graphs, Isomorphic graphs, Paths, Cycles and connectivity, Shortest path in weighted graph, Introduction to Eulerian paths and circuits, Hamiltonian paths and circuits, Graph coloring, chromatic
number, Isomorphism and Homomorphism of graphs.

Posets, Hasse Diagram and Lattices: Introduction, ordered set, Hasse diagram of partially, ordered set,

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, III-Semester

CS303 Data Structure

1. Review of C programming language.Introduction to Data Structure: Concepts of Data and Information, Classification of Data structures, Abstract Data Types, Implementation aspects: Memory representation. Data structures operations and its cost estimation. Introduction to linear data structures- Arrays, Linked List: Representation of linked list in memory, different implementation of linked list. Circular linked list, doubly linked list, etc. Application of linked list: polynomial manipulation using linked list, etc.
2. Stacks: Stacks as ADT, Different implementation of stack, multiple stacks. Application of Stack: Conversion of infix to postfix notation using stack, evaluation of postfix expression, Recursion. Queues: Queues as ADT, Different implementation of queue, Circular queue, Concept of Dqueue and Priority Queue, Queue simulation, Application of queues.
3. Tree: Definitions - Height, depth, order, degree etc. Binary Search Tree - Operations, Traversal, Search. AVL Tree, Heap, Applications and comparison of various types of tree; Introduction to forest, multi-way Tree, B tree, B+ tree, B* tree and red-black tree.
4. Graphs: Introduction, Classification of graph: Directed and Undirected graphs, etc, Representation, Graph Traversal: Depth First Search (DFS), Breadth First Search (BFS), Graph algorithm: Minimum Spanning Tree (MST)- Kruskal, Prim's algorithms. Dijkstra's shortest path algorithm; Comparison between different graph algorithms. Application of graphs.
5. Sorting: Introduction, Sort methods like: Bubble Sort, Quick sort. Selection sort, Heap sort, Insertion sort, Shell sort, Merge sort and Radix sort; comparison of various sorting techniques. Searching: Basic Search Techniques: Sequential search, Binary search, Comparison of search methods. Hashing & Indexing. Case Study: Application of various data structures in operating system, DBMS etc.

Text Books

1. AM Tanenbaum, Y Langsam& MJ Augustein, "Data structure using C and C++", Prentice Hall India.
2. Robert Kruse, Bruse Leung, "Data structures & Program Design in C", Pearson Education.

Reference Books

1. Aho, Hopcroft, Ullman, "Data Structures and Algorithms", Pearson Education.
2. N. Wirth, "Algorithms + Data Structure = Programs", Prentice Hall.
3. Jean – Paul Trembly , Paul Sorenson, "An Introduction to Structure with application", TMH.
4. Richard, GilbergBehrouz, Forouzan ,"Data structure – A Pseudocode Approach with C", Thomson press.

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isomorphic ordered set, well ordered set, properties of Lattices, bounded and complemented lattices.

Combinatorics: Introduction, Permutation and combination, Binomial Theorem, Multimonial Coefficients Recurrence Relation and Generating Function: Introduction to Recurrence Relation and Recursive algorithms , Linear recurrence relations with constant coefficients, Homogeneous solutions, Particular solutions, Total solutions , Generating functions , Solution by method of generating functions.

Outcome:-After this completion student will be familiar with relational algebra,Functions and graph theory.

References:

1. C.L.Liu, "Elements of Discrete Mathematics" Tata Mc Graw-Hill Edition.
2. Trembley, J.P & Manohar; "Discrete Mathematical Structure with Application CS", McGraw Hill.
3. Kenneth H. Rosen, "Discrete Mathematics and its applications", McGraw Hill.
4. Bisht, "Discrete Mathematics",Oxford University Press
5. Biswal,"Discrete Mathematics & Graph Theory", PHI

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, III-Semester

CS303 Data Structure

1. Review of C programming language.Introduction to Data Structure: Concepts of Data and Information, Classification of Data structures, Abstract Data Types, Implementation aspects: Memory representation. Data structures operations and its cost estimation. Introduction to linear data structures- Arrays, Linked List: Representation of linked list in memory, different implementation of linked list. Circular linked list, doubly linked list, etc. Application of linked list: polynomial manipulation using linked list, etc.
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2. Robert Kruse, Bruse Leung, "Data structures & Program Design in C", Pearson Education.

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, III-Semester

CS304 Digital Systems

Unit 1: Review of number systems and number base conversions. Binary codes, Boolean algebra, Boolean functions, Logic gates. Simplification of Boolean functions, Karnaugh map methods, SOP-POS simplification, NAND-NOR implementation.

Unit 2: Combinational Logic: Half adder, Half subtractor, Full adder, Full subtractor, look- ahead carry generator,BCD adder, Series and parallel addition, Multiplexer – demultiplexer, encoder- decoder, arithmetic circuits, ALU

Unit 3 : Sequential logic: flip flops, D,T, S-R, J-K Master- Slave, racing condition, Edge & Level triggered circuits, Shift registers, Asynchronous and synchronous counters, their types and state diagrams. Semiconductor memories, Introduction to digital ICs 2716, 2732 etc. & their address decoding. Modern trends in semiconductor memories such as DRAM, FLASH RAM etc. Designing with ROM and PLA.

Unit 4 : Introduction to A/D & D/A convertors & their types, sample and hold circuits, Voltage to Frequency & Frequency to Voltage conversion. Multivibrators :Bistable, Monostable, Astable, Schmitt trigger, IC 555 & Its applications. TTL, PMOS, CMOS and NMOS logic. Interfacing between TTL to MOS.

Unit 5 : Introduction to Digital Communication: Nyquist sampling theorem, time division multiplexing, PCM, quantization error, introduction to BPSK & BFSK modulation schemes. Shannon's theorem for channel capacity.

References:

1. Morris Mano, Digital Circuits & Logic Design, PHI
2. Gothman, Digital Electronics, PHI
3. Tocci, Digital Electronics, PHI
4. Mavino& Leach, Digital Principles & Applications, PHI
5. Taub and schilling, Digital Integrated electronics.
6. Simon Haykin, Introductionto Analog& Digital Communication, Wiley.
7. Lathi B.P., Modern analog& digital communication , Oxford University.

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List of Experiments:

1. To study and verify the truth tables of various Logic gates
2. To verify the properties of NAND and NOR gates as Universal Building Blocks.
3. Simplification and implementation of a Boolean function
4. Implementation of basic Boolean arithmetic logic circuits such as Half-adder, Half-subtractor, Full adder and Full subtractor
5. Conversion from Binary to Gray and Gray to Binary code
6. To construct a binary multiplier using combinational logic and to verify with the truth table
7. To verify 2-bit Magnitude comparator for all possible conditions
8. Generation of various logical functions using 8-to-1 multiplexer
9. Construction of a 4-bit ripple counter and study of its operation
10. Operation of IC-555 Timer as Monostable, Astable and Bistablemultivibrators
11. To characterize binary ladder type digital to analog (D/A) and analog to digital (A/D) convertor
12. Comparison of various Logic families
13. Design and implementation of various types of flip-flops using JK flip-flop
14. To study natural sampling of continuous time waveforms using different sampling rates
15. To study Pulse-Code modulation with Time-division multiplexing (PCM-TDM)
16. To study generation and detection of BPSK and QPSK waveforms

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, VI-Semester

CS601 Machine Learning

COURSE OUTCOMES:

After Completing the course student should be able to:

1. Apply knowledge of computing and mathematics to machine learning problems, models and algorithms;
2. Analyze a problem and identify the computing requirements appropriate for its solution;
3. Design, implement, and evaluate an algorithm to meet desired needs; and
4. Apply mathematical foundations, algorithmic principles, and computer science theory to the modeling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.

COURSE CONTENTS:

THEOTY:

Unit –I

Introduction to machine learning, scope and limitations, regression, probability, statistics and linear algebra for machine learning, convex optimization, data visualization, hypothesis function and testing, data distributions, data preprocessing, data augmentation, normalizing data sets, machine learning models, supervised and unsupervised learning.

Unit –II

Linearity vs non linearity, activation functions like sigmoid, ReLU, etc., weights and bias, loss function, gradient descent, multilayer network, backpropagation, weight initialization, training, testing, unstable gradient problem, auto encoders, batch normalization, dropout, L1 and L2 regularization, momentum, tuning hyper parameters,

Unit –III

Convolutional neural network, flattening, subsampling, padding, stride, convolution layer, pooling layer, loss layer, dance layer 1x1 convolution, inception network, input channels, transfer learning, one shot learning, dimension reductions, implementation of CNN like tensor flow, keras etc.

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Unit –IV

Recurrent neural network, Long short-term memory, gated recurrent unit, translation, beam search and width, Bleu score, attention model, Reinforcement Learning, RL-framework, MDP, Bellman equations, Value Iteration and Policy Iteration, , Actor-critic model, Q-learning, SARSA

Unit –V

Support Vector Machines, Bayesian learning, application of machine learning in computer vision, speech processing, natural language processing etc, Case Study: ImageNet Competition

TEXT BOOKS RECOMMENDED:

1. Christopher M. Bishop, "Pattern Recognition and Machine Learning", Springer-Verlag New York Inc., 2nd Edition, 2011.
2. Tom M. Mitchell, "Machine Learning", McGraw Hill Education, First edition, 2017.
3. Ian Goodfellow and Yoshua Bengio and Aaron Courville, "Deep Learning", MIT Press, 2016

REFERENCE BOOKS:

1. Aurelien Geon, "Hands-On Machine Learning with Scikit-Learn and Tensorflow: Concepts, Tools, and Techniques to Build Intelligent Systems", Shroff/O'Reilly; First edition (2017).
2. Francois Chollet, "Deep Learning with Python", Manning Publications, 1 edition (10 January 2018).
3. Andreas Muller, "Introduction to Machine Learning with Python: A Guide for Data Scientists", Shroff/O'Reilly; First edition (2016).
4. Russell, S. and Norvig, N. "Artificial Intelligence: A Modern Approach", Prentice Hall Series in Artificial Intelligence. 2003.

PRACTICAL:

Different problems to be framed to enable students to understand the concept learnt and get hands-on on various tools and software related to the subject. Such assignments are to be framed for ten to twelve lab sessions.

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RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, VI-Semester

CS602 Computer Networks

Course Outcomes: After completion of the course students will be able to

1. Characterize and appreciate computer networks from the view point of components and from the view point of services
2. Display good understanding of the flow of a protocol in general and a network protocol in particular
3. Model a problem or situation in terms of layering concept and map it to the TCI/IP stack
4. Select the most suitable Application Layer protocol (such as HTTP, FTP, SMTP, DNS, Bit torrent) as per the requirements of the network application and work with available tools to demonstrate the working of these protocols.
5. Design a Reliable Data Transfer Protocol and incrementally develop solutions for the requirements of Transport Layer
6. Describe the essential principles of Network Layers and use IP addressing to create subnets for any specific requirements

Unit –I

Computer Network: Definitions, goals, components, Architecture, Classifications & Types. Layered Architecture: Protocol hierarchy, Design Issues, Interfaces and Services, Connection Oriented & Connectionless Services, Service primitives, Design issues & its functionality. ISO-OSI Reference Model: Principle, Model, Descriptions of various layers and its comparison with TCP/IP. Principals of physical layer: Media, Bandwidth, Data rate and Modulations

Unit-II

Data Link Layer: Need, Services Provided, Framing, Flow Control, Error control. Data Link Layer Protocol: Elementary &Sliding Window protocol: 1-bit, Go-Back-N, Selective Repeat, Hybrid ARQ. Protocol verification: Finite State Machine Models & Petri net models. ARP/RARP/GARP

Unit-III

MAC Sub layer: MAC Addressing, Binary Exponential Back-off (BEB) Algorithm, Distributed Random Access Schemes/Contention Schemes: for Data Services (ALOHA and Slotted-ALOHA), for Local-Area Networks (CSMA, CSMA/CD, CSMA/CA), Collision Free Protocols: Basic Bit Map, BRAP, Binary Count Down, MLMA Limited Contention Protocols: Adaptive Tree Walk, Performance Measuring Metrics. IEEE Standards 802 series & their variant.

Unit-IV

Network Layer: Need, Services Provided , Design issues, Routing algorithms: Least Cost Routing algorithm, Dijkstra's algorithm, Bellman-ford algorithm, Hierarchical Routing, Broadcast Routing, Multicast Routing. IP Addresses, Header format, Packet forwarding, Fragmentation and reassembly, ICMP, Comparative study of IPv4 & IPv6

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Unit-V

Transport Layer: Design Issues, UDP: Header Format, Per-Segment Checksum, Carrying Unicast/Multicast Real-Time Traffic, TCP: Connection Management, Reliability of Data Transfers, TCP Flow Control, TCP Congestion Control, TCP Header Format, TCP Timer Management.Application Layer: WWW and HTTP, FTP, SSH, Email (SMTP, MIME, IMAP), DNS, Network Management (SNMP).

References:

1.Andrew S. Tanenbaum, David J. Wetherall, "Computer Networks" Pearson Education.
2 Douglas E Comer, "Internetworking WithTcp/Ip Principles, Protocols, And Architecture - Volume I" 6th Edition,Pearson Education
3.DimitriBertsekas, Robert Gallager, "Data Networks", PHI Publication, Second Edition.
4.KavehPahlavan, Prashant Krishnamurthy, "Networking Fundamentals", Wiley Publication.
5.Uyless Black, "Computer Networks", PHI Publication, Second Edition.
6.Ying-Dar Lin, Ren-Hung Hwang, Fred Baker, "Computer Networks: An Open Source Approach", McGraw Hill.

List of Experiments:

1. Study of Different Type of LAN& Network Equipments.
2. Study and Verification of standard Network topologies i.e. Star, Bus, Ring etc.
3. LAN installations and Configurations.
4. Write a program to implement various types of error correcting techniques.
5. Write a program to Implement various types of framing methods.
6. Study of Tool Command Language (TCL).
7. Study and Installation of Standard Network Simulator: N.S-2, N.S3.OpNet,QualNetetc .
8. Study & Installation of ONE (Opportunistic Network Environment) Simulator for High Mobility Networks .
9. Configure 802.11 WLAN.
10. Implement &Simulate various types of routing algorithm.
11. Study & Simulation of MAC Protocols like Aloha, CSMA, CSMA/CD and CSMA/CA using Standard Network Simulators.
12. Study of Application layer protocols-DNS, HTTP, HTTPS, FTP and TelNet.

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New Scheme Based On AICTE Flexible Curricula

Computer Science and Engineering, III-Semester

CS305 Object Oriented Programming & Methodology

1. Introduction to Object Oriented Thinking & Object Oriented Programming: Comparison with Procedural Programming, features of Object oriented paradigm Merits and demerits of OO methodology; Object model; Elements of OOPS, IO processing.
2. Encapsulation and Data Abstraction- Concept of Objects: State, Behavior & Identity of an object; Classes: identifying classes and candidates for Classes Attributes and Services, Access modifiers, Static members of a Class, Instances, Message passing, and Construction and destruction of Objects.
3. Relationships – Inheritance: purpose and its types, 'is a' relationship; Association, Aggregation. Concept of interfaces and Abstract classes.
4. Polymorphism: Introduction, Method Overriding & Overloading, static and run time Polymorphism.
5. Strings, Exceptional handling, Introduction of Multi-threading and Data collections. Case study like: ATM, Library management system.

Text Books

1. Timothy Budd, "An Introduction to Object-Oriented Programming", Addison-Wesley Publication, 3rd Edition.
2. Cay S. Horstmann and Gary Cornell, "Core Java: Volume I, Fundamentals", Prentice Hall publication.

Reference Books

1. G. Booch, "Object Oriented Analysis& Design", Addison Wesley.
2. James Martin, "Principles of Object Oriented Analysis and Design", Prentice Hall/PTR.
3. Peter Coad and Edward Yourdon, "Object Oriented Design", Prentice Hall/PTR.
4. Herbert Schildt, "Java 2: The Complete Reference", McGraw-Hill Osborne Media,
7th Edition.

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2023-2024

Step II- Formulation of Institute's Academic Calendar for the semester & Various Committees.

Institute Sample Academic Calendar for Odd Semester

Indore Institute of Science and Technology

Academic Calendar of 2023-24 (Session: July - Dec. 2023)

July

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29*	30

October

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25*	26	27	28
29	30	31				

November

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Events (Tentative)

Commencement of Classes

1st Year – 1st Sem.	5th September 2023
2nd Year - 3rd Sem. and 3rd Year - 5th Sem.	1st August 2023
4th Year - 7th Sem.	3rd July 2023

Last date for Semester Registration

2nd Year - 3rd Sem. & 3rd Year - 5th Sem.	14th Aug., 2023
4th Year - 7th Sem.	11th July, 2023

Attendance

Short attendance notice and letter to parents after 15 days from the commencement of classes.

Display of 2nd short attendance list and intimation to Parents
3rd and 5th Sem. On 07th Sept. 2023 and 1st Sem. On 07th Oct. 2023

Display of 3rd short attendance list and intimation to Parents
3rd and 5th Sem. On 30th Sept. 2023 and 1st Sem. On 01st Nov. 2023

Internal Assessment

Centralized MST-I (Theory & Practical)

1st Sem.	16th – 21st Oct. 2023*
3rd & 5th Sem.	15th – 22nd Sept. 2023
7th Sem.	21st – 26th Aug. 2023

Display of MST-I Result 1st Sem.-2nd Nov., 3rd & 5th Sem. - 30th Sept. & 7th Sem.-1st Sept. 2023

Centralized MST-II (Theory & Practical)

1st Sem.	21st – 25th Nov. 2023*
3rd & 5th Sem.	26th Oct. – 1st Nov. 2023
7th Sem.	16th – 21st Oct. 2023

Display of MST-II Result 1st Sem.-1st Dec., 3rd & 5th Sem.- 10th Nov. and 7th Sem.-02nd Nov. 2023

Class Test/Quizzes to be conducted before each MST

Submission of Mid Semester & Sessional Marks to University

1st Sem. – 08th Dec. 2023*, 3rd & 5th Sem. - 26th Nov. and 7th Sem. - 20th Nov. 2023

Submission of Practical marks to University – On the date of Practical Exam.

Event (Extra Curriculum & Sports activities)

Apratim Sports - 2023 *(Inter School Sports activities)*	30th, 31st Oct. & 1st Nov., 2023
Apratim Pragya - 2023 *(1. Model Presentation, 2. Hackathon)*	4th to 5th Nov., 2023
(3. GK Competition)	*1st to 5th Nov., 2023*
Institute level (Inter Branch Sports)	21st – 26th Nov., 2023*

End of Teaching

1st Sem. - 30th Nov., 3rd and 5th Sem. - 18th Nov. & 7th Sem. - 10th Nov. 2023.

University Exam — **Theory and Practical Examination**

3rd & 5th Sem.	28th Nov. – 27th Dec., 2023
7th Sem.	20th Nov. – 22nd Dec., 2023

Online submission of Examination form to university

1st, 3rd & 5th Sem. - 17th Nov. and 7th Sem. till 13th Nov. 2023 *(Without late fee)**

***All Dates are subjected to change as per University guidelines & schedule.**

Two Industry visit & Two Expert lectures for each department is mandatory.

Sports Activity: On all working Saturday & RGPV Sports Activities will be as per University Sports Calendar

List of Holidays for the session (July to Dec. – 2023)

Moharram	29/07/2023	Dushahara	24/10/2023	**Deepawali Vacation** From 11th Nov. to 14th Nov. 2023
Independence Day	15/08/2023	M. Valmiki Jayanti	28/10/2023	
Raksha Bandhan	30/08/2023	Dena Manda ...	15/11/2023	*Local holiday: One after Anant chaturdashi on 28/09/2023; One after Dushahara on 25/10/2023 as per notified by District Administration
Janmashtami	07/09/2023	Gurunanak Jayanti	27/11/2023	
Milad Un Nabi	28/09/2023	X-Mas	25/12/2023	
Gandhi Jayanti	02/10/2023			

Dr. Keshav Patidar
Principal

Shri Arun S Bhatnagar as
Group Advisor (SPARSH & SEWS)

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Institute Sample Academic Calendar for Even Semester

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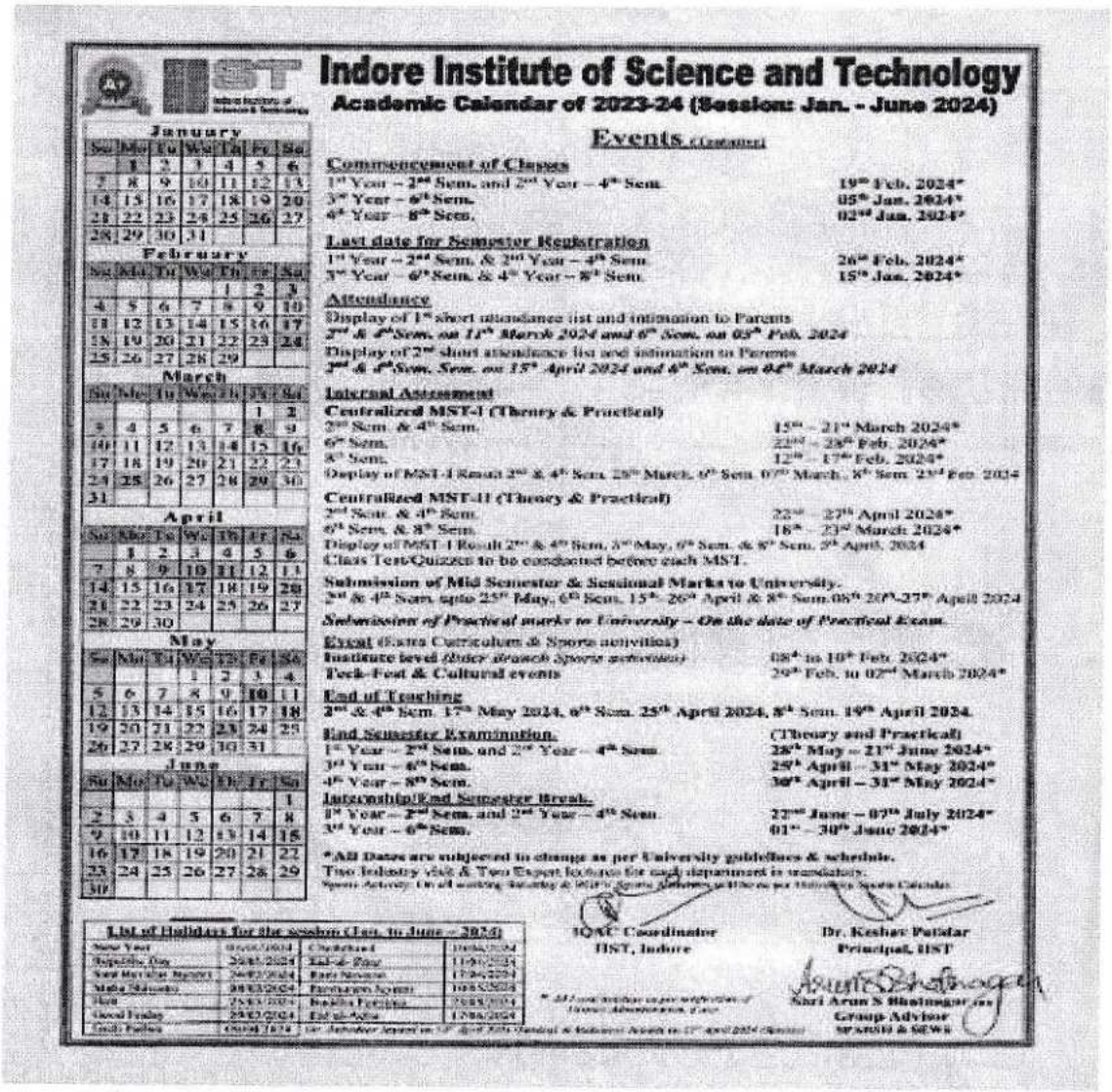

Indore Institute of Science and Technology

Academic Calendar of 2023-24 (Session: Jan. - June 2024)

Events (Tentative)

Commencement of Classes

1st Year – 2nd Sem. and 2nd Year – 4th Sem.	19th Feb. 2024*
3rd Year – 6th Sem.	05th Jan. 2024*
4th Year – 8th Sem.	02nd Jan. 2024*

Last date for Semester Registration

1st Year – 2nd Sem. & 2nd Year – 4th Sem.	26th Feb. 2024*
3rd Year – 6th Sem. & 4th Year – 8th Sem.	15th Jan. 2024*

Attendance

Display of 1st short attendance list and intimation to Parents
2nd & 4th Sem. on 13th March 2024 and 6th Sem. on 05th Feb. 2024
Display of 2nd short attendance list and intimation to Parents
2nd & 4th Sem. Sem. on 15th April 2024 and 6th Sem. on 04th March 2024

Internal Assessment

Centralized MST-I (Theory & Practical)

2nd Sem. & 4th Sem.	15th – 21st March 2024*
6th Sem.	22nd – 28th Feb. 2024*
8th Sem.	12th – 17th Feb. 2024*

Display of MST-I Result 2nd & 4th Sem. 28th March, 6th Sem. 07th March, 8th Sem. 23rd Feb. 2024

Centralized MST-II (Theory & Practical)

2nd Sem. & 4th Sem.	22nd – 27th April 2024*
6th Sem. & 8th Sem.	18th – 23rd March 2024*

Display of MST-I Result 2nd & 4th Sem. 3rd May, 6th Sem. & 8th Sem. 2nd April, 2024
Class Test/Quizzes to be conducted before each MST.

Submission of Mid Semester & Sessional Marks to University.
2nd & 4th Sem. upto 25th May, 6th Sem. 15th- 26th April & 8th Sem.06th-20th-27th April 2024
Submission of Practical marks to University – On the date of Practical Exam.

Event (Extra Curriculum & Sports activities)

Institute level *(Inter Branch Sports activities)*	08th to 10th Feb. 2024*
Tech-Fest & Cultural events	29th Feb. to 02nd March 2024*

End of Teaching
2nd & 4th Sem. 17th May 2024, 6th Sem. 25th April 2024, 8th Sem. 19th April 2024.

End Semester Examination. (Theory and Practical)

1st Year – 2nd Sem. and 2nd Year – 4th Sem.	28th May – 21st June 2024*
3rd Year – 6th Sem.	25th April – 31st May 2024*
4th Year – 8th Sem.	30th April – 31st May 2024*

Internship/End Semester Break.

1st Year – 2nd Sem. and 2nd Year – 4th Sem.	22nd June – 07th July 2024*
3rd Year – 6th Sem.	01st – 30th June 2024*

*All Dates are subjected to change as per University guidelines & schedule.
Two Industry visit & Two Expert lectures for each department is mandatory.

List of Holidays for the session (Jan. to June – 2024)

New Year	01/01/2024	Christmas	25/12/2024
Republic Day	26/01/2024	Eid-ul-Fitar	11/04/2024
Vasant Panchmi (Sunday)	14/01/2024	Ram Navami	17/04/2024
Maha Shivratri	08/03/2024	Parshuram Jayanti	09/05/2024
Holi	25/03/2024	Buddha Purnima	23/05/2024
Good Friday	29/03/2024	Eid-ul-Adha	17/06/2024
Gudi Padwa	09/04/2024		

IQAC Coordinator
IIST, Indore

Dr. Keshav Patidar
Principal, IIST

Shri Arun S Bhatnagar
Group Advisor
SPASHS & SEWS

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The Institute adheres to academic calendar provided by the, University for Conduction of continuous internal evaluation system. The Institute academic calendar includes the dates of commencement and completion of syllabus, schedules of internal exams etc.

Students Grievance Redressal Committee.

Indore Institute of Science & Technology

IIST/June-23/10 | Academic Year 2023-24 | Date: 09/06/2023

Student's Grievance Redressal Cell

The Student's Grievance Redressal Cell has been constituted at IIST. The Student's Grievance Redersal Cell as per AICTE F.No.-1-101/PGRC/AICTE/Regulation/2019/9530-9537 (Clause No. 37-3/Legal/2012 of the AICTE) to ensure transparency and prevent unfair practices and to provide a mechanism to innocent students for redressal of their grievances: The following are the members of the Student's Grievance Redressal Cell as mention below:

Sr. No.	Name	Designation	Email ID	Contact No.
1.	Dr. Keshav Patidar (Principal)	Chairman	keshav.patidar@indoreinstitute.com	9926510687
2.	Mr. Puneet S. Duggal (Vice Principal-1 & CAO-1)	Co-Chairman	puneet.duggal@indoreinstitute.com	9893186681
3.	Dr. Richa Gupta (Vice Principal-2 & HOD-AI/ML)	Member	richa.gupta@indoreinstitute.com	9755647074
4.	Dr. Namrata Kaushal (Dean & Course Director-1 First Year)	Member	namrata.kaushal@indoreinstitute.com	9826075667
5.	Dr. Parimeeta Chanchani (Associate Prof. - ESH)	Member	parimeeta.chanchani@indoreinstitute.com	9981161212
6.	Dr. Niraj Soni (HOD-CE)	Member	niraj.soni@indoreinstitute.com	9977025413
7.	Mr. Abhay Sahasrabuddhe (CAO-2)	Member	abhay.sahasrabuddhe@indoreinstitute.com	7471130010
8.	Mr. Gajendra Dubey (Registrar)	Member	gd@indoreinstitute.com	9165360604
9.	Mr. Rajesh Tiwari (Chief Counselor)	Member	tiwari@indoreinstitute.com	9926439911
10.	Mr. Ayush Kushwah (Student)	Member	ayush.kushwahcs2020@indoreinstitute.com	6266796654

(Dr. Keshav Patidar)
Principal, IIST, Indore

CC to:
1. All Students,
2. All Faculty and Staff,
3. Dean/HoDs,
4. Registrar Office,
5. Admin Dept.,
6. DG Office,
7. Office record.

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Institute Industry Committee

IIST/June-23/07 *Academic Year 2023-24* Date: 09/06/2023

Institute-Industry Cell

This is to inform all of you that the Institute has constituted **Institute-Industry Cell** for the academic year **2023-24** as mentioned below:

Sr. No.	Name	Designation	Email ID	Contact No.
1.	Mr. Rohit Inani	Director Corporate Relation	corporate.relations@indoreinstitute.com	9827063083
2.	Mr. Abhay Sahasrabuddhe	CAO-2	abhay.sahasrabuddeh@indoreinstitute.com	7471130010
3.	Mr. Biplab Dey	Joint Director Corporate Relation & Placement	biplab.dey@indoreinstitute.com	8878339258
4.	Mr. Kundan Bhavsar	Training and Placement Officer	kundan.bhavsar@indoreinstitute.com	9229222823
5.	Mr. Anshul Pandey	Assistant Professor, Civil	anshul.pandey@indoreinstitute.com	7415500483
6.	Dr. Mukesh Patidar	Assistant Professor, ECE	mukesh.patidar@indoreinstitute.com	9770435369
7.	Ms. Farhin Khan	Assistant Professor, CM	farhin.khan@indoreinstitute.com	9907955884
8.	Mr. Akashdeep Gupta	Assistant Professor, ME	akashdeep.gupta@indoreinstitute.com	9098595222
9.	Mr. Rakesh Verma	Assistant Professor, CSE	rakesh.verma@indoreinstitute.com	8824275922

(Dr. Keshav Patidar)
Principal, IIST, Indore

CC to:
1. All Students,
2. All Faculty and Staff,
3. Dean/HoDs,
4. TPO Office,
5. Registrar Office,
6. Admin Dept.,
7. DG Office,
8. Office record.

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Committee for SC / ST

Indore Institute of Science & Technology

IIST/June-23/04 *Academic Year 2023-24* Date: 09/06/2023

Committee for SC/ST

This to inform all of you that as per AICTE, New Delhi the Institute has constituted "**Committee for SC/ST**" for the **academic year 2023-24** as mentioned below:

Sr. No.	Name	Designation	Email ID	Contact No.
1.	Dr. Keshav Patidar	Chairman	keshav.patidar@indoreinstitute.com	9926530687
2.	Dr. Dheerendra V. Singh	Co-Chairman	dheerendrav.singh@indoreinstitute.com	9827215156
3.	Dr. Sathish Penchala	Member	sathish.penchala@indoreinstitute.com	9561263763
4.	Mr. Pankaj Malviya	Member	pankaj.malviya@indoreinstitute.com	9826674572
5.	Mr. Gajendra Dubey	Member	gd@indoreinstitute.com	9165360604
6.	Mr. Manish Nimoriya	Member	manish.nimoriya@indoreinstitute.com	9522444456
7.	Mr. Anil Verma	Member	anil.verma@indoreinstitute.com	9826081720
8.	Ms. Uma Kadam	Member	uma.kadam@indoreinstitute.com	8889574131
9.	One Member from DTE (As nominated by the DTE, Bhopal)			
10.	One Member form University (As nominated by the RGPV, Bhopal)			

(Dr. Keshav Patidar)
Principal, IIST, Indore

CC to:
1. All Students,
2. All Faculty and Staff,
3. Dean/HoDs,
4. Registrar Office,
5. Admin Dept.,
6. DG Office,
7. Office record.

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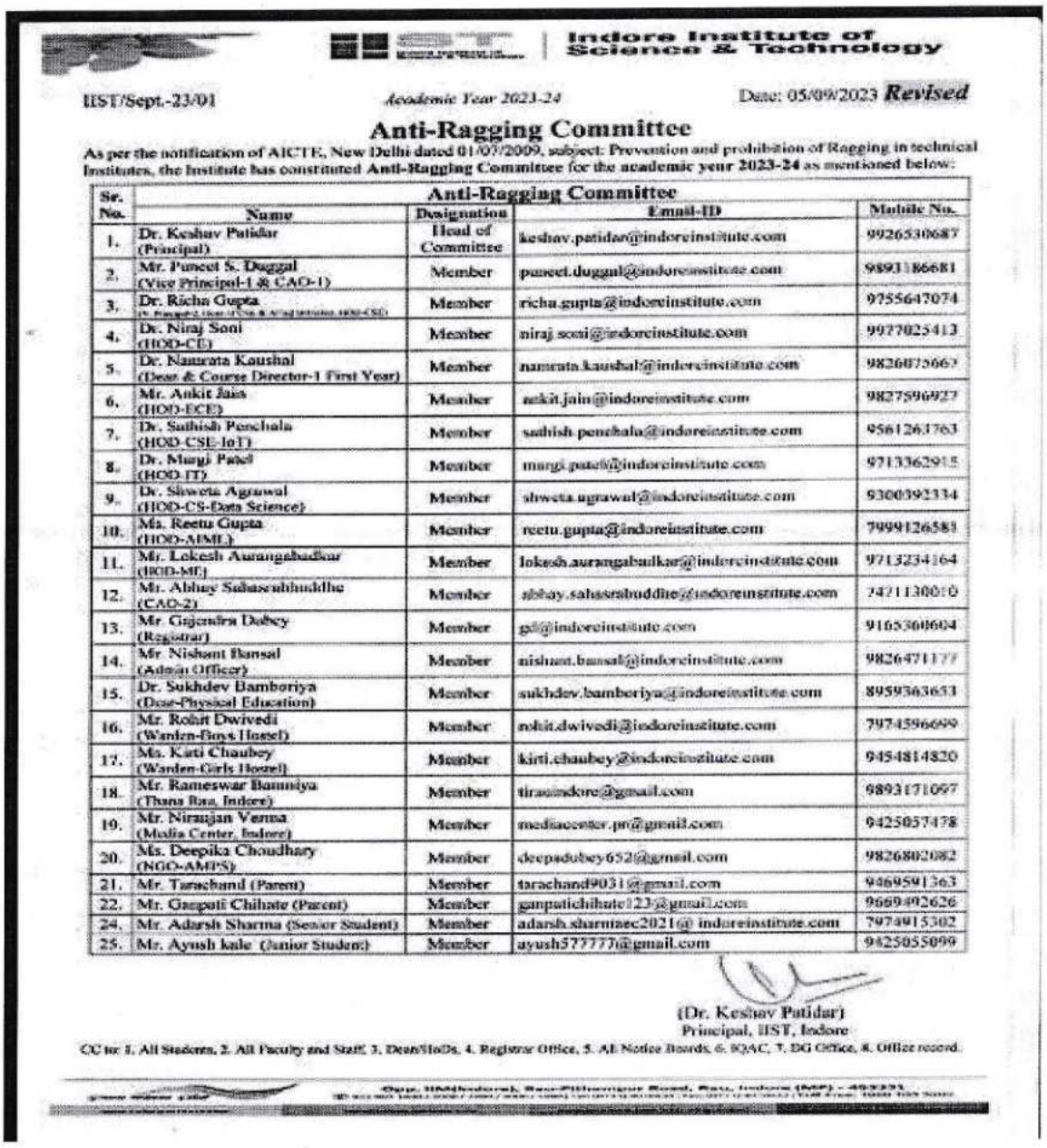
Anti Ragging Committee



Indore Institute of Science & Technology

IIST/Sept.-23/01 *Academic Year 2023-24* Date: 05/09/2023 ***Revised***

Anti-Ragging Committee

As per the notification of AICTE, New Delhi dated 01/07/2009, subject: Prevention and prohibition of Ragging in technical Institutes, the Institute has constituted **Anti-Ragging Committee** for the **academic year 2023-24** as mentioned below:

Sr. No.	Anti-Ragging Committee			
	Name	Designation	Email-ID	Mobile No.
1.	Dr. Keshav Patidar (Principal)	Head of Committee	keshav.patidar@indoreinstitute.com	9926530687
2.	Mr. Puneet S. Duggal (Vice Principal-I & CAO-1)	Member	puneet.duggal@indoreinstitute.com	9893186681
3.	Dr. Richa Gupta	Member	richa.gupta@indoreinstitute.com	9755647074
4.	Dr. Niraj Soni (HOD-CE)	Member	niraj.soni@indoreinstitute.com	9977025413
5.	Dr. Namrata Koushal (Dean & Course Director-I First Year)	Member	namrata.kaushal@indoreinstitute.com	9826075663
6.	Mr. Ankit Jain (HOD-ECE)	Member	ankit.jain@indoreinstitute.com	9827596927
7.	Dr. Sathish Penchala (HOD-CSE-IoT)	Member	sathish.penchala@indoreinstitute.com	9561263763
8.	Dr. Margi Patel (HOD-IT)	Member	margi.patel@indoreinstitute.com	9713362915
9.	Dr. Shweta Agrawal (HOD-CS-Data Science)	Member	shweta.agrawal@indoreinstitute.com	9300392334
10.	Ms. Reetu Gupta (HOD-AIML)	Member	reetu.gupta@indoreinstitute.com	7999126583
11.	Mr. Lokesh Aurangabadkar (HOD-ME)	Member	lokesh.aurangabadkar@indoreinstitute.com	9713234164
12.	Mr. Abhay Sahasrabhuddhe (CAO-2)	Member	abhay.sahasrabuddhe@indoreinstitute.com	7421130010
13.	Mr. Gajendra Dubey (Registrar)	Member	gd@indoreinstitute.com	9165360604
14.	Mr. Nishant Bansal (Admin Officer)	Member	nishant.bansal@indoreinstitute.com	9826471177
15.	Dr. Sukhdev Bamboriya (Dean-Physical Education)	Member	sukhdev.bamboriya@indoreinstitute.com	8959363653
16.	Mr. Rohit Dwivedi (Warden-Boys Hostel)	Member	rohit.dwivedi@indoreinstitute.com	7974596699
17.	Ms. Kirti Chaubey (Warden-Girls Hostel)	Member	kirti.chaubey@indoreinstitute.com	9454814820
18.	Mr. Rameswar Banniya (Thana Rep. Indore)	Member	tirasindore@gmail.com	9893171097
19.	Mr. Niranjan Verma (Media Center, Indore)	Member	mediacenter.pr@gmail.com	9425057478
20.	Ms. Deepika Choudhary (NGO-AMPS)	Member	deepadubey652@gmail.com	9826802082
21.	Mr. Tarachand (Parent)	Member	tarachand9031@gmail.com	9669591363
22.	Mr. Ganpati Chihate (Parent)	Member	ganpatichihate123@gmail.com	9669492626
24.	Mr. Adarsh Sharma (Senior Student)	Member	adarsh.sharmaec2021@ indoreinstitute.com	7974915302
25.	Mr. Ayush kale (Junior Student)	Member	ayush577777@gmail.com	9425055099

(Dr. Keshav Patidar)
Principal, IIST, Indore

CC to: 1. All Students, 2. All Faculty and Staff, 3. Dean/HoDs, 4. Registrar Office, 5. All Notice Boards, 6. IQAC, 7. DG Office, 8. Office record.

Indore Institute of Science and Technology IQAC

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Indore Institute of Science and Technology Indore

Internal Complaints Committee

Indore Institute of Science & Technology

IIST/June-23/09 *Academic Year 2023-24* Date: 09/06/2023

Internal Complaint Committee

(Anti-Sexual harassment)

The Internal Compliant Committee (Anti-Sexual harassment) has been constituted at IIST. The Internal Compliant Committee for prevention of sexual harassment of women at workplace, as per AICTE Regulation, 2016 to deal with the sexual harassment complaints of women at workplace. The following are the members of the internal complaint committee as mention below:

Sr. No.	Name	Designation	Email ID	Contact No.
1.	Dr. Richa Gupta (Vice Principal-2 & HOD-AIML)	Presiding Officer	richa.gupta@indoreinstitute.com	9755647074
2.	Dr. Namrata Kaushal (Dean & Course Director-I First Year)	Member	namrata.kaushal@indoreinstitute.com	9826075667
3.	Dr. Parimeeta Chanchani (Associate Prof. - ESH)	Member	parimeeta.chanchani@indoreinstitute.com	9981161212
4.	Mr. Abhay Sahasrabuddhe (CAO-2)	Member	abhay.sahasrabuddeh@indoreinstitute.com	7471130010
5.	Mr. Gajendra Dubey (Registrar)	Member	gd@indoreinstitute.com	9165360601
6.	Mr. Aakshay Chilhate (Student)	Member	akshay.chilhatece2021@indoreinstitute.com	9826756948
7.	Ms. Yukta Kukreja (Student)	Member	yukta.kukrejait2021@indoreinstitute.com	8817902600
8.	Ms. Ruchita Jawle (Student)	Member	ruchita.jawlece2020@indoreinst	6263532634
9.	Ms. Deepika Choudhary (NGO-AMPS)	Member	deepudubey652@gmail.com	9826802082

(Dr. Keshav Patidar)
Principal, IIST, Indore

CC to:
1. All Students,
2. All Faculty and Staff,
3. Dean/HoDs,
4. Registrar Office,
5. Admin Dept.,
6. DG Office,
7. Office record.

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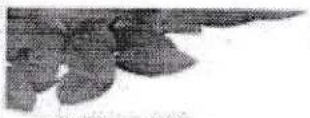
Women Grievance Redressal Committee



Indore Institute of Science & Technology

IIST/June-23/03 *Academic Year 2023-24* Date: 09/06/2023

The Women's' Grievance Redressal Cell

The Women's Grievance Redressal Cell for settling issues apart from sexual harassment at workplace: The following are the members of the Women's Grievance Redressal Cell:

Sr. No.	Name	Designation	Email ID	Contact No.
1.	Dr. Namrata Kaushal	Chairman	namrata.kaushal@indoreinstitute.com	9826075667
2.	Dr. Parimeeta Chanchani	Co-Chairman	parimeeta.chanchani@indoreinstitute.com	9981161212
3.	Dr. Richa Gupta	Member	richa.gupta@indoreinstitute.com	9755647074
4.	Dr. Margi Patel	Member	margi.patel@indoreinstitute.com	9713362915
5.	Dr. Neena Thacker	Member	neena.thacker@indoreinstitute.com	9826914202

The Cell is required to work in the direction of providing help to any female complaining of discrimination, either gender discrimination or otherwise, any kind of abuse, loneliness, peer pressure, groupism, home sickness, insecurity and/or inferiority complex in terms of physical appearance, hostel issues, harassment from room-mates, adjusting and adopting to the new environment, etc.

(Dr. Keshav Patidar)
Principal, IIST, Indore

CC to:
1. All Faculty and Staff,
2. Dean/HoDs,
3. Registrar Office,
4. Admin Dept.,
5. DG Office,
6. Office record.

Opp. IIM(Indore), Rau-Pithampur Road, Rau, Indore (MP) - 453331

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Step III - Study of University Syllabus and raise the requirement for updation and also collect subject choice from faculty

Sample Subject Choice Form Filled by ECE Faculty

Indore Institute of Science & Technology, Indore
Department of Electronics & Communication Engineering
SUBJECT ALLOTMENT OPTION FORM
Academic Year: 2023-24 (Odd Semester)

Faculty Name	DEVENDRA S MANDLOI	Experience :	14 YEAR
Qualification	ME	Specialization:	ELECTRONICS & COMMUNICATION
Area of Interest	WIRELESS COMM		

Note: 1) Put the number against your choice as your Priority
2) Select at least 2 subjects per semester.

VII Semester (EC)			**III Semester (CS)**	
	EC701	VLSI Design	(6)	CS-304 Digital System
	EC-702 Departmental Elective			
	EC-702 A	Microwave Engineering		
(7)	EC-702 B	Information Theory and Coding		
	EC-702 C	Nano Electronics	**III Semester (IT)**	
	EC703 Open Elective		(5)	IT-305 Digital Circuits & System
(3)	EC-703A	Cellular Mobile Communication		
	EC-703B	Internet of Things		
	EC-703C	Probability Theory and Stochastic Processor		
	EC-704	Microwave Lab		
	EC-705	IOT Lab		
V Semester (EC)			**III Semester (EC)**	
	EC-501	Microprocessor & its Application		BT-301 Mathematics III
(1)	EC-502	Digital Communication	(2)	EC-302 EMI & 306 EMI LAB
	EC-503 Departmental Elective		(8)	EC-303 Digital System Design
	EC-503 A	CNTL		EC-304 Electronic Devices
(4)	EC-503 B	Mobile Communication		EC305 Network Analysis
	EC-503 C	Advanced Control System		
	EC-504 Open Elective			
	EC-504 A	EMT		
	EC-504 B	CSO		
	EC-504 C	Process Control Instrumentation		
	I Semester			
	BT-104 Basic Electrical and Electronics Engineering			

Signature:

Date: 26/6/23

Subject Allotted:

S.No.	Subject Name	Subject Type	Class	Branch	Load/Week
1					
2					
3					
4					

Faculty Signature:

HOD Signature

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Indore Institute of Science and Technology, Indore

Indore Institute of Science & Technology, Indore
Department of Electronics & Communication Engineering
SUBJECT ALLOTMENT OPTION FORM
Academic Year: 2023-24 (Odd Semester)

Faculty Name	SHRAVAN KUMAR NAMDEO	Experience :	12 Year
Qualification	M.TECH	Specialization:	DIGITAL COMM.
Area of Interest	COMMUNICATION		

Note: 1) Put the number against your choice as your Priority
2) Select at least 2 subjects per semester.

VII Semester (EC)			**III Semester (CS)**	
	EC701	VLSI Design		CS-304 Digital System
	EC-702 Departmental Elective			
(2)	EC-702 A	Microwave Engineering		
	EC-702 B	Information Theory and Coding		
	EC-702 C	Nano Electronics	**III Semester (IT)**	
	EC703 Open Elective			IT-305 Digital Circuits & System
	EC-703A	Cellular Mobile Communication		
(6)	EC-703B	Internet of Things		
	EC-703C	Probability Theory and Stochastic Processor		
	EC-704	Microwave Lab		
	EC-705	IOT Lab		
V Semester (EC)			**III Semester (EC)**	
	EC-501	Microprocessor & its Application		BT-301 Mathematics III
(5)	EC-502	Digital Communication		EC-302 EMI
	EC-503 Departmental Elective		(1)	EC-303 Digital System Design
(3)	EC-503 A	CNTL		EC-304 Electronic Devices
	EC-503 B	Mobile Communication		EC305 Network Analysis
	EC-503 C	Advanced Control System		
	EC-504 Open Elective			
(4)	EC-504 A	EMT		
	EC-504 B	CSO		
	EC-504 C	Process Control Instrumentation		
I Semester				
	BT-104 Basic Electrical and Electronics Engineering			

Signature: **Date:**

Subject Allotted:

Sr.No.	Subject Name	Subject Type	Class	Branch	Load/Week
1					
2					
3					
4					

Faculty Signature:

HOD Signature

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and Technology, Indore

Sample Subject Choice Form Filled by CSE Faculty

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
SUBJECT ALLOTMENT OPTION FORM
Academic Year:

Faculty Name Vivek Gupta
Qualification B.E. ME. MBA
Area of Interest
Experience : 18
Specialization: Machine Learning
Subject taught in July to Dec 2024 BCE Data Analytics Lab
Subject taught in July to Dec DBMS
Subject taught in July to Dec

Note: 1) Write numbers according to your priority and select at least 2 subjects per semester.

VII Semester (As per Old Syllabus & Scheme)			IV Semester	
1	CS-801	IOT	CS-402	Analysis Design of Algorithm
2	CS-802 DE	BlockChain/ CC/ High Performance Computing/ OOSE (5)	CS-403	Software Engineering
3	CS-803 OE	Image Processing/ Game Theory/ IOT/ MIE	CS-404	Comp. Organization & Architecture
4	CS-804	D/ O/ E Lab	CS-405	Operating Systems
	CS-805	Major Project-II	CS-406	Programming Practices ✓ (1)
			CS-408	Cyber Security (MOOC)
VII Semester			II Semester	
1	CS-601	Machine Learning (1)	BT-2005	Basic Computer Engineering (2)
2	CS-602	Computer Networks		
3	CS-603 DE	ACA/ CG&V/Compiler Design	Other Department	
4	CS-604 OE	Knowledge Management / Project Management / Rural Tech & Community Development	CM-406	Computer Programming-II
5	CS-605	Data Analytics Lab	ME-606	RDBMS
6	CS-606	Skill Development Lab		
7	CS-608	Minor Project II		
ME (CSE) II Semester			ME (CSE) IV Semester	
1				
2				
3				

Signature: Date:

Subject Allotted:

SE No	Subject Name	Subject Type	Class	Branch	No. of Days
1	SDL	PR	CS1	CSE	4
2	Machine Learning	TH+PR	CS3	CSE	7
3					

Faculty Signature:

HOD Signature

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INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
SUBJECT ALLOTMENT OPTION FORM

Academic Year:

Faculty Name Megha Buthare
Qualification MTech
Area of Interest
Subject taught in July to Dec
Subject taught in July to Dec
Subject taught in July to Dec

Experience : 7yrs.
Specialization: OOPM

Note: 1) Write numbers according to your priority and select at least 2 subjects per semester.

VIII Semester (As per Old Syllabus & Scheme)			IV Semester	
1	CS-801	IOT	CS-402	Analysis Design of Algorithm ✓
2	CS-802 DE	BlockChain/ CC/ High Performance Computing/ OOSE	CS-403	Software Engineering ✓
3	CS-803 OE	Image Processing/ Game Theory/ IOT/ MIE	CS-404	Comp. Organization & Architecture
4	CS-804	D/ O/ E Lab	CS-405	Operating Systems
	CS-805	Major Project-II	CS-406	Programming Practices
			CS-408	Cyber Security (MOOC)
VI Semester			II Semester	
1	CS-601	Machine Learning	BT-2005	Basic Computer Engineering
2	CS-602	Computer Networks		
3	CS-603 DE	ACA/ CG&V/Compiler Design	Other Department	
4	CS-604 OE	Knowledge Management / Project ✓ Management / Rural Tech & Community Development	CM-406	Computer Programming-II
5	CS-605	Data Analytics Lab	ME-606	RDBMS
6	CS-606	Skill Development Lab		
7	CS-608	Minor Project II		
M.E. CS II Semester			M.E. CS IV Semester	
1				
2				
3				

Signature: [signature]

Date:

Subject Allotted:

Sr.No.	Subject Name	Subject Type	Class	Branch	Load/Week
1	Software Enginery	Th+Pr	CS1	CSE	7
2	Project mgmt	Th	CS1	CSE	3
3	[illegible]				

Faculty Signature: [signature]

HOD Signature [signature]

COMPUTER SCIENCE & ENGG. DEPARTMENT IIST

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Sample Subject Choice Form Filled by ME Faculty

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE
DEPARTMENT OF MECHANICAL ENGINEERING
SUBJECT ALLOTMENT OPTION FORM
Academic Year: 2023-2024

Faculty Name	Dr. D.V.S	Experience :	16 Year
Qualification	PhD	Specialization:	Thermal + Design
Area of Interest	Thermodynamics		
Subject taught in	July to Dec	IIMT	
Subject taught in	July to Dec	Minor project	
Subject taught in	July to Dec		

Note: 1) Write numbers according to your priority and select at least 2 subjects per semester.

ME I Semester				
1	ME801	Refrigeration &Air Conditioning	BS401	Energy & Environmental Engineering
2	ME802 (A)	Automobile Engineering	ME402	Instrumentation and Control
3	ME803(C)	Entrepreneurship and Management Concepts	ME403	Theory of Machines
4	ME804	Simulation and Modeling	ME404	Fluid Mechanics
5			ME405	Manufacturing Technology
VI Semester			**II Semester**	
1	ME601	Thermal Engineering and Gas Dynamics	BT203	Basic Mechanical Engineering
2	ME602	Machine Component Design	BT 105	Engineering Graphics
3	ME603 (A)	Turbo Machinery	BT 106	Manufacturing Practices
4	ME604(C)	Renewable Energy Technology		
5	ME605	CAD Lab		
ME II Semester				
1	MMMD-201	Adv.Machine Design	MMMD-204	Industrial Tribology
2	MMMD-202	Finite Elements Method	MMMD/ MMPD-205	Vibration and Noise Control
3	MMMD-203	Robotics		

Signature: **Date:**

Subject Allotted:

Sr.No	Subject Name	Subject Type	Year	Branch	Load/Week
1	Software Lab	P	4th	ME	2
2	BME	T+P	2nd	CSE/AE A-1	8
3	BME	T+P	2nd	CS A-2	8

Faculty Signature: **HOD Signature**

Indore Institute of Science and Technology IQAC

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Departments Minutes of Meeting (Sample MoM from CE Department)

Circular

All the faculties of Civil Engg. Dept. are hereby informed that departmental meeting is scheduled on 27/12/2023 at H.O.D. cabin. The agenda of meeting will be as follows :-

1. Planning for upcoming session
2. Discussion on feedback.
3. Subject preference & allotment
4. NABL visit surveillance
5. Course file
6. Attendance monitoring
7. Internship planning
8. Any other issue

Dr Niraj Soni
Mr. Pronam Bagora
Mr. Ishanya Joshi
Mr Shanu Sharma
Mr Shashank Agrawal
Mr. Maharveer Dangi
Mr. Prashant Dubey
Mr. Shailendra Singh
Mr. Manish K. Nimoriya
Mr Neeraj Rajput
Mr Neelesh Parikh

DEPARTMENT OF CIVIL ENGG.

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Circular

All the faculties of civil engineering department are here by informed that departmental meeting is scheduled on 28/06/23 at H.O.D.'s cabin. The agenda of meeting are as follows:

1. Planning for upcoming semester.
2. Discussion on feedback.
3. Subject Preference and allotment.
4. NABL visit
5. Course File
6. Attendance monitoring
7. Internship Planning
8. Any other issue.

Dr. Niraj Soni
Ms. Poonam Bagora
Mr. Ishanya Joshi
Mr. Shashank Agrawal
Ms. Shanu Sharma
Mr. Anshul Pandey
Mr. Prashant K. Dubey
Mr. Mahaveer Dangi
Mr. Shailendra Singh
Mr. Manish K. Nimoriya
Mr. Neeraj Rajput
Mr. Neetish Pareek.

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AY - 22-23.
Session - July '22 - Dec '22

(Date)
(P. No)

CIRCULAR

All the faculties of AIML department are hereby informed to attend the departmental meeting on date 21/11/22 in Meeting Room HOD cabin.

Agenda of Meeting :-

1. Summarization of events conducted in last session.
2. Semester planning.
3. Subjects allotment and preparation of lecture plan and course file.
4. Previous semester feedback.
5. Discussion on research papers & publications
6. Students attendance maintainence.
7. Students participation in events.
8. Weak Students remedial class planning.
9. Result analysis.
10. Others (if any)

HOD AIML
HOD

DEPARTMENT OF AIML

IQAC

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Indore Institute of Science and Technology, Indore
Principal

Date:
P. No:

Faculty Name	Signature
Dr. Sathish K. Penchala	
Ms. Rupal Yadav	
Ms. megha Dirthani	
Ms. Shruti Sharma	

HOD AIML

DEPARTMENT OF AIML

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Step III – Formulation of Department Activity Calendar for the semester Align with Academic Calendar

Sample CE Activity Calendar for Even Semester

Indore Institute of Science and Technology

Activity Calendar of Civil Engineering Deparment 2023-24 (Session: Jan. - June 2024)

January

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

March

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Events

Industrial Tour & Visit

Technical Visit at Water Treatment Plant at Jalud — Feb 24
Technical Visit at Indore Metro — April 24

Expert Lecture / Seminar

Expert Lecture on Advanced Technology in Wastewater Treatment — Feb 24
Expert Lecture on Professional Ethics / Human Values — March 24
Expert Lecture on BIM — Apr 24

SIG's / Internship / Training / Certification/Workshop Activities

Internship cum training on **Sustainable Development Through Energy Efficient and Green Building for III Year students-Jan 24**

Training on Total Station for Placements for II year and III year students — March 24
Certificate Course on Material Testing for III Year Students — March 24

Internship on Architectural Planning of a Hospital Building for II-year students — March 24
Certificate Course on Water Conservation System for II Year Students — April 24

Project

Project-Submission of abstract	January 24
1st Presentation of Project	February 24
2nd Presentation of Project	March 24
Final Presentation of Project	April 24

AutoCAD Competition / Civil Engineering Quiz / Mock Interview- March 24

Dr. Niraj Soni
HOD CIVIL

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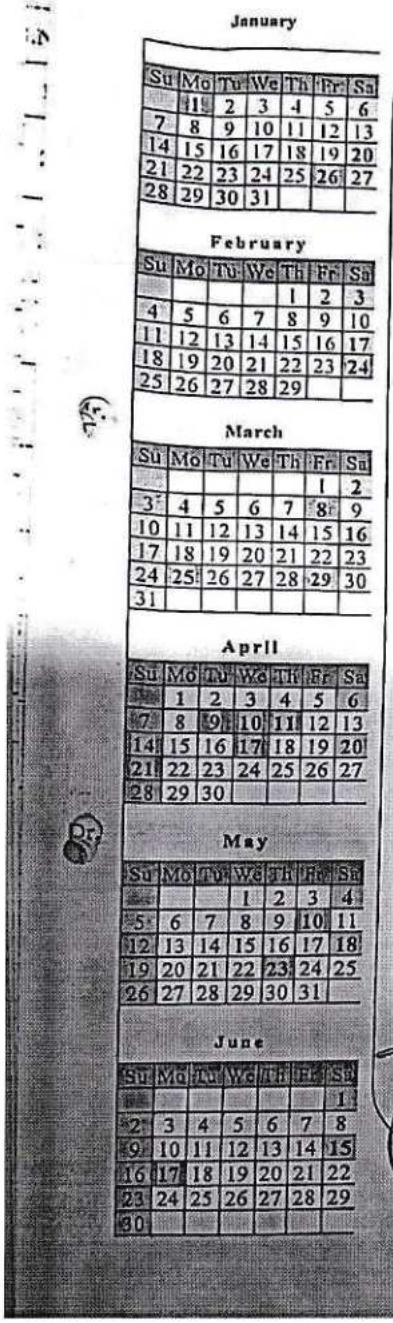
Sample ECE Activity Calendar for Even Semester

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



January

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

March

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Activity Calendar: January 2024 – June 2024

Industrial Tour & Visit

- RRCAT visit On National Science Day for 1st Year Students — Feb 24

Expert Lecture / Seminar/Webinar

- Webinar on Tina Pro Demonstration — Feb 24
- Webinar on Demonstration the Proteus VSM — Feb 24

SIG's / Internship / Training / Certification/Workshop Activities

- SIG On Front end Development Essential for IIIrd year students — Jan 24
- Workshop on MATLAB for IIIrd year students — Apr 24
- Workshop Cum Training on Proteus VSM Software & 3D Printing for IInd year students — Apr 24
- Workshop on Create & Connect Applications with IoT for IInd year students — Apr 24
- Certification Course on Mastering IoT for IIIrd year students — May 24

Other Activity / FDP/STTP

- FDP from eYantra on Introduction of Robotics — Feb 24
- FDP On Circuit Design,Simulation & Hands on Practice in association with Proteus — March 24
- Participation in IIT / NIT Tech-fest if offline possible than only — Jan to June 24

Robotics Club

- eYantra workshop in association with IIT for ECE Students — Feb 24

Drone Club

- Participation in Drone Competition organized by IIT's/ NIT's, between — Feb to Apr 24

Project

- Major Project-Submission of abstract — Jan 24
- 1st Presentation of Project — Feb 24
- 2nd Presentation of Project — March 24
- Final Presentation of Project — Apr 24

(HoD) DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG. IIST

(Principal) Principal
Indore Institute of Science and Technology, Indore

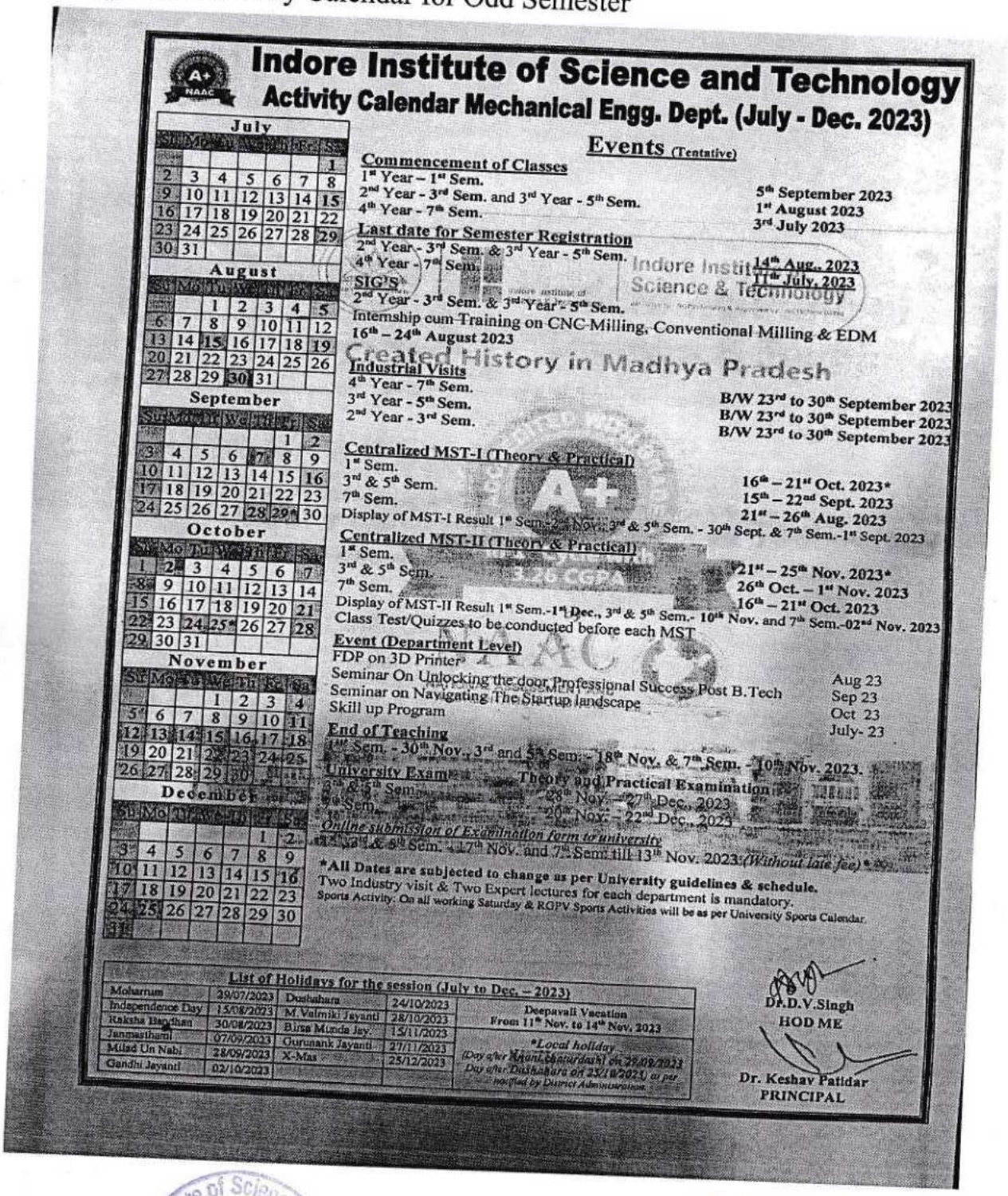
IQAC

Principal
Indore Institute of Science and Technology, Indore

Principal

2023-2024

Sample ME Activity Calendar for Odd Semester



Indore Institute of Science and Technology

Activity Calendar Mechanical Engg. Dept. (July - Dec. 2023)

July

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Events (Tentative)

Commencement of Classes
1st Year – 1st Sem. — 5th September 2023
2nd Year - 3rd Sem. and 3rd Year - 5th Sem. — 1st August 2023
4th Year - 7th Sem. — 3rd July 2023

Last date for Semester Registration
2nd Year - 3rd Sem. & 3rd Year - 5th Sem. — 14th Aug., 2023
4th Year - 7th Sem. — 11th July, 2023

SIG'S
2nd Year - 3rd Sem. & 3rd Year - 5th Sem.
Internship cum Training on CNC-Milling, Conventional Milling & EDM
16th – 24th August 2023

Industrial Visits
4th Year - 7th Sem. — B/W 23rd to 30th September 2023
3rd Year - 5th Sem. — B/W 23rd to 30th September 2023
2nd Year - 3rd Sem. — B/W 23rd to 30th September 2023

Centralized MST-I (Theory & Practical)
1st Sem. — 16th – 21st Oct. 2023*
3rd & 5th Sem. — 15th – 22nd Sept. 2023
7th Sem. — 21st – 26th Aug. 2023
Display of MST-I Result 1st Sem.-2nd Nov., 3rd & 5th Sem. - 30th Sept. & 7th Sem.-1st Sept. 2023

Centralized MST-II (Theory & Practical)
1st Sem. — 21st – 25th Nov. 2023*
3rd & 5th Sem. — 26th Oct. – 1st Nov. 2023
7th Sem. — 16th – 21st Oct. 2023
Display of MST-II Result 1st Sem.-1st Dec., 3rd & 5th Sem.- 10th Nov. and 7th Sem.-02nd Nov. 2023
Class Test/Quizzes to be conducted before each MST

Event (Department Level)
FDP on 3D Printer — Aug 23
Seminar On Unlocking the door Professional Success Post B.Tech — Sep 23
Seminar on Navigating The Startup landscape — Oct 23
Skill up Program — July- 23

End of Teaching
1st Sem. - 30th Nov., 3rd and 5th Sem. - 18th Nov. & 7th Sem. - 10th Nov. 2023.

University Exam*
Theory and Practical Examination
3rd & 5th Sem. — 28th Nov. - 27th Dec. 2023
7th Sem. — 20th Nov. - 22nd Dec. 2023
Online submission of Examination form to university
1st, 3rd & 5th Sem. - 17th Nov. and 7th Sem. till 13th Nov. 2023 *(Without late fee)*

*All Dates are subjected to change as per University guidelines & schedule.
Two Industry visit & Two Expert lectures for each department is mandatory.
Sports Activity: On all working Saturday & RGPV Sports Activities will be as per University Sports Calendar.

List of Holidays for the session (July to Dec. – 2023)

Moharrum	29/07/2023	Dushahara	24/10/2023	Deepavali Vacation From 11th Nov. to 14th Nov. 2023
Independence Day	15/08/2023	M.Valmiki Jayanti	28/10/2023	
Raksha Bandhan	30/08/2023	Birsa Munda Jay.	15/11/2023	*Local holiday (Day after Maan chaturdashi on 27.09.2023 Day after Dushahara on 25/10/2023 as per notified by District Administration)
Janmasthami	07/09/2023	Gurunank Jayanti	27/11/2023	
Milad Un Nabi	28/09/2023	X-Mas	25/12/2023	
Gandhi Jayanti	02/10/2023			

Dr.D.V.Singh
HOD ME

Dr. Keshav Patidar
PRINCIPAL

INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION

OFFLINE SUBJECTS ALLOTMENT FOR THE ODD SEMESTER ACADAMIC YEAR 2023-24

Sr.No	Faculty Name	Subjects /Subject Code	Section	Year	Theory	Practical	Projects/ Other	Lab Incharge	Coordinator
1	Dr. Keshav Patidar	BEEE	A-2	I	4	4	0	-	Principal, IIST
		Total		8	4	4	0		
2	Mr.Ankit Kumar Jain	Network Analysis	EC-1	II	4	4	0	-	HOD, ARIIA, NIRF, NBA & NAAC Coordinator
		EMT	EC-1	III	4	0	0		
		Total		12	8	4	0		
3	Mr. Devendra Singh Mandloi	Digital Communication	EC-1	III	4	4	0	EMI Lab Ground Floor C block	Class Coordinator EC IV Year, Industry Training/ Tour & Placement Coordinator
		EMI	EC-1	II	4	0	0		
		EMI Lab	EC-1	II	0	4	0		
		Total		16	8	8	0		
4	Mr. Shravan Namdeo	CNTL	EC-1	III	4	4	0	CNTL Lab First Floor C Block	Examination Coordinator, Time Table Coordinator and Alumni Coordinator
		BEEE	A-4	I	4	4	0		
		Total		16	8	8	0		
5	Mr. Nitin Chouhan	Digital System Design	EC	II	4	2	0	Digital Lab C Block First Floor	Social Media, Code Chef Coordinator
		Digital System	IT	II	3	4	0		
		Total		13	7	6	0		
6	Dr. Mukesh Patidar	Microprocessor & Its Application	EC-1	III	4	4	0	Microprocessor Lab First Floor Computer Center	NPTEL / MOOC Coordinator and Course File Coordinator
		Electronic Devices	EC	II	4	0	0		
		Total		12	8	4	0		

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Various Type of Coordinator at Department level -Sample from ECE

7	Mr. Pranav Pranajpe	Microwave Engineering	EC-1	IV	4	4	0	Microwave Lab First Floor A Block	Skill Rack Coordinator, Drone Cub Coordinator and Students Participation and Achievement Coordinator
		Digital System	CS-1	II	3	4	0		
		Total		15	7	8	0		
8	Mr. Ashutosh Kashiv	BEEE	A-1	I	4	4	0	BEEE Lab Ground Floor	First Year Coordinator
		BEEE	A-3	I	4	4	0		
		BEEE Lab	A-2	I	0	4	0		
		Total		20	8	12	0		
9	Mr. Ankit Muley	Internship	EC	II	0	0	1	Project Lab	Robotics Club Coordinator & Major Project Coordinator
		MATLAB	EC	III	0	4	0		
		Major Project -I	EC	IV	0	0	4		
		Total		9	0	4	5		
10	Ms.Sneha Nagar	Digital System	CS-2	II	3	4	0	IoT Lab	IoT Coordinator
		Digital system	CS-3	II	3	4	0		
		Electronic Devices	EC	II	0	4	0		
		Total		18	6	12	0		
11	Mr. Navanit Palrecha	Open Elective - IoT	EC	IV	4	4	0	eYantra Lab	Class coordinator EC-II[nd] Year
		Minor Project	EC-1	III	0	0	4		
		Total		12	4	4	4		
12	Ms. Arpita Tiwari	Internship	EC	III/IV	0	0	3	Digital Comm. Lab C block	Class coordinator EC-III[rd] Yea
		Major Project	EC-1	IV	0	0	4		
		Total		7	0	0	7		
	Mr. Rupesh Dutta	VLSI Design	EC	IV	4	4	0	Optical Lab First Floor A Block	Faculty Achievemen Coordinato
		Major Project	EC-1	IV	0	0	4		
		Total		12	4	4	4		

DEPARTMENT OF ELEX. & COMM. ENGG. IIST

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Various Type of Coordinator at Department level -Sample from CE Department

Indore Institute of Science & Technology, Indore
Department of Civil Engineering
Faculty Load Distribution - Session Jan-June, 2023

S. No.	Faculty Name	Subject Allotted	Subject Code	Sem	Teaching load L	T	P	Academic Total (hrs)	Add. responsibility
1	Mr. Niraj Soni	BC & EM	BT-204	II	3	1	4	9	HOD & Project Incharge
		RRS	CE-803C	VIII	1	0	0		
2	Ms. Poonam Bagora	WRE	CE-603	VI	4	0	0	11	IV Coordinator & Syndicate Incharge for 23 Students (S No. 1-23). NPTEL Mentor
		RRS	CE-803C	VIII	2	0	0		
		CT	CE-402	IV	2	1	2		
3	Mr. Shashank Agrawal	BC & EM	BT-204	II	3	1	4	18	Ist Yr Syndicate I/C (39 Students), Time Table Coordinator
		EQRS LAB	CE-804	VIII	0	0	2		
		BC & EM	BT-204	II	3	1	4		
4	Mr. Ishanya Joshi	BC & EM	BT-204	II	3	1	4	13	Syndicate of 1st year students & NAAC Coordinator Placement Incharge.
		EG & RS	CE-405	IV	3	0	2		
5	Mr Tridev Pawar	SA-I	CE-403	IV	3	1	2	16	II year Coordinator & II Year Syndicate Incharge 15 Students (16-30)
		RCC-I	CE-601	VI	2	1	2		
		DSS	CE-801	VIII	2	1	2		
6	Ms. Shanu Sharma	EIA	CE-604C	VI	4	0	0	12	III Year Coordinator & III Year Syndicate Incharge for 15 students(S No 1-15). Alumni Coordinator.
		FE	CE-802	VIII	3	1	0		
		EEE	CE-401	IV	3	1	0		
7	Mr Yash Hardiya	NDT LAB	CE-606	VI	0	0	3	3	
8	Mr Mahaveer Dangi	TE-I	CE-404	IV	3	1	2	11	Syndicate Incharge for 23 students (S No. 24-47),Exam Control Room Member (PI).
		EE-I	CE-602	VI	2	1	2		
9	Mr. Manish Kumar Nimoriya	SOFTWARE LAB	CE-406	IV	0	0	2	2	Project Coordinator
10	Mr. Neetesh Pareek	ASL	CE-605	VI	0	0	2	6	
		MAJOR PROJECT-II	CE-805	VIII	0	0	4		
11	Mr. Neeraj Rajput	SOFTWARE LAB	CE-406	IV	0	0	2	6	Project Coordinator
		MAJOR PROJECT-II	CE-805	VIII	0	0	4		
12	Mr. Shailendra singh	MINOR PROJECT-II	CE-608	VI	0	0	4	7	
13	Mr. Anshul Pandey	NDT LAB	CE-606	VI	0	0	3	5	
		EQRS LAB	CE-804	VIII	0	0	2		
14	Mr Prashant Dubey	ASL	CE-605	VI	0	0	2	6	
		MAJOR PROJECT-II	CE-805	VIII	0	0	4		

Timetable I/C

Dr. Niraj Soni
H.O.D

Dr. Keshav Pahdia
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Various Type of Coordinator at Department level -Sample from ESH Department

INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY, INDORE
DEPARTMENT OF ENGINEERING SCIENCE AND HUMANITIES(ESH)
Coordinators for the session 2023-24

S. No.	Name of faculty	Coordinator	Signature
1	Dr.Namrata Kaushal	Dean/HOD/Inter department Coordinator	
2	Dr.Parimeeta Chanchani	Chemistry Lab Coordinator	
3	Dr. Irfan Mansuri	Physics Lab Coordinator	
4	Dr. Neena Thacker	Language Lab Coordinator	
5	Mr. Gopal Yadav	Website Coordinator	
6	Dr. Preeti Dixit	Activity Coordinator	
7	Ms Akanksha Agrawal	ERP Coordinator	
8	Dr.Namrata Kaushal	Library Coordinator	
9	Dr. Irfan Mansuri	NAAC Coordinator	
10	Dr. Neena Thacker	Class Coordinator	
11	Mr. Gopal Yadav	Class Coordinator	
12	Dr. Preeti Dixit	Class Coordinator	
13	Ms. Rupali Tiwari	Class Coordinator	
14	Dr. Amit Jain	Class Coordinator	
15	Dr. Irfan Mansuri	Class Coordinator	
16	Mr.Dhannanjay Joshi	Class Coordinator	
17	Dr.Namrata Kaushal	Exam Coordinator	
18	Dr.Parimeet Chanchani	Social Media Coordinator	
19	Dr.Parimeet Chanchani	Expert Lecture Coordinator	
20	Ms Akanksha Agrawal	NPTEL / MOOC Course Coordinator	
21	Ms. Rupali Tiwari	edX / Courera Coordinator	
22	Dr. Amit Jain	Rural Outreach Coordinator	
23	Mr. Gopal Yadav	NSS Coordinator	
24	Dr.Parimeeta Chanchani	Cultural Coordinator	
25	Dr. Irfan Mansuri	Sports Coordinator	
26	Dr.Namrata Kaushal	Internship Coordinator	
27	Dr. Amit Jain	NBA Coordinator	
28	Dr. Neena Thacker	PDP Coordinator	
29	Ms. Rupali Tiwari	NDLI Club Coordinator	
30	Dr. Preeti Dixit	Admission Coordinator	

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31	Mr.Dhannanjay Joshi	Admission Coordinator	
32	Ms Akanksha Agrawal	Time table Coordinator	
33	Dr. Neena Thacker	Admission Coordinator	

Signature of HOD

Signature of Principal

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Indore Institute of Science and Technology, Indore
Principal

Step V- Competency/ experience-based allotment of subjects to various faculty members of the dept -Prepare Load Chart, Time Table and allocation of Syndicate Inc

Sample Load Chart from ECE

INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION

OFFLINE SUBJECTS ALLOTMENT FOR THE ODD SEMESTER ACADAMIC YEAR 2023-24

Sr.No	Faculty Name	Subjects /Subject Code	Section	Year	Theory	Practical	Projects/ Other	Lab Incharge	Coordinator
1	Dr. Keshav Patidar	BEEE	A-2	I	4	4	0	-	Principal, IIST
		Total		8	4	4	0		
2	Mr.Ankit Kumar Jain	Network Analysis	EC-I	II	4	4	0	-	HOD, ARIIA, NIRF, NBA & NAAC Coordinator
		EMT	EC-I	III	4	0	0		
		Total		12	8	4	0		
3	Mr. Devendra Singh Mandloi	Digital Communication	EC-I	III	4	4	0	EMI Lab Ground Floor C block	Class Coordinator EC IV Year, Industry Training/ Tour & Placement Coordinator
		EMI	EC-I	II	4	0	0		
		EMI Lab	EC-I	II	0	4	0		
		Total		16	8	8	0		
4	Mr. Shravan Namdeo	CNTL	EC-I	III	4	4	0	CNTL Lab First Floor C Block	Examination Coordinator, Time Table Coordinator and Alumni Coordinator
		BEEE	A-4	I	4	4	0		
		Total		16	8	8	0		
5	Mr. Nitin Chouhan	Digital System Design	EC	II	4	2	0	Digital Lab C Block First Floor	Social Media, Code Chef Coordinator
		Digital System	IT	II	3	4	0		
		Total		13	7	6	0		
6	Dr. Mukesh Patidar	Microprocessor & Its Application	EC-I	III	4	4	0	Microprocessor Lab First Floor Computer Center	NPTEL / MOOC Coordinator and Course File Coordinator
		Electronic Devices	EC	II	4	0	0		
		Total		12	8	4	0		

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7	Mr. Pranav Pranajpe	Microwave Engineering	EC-1	IV	4	4	0	Microwave Lab First Floor A Block	Skill Rack Coordinator, Drone Cub Coordinator and Students Participation and Achievement Coordinator
		Digital System	CS-1	II	3	4	0		
		Total		**15**	**7**	**8**	**0**		
8	Mr. Ashutosh Kashiv	BEEE	A-1	I	4	4	0	BEEE Lab Ground Floor	First Year Coordinator
		BEEE	A-3	I	4	4	0		
		BEEE Lab	A-2	I	0	4	0		
		Total		**20**	**8**	**12**	**0**		
9	Mr. Ankit Muley	Internship	EC	II	0	0	1	Project Lab	Robotics Club Coordinator & Major Project Coordinator
		MATLAB	EC	III	0	4	0		
		Major Project -1	EC	IV	0	0	4		
		Total		**9**	**0**	**4**	**5**		
10	Ms.Sneha Nagar	Digital System	CS-2	II	3	4	0	IoT Lab	IoT Coordinator
		Digital system	CS-3	II	3	4	0		
		Electronic Devices	EC	II	0	4	0		
		Total		**18**	**6**	**12**	**0**		
11	Mr. Navanit Palrecha	Open Elective - IoT	EC	IV	4	4	0	eYantra Lab	Class coordinator EC-II[nd] Year
		Minor Project	EC-1	III	0	0	4		
		Total		**12**	**4**	**4**	**4**		
12	Ms. Arpita Tiwari	Internship	EC	III/IV	0	0	3	Digital Comm. Lab C block	Class coordinator EC-III[rd] Yea
		Major Project	EC-1	IV	0	0	4		
		Total		**7**	**0**	**0**	**7**		
	Mr. Rupesh Dutta	VLSI Design	EC	IV	4	4	0	Optical Lab First Floor A Block	Faculty Achievemen Coordinato
		Major Project	EC-1	IV	0	0	4		
		Total		**12**	**4**	**4**	**4**		

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Sample Load Chart from ME

DEPARTMENT OF MECHANICAL ENGINEERING
TEACHING LOAD
JAN JUNE 2024

Dr. Dheerendra Vikram Singh	BME	8
	SL	2
Dr. Shriram Dravid	MCD	7
	I & C	6
Mr. Akashdeep Gupta	EG	6
	EG	6
Mr. Amit Chauhan	Turbo	5
	EEE	4
Mr. Ravi Verma	BME	8
	CAD LAB	2
Mr. Sunil Soni	AE	6
	RET	5
Mr. Lokesh Aurangabadkar	EG	6
	EG	6
Mr. Naman Gandhi	TEGD	7
	FM	6
Mr. Shantanu roy	WS	16
Mr. Suveer Dubey	BME	8
	BME	8
Mr. Navdeep Jain	EMC	6
	MT	6
Mr. Ashish Soni	SIM & MOD LAB	4
	MAJOR PROJECT	10
Mr.Yogesh Pawar	SIM & MOD LAB	4
	MAJOR PROJECT	10
Mr.Vipin Patel	RAC	8
	TOM	6

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Sample Load Chart from CE

Indore Institute of Science & Technology, Indore
Department of Civil Engineering
Faculty Load Distribution - Session Jan-June, 2023

S. No.	Faculty Name	Subject Allotted	Subject Code	Sem	Teaching load L	T	P	Academic Total (hrs)	Add. responsibility
1	Mr. Niraj Soni	BC & EM	BT-204	II	3	1	4	9	HOD & Project Incharge
		RRS	CE-803C	VIII	1	0	0		
2	Ms. Poonam Bagora	WRE	CE-603	VI	4	0	0	11	IV Coordinator & Syndicate Incharge for 23 Students (S No. 1-23). NPTEL Mentor
		RRS	CE-803C	VIII	2	0	0		
		CT	CE-402	IV	2	1	2		
3	Mr. Shashank Agrawal	BC & EM	BT-204	II	3	1	4	18	Ist Yr Syndicate I/C (39 Students), Time Table Coordinator
		EQRS LAB	CE-804	VIII	0	0	2		
		BC & EM	BT-204	II	3	1	4		
4	Mr. Ishaniya Joshi	BC & EM	BT-204	II	3	1	4	13	Syndicate of 1st year students & NAAC Coordinator Placement Incharge
		EG & RS	CE-405	IV	3	0	2		
5	Mr Tridev Pawar	SA-I	CE-403	IV	3	1	2	16	II year Coordinator & II Year Syndicate Incharge 15 Students (16-30)
		RCC-I	CE-601	VI	2	1	2		
		DSS	CE-801	VIII	2	1	2		
6	Ms. Shano Sharma	EIA	CE-604C	VI	4	0	0	12	III Year Coordinator & III Year Syndicate Incharge for 15 students(S No 1-15), Alumni Coordinator.
		FE	CE-802	VIII	3	1	0		
		EEE	CE-401	IV	3	1	0		
7	Mr Yash Hardiya	NDT LAB	CE-606	VI	0	0	3	3	
8	Mr Mahaveer Dangi	TE-I	CE-404	IV	3	1	2	11	Syndicate Incharge for 23 students (S No. 24-47),Exam Control Room Member (PI).
		EE-I	CE-602	VI	2	1	2		
9	Mr. Manish Kumar Nimoriya	SOFTWARE LAB	CE-406	IV	0	0	2	2	Project Coordinator
10	Mr. Neenish Pareek	ASL	CE-605	VI	0	0	2	6	
		MAJOR PROJECT-II	CE-805	VIII	0	0	4		
11	Mr. Neeraj Rajput	SOFTWARE LAB	CE-406	IV	0	0	2	6	Project Coordinator
		MAJOR PROJECT-II	CE-805	VIII	0	0	4		
12	Mr. Shailendra singh	MINOR PROJECT-II	CE-608	VI	0	0	4	7	
13	Mr. Anshul Pandey	NDT LAB	CE-606	VI	0	0	3	5	
		EQRS LAB	CE-804	VIII	0	0	2		
14	Mr Prashant Dubey	ASL	CE-605	VI	0	0	2	6	
		MAJOR PROJECT-II	CE-805	VIII	0	0	4		

Timetable I/C

Dr. Niraj Soni
H.O.D

Dr. Keshav Pahdia
PRINCIPAL

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Sample Timetable from CE

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

TIME-TABLE: ACADMIC YEAR: 2023 - 24 (EVEN SEMESTER)

CLASS - OFFLINE | Class Coordinator: Mr. Tridev Panwar | EFFECTIVE FROM : 26 / 02 / 2024

Class - CE- II Year

TIME / DAY	9:30 to 10:20	10:20 to 11:10	11:10 to 12:00	12:00 to 12:50	Lunch	1:30 to 2:20	2:20 to 3:10	03:00 to 3:50
MONDAY	CE406 P SL MKN		CE402 L CT PB	ES401 L EEE SSH		CE404 P TE MD		CE403 L SA-I TP
TUESDAY	CE405 L EG & RS IJ	CE404 T TE MD	CE405 P EG & RS IJ			CE403 P SA-I TP		ES401 T EEE SSH
WEDNESDAY	CE405 L EG & RS IJ	CE404 L TE MD	ES401 L EEE SSH	CE402 L CT PB		CE402 P CT PB		APTITUDE AB
THURSDAY	CE406 P SL MR		CE402 T CT PB	CE403 L SA-I TP		CE404 L TE MD	PDP JS	APTITUDE AB
FRIDAY	CE404 L TE MD	CE405 L EG & RS IJ	ES401 L EEE SSH	CE403 L SA-I TP		LIBRARY	PDP JS	CE403 T SA-I TP
SATURDAY								

Sub. Code	Subject	Name of Faculty	Room No.	Lab Technician
CE-401	Energy and Environmental Engineering	Ms. Shanu Sharma	R-5	
CE-402	Construction Technology	Ms. Poonam Bagora	R-5	Mr. Manish Prahlad/Mr. Ratnakar Likhitkar
CE-403	Structural Analysis-I	Mr. Tridev Panwar	R-5	Mr. Manish Prahlad/Mr. Ratnakar Likhitkar
CE-404	Transportation Engineering	Mr. Mahaveer Dangi	R-5	Mr. Manish Prahlad/Mr. Ratnakar Likhitkar
CE-405	Engineering Geology & Remote Sensing	Mr. Ishaya Joshi	R-5	Mr. Manish Prahlad/Mr. Ratnakar Likhitkar
CE-406	Software Lab	Mr. Manish Kumar Narsaiya	Computer Lab	
	SIG	Mr. Neeraj Rajput	Computer Lab	
CE	Aptitude	Mr. Abhishek Bhatnagar		
CE	PDP	Ms. Jaya Singh		

for Tshanu

Timetable I/C | HOD,CED | Principal

DEPARTMENT CIVIL ENGG. IIST

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Indore Institute of Science and Technology, Indore
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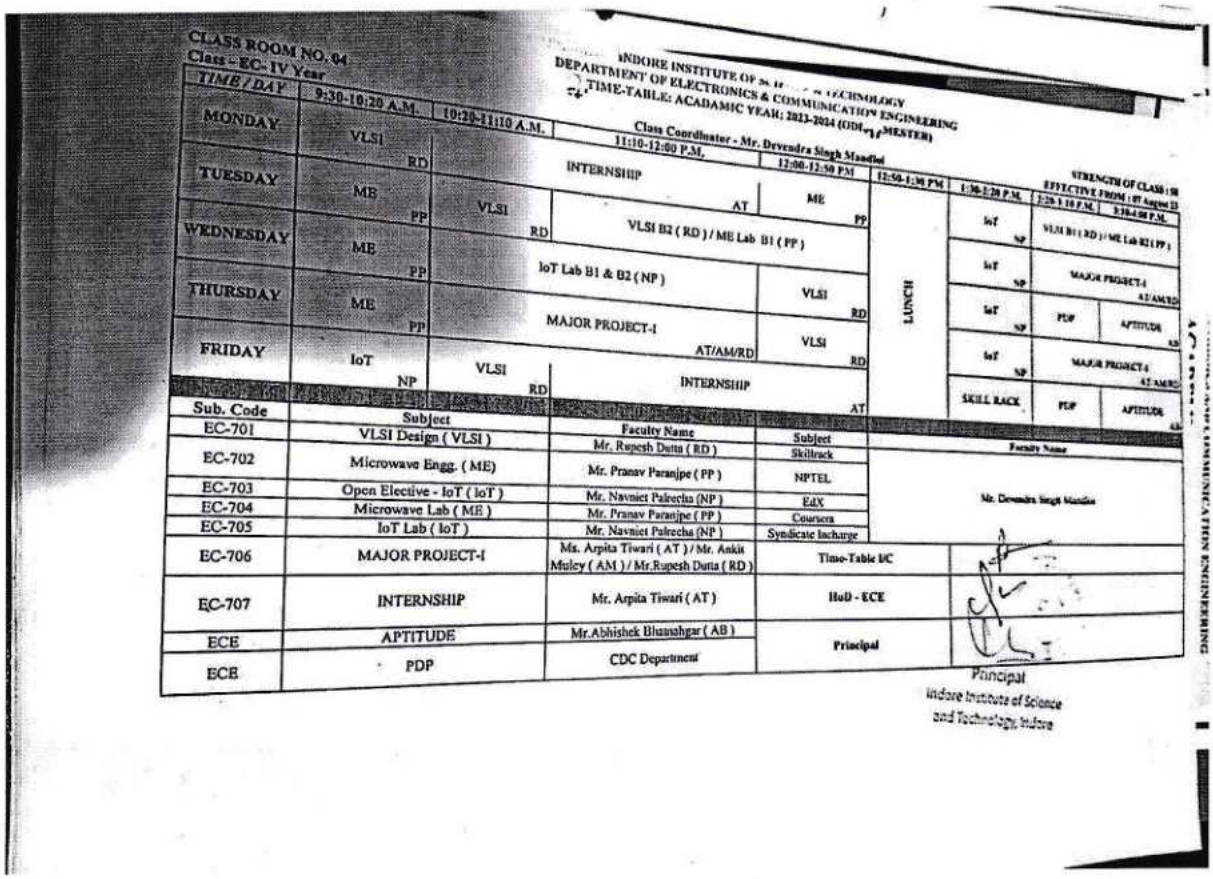
Sample Timetable from ECE



CLASS ROOM NO. 04
Class - EC- IV Year

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
TIME-TABLE: ACADAMIC YEAR: 2023-2024 (ODD SEMESTER)
Class Coordinator - Mr. Devendra Singh Mandloi

TIME / DAY	9:30-10:20 A.M.	10:20-11:10 A.M.	11:10-12:00 P.M.	12:00-12:50 PM	12:50-1:30 PM	1:30-2:20 P.M.	2:20-3:10 P.M.	3:10-4:00 P.M.
MONDAY	VLSI RD	INTERNSHIP AT		ME PP	LUNCH	IoT NP	VLSI B1 (RD) / ME Lab B2 (PP)	
TUESDAY	ME PP	VLSI RD	VLSI B2 (RD) / ME Lab B1 (PP)			IoT NP	MAJOR PROJECT-I AT/AM/RD	
WEDNESDAY	ME PP	IoT Lab B1 & B2 (NP)		VLSI RD		IoT NP	PDP	APTITUDE
THURSDAY	ME PP	MAJOR PROJECT-I AT/AM/RD		VLSI RD		IoT NP	MAJOR PROJECT-I AT/AM/RD	
FRIDAY	IoT NP	VLSI RD	INTERNSHIP AT			SKILL RACK	PDP	APTITUDE

STRENGTH OF CLASS : 58
EFFECTIVE FROM : 07 August 23

Sub. Code	Subject	Faculty Name	Subject
EC-701	VLSI Design (VLSI)	Mr. Rupesh Dutta (RD)	Skilltrack
EC-702	Microwave Engg. (ME)	Mr. Pranav Paranjpe (PP)	NPTEL
EC-703	Open Elective - IoT (IoT)	Mr. Navniet Palrecha (NP)	EdX
EC-704	Microwave Lab (ME)	Mr. Pranav Paranjpe (PP)	Coursera
EC-705	IoT Lab (IoT)	Mr. Navniet Palrecha (NP)	Syndicate Incharge
EC-706	MAJOR PROJECT-I	Ms. Arpita Tiwari (AT) / Mr. Ankit Mulay (AM) / Mr.Rupesh Dutta (RD)	Time-Table I/C
EC-707	INTERNSHIP	Mr. Arpita Tiwari (AT)	HoD - ECE
ECE	APTITUDE	Mr.Abhishek Bhanahgar (AB)	Principal
ECE	PDP	CDC Department	

Faculty Name: Mr. Devendra Singh Mandloi

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Sample Timetable from ME

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
TIME-TABLE: ACADEMIC YEAR: 2023 - 24 (ODD SEMESTER)
ME III SEM
Class Coordinator
Mr.Umesh Badode

ROOM NO. - 12

EFFECTIVE FROM : 07/08/2023

TIME / DAY	9.30-10.20	10.20-11.10	11.10-12.00	12.00-12.50	12.50-1.30	1.30-2.20	2.20-3.10	3.10-4.00
MONDAY	L TD AC	L MIII GY	L MP NJ	L SOM SRD	BREAK	EOI I NG	L MT LAB	SS
TUESDAY	L SOM SRD	L MIII GY	L SOM LAB	NJ		L MP NJ	L TD AC	L MT SS
WEDNESDAY	L MP NJ	L MIII GY	L SOM SRD	EOI I NG		L MT SS	PDP	L TD AC
THURSDAY	L SOM SRD	L MIII GY	P MP LAB	NJ		L MT SS	L TD AC	L MP NJ
FRIDAY	L TEGD LAB	AC	PDP	LIBRARY		L MT SS	APTITUDE	SPORTS
SATURDAY								

Sub. Code	Subject	Name of Faculty
BT 301	M-III	Mr. Gopal Yadav
ME 302	Thermochnamics	Mr. Amit Chauhan
ME 303	Material Technology	Mr.Sunil Soni
ME 304	Strength of Materials	Dr.Shriram Dravid
ME 305	Manufacturing Process	Mr. Navdeep Jain
ME 306	TEGD Lab	Mr. Amit Chauhan
BT 307	Evaluation of Internship - I	NG
	PDP	Ms.Shweta Bahrani
	APTITUDE	Mr. Abhishek Bhatnagar

Mr.Lokesh Aurangabadkar
TIME TABLE COORDINATOR

Mr.Lokesh Aurangabadkar
HOD I/C

Dr.Kishor Patidar
PRINCIPAL

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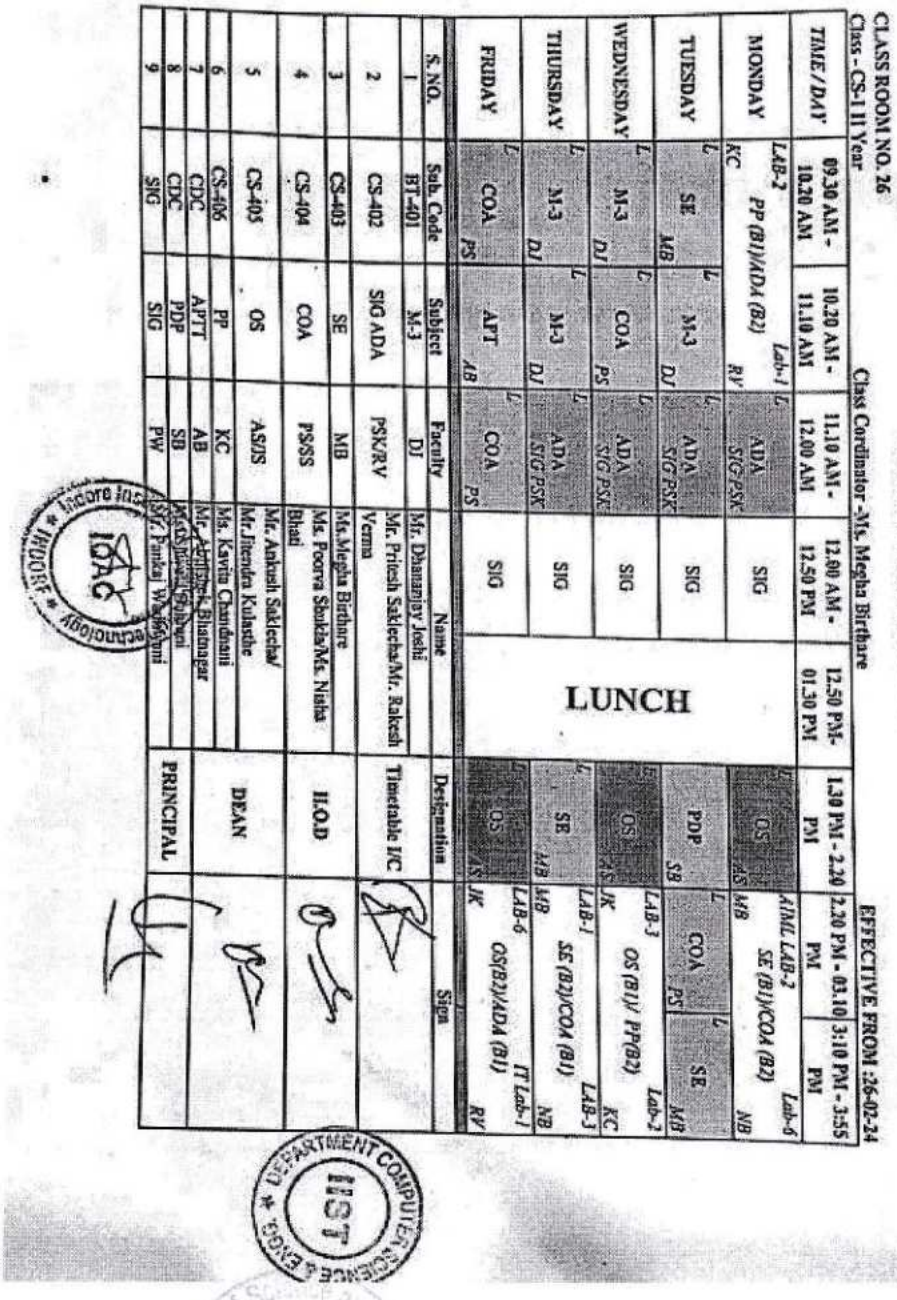
Sample Time table from CSE



INDORE INSTITUTE OF SCIENCE & TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
TIME TABLE
SESSION: Jan - June 2024

CLASS ROOM NO. 26 — Class Coordinator -Ms. Megha Birthare — EFFECTIVE FROM :26-02-24
Class - CS-1 II Year

TIME/DAY	09.30 AM - 10.20 AM	10.20 AM - 11.10 AM	11.10 AM - 12.00 AM	12.00 AM - 12.50 PM	12.50 PM - 01.30 PM	1.30 PM - 2.20 PM	2.20 PM - 03.10 PM	3:10 PM - 3:55 PM
MONDAY	LAB-2 PP (B1)/ADA (B2) KC	Lab-1 RV	L ADA SIG PSK	SIG	LUNCH	L OS AS	L COA PS	L SE MB
TUESDAY	L SE MB	L M-3 DJ	L ADA SIG PSK	SIG		L PDP SB	L COA PS	L SE MB
WEDNESDAY	L M-3 DJ	L COA PS	L ADA SIG PSK	SIG		L OS AS	LAB-1 JK	LAB-3 KC
THURSDAY	L M-3 DJ	L M-3 DJ	L ADA SIG PSK	SIG		L SE MB	LAB-6 MB	IT Lab-1 NB
FRIDAY	L COA PS	L APT AB	L COA PS	SIG		L OS AS	LAB-2 OS(B2)/ADA (B1) JK	LAB-4 RV

AIML LAB-2 SE (B1)/COA (B2) NB — Lab-6
LAB-3 OS (B1)/ PP(B2) — Lab-2
LAB-1 SE (B2)/COA (B1) — LAB-3
LAB-6 OS(B2)/ADA (B1) — IT Lab-1

S.NO.	Sub. Code	Subject	Faculty	Name	Designation	Signature
1	BT-401	M-3	DJ	Mr. Dhananjay Joshi		
2	CS-402	SIG ADA	PSK/RV	Mr. Pritesh Saklecha/Mr. Rakesh Verma	Timetable I/C	
3	CS-403	SE	MB	Ms.Megha Birthare		
4	CS-404	COA	PS/SS	Ms. Poorva Shukla/Ms. Nisha Bhati	H.O.D	
5	CS-405	OS	AS/JS	Mr. Aakash Saklecha/ Mr.Jitendra Kulashe	DEAN	
6	CS-406	PP	KC	Ms. Kavita Chandnani		
7	CDC	APTT	AB	Mr. Abhishek Bhatnagar		
8	CDC	PDP	SB	Ms. Nisha Bhati	PRINCIPAL	
9	SIG	SIG	PW	Mr. Pankaj Wadhwani		

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Sample Syndicate In charge list from ECE

INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SYNDICATE LIST (BATCH 2021-25)

S.No	Enrollment	Student Name	Syndicate Incharge
1	0818EC211001	AAYUSH OSARIYA	
2	0818EC211002	ABHAY TIWARI	
3	0818EC211003	ABHIJEET CHOUHAN	
4	0818EC211004	ADARSH SHARMA	
5	0818EC211005	ADITYA SHARMA	
6	0818EC211006	AJAY SHARMA	
7	0818EC211007	AMISHA SISODIYA	
8	0818EC211008	ANJANA SAHU	
9	0818EC211009	ANKIT MALVIYA	
10	0818EC211010	ANKUSH YADAV	
11	0818EC211011	ANSHUL PATEL	
12	0818EC211012	ANUJ DAYMA	
13	0818EC211013	ANUJ PANCHAL	
14	0818EC211014	ANUSHKA KURIL	
15	0818EC211015	ASHIMA KURIL	
16	0818EC211016	ASHISH VISHVAKARMA	Mr. Shravan Namdeo
17	0818EC211018	AYUSH JADHAV	
18	0818EC211019	AYUSH RAGHUWANSHI	
19	0818EC211020	BHUMI CHOUHAN	
20	0818EC211021	DIGAMBER BARFA	
21	0818EC211022	DURGESH SUPARE	
22	0818EC211023	DURGESH TRIPATHI	
23	0818EC211024	HARI PRASAD MALVIYA	
24	0818EC211025	HARSH MALVIYA	
25	0818EC211026	HIMANSHI DODEJA	
26	0818EC211027	HOMESH BHARDWAJ	
27	0818EC211028	JAYDEEP SINGH JADON	
28	0818EC211029	KAPIL DETHLIYA	
29	0818EC211030	KARINA SISODIYA	
30	0818EC211031	KARTIK KANDHARI	
31	0818EC211032	KIRTI PATIDAR	
32	0818EC211033	KOMAL MEGHWAL	
33	0818EC211035	MAHIMA PAL	
34	0818EC211036	MANISHA	
35	0818EC211037	MANSI LASHKARI	
36	0818EC211038	MANSI TAMHANKAR	
37	0818EC211040	NAINA AHIRE	
38	0818EC211041	NISHITA SHINDHVE	
39	0818EC211043	PAWAN KUMAR	

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40	0818EC211045	PRIYANSHU JHA
41	0818EC211046	RAJVEER SINGH RAJPUT
42	0818EC211047	RAKSHA KALE
43	0818EC211048	ROHIT SAWNER
44	0818EC211049	RONIT CHOUDHARY
45	0818EC211050	ROUNAK GADWAL
46	0818EC211052	SANJANA SEN
47	0818EC211053	SANJEEVANI SINGH
48	0818EC211054	SATISH PATIDAR
49	0818EC211055	SHASHI YADAV
50	0818EC211056	SHIVAM RAY
51	0818EC211057	SHOBHIT PAWAR
52	0818EC211058	SUMIT GUPTA
53	0818EC211059	UDAY MALVIYA
54	0818EC211060	UTKARSH DUBEY
55	0818EC211061	VAIDIKA RATHORE
56	0818EC211062	VIJAY SAHU
57	0818EC211063	VINAY CHOUHAN
58	0818EC211064	VISHAL SOLANKI
59	0818EC211065	VIVEK LOWANSHI
60	0818EC211066	YOGANSHI SHARMA
61	0818CE211030	SHUBHAM SINGH
62	0818CE211034	VIJAY PAWAR

Mr. Nitin Chauhan
(Class Coordinator)

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
SYNDICATE LIST (BATCH 2022-26)

S.No	Name	Father	Syndicate Incharge
1	AADITYA PRAJAPATI	NANDKUMAR PRAJAPATI	
2	AASHIKA JAIN	NITIN JAIN	
3	AAYUSH GID	PANDURANG JI GID	
4	ABHISHEK PARMAR	NANDLAL PARMAR	
5	AKSHAT AWASTHI	SANJAY AWASTHI	
6	ANSH SINGH	DINESH SINGH	
7	ANSHUL JAYASWAL	SUNIL JAYASWAL	
8	ANUJ DHAKARIYA	SUNIL	
9	ARUN RATHORE	RAMVARAN RATHORE	
10	ARYAN DAS BAIRAGI	RAMESH BAIRAGI	
11	ASHOK PETHARI	MAHESH PETHARI	
12	AYUSH MALVI	KAILASH MALVI	
13	BHAVESH ZERBADE	MANOHAR ZERBADE	
14	CHIRAG JAIN	RAJESH	
15	DEEPAK YADAV	RAMBADAN YADAV	
16	DEVANSH PAL	PRADEEP PAL	
17	HARSH VARDHAN JAISWAL	SANJAY JAISWAL	
18	HARSHITA MAHANT	NARENDRA MAHANT	
19	HARSHITA PATIDAR	JITENDRA PATIDAR	Dr. Mukesh Patidar (Class Coordinator)
20	HIMANSHU CHOUDHARY	SHIVJI CHOUDHARY	
21	KANIKA CHOUHAN	SOURABH	
22	MALVIKA SHARMA	KAPIL SHARMA	
23	MANAS BORANA	DHIRAJ BORANA	
24	MOHINI SHARMA	RAMSHARAN SHARMA	
25	PIYUSH KOUSHAL	MAHESH	
26	RAJU SARWA	BHERULAL	
27	RAJVEEN MUKATI	MANOJ MUKATI	
28	ROHIT PANCHAL	OMPRAKASH PANCHAL	
29	ROHIT RAJORIYA	MURARILAL RAJORIYA	
30	SHIVAM KOURAV	PRADEEP KOURAV	
31	SHIVANI AHIRWAR	SEETARAM AHIRWAR	
32	SONALI SINGH RAJAWAT	DHEERENDRA	
33	SUMIT PATEL	BASANT PATEL	
34	TUSHAR JAISWAL	JITENDRA JAISWAL	
35	VIKAS RATHOR	MADAN	
36	VISHAL DAS BAIRAGI	GOPAL DAS BAIRAGI	
37	VISHAL PATEL	MANOJ PATEL	
38	VIVEK RAGHUWANSHI	LAKHAN RAGHUWANSHI	
39	YASH PRAJAPATI	SANJAY	

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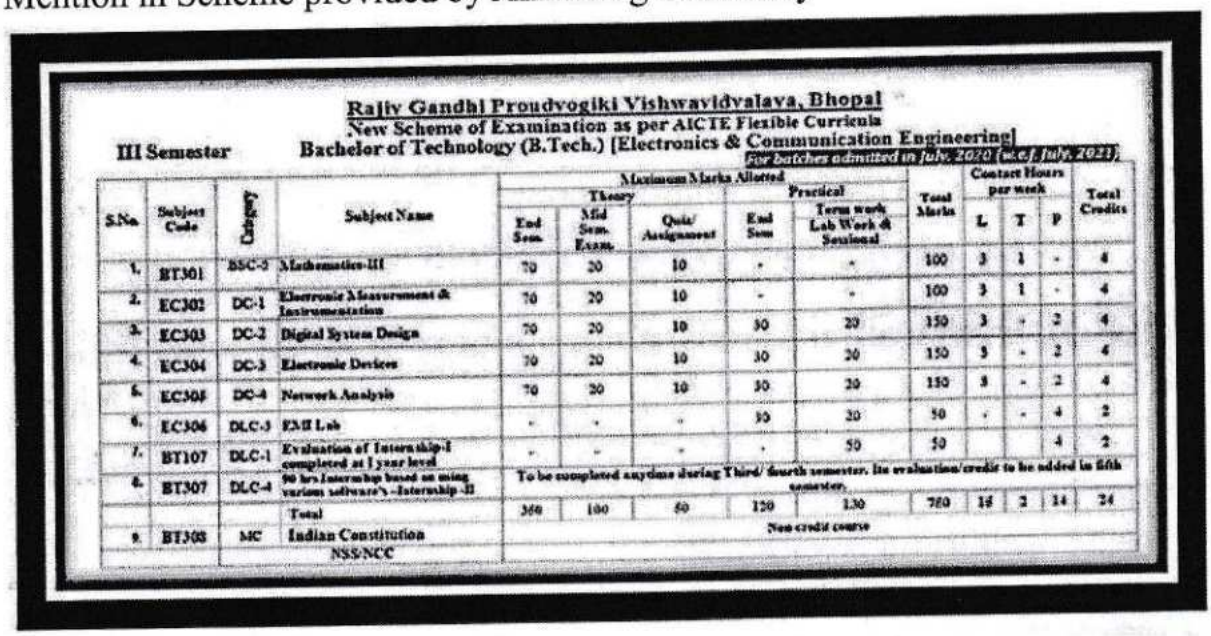
Step VII - Display Evaluation Scheme on Notice board.

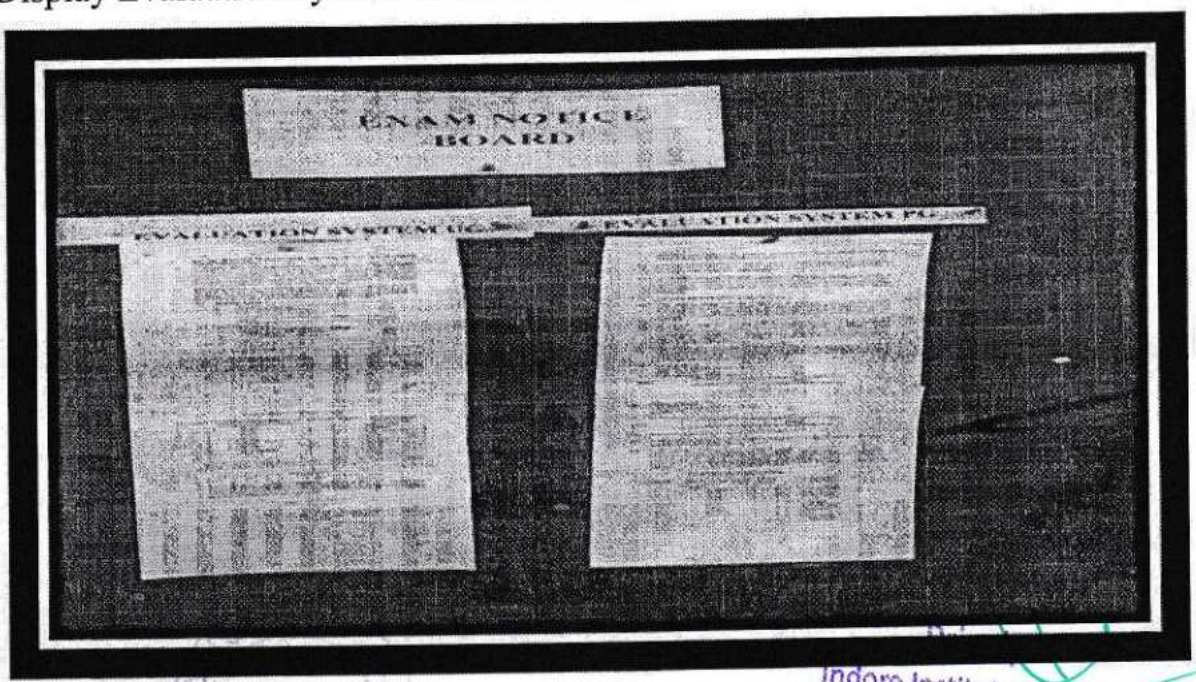
Mention in Scheme provided by Affiliating University



Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula
III Semester Bachelor of Technology (B.Tech.) [Electronics & Communication Engineering]
For batches admitted in July 2020 (w.e.f. July 2021)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted: Theory: End Sem.	Theory: Mid Sem. Exam.	Theory: Quiz/ Assignment	Practical: End Sem	Practical: Term work Lab Work & Sessional	Total Marks	Contact Hours per week: L	T	P	Total Credits
1.	BT301	BSC-3	Mathematics-III	70	20	10	-	-	100	3	1	-	4
2.	EC302	DC-1	Electronic Measurement & Instrumentation	70	20	10	-	-	100	3	1	-	4
3.	EC303	DC-2	Digital System Design	70	20	10	30	20	150	3	-	2	4
4.	EC304	DC-3	Electronic Devices	70	20	10	30	20	150	3	-	2	4
5.	EC305	DC-4	Network Analysis	70	20	10	30	20	150	3	-	2	4
6.	EC306	DLC-3	EM II Lab	-	-	-	30	20	50	-	-	4	2
7.	BT107	DLC-1	Evaluation of Internship-I completed at I year level	-	-	-	-	50	50			4	2
8.	BT307	DLC-4	90 hrs Internship based on using various software's -Internship-II	To be completed anytime during Third/ fourth semester. Its evaluation/credit to be added in fifth semester.									
			Total	350	100	50	120	130	700	15	2	14	24
9.	BT308	MC	Indian Constitution	Non credit course									
			NSS/NCC										

Display Evaluation System on Notice Board



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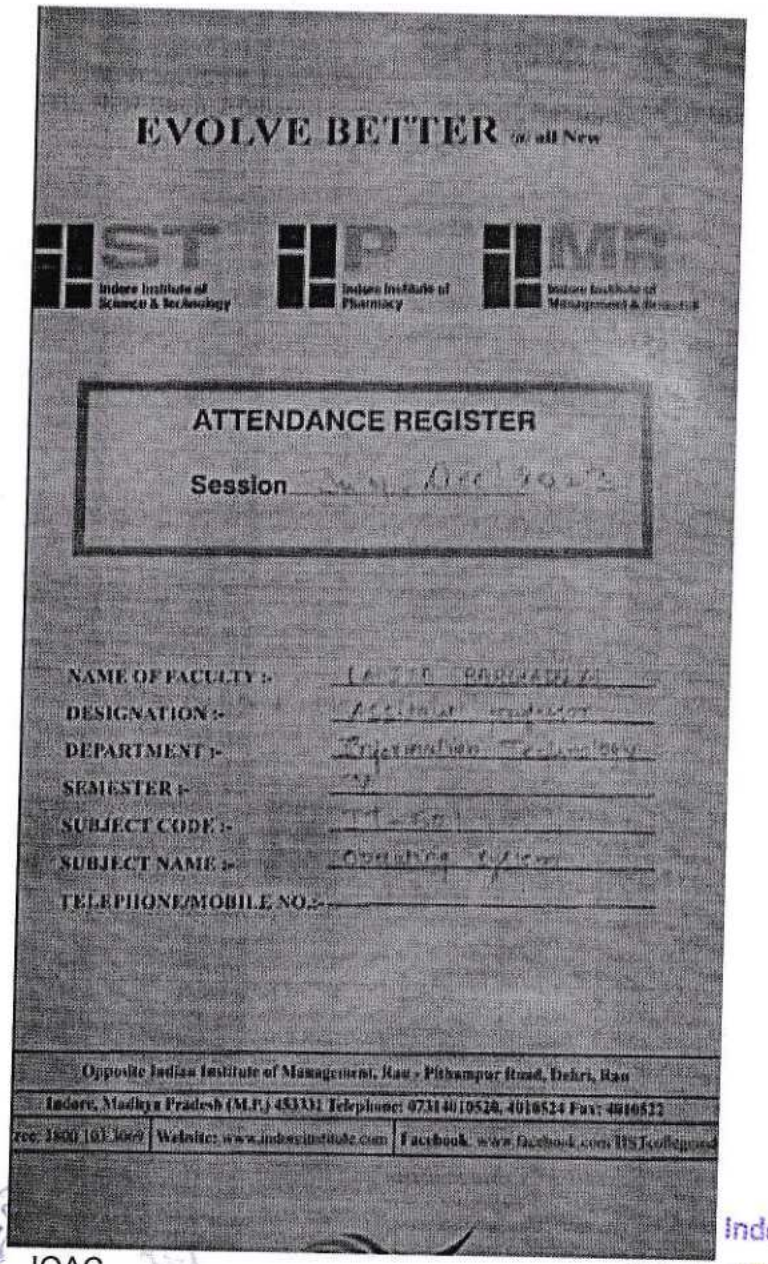
Step VIII- Regular conduct of lectures/,tutorials/ lab classes duly monitored by HOD/Dean/ Director on regular basis and prepare Attendance register and dairy daily by all faculties.

Sample Attendance Register, Dairy Daily and Lesson Plan from IT


EVOLVE BETTER to all New

ATTENDANCE REGISTER

Session

NAME OF FACULTY :-

DESIGNATION :-

DEPARTMENT :-

SEMESTER :-

SUBJECT CODE :-

SUBJECT NAME :-

TELEPHONE/MOBILE NO.:-

Opposite Indian Institute of Management, Rau - Pithampur Road, Dehri, Rau

Indore, Madhya Pradesh (M.P.) 453331 Telephone: 07314010520, 4010524 Fax: 4010522

Website: www.indoreinstitute.com Facebook: www.facebook.com/IISTcollegeind

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Time Table

Time Table

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
TIME TABLE
SESSION: July - Dec 2023

CLASS ROOM NO 23
Class - IT III Year
Class Cordinator - Ms. Lalita Bargadiya
EFFECTIVE FROM :07-08-2023

TIME / DAY	10.00 AM - 11.00 AM	11.00 AM - 11.50 AM	11.50 AM - 12.40 PM	12.40 PM - 1.30 PM	1.30 PM-2.10 PM	2.10 PM - 3.00 PM	3.00 PM - 3.50 PM	3.50 PM - 4.40 PM
MONDAY	L TOC PB	L CN AK	Full Stack-SIG Auditorium-II PB		LUNCH	CDC PDF	CDC APTI LS	L Java NB
TUESDAY	Lab-2/Lab-1 CN B1/ OS B2 AK LB		Full Stack-SIG Auditorium-II PB			L OS LB	L CN AK	L TOC PB
WEDNESDAY	Lab-2/Lab-1 CN B2/ OS B1 AK LB		Full Stack-SIG Auditorium-II PB			L OS LB	Lab-1/Lab-2 Advanced Java B1/Soft Skill B2 LM/RT	
THURSDAY	L TOC PB	L Advanced Java NB	Full Stack-SIG Auditorium-II PB			CDC PDF	L CN AK	L Java NB
FRIDAY	L Java NB	L TOC PB	Full Stack-SIG Auditorium-II PB			L OS LB	Lab-2/Lab-1 Advanced Java B2/ Soft Skill B1 LM/RT	
SATURDAY	MP Lab B1& B2 AIML LAB LB		CDC PDF	L CN AK		Library	CDC APTI AK	Sport

S. NO.	Sub. Code	Subject	Faculty
1	IT-501	OS	Lalita Bargadiya(LB)
2	IT502	CN	Mr. Amit Kanungo(AK)
3	IT 503	TOC	Mr. Pradeep Baniya(PB)
4	IT-504	JAVA Programming	Ms. [illegible](LM)
5	IT-505	Advanced Java Lab	Ms. [illegible](LM)
6	IT-504	Soft Skill	Ms. Rupali Tiwari(RT)
7	IT-508	Minor Project	Ms. Lalita Bargadiya(LB)

INFORMATION TECHNOLOGY DEPARTMENT IIST

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

COURSE DESCRIPTION

2.4.5.1	Gain knowledge of history of operating systems and understand design issues associated with operating systems.
2.4.5.2	Understand issues related to filesystem interfaces and implementation, disk management.
2.4.5.3	Identify the process management policies and analyze and compare scheduling of processes by CPU along with memory management.
2.4.5.4	Understand concepts of memory management (including virtual memory), I/O and concurrency control.
2.4.5.5	Understand network distributed and multiprocessing operating system.

THEORY COURSE OBJECTIVES

1. To understand the services provided by and the design of an operating system.
2. To understand the structure and organization of the file system.
3. To understand what a process is and how processes are scheduled and different approaches to memory management.
4. To understand what a process is and how processes are synchronized.
5. Students should understand the various types of operating system.

THEORY COURSE OUTCOMES

1. $CO_{245.1}$: **Explain** the role of operating system and its management policies and algorithm.
2. $CO_{245.2}$: **Identify** the process management policies and **analyze** and **compare** scheduling of processes by CPU along with memory management.
3. $CO_{245.3}$: **Identify** process synchronization and coordination handled by operating system
4. $CO_{245.4}$: **Identify** the I/O management and **analyze** and **compare** CPU concurrent processes problem.
5. $CO_{245.5}$: **Summarize** the introduction to network, multi-processor and distributed OS, and **Elaborate** on case studies for the same.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

COURSE PLAN / LESSON PLAN

S.No	Topics to be covered	Time	Ref	Teaching Aids
1.	UNIT 1. Introduction to Operating Systems	50 min	1,5	BB/PPT
2.	Different Types of OS	50 min	1,5	BB/PPT
3.	Characteristics and features of an O/S	50 min	1,5	BB/PPT
4.	Operating Systems Services: Utility Programs	50 min	1,5	BB/PPT
5.	System Calls.	50 min	1,5	BB/PPT
6.	UNIT 3. CPU Scheduling: Process Concept, Scheduling Concepts, Types of Schedulers	50 min	1,5	BB/PPT
7.	Process State Diagram, Scheduling Algorithms,	50 min	1,5	BB/PPT
8.	Algorithms Evaluation	50 min	1,5	BB/PPT
9.	System calls for Process Management	50 min	1,5	BB/PPT
10.	Multiple Processor Scheduling: Concept of Threads	50 min	1,5	BB/PPT
11.	Memory Management Techniques – Partitioning, Swapping	50 min	1,5	BB/PPT
12.	Liner, loader, Segmentation,	50 min	1,5	BB/PPT
13.	Paging,	50 min	1,5	BB/PPT
14.	Paged Segmentation	50 min	1,5	BB/PPT
15.	Comparison of Overlay	50 min	1,5	BB/PPT
16.	Dynamic Linking and Loading	50 min	1,5	BB/PPT
17.	Virtual Memory Concept	50 min	1,5	BB/PPT
18.	Implementation by Demand Paging etc.	50 min	1,5	BB/PPT
19.	UNIT 4. Principles and Programming, Input/Output Problems	50 min	1,5	BB/PPT
20.	Asynchronous Operations, Speed gap Format conversion	50 min	1,5	BB/PPT
21.	I/O Interfaces, Programme Controlled I/O	50 min	1,5	BB/PPT
22.	Interrupt Driven I/O, Concurrent I/O	50 min	1,5	BB/PPT
23.	Real and Virtual Concurrency, Mutual Exclusion, Synchronization	50 min	1,5	BB/PPT
24.	Inter- Process Communication	50 min	1,5	BB/PPT
25.	Critical Section Problem	50 min	1,5	BB/PPT
26.	Semaphores – Binary and Counting Semaphores	50 min	1,5	BB/PPT
27.	WAIT & SIGNAL Operations and their implementation	50 min	1,5	BB/PPT
28.	Deadlocks: Deadlock Problems	50 min	1,5	BB/PPT
29.	Characterization, Prevention	50 min	2,3	BB/PPT
30.	Avoidance, Recovery	50 min	2,3	BB/PPT
31.	UNIT 2. File Systems: File Concept, User's and System Programmer's view of File System	50 min	2,3	BB/PPT

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

32.	Disk Organization, Tape Organization	50 min	2,3	BB/PPT
33.	Different Modules of a File System, Disk Space	50 min	2,3	BB/PPT
34.	Allocation Methods – Contiguous, Linked, Indexed	50 min	2,3	BB/PPT
35.	Directory Structures, File Protection	50 min	2,3	BB/PPT
36.	System Calls for File Management	50 min	2,3	BB/PPT
37.	Disk Scheduling Algorithms	50 min	2,3	BB/PPT
38.	UNIT 5. Introduction to Network	50 min	2,3	BB/PPT
39.	Distributed and Multiprocessor Operating Systems	50 min	2,3	BB/PPT
40.	Case Studies: Unix/Linux, WINDOWS, and other Contemporary Operating Systems	50 min	2,3	BB/PPT

TEXT BOOKS RECOMMENDED:

1. Silberschatz, Galvin, Gagne, "Operating System Concepts'', Wiley, 9/E

2. William Stalling, "Operating Systems", Pearson Education

REFERENCE BOOKS:

1. Andrew S. Tanenbaum, "Modern Operating Systems", 3/e, Prentice Hall

2. Maurice J. Bach, " The Design of Unix Operating System", Prentice Hall of India,

3. Bovet & Cesati, "Understanding the Linux Kernel", O'Reily, 2/E.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

Department of Computer Science and Engineering	IT-501	Operating System	Professional Core

Lecture	Tutorial	Lab	Total Hours
4		2	

UNIT 1

Introduction to Operating Systems: Function, Evolution, Different Types, Desirable Characteristics and features of an O/S, Operating Systems Services: Types of Services, Different ways of providing these Services – Utility Programs, System Calls.

UNIT 2

File Systems: File Concept, User's and System Programmer's view of File System, Disk Organization, Tape Organization, and Different Modules of a File System, Disk Space Allocation Methods – Contiguous, Linked, and Indexed. Directory Structures, File Protection, System Calls for File Management, Disk Scheduling Algorithms.

UNIT 3

CPU Scheduling : Process Concept, Scheduling Concepts, Types of Schedulers, Process State Diagram, Scheduling Algorithms, Algorithms Evaluation, System calls for Process Management; Multiple Processor Scheduling; Concept of Threads. Memory Management: Different Memory Management Techniques – Partitioning, Swapping, Segmentation, Paging, Paged Segmentation, Comparison of these techniques, Techniques for supporting the execution of large programs: Overlay, Dynamic Linking and Loading, Virtual Memory – Concept, Implementation by Demand Paging etc.

UNIT 4

Input / Output : Principles and Programming, Input/output Problems, Asynchronous Operations, Speed gap Format conversion, I/O Interfaces, Programme Controlled I/O, Interrupt Driven I/O, Concurrent I/O. Concurrent Processes : Real and Virtual Concurrency, Mutual Exclusion, Synchronization, Inter- Process Communication, Critical Section Problem, Solution to Critical Section Problem : Semaphores – Binary and Counting Semaphores, WAIT & SIGNAL Operations and their implementation. Deadlocks: Deadlock Problems, Characterization, Prevention, Avoidance, Recovery.

UNIT 5

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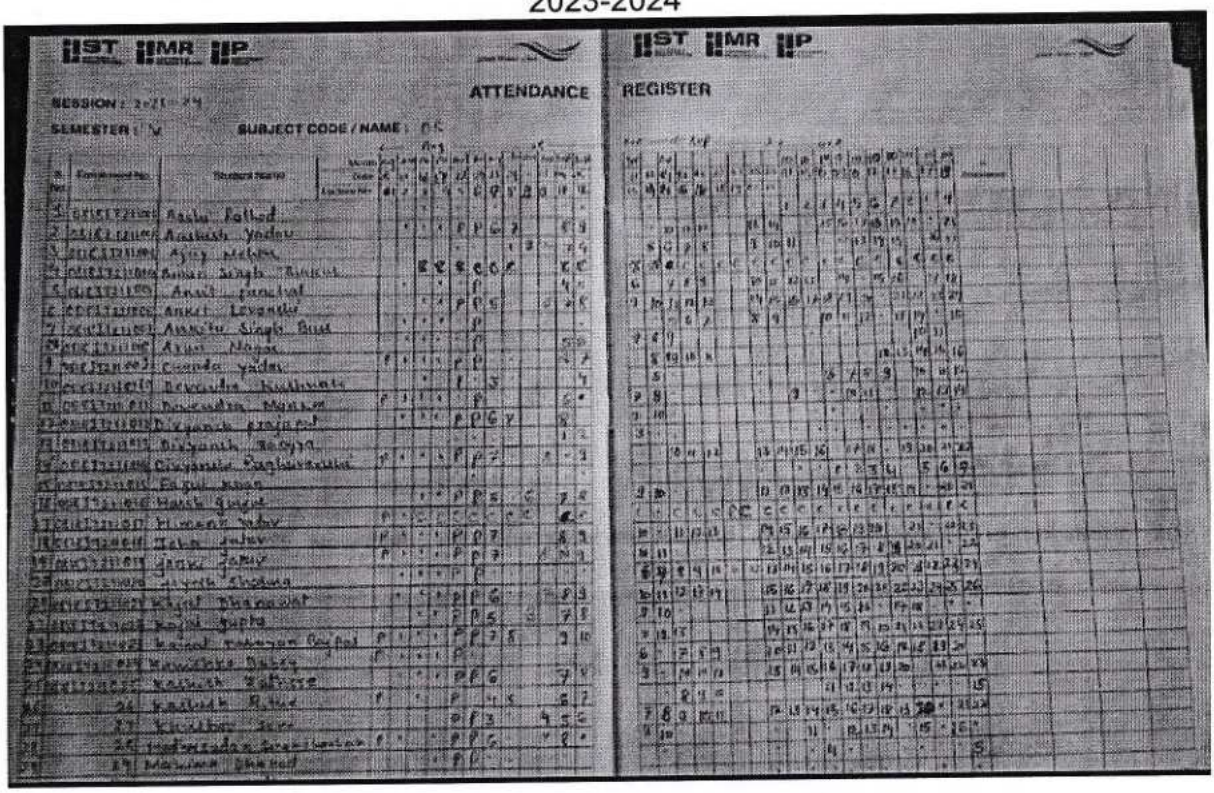

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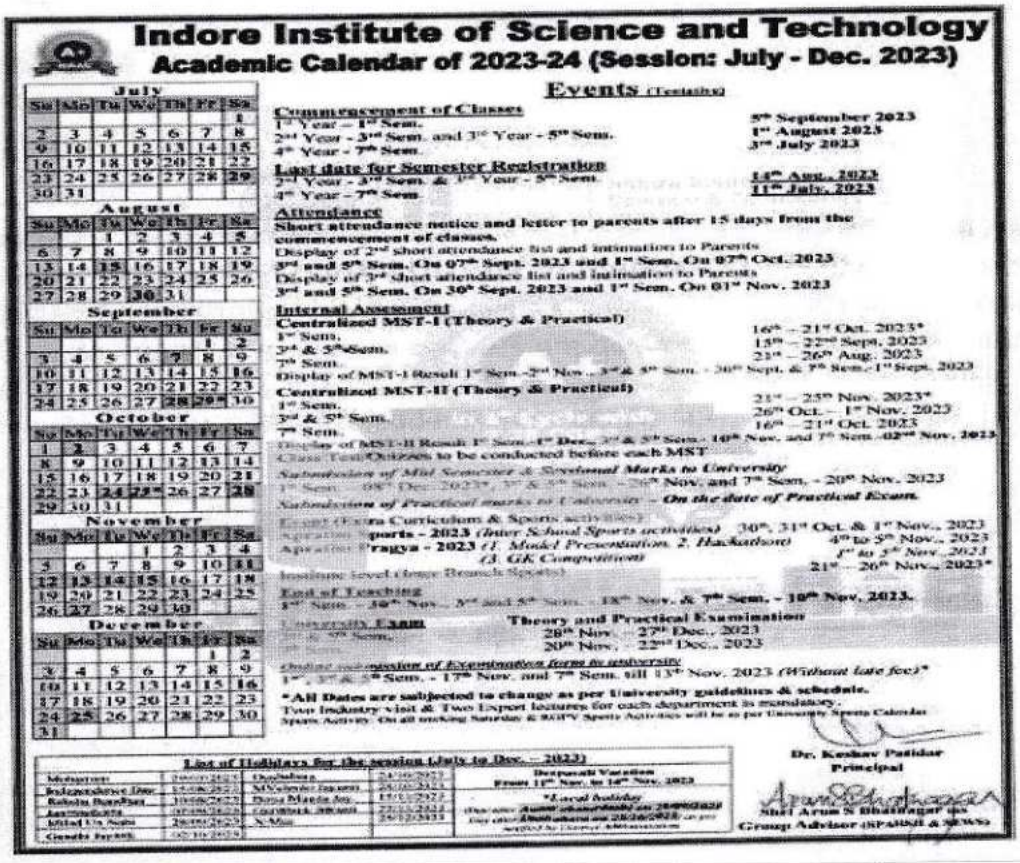
Frequency & Variety for Continuous Evaluation

Mechanism of Internal & External Assessment

Frequency of assessment component will be finalized by AEC/IQAC based on university guidelines and mention in MST notice and well informed faculty before the semester start. Currently two MST exam., 2 Quiz and 2 assignment minimum need to conduct and apart from theses teachers are given free hand to use their innovative variety for evaluation methods like such as Open Book Tests, MCQs, etc. on continuous basis., whereby students are 'encouraged to participate in interactive sessions, group discussions, presentations and assignments



Indore Institute of Science and Technology

Academic Calendar of 2023-24 (Session: July - Dec. 2023)

July

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Events (Tentative)

Commencement of Classes
1st Year – 1st Sem. — 5th September 2023
2nd Year - 3rd Sem. and 3rd Year - 5th Sem. — 1st August 2023
4th Year - 7th Sem. — 3rd July 2023

Last date for Semester Registration
2nd Year - 3rd Sem. & 3rd Year - 5th Sem. — 14th Aug., 2023
4th Year – 7th Sem. — 11th July, 2023

Attendance
Short attendance notice and letter to parents after 15 days from the commencement of classes.
Display of 2nd short attendance list and intimation to Parents
3rd and 5th Sem. On 07th Sept. 2023 and 1st Sem. On 07th Oct. 2023
Display of 3rd short attendance list and intimation to Parents
3rd and 5th Sem. On 30th Sept. 2023 and 1st Sem. On 01st Nov. 2023

Internal Assessment
Centralized MST-I (Theory & Practical)
1st Sem. — 16th – 21st Oct. 2023*
3rd & 5th Sem. — 18th – 22nd Sept. 2023
7th Sem. — 21st – 26th Aug. 2023
Display of MST-I Result 1st Sem.-2nd Nov., 3rd & 5th Sem. - 30th Sept. & 7th Sem.-1st Sept. 2023

Centralized MST-II (Theory & Practical)
1st Sem. — 21st – 25th Nov. 2023*
3rd & 5th Sem. — 26th Oct. – 1st Nov. 2023
7th Sem. — 16th – 21st Oct. 2023
Display of MST-II Result 1st Sem.-1st Dec., 3rd & 5th Sem.- 10th Nov. and 7th Sem.-02nd Nov. 2023
Class Test/Quizzes to be conducted before each MST
Submission of Mid Semester & Sessional Marks to University
1st Sem. – 08th Dec. 2023*, 3rd & 5th Sem. – 24th Nov. and 7th Sem. – 20th Nov. 2023
Submission of Practical marks to University – On the date of Practical Exam.
Expert (Extra Curriculum & Sports activities)
Aparoksh Sports - 2023 (Inter School Sports activities) — 30th, 31st Oct. & 1st Nov., 2023
Aparoksh Pragya - 2023 (1. Model Presentation, 2. Hackathon) — 4th to 5th Nov., 2023
(3. GK Competition) — 1st to 3rd Nov., 2023
Institute level Cheer Branch Sports) — 21st – 26th Nov., 2023*
End of Teaching
1st Sem. - 30th Nov., 3rd and 5th Sem. - 18th Nov. & 7th Sem. - 10th Nov. 2023.
University Exam — Theory and Practical Examination
1st Sem. — 28th Nov. – 27th Dec., 2023
3rd, 5th & 7th Sem. — 20th Nov. – 22nd Dec., 2023
Online submission of Examination forms to university
1st, 3rd & 5th Sem. - 17th Nov. and 7th Sem. till 13th Nov. 2023 (Without late fee)*
*All Dates are subjected to change as per University guidelines & schedule.
Two Industry visit & Two Expert lectures for each department is mandatory.
Sports Activity: On all working Saturday & RGPV Sports Activities will be as per University Sports Calendar

List of Holidays for the session (July to Dec. – 2023)

Muharram	29/07/2023	Dussehra	24/10/2023
Independence Day	15/08/2023	Milad-un-Nabi	28/10/2023
Raksha Bandhan	31/08/2023	Deepawali Vacation	11/11/2023
Janmashtami	07/09/2023	From 12th Nov. to 14th Nov. 2023	
Eid-ul-Fitr	29/09/2023	Guru Nanak Jay	27/11/2023
Gandhi Jayanti	02/10/2023	X-Mas	25/12/2023

*Local holiday

Dr. Keshav Patidar
Principal

Shri Arun S Bhatnagar
Group Advisor (SPARSH & NEWS)

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Academic Calendar (Highlight the Internal Assessment communicate to students)

Indore Institute of Science & Technology

IIST/June-24/0[illegible] *Academic Year 2023-24 (Even Sem.)* Date: 14.06.2024

NOTICE

Mid – Semester Tests (MST-II) of 1st and 2nd Year

Dear All,
This to inform you that the centralized **MST-II** for the session **Jan. to July, 2024** scheduled in as mention below:

Dates for MST-II (Theory)

MST-II	Year/Sem.	Date
Theory	**1st and 2nd Year**	**28th (Friday), 29th (Saturday) June, 1st (Monday), 2nd (Tuesday) & 3rd (Wednesday) July, 2024.**

1. It is mandatory for all the eligible students to appear and perform in the MST examination.
2. MST is of 20 Marks.
3. The marks obtained in the MST will be uploaded to the University portal.
4. Questions in the **MST-II** exam will be from remaining units covered after **MST-I.**
5. Ten Marks towards Quiz & Assignment is evaluated as follows:
   05 Marks for Quiz – 1 after MST-I
   05 Marks for Quiz – 2 after/before MST-II
   Average of the two quizzes is taken for 05 marks.
   05 Marks for assignment.
6. The schedule and other details related to the MST can also be collected from the respective department.
7. No request will be entertained for the change of schedule, subject etc regarding the scheduled centralized MST.
8. Students having short of attendance will not be permitted for MST.
9. **Clear outstanding dues payable to the institute in any form (Institute/Hostel/Transport fee) to appear in the MST.**

"Wishing you best wishes and good luck for the upcoming MST"

Dr. Keshav Patidar
Principal, IIST, Indore

C.C.to:-
1. All the students
2. Dean/HOD
3. All faculty & Staff
4. Exam Dept.
5. Registrar Office, 6. Account Dept., 7. Admin Dept., 8. IQAC, 9. DG Office, 10. Office Record

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INDORE INSTITUTE OF SCIENCE & TECHNOLOGY
Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under Section 2(f)

Mode of Assessment	Assessment Tool	Description/Frequency with variety	Evaluation of Course Outcomes	Frequency of Assessment
Direct	Teacher Assessment (Assignment and Quiz)	Two assignment and Two Quiz are given for each courses for continuous assessment	The Question in the internal examination and assignment /quiz is mapped against COs of respective course. The question for two internal examination and assignment and quiz are framed in such a way to cover all course outcomes. The final attainment for each Cos under direct assessment is calculated by taking average.	Continuous
Direct	Mid Semester Examination	Two Mid semester examinations are conducted within semester. Each MST Cover 2.5 Units		Twice in a Semester
Direct	Lab Work and Sessional	Continuous evaluation is done through viva-voce, Lab report submission and laboratory quiz.	The Question in the internal Lab examination/ assignment /quiz is mapped against COs of respective course. The question for two internal examination/ assignment / quiz is framed in such a way to cover all course outcomes and experiment list. The final attainment for each Cos under direct assessment is calculated by taking average.	Continuous
Direct	Lab Assignment / MST / Quiz			Twice in a Semester
Indirect	Course Outcome Feedback	After the end of every semester, feedback is taken for individual subject.		End of Semester

Rubrics for PO's Assessment and Attainment

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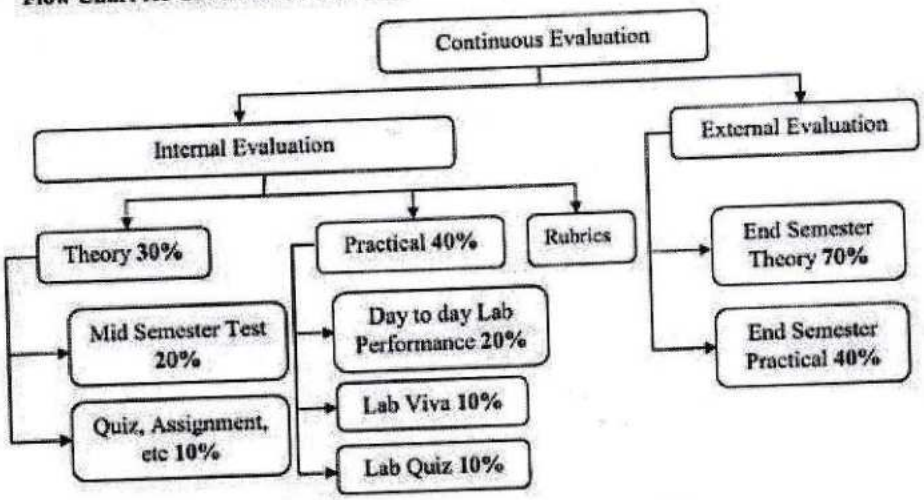
Flow Chart for Continuous Evaluation



Note: - Based on Affiliating University Ordinance refer page number: 8

INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY, INDORE
TIME TABLE
MST-II JUNE -2024

EXAM: B.Tech. (All Branches) IV Semester

Date	28/06/2024 (FRIDAY)	29/06/2024 (SATURDAY)	01/07/2024 (MONDAY)	02/07/2024 (TUESDAY)	03/07/2024 (WEDNESDAY)
Branch/Time	10:00AM-12:00 Noon	10:00AM-12:00 Noon	10:00AM-12:00 Noon	10:00AM-12:00 Noon	10:00AM-12:00 Noon
CS	BT 401 M-3	CS402 ADA	CS 403 SE	CS404 COA	CS405 OS
IT	BT 401 M-3	IT 403 ADA	IT402 CA	IT 404 ADC	IT 405 DBMS
AIML	AL 401 DS&L	AL402 ADA	AL403 SE	AL404 COA	AL405 ML
IOT	IS 401 PS & LA	IS402 FIoT	IS 403 OS	IS 404 COA	IS 405 CN
EC	EC401 Energy & Environmental Engineering	EC402 Signals & Systems	EC403 Analog Communication	EC404 Control System	EC405 Analog Circuits
ME	ES401 Energy & Environmental Engineering	ME402 INSTRUMENTATION & CONTROL	ME403 THEORY OF MACHINES	ME404 FLUID MECHANICS	ME405 MANUFACTURING TECHNOLOGY
CE	ES401 Energy & Environmental Engineering	CE-402 Construction Technology	CE-403 Structural Analysis-I	CE-404 Transportation Engineering-I	CE-405 Engineering Geology & Remote Sensing

Note- Candidate should note the dates & sequence of subjects very carefully.

Dr. Keshav Patidar
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Internal Evaluation (Theory & Practical)

S.No.	Session	Particular	Branch/Sem	Sub.Code	No.of A/Book
1.	Jan-June 2024	MST-II	CS/IV	CS-405	3
2.	Jan-June 2024	MST-II	IT/IV	IT-402	3
3.	Jan-June 2024	MST-II	AIML/VI	AL-602	2
4.	Jan-June 2024	MST-II	EC/VI	EC-604	3
5.	Jan-June 2024	MST-I	CE/IV	CE-404	2
6.	Jan-June 2024	MST-I	AIML/VI	AL-604	3
7.	Jan-June 2024	MST-I	CM/VIII	CM-802	3
8.	Jan-June 2024	MST-I	EC/IV	EC-402	3
9.	July-Dec 2023	MST-II	CS/III	CS-302	3
10.	July-Dec 2023	MST-II	CS/III	CS-303	3
11.	July-Dec 2023	MST-II	IT/III	ES-301	3
12.	July-Dec 2023	MST-I	CS/VII	CS-701	3
13.	July-Dec 2023	MST-I	CS/V	CS-502	3
14.	July-Dec 2023	MST-I	CE/V	CE-503	3
15.	July-Dec 2023	MST-I	CE/VII	CE-701	3

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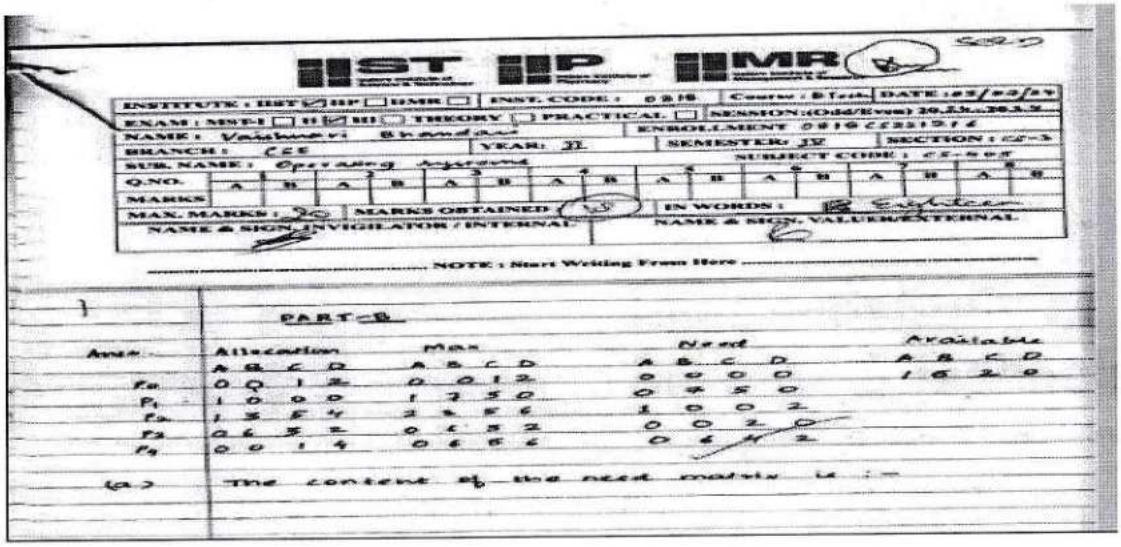
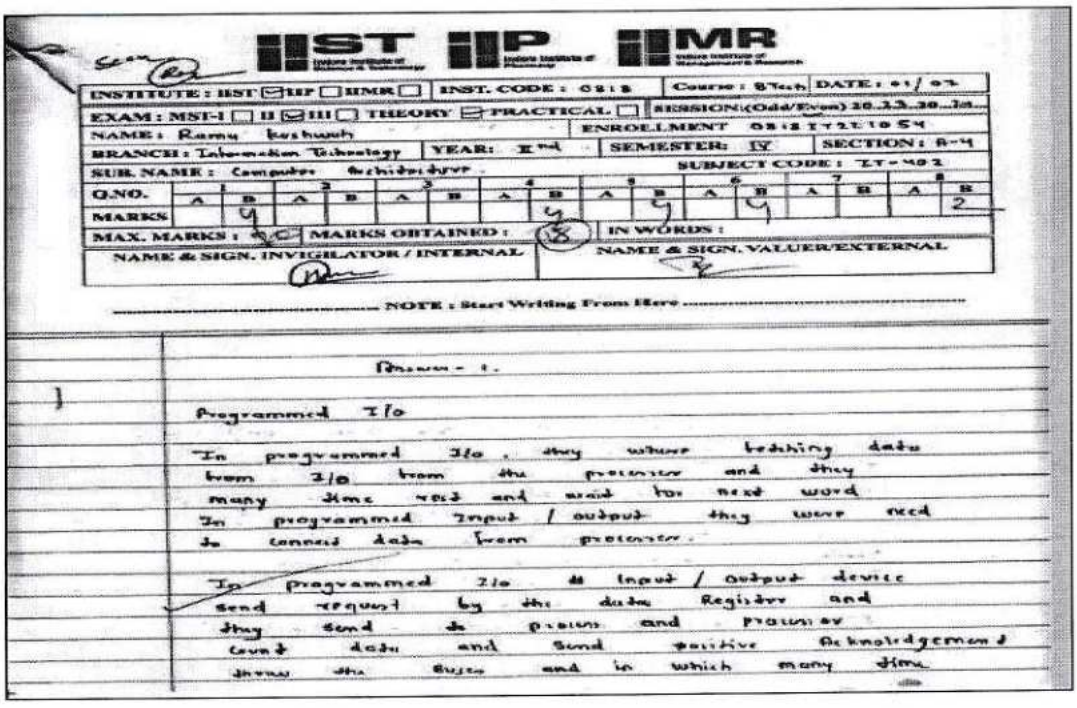
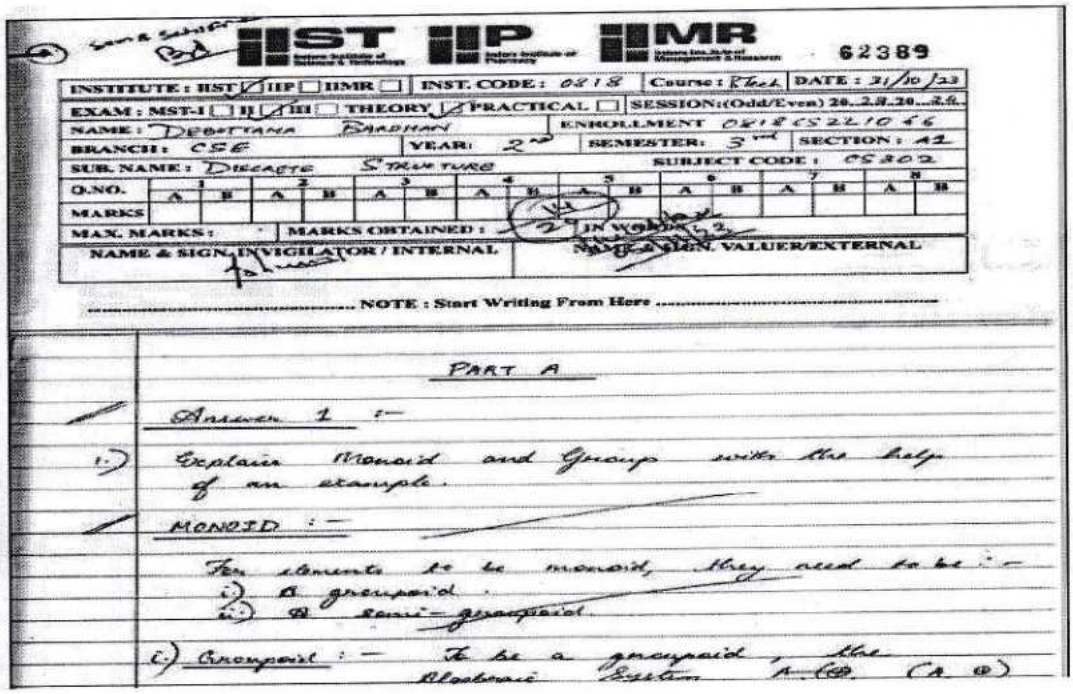
Jan-Jun 2024 MST II CS-405



Jan-Jun 2024 MST II IT 402



Jul- Dec 23 MST I CS 302



IIST IIP IIMR 62389

INSTITUTE : IIST ☑ IIP ☐ IIMR ☐ | INST. CODE : 0818 | Course : B.Tech | DATE : 21/10/23
EXAM : MST-I ☐ II ☑ III ☐ | THEORY ☑ PRACTICAL ☐ | SESSION:(Odd/Even) 20..23..20..24..
NAME : Debottama Bardhan | ENROLLMENT 0818CS221046
BRANCH : CSE | YEAR: 2nd | SEMESTER: 3rd | SECTION : A2
SUB. NAME : Discrete Structure | SUBJECT CODE : CS302
Q.NO. 1 A B | 2 A B | 3 A B | 4 A B | 5 A B | 6 A B | 7 A B | 8 A B
MARKS
MAX. MARKS : | MARKS OBTAINED : | IN WORDS :
NAME & SIGN. INVIGILATOR / INTERNAL | NAME & SIGN. VALUER/EXTERNAL

NOTE : Start Writing From Here

PART A

Answer 1 :-

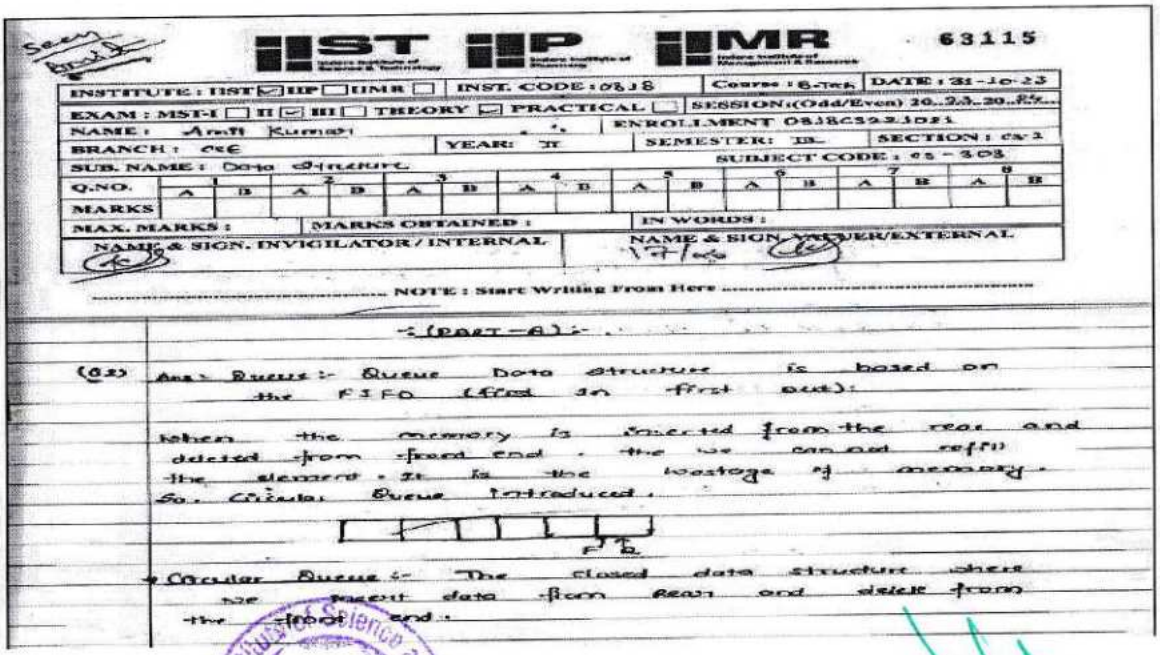
i.) Explain Monoid and Group with the help of an example.

MONOID :-

For elements to be monoid, they need to be :-
i.) A groupoid.
ii.) A semi-groupoid

i.) Groupoid :- To be a groupoid, the Abelonic System (A, ⊕)

Jul- Dec 23 MST I CS 303



IIST IIP IIMR 63115

INSTITUTE : IIST ☑ IIP ☐ IIMR ☐ | INST. CODE : 0818 | Course : B.Tech | DATE : 31-10-23
EXAM : MST-I ☐ II ☑ III ☐ | THEORY ☑ PRACTICAL ☐ | SESSION:(Odd/Even) 20..23..20..24..
NAME : Amit Kumar | ENROLLMENT 0818CS223021
BRANCH : CSE | YEAR: IInd | SEMESTER: IIIrd | SECTION : CS-2
SUB. NAME : Data Structure | SUBJECT CODE : CS - 303
Q.NO. 1 A B | 2 A B | 3 A B | 4 A B | 5 A B | 6 A B | 7 A B | 8 A B
MARKS
MAX. MARKS : | MARKS OBTAINED : | IN WORDS :
NAME & SIGN. INVIGILATOR / INTERNAL | NAME & SIGN. VALUER/EXTERNAL

NOTE : Start Writing From Here

:- (PART-A) :-

(Q.2) Ans:- Queue :- Queue Data structure is based on the FIFO (First in first out).

When the memory is deleted from the rear and deleted from front end, the we can add refill the element. It is the wastage of memory. So, Circular Queue introduced.

• Circular Queue :- The closed data structure where we insert data from rear end and delete from the front end.

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Mention in MST Notices

Indore Institute of Science & Technology

IIST/May-24/0 4 *Academic Year 2023-24 (Even Sem.)* Date: 20.05.2024

NOTICE

Mid – Semester Tests (MST-II) of 3rd Year

Dear All,
This to inform you that the centralized **MST-II** for the session **Jan. to July, 2024** scheduled in as mention below:

Dates for MST-II (Theory)

MST-II	Year/Sem.	Date
Theory	**3rd Year**	**28th (Tuesday), 29th (Wednesday), 30th (Thursday) & 31st (Friday) May, 2024**

1. It is mandatory for all the eligible students to appear and perform in the MST examination.
2. MST is of 20 Marks.
3. The marks obtained in the MST will be uploaded to the University portal.
4. Questions in the **MST-II** exam will be from remaining units covered after **MST-I**.
5. Ten Marks towards Quiz & Assignment is evaluated as follows:
   05 Marks for Quiz – 1 after MST-I
   05 Marks for Quiz – 2 after/before MST-II
   Average of the two quizzes is taken for 05 marks.
   05 Marks for assignment.
6. The schedule and other details related to the MST can also be collected from the respective department.
7. No request will be entertained for the change of schedule, subject etc regarding the scheduled centralized MST.
8. Students having short of attendance will not be permitted for MST.
9. **Clear outstanding dues payable to the institute in any form (Institute/Hostel/Transport fee) to appear in the MST.**

"Wishing you best wishes and good luck for the upcoming MST"

Dr. Keshav Patidar 20/5/24
Principal, IIST, Indore

C.C.to:-
1. All the students
2. Dean/HOD
3. All faculty & Staff
4. Exam Deptt.
5. Registrar Office, 6. Account Dept., 7. Admin Dept., 8. IQAC, 9. DG Office, 10. Office Record

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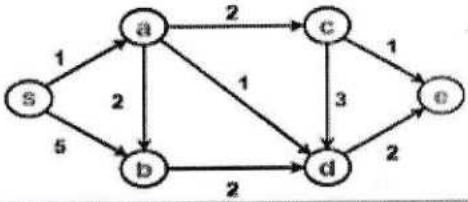
MST Examination Paper based on AICTE Exam Reform Policy

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE
DEPARTMENT OF CSE
MID SEMESTER TEST-II MAY, 2024

SUBJECT NAME: Computer Network **SUBJECT CODE:CS-602**
SEMESTER: VI SEM / III YEAR **SECTION: ALL** **ENROLLMENT NO.: .....**
MAX MARKS: 20

Q. No.	Questions	Marks	CO	BL	PO
	PART –A (ATTEMPT ANY TWO QUESTIONS)				
1.	Distinguish between Pure Aloha and Slotted Aloha and explain Bitmap Protocol in detail.	4	CO 3.6.2.3	L4	1,2,3,4,11,12
2.	Explain CSMA/CD and how it is different from CSMA/CA	4	CO 3.6.2.3	L4	1,2,3,4,11,12
3.	Explain Token ring and Token Bus	4	CO 3.6.2.3	L4	1,2,3,11,12
	PART –B (ATTEMPT ANY TWO QUESTIONS)				
4.	Using Dijkstra's Algorithm, find the shortest distance from source vertex 'S' to remaining vertices in the following graph- Also, write the order in which the vertices are visited. 	4	CO 3.6.2.4	L5	1,11,12
5.	Determine the class, Default subnet mask, and the Network and host Id of following IP addresses. i. 126.5.1.5 ii. 192.222.5.64 iii. 222.113.64.22 iv. 172.16.7.91	4	CO 3.6.2.4	L5	1,11,12
6.	Compare IPv4 & IPv6 with header format.	4	CO 3.6.2.4	L5	1,11,12
	PART –B (ATTEMPT ANY ONE QUESTION)				
7.	Explain congestion control.	4	CO 3.6.2.5	L2,4	1,2,3,11,12
8.	Write a short note on any two of the following i. DNS ii. FTP iii. SMTP iv. POP3	4	CO 3.6.2.5	L4,6	1,2,3,11,12

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Sample MST Copies

IIST | IIP | IIMR

INSTITUTE : IIST ☑ IIP ☐ IIMR ☐ | INST. CODE : 0818 | Course : B.Tech | DATE : 03/02/24

EXAM : MST-I ☐ II ☑ III ☐ THEORY ☐ PRACTICAL ☐ | SESSION:(Odd/Even) 20.23-20.24

NAME : Vaishnavi Bhandari | ENROLLMENT 0818CS221216

BRANCH : CSE | YEAR: III | SEMESTER: IV | SECTION : CS-3

SUB. NAME : Operating Systems | SUBJECT CODE : CS-405

Q.NO.	1		2		3		4		5		6		7		8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
MARKS																

MAX. MARKS : 20 | MARKS OBTAINED : 18 | IN WORDS : Eighteen

NAME & SIGN. INVIGILATOR / INTERNAL | NAME & SIGN. VALUER/EXTERNAL

NOTE : Start Writing From Here

PART-B

Ans.	Allocation				Max				Need				Available			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
P_0	0	0	1	2	0	0	1	2	0	0	0	0	1	5	2	0
P_1	1	0	0	0	1	7	5	0	0	7	5	0				
P_2	1	3	5	4	2	3	5	6	1	0	0	2				
P_3	0	6	3	2	0	6	5	2	0	0	2	0				
P_4	0	0	1	4	0	6	5	6	0	6	4	2				

(a) The content of the need matrix is :-

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Indore Institute of Science and Technology, Indore

Saarg Vaishnavi

IIST Indore Institute of Science & Technology | IIP Indore Institute of Pharmacy | IIMR Indore Institute of Management & Research

INSTITUTE : IIST ☑ IIP ☐ IIMR ☐	INST. CODE : 0818	Course : BTech	DATE : 03/07/24
EXAM : MST-I ☐ II ☑ III ☐ THEORY ☑ PRACTICAL ☐	SESSION:(Odd/Even) 20.23-20.24		
NAME : Vaishnavi Soje	ENROLLMENT 0818CS221217		
BRANCH : CSE	YEAR: 2nd	SEMESTER: 4th	SECTION : C&3
SUB. NAME : OS	SUBJECT CODE :		

Q.NO.	1 A	1 B	2 A	2 B	3 A	3 B	4 A	4 B	5 A	5 B	6 A	6 B	7 A	7 B	8 A	8 B
MARKS																

MAX. MARKS : 20 | MARKS OBTAINED : 17 | IN WORDS : Seventeen

NAME & SIGN. INVIGILATOR / INTERNAL | NAME & SIGN. VALUER/EXTERNAL

NOTE : Start Writing From Here

PART - B

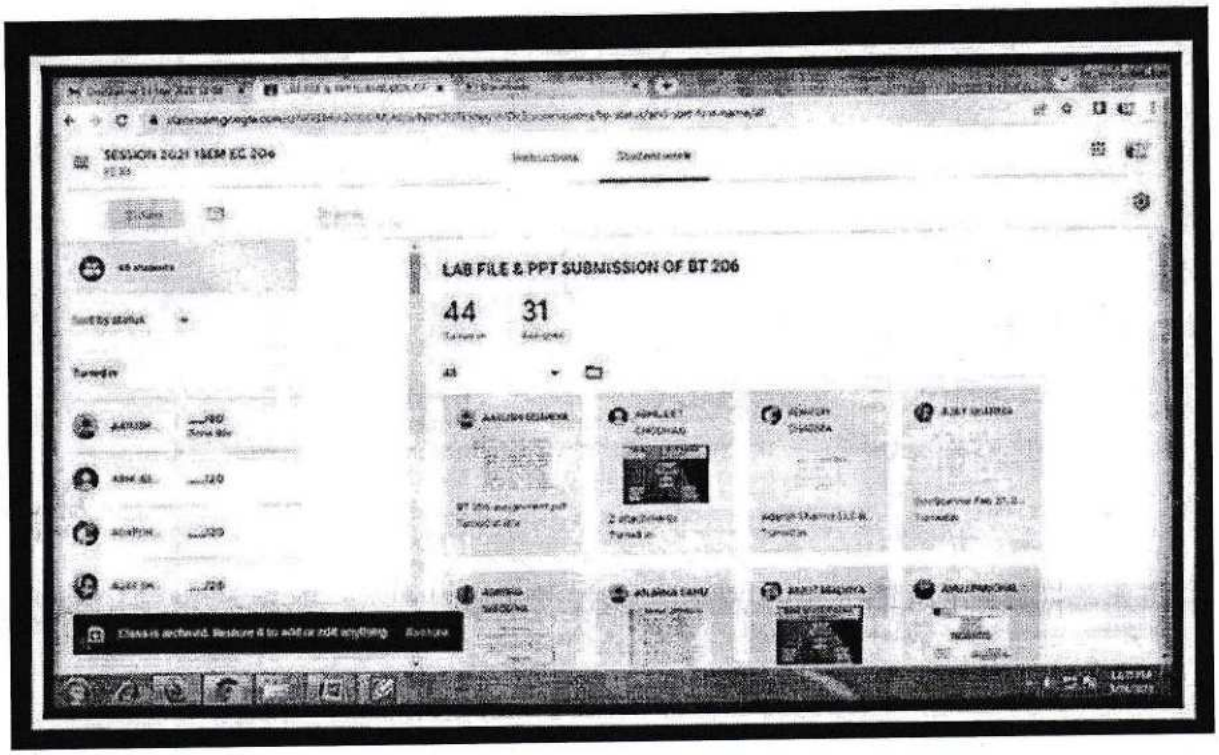
Ques 4

(i)

	Allocation				Max				NEED				Available			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
P0	0	0	1	2	0	0	1	2	0	0	0	0	1	5	2	0
P1	1	0	0	0	1	7	5	0	0	7	5	0				
P2	1	3	5	4	2	3	5	6	1	0	0	2				
P3	0	6	3	2	0	6	5	2	0	0	2	0				
P4	0	0	1	4	0	6	5	6	0	6	4	2				

(ii) Safe state

11. Lab File Submission and Group wise PPT Submission for Book Review



12. Lab File Submission

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13. Rubrics

11. Rubrics for Project Evaluation

RUBRICS FOR PROJECTS RUBRICS#1:FIRST REVIEW(EVALUATION)(100 MARKS)

S. No	Rubrics	Excellent (19-20)	Good (17-18)	Average (15-16)	Partially Acceptable (13-14)	Poor (10-12)	Remarks
1	Attendance (20M)	Attended all meetings on time; demonstrated proactive involvement.	Missed 1-2 meetings but informed in advance; generally punctual.	Missed 3-4 meetings or occasionally late without prior notice.	Frequently absent or late; minimal effort to inform in advance.	Rarely present; no communication about absences.	
2	Teamwork (20M)	Actively collaborates; resolves conflicts constructively; motivates team.	Collaborates well; contributes to discussions; helps solve minor conflicts.	Participates inconsistently; minor contributions; occasional conflict issues.	Limited involvement in team tasks; conflicts disrupt performance.	Minimal participation; negative impact on team dynamics.	
3	Literature (20M)	Comprehensive review; uses diverse, credible sources; synthesizes insights.	Good coverage of sources; analysis is logical but lacks depth.	Limited sources; basic understanding of the topic with few insights.	Insufficient sources; lacks critical analysis.	No literature review or irrelevant sources.	
4	Guide Reporting (20M)	Regular updates; thorough documentation; incorporates feedback effectively.	Provides regular updates; documentation is adequate with minor gaps.	Inconsistent updates; basic documentation; limited feedback incorporation.	Rare updates; incomplete or unclear documentation.	No updates or documentation provided.	
5	Overall Presentation (20M)	Engaging, clear communication; professional visuals; strong question handling.	Clear communication; good visuals; answers most questions confidently.	Basic presentation; visuals lack impact; struggles with questions.	Unclear communication; visuals poorly designed; weak Q&A.	Disorganized; no visuals or ineffective communication.	

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RUBRICS FOR PROJECTS RUBRICS#2:FINAL REVIEW/END TERM(100 MARKS)

S.No	Rubrics	Excellent (19-20)	Good (17-18)	Average (15-16)	Partially Acceptable (13-14)	Poor (10-12)	Remarks
1	Innovation in the Project (20M)	The project demonstrates groundbreaking creativity and original thinking. It introduces entirely new ideas, solutions, or methodologies, potentially setting a benchmark in the domain. The approach is innovative, solving problems that have not been addressed before	Includes a moderate degree of originality and innovation. Builds effectively on existing ideas but lacks groundbreaking contributions. Some components are well-thought-out and creative.	Shows minimal creativity; primarily relies on existing work or standard solutions. The project has limited innovative features that don't significantly stand out.	Demonstrates little or no originality. The project mostly replicates existing solutions with minimal improvements or deviations.	Completely lacks innovation or creativity. It appears entirely derivative or fails to attempt a novel approach.	
2	Literature Survey (20M)	Comprehensive and systematic review of high-quality literature. Sources are highly relevant and diverse, covering journals, books, and conferences. Insightful synthesis of information shows critical thinking and contributes directly to the project's foundation.	Adequate and well-organized review of relevant literature. Most sources are current and appropriate, although the depth of analysis may be limited. Shows reasonable understanding of the field.	Basic review with limited diversity in sources. The analysis is present but superficial, with minimal connections to the project. Some sources may be outdated.	Few or irrelevant sources; lacks depth or breadth. The review shows little understanding of the topic or its connection to the project.	Minimal or no literature survey. Sources are irrelevant or absent, and there's little to no analysis.	
3	Theoretical Modeling/Experimental Design (20M)	Exceptional theoretical framework or design, with precise experimental observations or calculations. Models or experiments are detailed, accurate, and reproducible. All objectives are achieved with measurable outcomes.	Well-developed models or experiments, with minor inaccuracies. Achieves most objectives but lacks exceptional rigor or depth in observations.	Theoretical models and experimental results are basic. While functional, they lack precision and detailed analysis. Objectives are only partially achieved.	Weak or incomplete models and experiments. Observations lack reliability or depth. The project fails to achieve significant objectives.	No coherent models or experimental observations. The project fails to produce usable or reproducible results.	
4	Organization of the Project Report (20M)	The report is flawlessly structured, adhering completely to prescribed guidelines. All sections (e.g., abstract, introduction, objectives, results, references) are well-organized, professional, and visually appealing.	Follows most guidelines with minor inconsistencies. The structure is logical and clear, with only small deviations or formatting errors.	Basic adherence to guidelines. The report is readable but lacks polish and contains noticeable errors in structure or formatting.	Poorly organized report with significant deviations from guidelines. Content is difficult to follow due to unclear structure or errors.	Disorganized report with no adherence to guidelines. The structure is chaotic, and the content is difficult to understand.	
5	Summarize Ultimate Findings (20M)	The findings are clearly articulated, highly impactful, and thoroughly supported by evidence. They align seamlessly with the project objectives, offering significant insights or applications.	Findings are clear and well-supported, with reasonable depth. While impactful, they may lack groundbreaking insights or perfect alignment with objectives.	Findings are presented but lack depth or clarity. Limited evidence is provided to support conclusions, and the impact is moderate.	Findings are unclear, weak, or incomplete. Evidence is insufficient or poorly linked to conclusions.	Findings are absent, unsupported, or irrelevant. There is no clear conclusion or takeaway from the project.	

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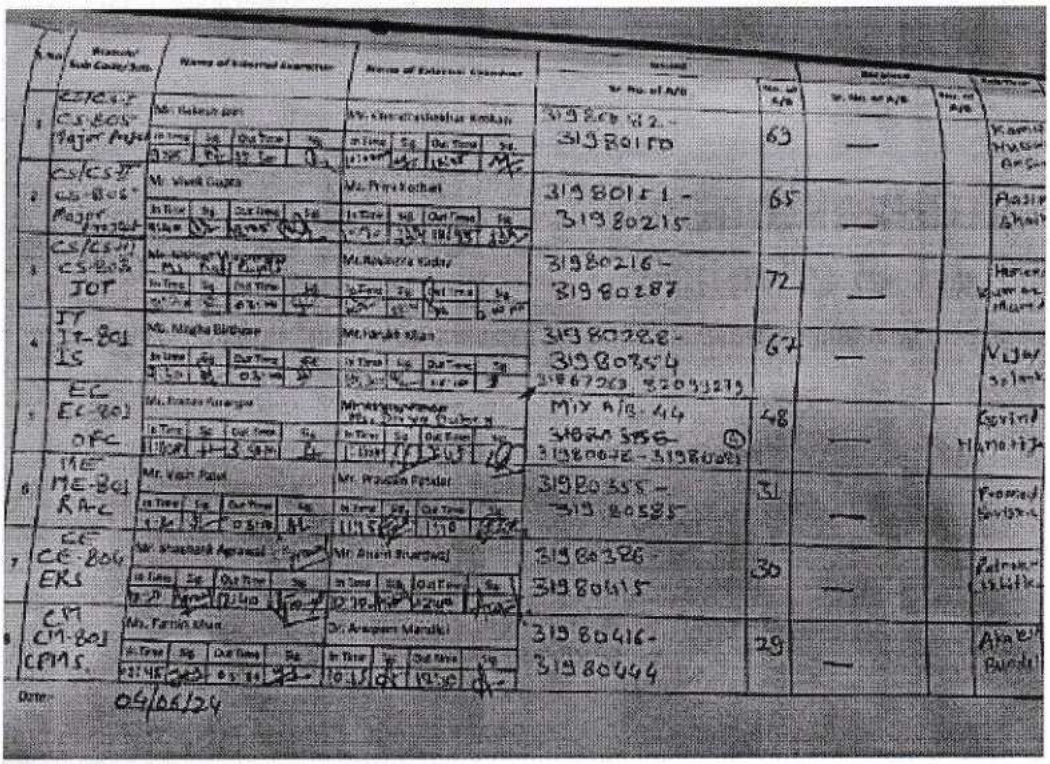
External Evaluation

J. External Evaluation

1. External and Internal Examiner Record



2. End Term Examination Viva voce UG and PG.

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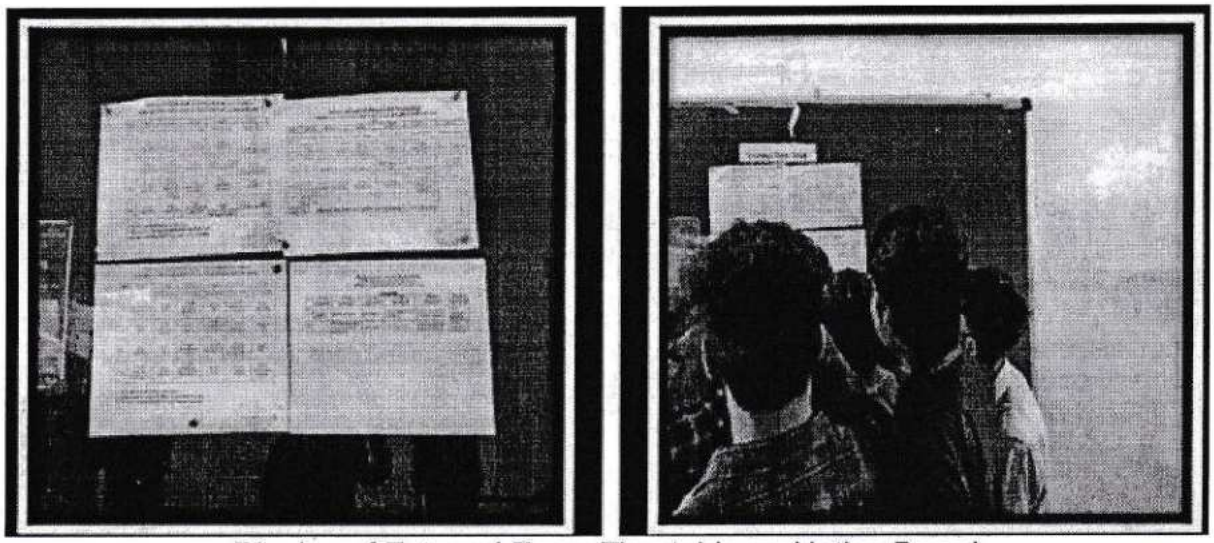
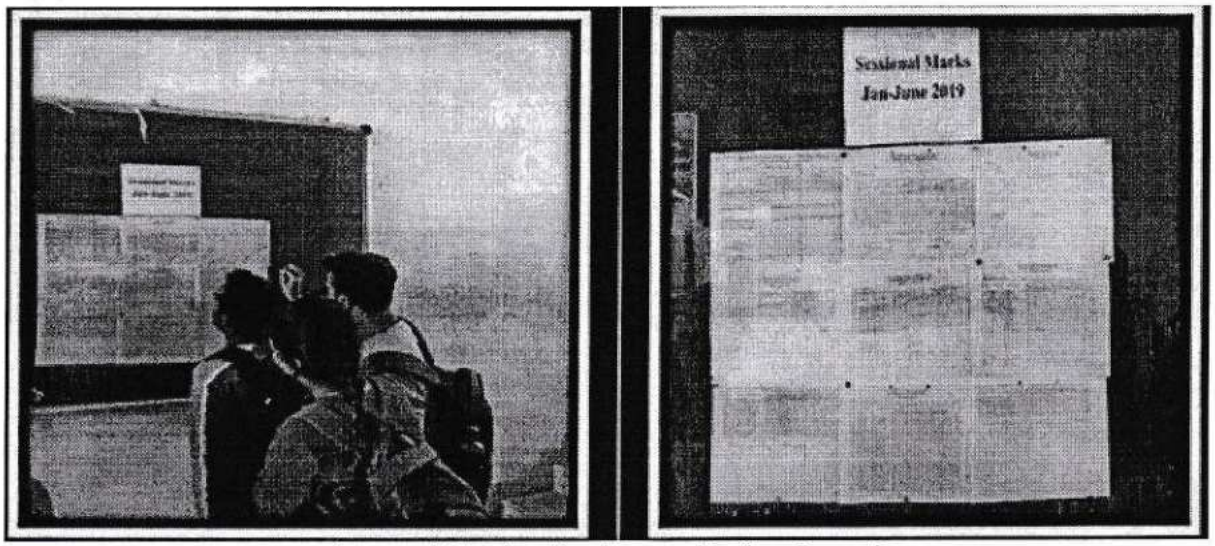
Display of External / Internal Timetable on Notice Board



Display of External Exam Timetable on Notice Board

University Notice for display internal marks



Internal Marks display on Notice Board

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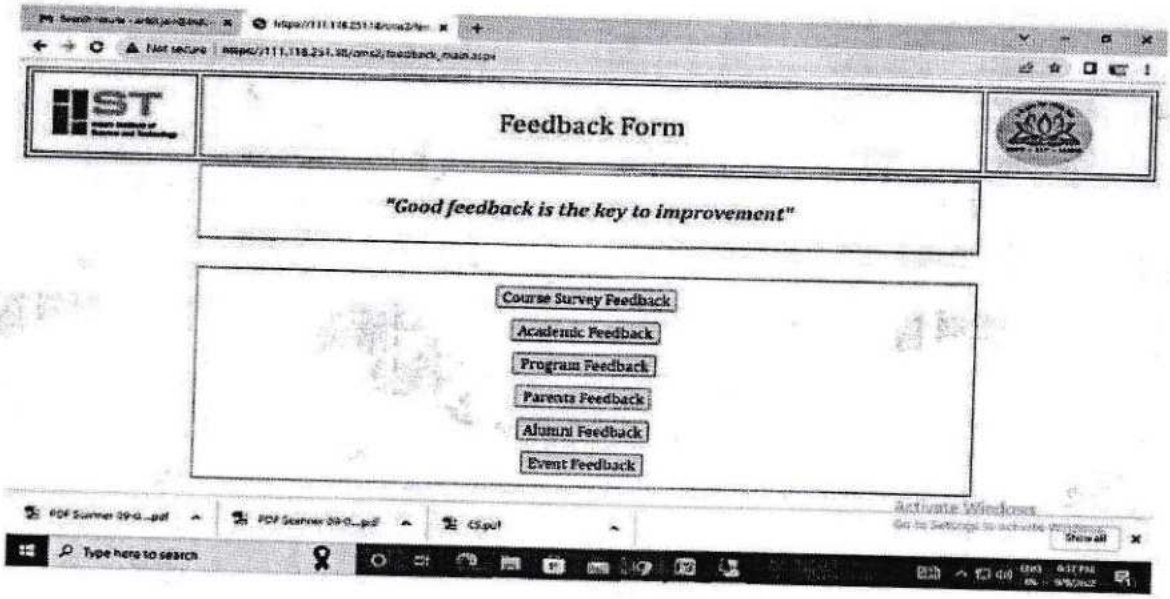
Various Type of Feedback System @ IIST



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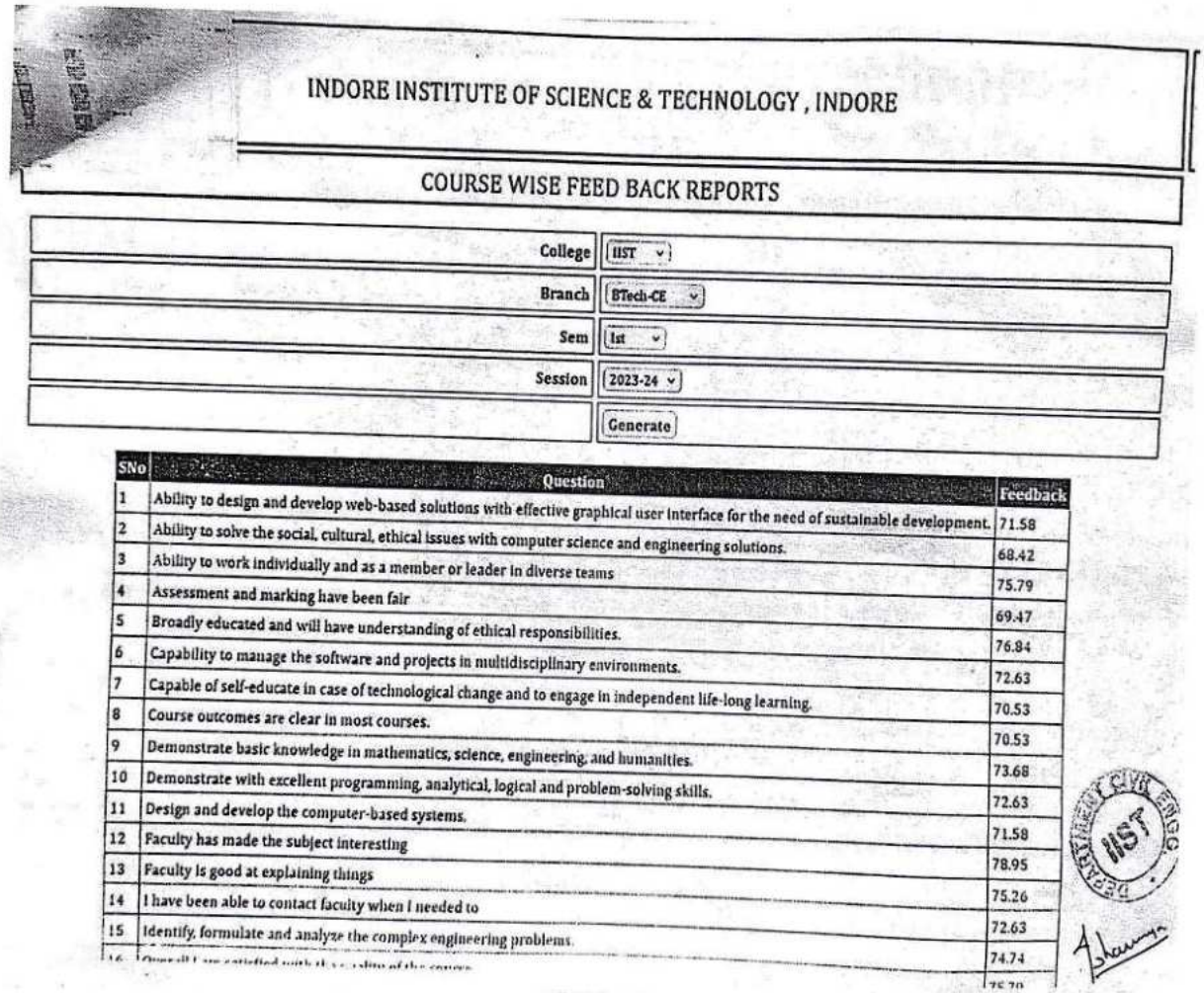
Semester / Course End Survey



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COURSE WISE FEED BACK REPORTS

College	IIST
Branch	BTech-CE
Sem	Ist
Session	2023-24
	Generate

SNo	Question	Feedback
1	Ability to design and develop web-based solutions with effective graphical user interface for the need of sustainable development.	71.58
2	Ability to solve the social, cultural, ethical issues with computer science and engineering solutions.	68.42
3	Ability to work individually and as a member or leader in diverse teams	75.79
4	Assessment and marking have been fair	69.47
5	Broadly educated and will have understanding of ethical responsibilities.	76.84
6	Capability to manage the software and projects in multidisciplinary environments.	72.63
7	Capable of self-educate in case of technological change and to engage in independent life-long learning.	70.53
8	Course outcomes are clear in most courses.	70.53
9	Demonstrate basic knowledge in mathematics, science, engineering, and humanities.	73.68
10	Demonstrate with excellent programming, analytical, logical and problem-solving skills.	72.63
11	Design and develop the computer-based systems.	71.58
12	Faculty has made the subject interesting	78.95
13	Faculty is good at explaining things	75.26
14	I have been able to contact faculty when I needed to	72.63
15	Identify, formulate and analyze the complex engineering problems.	74.74
16	Overall I am satisfied with the quality of the course	75.79

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Program End Survey

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PROGRAM WISE FEED BACK REPORTS

College: IIST
Branch: BTech-CE
Session: 2023-24
Generate

SNo	Question	Feedback
1	Faculties are available when I need them	89.44
2	Faculties are good at explaining things	83.33
3	Faculties treat students with respect.	94.44
4	How interesting the teaching is in most subjects in your programme?	71.11
5	Ability to work in groups in team work	76.67
6	Able to acquire high and industry centric skills in the field of civil engineering field.	82.22
7	Able to analyse different system by applying knowledge of surveying.	76.11
8	Able to generate drawings related to civil engineering.	67.78
9	Able to understand knowledge of civil engineering projects to work as a leader or member.	75
10	Assistance from most faculty outside of class	91.67
11	Being informed about things in the department	81.11
12	Capable to engage in independent and life-long learning in specialized technologies.	68.33
13	Communication skills & Writing skills	73.33
14	Communication skills & Writing skills	72
15	Course outcomes are clear in most courses	82.22
16	Develop analytical skills	91.67
17	How helpful and accurate the career counseling is in your programme?	73.33
18	I actively participate in most class discussions	83.89

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Parents Feedback

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PARENTS WISE FEED BACK REPORTS

College	IIST
Branch	BTech-CE
Session	2023-24
	Generate

o	Question	Feedbac
	Rate your ward on Co-curricular and extra-curricular activities aided in overall grooming and personality development of the student.	91.67
	Do you Feel Student counseling and mentoring helped in inculcating moral and ethical values among the students.	93.85
	Rate - Constant communication about your ward academic progress report, discipline and attendance.	92.31
	Rate Facilities available namely library, hostel facility, Teaching learning process, Administrative help, Examination.	90.77
	Rate the Quality of infrastructure facilities namely laboratory, facilitated learning of curriculum-based software development tools.	90.77
	Rate Workshops, Seminars, Conferences aided the professional development of student (Your Ward).	92.31
	Rate your ward on Conducive learning environment due to good interaction with the teachers.	84.62

DEPARTMENT OF CIVIL ENGG. IIST

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Alumni Feedback

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ALUMNI FEED BACK REPORTS

College	IIST
Branch	BTech-CE
Session	2023-24
	Generate

SNo	Question	Feedback
1	Ability to engage in independent and lifelong learning & adapt to rapid changes in civil engineering and its allied areas.	89.33
2	Ability to participate as members of multidisciplinary design teams along with mechanical, electrical, Computer Science and other engineers	90.67
3	Apply ethical principles committed to professional ethics, responsibilities and norms of engineering practices and regulatory Building Bye Laws.	89.33
4	Awareness to apply engineering solutions in global, national, and societal contexts	89.33
5	Broadly educated and will have an understanding of ethical responsibilities	88
6	Course provided relation with the research field and is benificial for higher studies also	90.67
7	Demonstrate basic knowledge in mathematics, science, engineering, and humanities.	93.33
8	Demonstrate the ability to apply advanced technologies to solve contemporary and new problems.	92
9	Demonstrate the ability to choose and apply contextual knowledge to assess social health safety, legal and cultural issues and consequent responsibilities relevant to professional civil engineering practices.	93.33
10	Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary setting.	94.67
11	How do you rate the academic initiatives taken by the college to bridge the gap between industry & academia?	90.67
12	How would you rate any new skills learnt in the due course of your study?	89.33
13	How would you rate the course curriculum for fulfilling your expectations?	89.33
14	How would you rate the curriculum prescribed for your degree during your term in college?	85.33
15	How would you rate the quality of education imparted in college?	89.33
16	Identify, formulate and solve complex problems related to civil engineering design, planning and construction.	88
17	Proficient in English language in both communicative and technical forms	90.67

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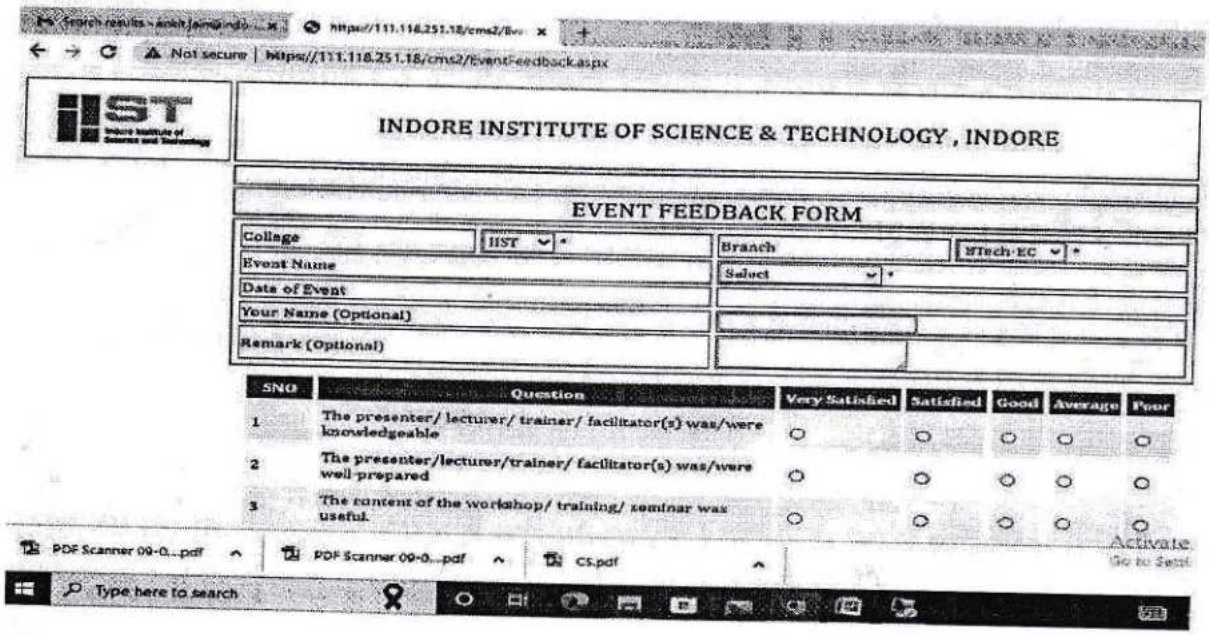
Event Feedback



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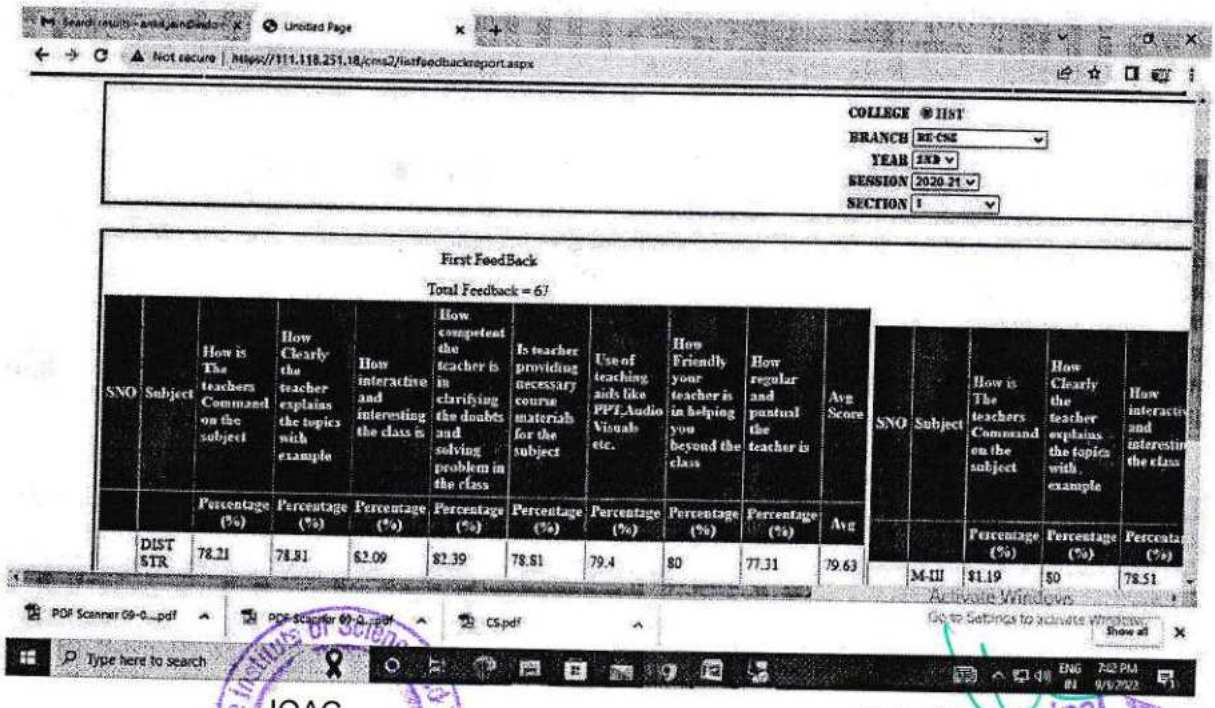
EVENT FEEDBACK FORM

College	IIST *	Branch	MTech-EC *
Event Name		Select *	
Date of Event			
Your Name (Optional)			
Remark (Optional)			

SNO	Question	Very Satisfied	Satisfied	Good	Average	Poor
1	The presenter/ lecturer/ trainer/ facilitator(s) was/were knowledgeable					
2	The presenter/lecturer/trainer/ facilitator(s) was/were well prepared					
3	The content of the workshop/ training/ seminar was useful.					

Academic Feedback (Sample)



COLLEGE IIST
BRANCH RE-CSE
YEAR 3RD
SESSION 2020-21
SECTION 1

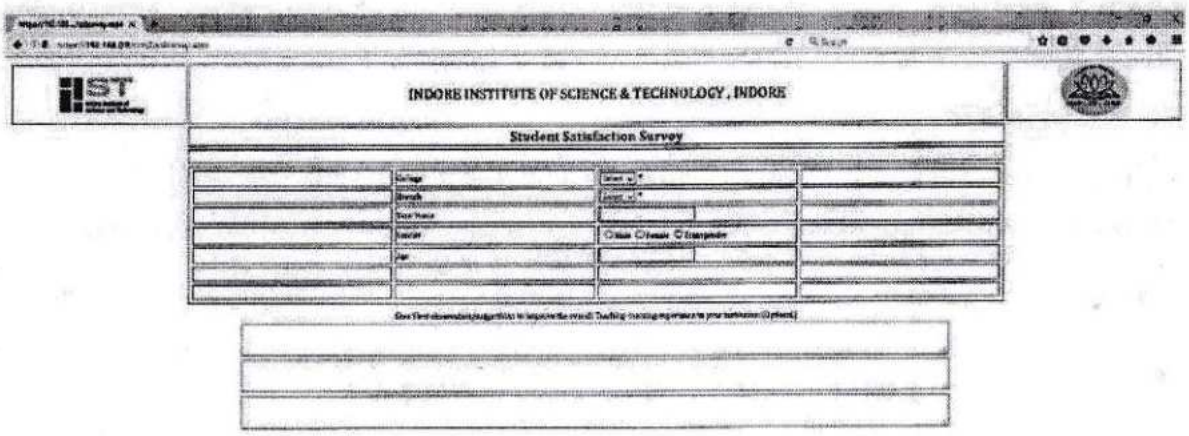
First FeedBack

Total Feedback = 67

SNO	Subject	How is The teachers Command on the subject	How Clearly the teacher explains the topics with example	How interactive and interesting the class is	How competent the teacher is in clarifying the doubts and solving problem in the class	Is teacher providing necessary course materials for the subject	Use of teaching aids like PPT,Audio Visuals etc.	How Friendly your teacher is in helping you beyond the class	How regular and puntual the teacher is	Avg Score
		Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)	Avg
	DIST STR	78.21	78.81	62.09	82.39	78.81	79.4	80	77.31	79.63

SNO	Subject	How is The teachers Command on the subject	How Clearly the teacher explains the topics with example	How interactive and interesting the class
		Percentage (%)	Percentage (%)	Percentage (%)
	M-III	81.19	80	78.51

Students Satisfaction Survey



Sample Result Analysis of ECE

Indore Institute of Science and Technology
Department of Electronics & Communication Engineering
Result Analysis B Tech VIIIth Semester [Jan - June 2024]

S.No.	Enrollment No.	Name	EC801- [T]	EC802- [T]	EC803- [T]	EC851- [P]	EC854- [P]	EC855- [P]	Result Dec.	SGPA	CGPA	Division
1	0818EC201002	Aashutosh Sharma	C+	C+	C+	A	A	A	PASS	7.33	7.67	First Division with
2	0818EC201004	Abhishek Patidar	C+	C	B	A	A	A+	PASS	7.5	7.5	First Division with
3	0818EC201006	Aman Bhardwaj	C	C+	B	A+	A+	A+	PASS	7.78	7.94	First Division with
4	0818EC201007	Aman Kumar	C+	C+	B	A	A	A	PASS	7.5	7.57	First Division with
5	0818EC201008	Amit Soni	C+	C	C+	B+	B+	A	PASS	6.89	6.75	First Division
6	0818EC201009	Amit Tiwari	B+	C+	B+	A	A	A	PASS	8	7.28	First Division
7	0818EC201011	Anand Verma	C+	C+	C+	A	A	A+	PASS	7.56	8.04	First Division with
8	0818EC201012	Anjali Patil	B+	B+	B+	A	A+	A	PASS	8.61	8.39	First Division with
9	0818EC201013	Anupam Aleriya	C	C	B	A	A	A+	PASS	7.33	7.51	First Division with
10	0818EC201015	Ashish Raghuvanshi	C	C+	C	A	A	A+	PASS	7.22	7.05	First Division
11	0818EC201016	Atharv Vyas	C	C	C	A	A	A	PASS	6.78	0	WITH HELD
12	0818EC201017	Ayush Malviya	B	B	B+	A	A+	A	PASS	8.22	7.69	First Division with
13	0818EC201018	Ayush Soni	B	B	B+	A	A+	A+	PASS	8.44	8.14	First Division with
14	0818EC201019	Dipanshu Patidar	C+	C	C+	B+	B+	A	PASS	6.89	0	WITH HELD
15	0818EC201020	Dipesh Waghe	C+	C+	C+	B+	B+	A	PASS	7.11	7.34	First Division
16	0818EC201021	Divyanshu Bhati	B+	B+	A	A+	A+	A+	PASS	9.06	9.09	First Division with
17	0818EC201022	Gautam Dahale	B	B	B+	A+	A+	A+	PASS	8.5	8.41	First Division with
18	0818EC201023	Gautam Singh Panwar	C	C	C+	A	A	A+	PASS	7.17	7.27	First Division
19	0818EC201024	Gitesh Ahirwar	C+	C+	B+	A	A	A+	PASS	7.89	7.46	First Division
20	0818EC201025	Goutam Shivde	C	C	C+	B+	B+	A	PASS	6.72	6.97	First Division
21	0818EC201028	Jay Pandey	B	B	B+	A+	A+	A+	PASS	8.5	8.75	First Division with
22	0818EC201029	Khushboo Malviya	B+	B+	B+	A+	A+	A+	PASS	8.89	8.73	First Division with
23	0818EC201030	Kuldeep Solanki	C+	C	C+	A	A	A+	PASS	7.33	7.35	First Division

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24	0818EC201031	Naina Varma	C+	C+	B	A	A	A+	PASS	7.72	8.13	First Semester with Honours
25	0818EC201033	Nandini Soni	C+	C+	C+	A+	A+	A+	PASS	7.78	8.25	First Semester with Honours
26	0818EC201034	Neeraj Patil	B	B	B	A+	A+	A+	PASS	8.33	8.22	First Semester with Honours
27	0818EC201035	Nikita Tomar	B	B	B+	A	A	A+	PASS	8.28	8.41	First Semester with Honours
28	0818EC201036	Nikunj Giri Goswami	C	C	C	A	A	A	PASS	6.78	0	WITH HELD
29	0818EC201038	Prakhar Solanki	B	B	B	A	A	A+	PASS	8.11	7.65	First Semester with Honours

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30	0818EC201039	Priya Sharma	B	B	B+	A	A	A	PASS	8.05	8.02	First Division With Honours
31	0818EC201040	Rahul Thakur	C+	C+	C+	A+	A	A+	PASS	7.61	7.61	First Division With Honours
32	0818EC201041	Rashika Diwekar	C+	B	B+	A+	A+	A+	PASS	8.33	8.51	First Division With Honours
33	0818EC201042	Ritika Diwekar	B	C+	B+	A+	A+	A+	PASS	8.28	8.59	First Division With Honours
34	0818EC201044	Shabina Khan	C+	C+	C+	A	A+	A+	PASS	7.72	7.9	First Division With Honours
35	0818EC201045	Sharad Pratap Singh Baix	B	B	B+	A	A+	A+	PASS	8.44	8.39	First Division With Honours
36	0818EC201047	Siddharth Rathore	C+	C+	C+	A	A+	A+	PASS	7.72	7.86	First Division With Honours
37	0818EC201048	Simran Rajput	B+	B+	B+	A+	A+	A+	PASS	8.89	8.82	First Division With Honours
38	0818EC201049	Somesh Sharma	C+	C+	B	A	A	A+	PASS	7.72	7.66	First Division With Honours
39	0818EC201051	Tanisha Singhai	B	B	B+	A+	A	A	PASS	8.11	8.21	First Division With Honours
40	0818EC201052	Tanmay Soni	B+	C+	B	A	A	A+	PASS	8.06	7.54	First Division With Honours
41	0818EC201054	Vaidik Soni	C+	C	C+	A	A	A+	PASS	7.33	7.54	First Division With Honours
42	0818EC201057	Vishal Kaushal	B	B	A	A	A	A+	PASS	8.44	7.86	First Division With Honours
43	0818EC201058	Yash Raghuwanshi	B	B	C+	A	A+	A+	PASS	8.11	7.12	First Division
44	0818EC201059	Yogita Patel	A	B	A	A+	A+	A+	PASS	9	8.95	First Division With Honours
45	0818EC213D03	Sachin Kochale	C	C	C	A	A	A+	PASS	7	0	WITH HELD
46	0818EC213D04	Shreya Kumari	A	B	B+	A+	A+	A+	PASS	8.42	8.12	First Division With Honours
47	0818EC213D05	Renuka Satish Sontakke	B+	A	A	A+	A+	A+	PASS	9.28	8.84	First Division With Honours
48	0818EC213D06	Sonu Suryawanshi	C	C	C+#	A	A	A	PASS WITH GRACE	6.78	0	WITH HELD

Subject Wise Result Analysis B Tech VIIIth Semester [Jan - June 2024]

S. No.	Subject Code	Subject	Name of Faculty	No. of students appeared	A+	A	B+	B	C+	C	C#	F	Passed percentage
1	EC801- [T]	Optical Fibre Communication	Mr. Pranav Paranjpe	48	0	2	7	13	17	9	0	0	100
2	EC802- [T]	Departmental Elective (802 (B) Wireless C	Mr. Devendra S Mandloi	48	0	1	4	15	16	12	0	0	100
3	EC803- [T]	Open Elective (803(A) Wireless Network)	Dr. Mukesh Patidar	48	0	4	16	9	14	4	1	0	100
4	EC801- [P]	Optical Fibre Communication Lab	Mr. Pranav Paranjpe	48	15	29	4	0	0	0	0	0	100
5	EC804- [P]	Advanced Communication Engg. Lab	Mr. Devendra S Mandloi	48	20	24	4	0	0	0	0	0	100
6	EC805- [P]	Major Project-II	Mr. Devendra S Mandloi + Mr. Aditya Sh	48	34	14	0	0	0	0	0	0	100

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Student wise RGPV Result Analysis

Name of Institute:	IIST
Name of Department:	ME
Course:	B TECH
Branch:	MECH
Semester:	5
Exam Duration:	Dec-jan2024
Date of Results declaration:	2/12/2024
Regular/EX:	R
Batch:	2021
Grading/Non Grading	Grading

Sr. No.	Enrollment NO.	Students Name	Subject Cod (THEORY)					PRACTICAL					Pass/ Fail	SGPA	CGPA
			ME501-[T]	ME502-[T]	ME503-[T]	ME504-[T]	BT407-[P]	ME501-[P]	ME502-[P]	ME505-[P]	ME506-[P]	ME508-[P]			
1	0818ME211001	ABHINESH ANURAGI	D	F	C+	C+	A	A	B+	B+	B+	A	Fail in ME502	6.17	6.35
2	0818ME211002	ABHISHEK PURI	C+	D	C	C+	A	B+	B+	B+	B+	A	PASS	6.71	6.38
3	0818ME211004	ADITYA DUKARIYA	F	D	D	D	A	B+	A	B+	A	A	Fail in ME501	5.67	5.81
4	0818ME211005	ADITYA YADAV	C	C	C	C	A	A	B+	B+	B+	A	PASS	6.63	6.47
5	0818ME211006	AKASH PANDAGRE	C	D##	C	C	A	B+	B+	B+	B+	A	PASS WITH GRACE	6.46	6.39
6	0818ME211010	ASMIT VERMA	C	C	D	C	A	A	A	A	B+	A	PASS	6.58	7.11
7	0818ME211012	CHIRAG SARSONIYA	C	C	D		A	B	B+	B+	B+	A	PASS	6.38	6.2
8	0818ME211013	DEEPTI VERMA	C+	B+	C+	B+	A	A+	A+	A	A	A	PASS	7.96	7.92
9	0818ME211014	DEV PANWAR	C+	C+	F	C	A	A	A	A	B+	A	Fail in ME503	6.17	6.27
10	0818ME211016	FAIZAN MANSURI	C	C	D	C+	A	B	B+	B+	A	A	PASS	6.58	6.57
11	0818ME211017	GAGAN PATIDAR	C	C	F	C+	A	B+	B+	B+	B+	A	Fail in ME503	5.88	6.57
12	0818ME211018	GOURAV MISHRA	C+	C+	C	B	A	B+	B+	B+	B+	A	PASS	7.08	6.94
13	0818ME211020	HARSHIT KADAM	D	C	C+	C	A	A	B+	B+	B+	A	PASS	6.67	5.88
14	0818ME211021	JAY BARANIYA	B	C+	C+	B	A	B+	B+	B+	A	A	PASS	7.46	7.04
15	0818ME211025	KUNAL JOSHI	C+	B+	B	B	A	A+	A+	A+	A	A	PASS	8.08	7.57
16	0818ME211027	MOHIT NAGVANSHI	C+	C	B	B	B+	A	B+	B+	B+	A	PASS	7.21	6.3
17	0818ME211028	NAMAN TAMRAKAR	C	C	D	C	A	B+	A	B+	A	A	PASS	6.54	6.2
18	0818ME211030	NITEESH KUMAR SAKET	C	C	C+	C	A	A	B+	B+	B+	A	PASS	6.79	5.83
19	0818ME211032	PRAJJWAL PAL	C+	B+	C+	B	A	A+	A	A+	A	A+	PASS	7.96	7.68
20	0818ME211034	ROHAN KUMAR	D	D##	D	C+	A	B+	B+	B+	A	A	PASS WITH GRACE	6.38	5.88
21	0818ME211035	ROHIT PANDORIA	C	D	D	C+	A	B+	B+	B+	B+	A	PASS	6.42	6.21
22	0818ME211037	SANDEEP BALODIYA	C+	D##	C	C+	A	A	B+	B+	B+	A	PASS WITH GRACE	6.75	6.65
23	0818ME211038	SATYAVRAT MISHRA	C	C	D	C+	A	A	B+	B+	B+	A	PASS	6.58	5.84
24	0818ME211042	VIJAWAL PATIDAR	D	C	D	C+	A	A	B+	B+	B+	A	PASS	6.46	5.81
25	0818ME211043	VASU NAGAR	C	C	C	C+	A	A	A	A	A	A	PASS	6.83	6.62
26	0818ME211045	YASHWARDHAN CHOUDHARY	C	D##	C	B+	A	A+	A	A+	A+	A+	PASS WITH GRACE	7.29	6.33

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Sample Result Analysis of ME

RGPV Result Analysis

Name of Institute:	IIST
Name of Department:	ME
Course:	B TECH
Branch:	MECH
Semester:	5
Exam Duration:	Dec-jan2024
Date of Results declaration:	2/12/2024
Regular/EX:	R
Batch:	2021
Grading/Non Grading	Grading

Total No. of Students Appear Exam	27
Total No. of Students Pass	22
Total No. of Students FAIL	5
Pass Percentage	81%
No. of Students obtaining more then 75% marks	3
No. of Students in University Merit List	0
No. of Students Ist Division	17

DEPARTMENT MECHANICAL ENGG. IIST

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Faculty wise RGPV Result Analysis

Name of Institute:	IIST
Name of Department:	ME
Course:	B TECH
Branch:	MECH
Semester:	5
Exam Duration:	Dec-jan2024
Date of Results declaration:	2/12/2024
Regular/EX:	R
Batch:	2021
Grading/Non Grading	Grading

Subject wise Result Analysis

Sem / Year:- 4th/ 2nd (Grading) **Batch:-2021-2025**

S. No.	Subject	Subject Code	Name of Faculty	No. of students appeared	No. of students passed	Passed percentage	A+/A/B/ B+	C+/C	D	F
1	I C Engines	ME501- [T]	MR. Akashdeep Gupta	27	26	96%	1	20	5	1
2	Mechanical Vibration	ME502- [T]	MR. VIPIN PATEL	27	25	93%	3	17	7	2
3	Dynamics of Machine	ME503- [T]	Dr. S.R. dravid	27	24	89%	2	16	9	3
4	Industrial Engineering & Ergonomics	ME504- [T]	MR. UMESH BADODE	27	27	100%	7	18	2	0

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Semester summary of Result Analysis

Indore Institute of Science & Technology
Approved by AICTE, New Delhi, Affiliated to RGPV, Bhopal, Recognized by UGC under Section 2(f)
2023-2024

INFORMATION TECHNOLOGY

Result Analysis Summary

Academic Session – Jan-June 2024

Admission Year	Course	Year	Semester	No. of Students Appeared	No. of Students Fail	No. of Students Passed	Passed %
IV	BTECH	IV	VIII	67	0	67	100.00%
III	BTECH	III	VI	61	1	60	98.36%
II	BTECH	II	IV	74	12	62	83.78%

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Sample Course File from IT

	COURSE PLAN	2023-24
		Branch IT Year III Sem V

COURSE FILE: - OPERATING SYSTEM

Name of Faculty	Ms. Lakshita Mandpe
Designation	Asst. Prof.
Department	Information Technology
Course	B. Tech.
Name of Programme	IT
Subject	Operating System
Subject Code	IT-501
Class (Year/Semester/ Section)	III/V
Academic Year and Term: (EVEN/ODD)	2023 / ODD
Number of Students	62
Target	
Prerequisite	Basic Computer knowledge, Knowledge of C/C++

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

20.	Assignment Sheet				
21.	Quiz Questions (Covering all units)				
22.	Question Bank				
23.	Continuous assessment record for Practical				
24.	Question Papers Of Mid Term Exam-I				
25.	Marks and Gap Analysis in Mid Term I				
26.	Remedial Action Taken To Remove the Gaps after mid Term I				
27.	Question Papers Of Mid Term Exam-II				
28.	Gap Analysis in Mid Term II				
29.	Remedial Action Taken To Remove the Gaps after mid Term II				
30.	Content beyond syllabus report				
31.	Model Question Paper With Key Solution				
32.	University Question Paper (Last three years)				
33.	Student Performance Report				
34.	Result Analysis				
35.	Certificate				

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

VISION & MISSION OF INSTITUTE

To be a nationally recognized institution of excellence in technical education and produce competent professionals capable of making valuable contribution to the society.

Mission of the Institute:

- To promote academic growth by offering state-of-the-art undergraduate and postgraduate programmes.
- To undertake collaborative projects which offer opportunities for interaction with academia and industry.
- To develop intellectually capable human potential who are creative, ethical and gifted leaders.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

VISION & MISSION OF DEPARTMENT

Vision of the Department:

To be a center of academic excellence in the field of computer science and engineering education.

Mission of the Department:

- Strive for academic excellence in computer science and engineering through well designed course curriculum, effective classroom pedagogy and in-depth knowledge of laboratory work.
- Transform under graduate engineering students into technically competent, socially responsible and ethical computer science and engineering professionals.
- Create computing centers of excellence in leading areas of computer science and engineering to provide exposure to the students on latest software tools and computing technologies.
- Incubate, apply and spread innovative ideas by collaborating with relevant industries and R&D labs through focused research groups.
- Attain these through continuous team work by a group of committed faculty, transforming the computer science and engineering department as a leader in imparting computer science and engineering education and research.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: To provide students with a solid foundation in mathematics, computer science and engineering, basic science fundamentals required to solve the computing problems.

PEO 2: To expose students to latest computing technologies and software tools, so that they can comprehend, analyze, design and create innovative computing products and solutions for real life problems.

PEO 3: To inculcate in students multi-disciplinary approach, professional attitude and ethics, communication and teamwork skills, and ability to relate computer engineering issues with social awareness.

PEO 4: To develop professional skills in students that prepare them for immediate employment and for life-long learning in advanced areas of computer science and related fields which enable them to be successful entrepreneurs.

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PROGRAMME OUTCOMES (POs)

PO 1: Apply the knowledge of mathematics, science and engineering fundamentals for the solution of computer science and engineering problems.

PO 2: Ability to identify, formulate and analyze the complex engineering problems

PO 3: Ability to design and develop the computer based systems to meet desired needs within realistic constraints such as public health and safety, environmental, agriculture, economic and societal considerations

PO 4: Ability to demonstrate with excellent programming, analytical, logical and problem solving skills

PO 5: Ability to use the emerging technologies, skills, and modern software tools to design, develop, test and debug the programs or software

PO 6: Ability to include and solve the social, cultural, ethical issues with computer science and engineering solutions

PO 7: Ability to design and develop web based solutions with effective graphical user interface for the need of sustainable development

PO 8: Apply ethical principles and commit to professional ethics and responsibilities and norms of the computer science and engineering practices.

PO 9: Ability to work individually and as a member or leader in diverse teams to accomplish a common goal.

PO 10: Ability to communicate effectively in both verbal and written forms with engineering community and society

PO 11: Knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team to manage the software and IT based projects in multidisciplinary environments.

PO 12: Appreciation of technological change and the need for independent life-long learning

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PROGRAM SPECIFIC OUTCOMES (PSO's)

A graduate of the Computer Science and Engineering Program will demonstrate:

PSO 1: Computer Science Specific Skills: The ability to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas by understanding the core principles and concepts of computer science and thereby engage in national grand challenges.

PSO 2: Programming and Software Development Skills: The ability to acquire programming efficiency by designing algorithms and applying standard practices in software project development to deliver quality software products meeting the demands of the industry.

PSO 3: Professional Skills: The ability to apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs thereby evolving as an eminent researcher and entrepreneur.

PEO-MISSION MAPPING MATRIX

PEO's	M1	M2	M3	M4	M5
PEO1	3	1			
PEO2			3	2	
PEO3		2			3
PEO4		1		1	

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

Department of Computer Science and Engineering	IT-501	Operating System	Professional Core

Lecture	Tutorial	Lab	Total Hours
4		2	

UNIT 1

Introduction to Operating Systems: Function, Evolution, Different Types, Desirable Characteristics and features of an O/S, Operating Systems Services: Types of Services, Different ways of providing these Services – Utility Programs, System Calls.

UNIT 2

File Systems: File Concept, User's and System Programmer's view of File System, Disk Organization, Tape Organization, and Different Modules of a File System, Disk Space Allocation Methods – Contiguous, Linked, and Indexed. Directory Structures, File Protection, System Calls for File Management, Disk Scheduling Algorithms.

UNIT 3

CPU Scheduling : Process Concept, Scheduling Concepts, Types of Schedulers, Process State Diagram, Scheduling Algorithms, Algorithms Evaluation, System calls for Process Management; Multiple Processor Scheduling; Concept of Threads. Memory Management: Different Memory Management Techniques – Partitioning, Swapping, Segmentation, Paging, Paged Segmentation, Comparison of these techniques, Techniques for supporting the execution of large programs: Overlay, Dynamic Linking and Loading, Virtual Memory – Concept, Implementation by Demand Paging etc.

UNIT 4

Input / Output : Principles and Programming, Input/output Problems, Asynchronous Operations, Speed gap Format conversion, I/O Interfaces, Programme Controlled I/O, Interrupt Driven I/O, Concurrent I/O. Concurrent Processes : Real and Virtual Concurrency, Mutual Exclusion, Synchronization, Inter- Process Communication, Critical Section Problem, Solution to Critical Section Problem : Semaphores – Binary and Counting Semaphores, WAIT & SIGNAL Operations and their implementation. Deadlocks: Deadlock Problems, Characterization, Prevention, Avoidance, Recovery.

UNIT 5

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	COURSE PLAN	2023-24
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Introduction to Network, Distributed and Multiprocessor Operating Systems. Case Studies: Unix/Linux, WINDOWS and other Contemporary Operating Systems.

TEXT BOOKS RECOMMENDED:

1. Silberschatz, Galvin, Gagne, "Operating System Concepts'', Wiley, 9/E

2. William Stalling, "Operating Systems", Pearson Education

REFERENCE BOOKS:

1. Andrew S. Tanenbaum, "Modern Operating Systems", 3/e, Prentice Hall

2. Maurice J. Bach, " The Design of Unix Operating System", Prentice Hall of India,

3. Bovet & Cesati, "Understanding the Linux Kernel", O'Reily, 2/E.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

LIST OF EXPERIMENTS

All experiments (wherever applicable) should be performed through the following steps.

1. Write a program for FCFS (non pre-emptive) to find turn around time and waiting time.
2. Write a program for SJF (non pre-emptive) to find turn around time and waiting time.
3. Write a program to demonstrate FIFO.
4. Write a program to demonstrate LRU.
5. Write a program to simulate the working of FCFS.
6. Write a program to simulate the working of SCAN.
7. Write a program to avoid deadlock using Banker's algorithm.
8. Write a program to demonstrate producer consumer problem using semaphores.
9. Write a program to simulate working of Dining Philosopher's problem.
10. Write a program to simulate sequential file allocation strategy.
11. Write a program to simulate indexed file allocation strategy
12. Write a program to design primitive kernel.
13. Case study of VI editor'

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	COURSE PLAN	2023-24
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COURSE DESCRIPTION

2.4.5.1	Gain knowledge of history of operating systems and understand design issues associated with operating systems.
2.4.5.2	Understand issues related to filesystem interfaces and implementation, disk management.
2.4.5.3	Identify the process management policies and analyze and compare scheduling of processes by CPU along with memory management.
2.4.5.4	Understand concepts of memory management (including virtual memory), I/O and concurrency control.
2.4.5.5	Understand network distributed and multiprocessing operating system.

THEORY COURSE OBJECTIVES

1. To understand the services provided by and the design of an operating system.
2. To understand the structure and organization of the file system.
3. To understand what a process is and how processes are scheduled and different approaches to memory management.
4. To understand what a process is and how processes are synchronized.
5. Students should understand the various types of operating system.

THEORY COURSE OUTCOMES

1. **$CO_{245.1}$: Explain** the role of operating system and its management policies and algorithm.
2. **$CO_{245.2}$: Identify** the process management policies and **analyze** and **compare** scheduling of processes by CPU along with memory management.
3. **$CO_{245.3}$: Identify** process synchronization and coordination handled by operating system
4. **$CO_{245.4}$: Identify** the I/O management and **analyze** and **compare** CPU concurrent processes problem.
5. **$CO_{245.5}$: Summarize** the introduction to network, multi-processor and distributed OS, and **Elaborate** on case studies for the same.

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	COURSE PLAN	2023-24
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COURSE OBJECTIVES	COURSE OUTCOMES
1. To understand the services provided by and the design of an operating system.	1. **Explain** the role of operating system and its management policies and algorithm
2. To understand the structure and organization of the file system.	2. **Identify** the process management policies and **analyze** and **compare** scheduling of processes by CPU along with memory management.
3. To understand what a process is and how processes are scheduled and different approaches to memory management.	3. **Identify** process synchronization and coordination handled by operating system
4. To understand what a process is and how processes are synchronized.	4. **Identify** the I/O management and **analyze** and **compare** CPU concurrent processes problem.
5. Students should understand the various types of operating system.	5. **Summarize** the introduction to network, multi-processor and distributed OS, and **Elaborate** on case studies for the same.

Note: For each of the OBJECTIVE indicate the appropriate OUTCOMES to be achieved.

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LAB Objective:

This course introduces the general architecture of computers. It covers functions of operating system as process, memory, disk, file and resources management. Process, disk and file management can be applied for better system performance and can be used for designing a new system.

LAB Outcomes:

After completing this course satisfactorily, students will be able to:

1. **CO2.4.5.1:** Apply and analyze various scheduling criteria.
2. **CO2.4.5.2:** Apply and identify efficient page replacement algorithms.
3. **CO2.4.5.3:** Identify various disk scheduling algorithms on the basis of their total seek time.
4. **CO2.4.5.4:** Identify and explain resource management by operating system.
5. **CO2.4.5.5:** Explain different file management strategies

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Lab Outcomes	Lab Experiments
Apply and analyze various scheduling criteria.	1. Write a program for FCFS (non pre-emptive) to find turnaround time and waiting time. 2. Write a program for SJF (non pre-emptive) to find turnaround time and waiting time.
Apply and identify efficient page replacement algorithms.	1. Write a program to demonstrate FIFO. 2. Write a program to demonstrate LRU.
Identify various disk scheduling algorithms on the basis of their total seek time.	1. Write a program to simulate the working of FCFS. 2. Write a program to simulate the working of SCAN.
Identify and explain resource management by operating system.	1. Write a program to avoid deadlock using Banker's algorithm. 2. Write a program to demonstrate producer consumer problem using semaphores. 3. Write a program to simulate working of Dining Philosopher's problem.
Explain different file management strategies.	1. Write a program to simulate sequential file allocation strategy. 2. Write a program to simulate indexed file allocation strategy 3. Write a program to design primitive kernel.

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Relation between Lab Outcome and Theory Course Outcome

THEORY COURSE OUTCOMES	LAB OUTCOMES
1. Explain the role of operating system and its management policies and algorithm.	1. Apply and analyze various scheduling criteria.
2. Identify the process management policies and analyze and compare scheduling of processes by CPU along with memory management.	2. Apply and identify efficient page replacement algorithms.
3. Identify process synchronization and coordination handled by operating system.	3. Identify various disk scheduling algorithms on the basis of their total seek time.
4. Identify the I/O management and analyze and compare CPU concurrent processes problem.	4. Identify and explain resource management by operating system.
5. Summarize the introduction to network, multi-processor and distributed OS, and Elaborate on case studies for the same.	5. Explain different file management strategies.

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	COURSE PLAN	2023-24
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Course Articulation Matrix

Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
$CO_{245.1}$	3	2	3										3	3	
$CO_{245.2}$	3	2		3									3	3	
$CO_{245.3}$	3	3		2					3				3	3	3
$CO_{245.4}$	3	2											3	2	
$CO_{245.5}$	3	2		2							2	1	3	2	
CO_{245} (AVG)	2	2	1	2	1	1	0	0	1	0	2	1	3	1	2

Mapping of Course outcomes to Program outcomes

EVALUATION COMPONENTS / SCHEME

Tools can be divided into two categories

- Direct Assessment
- Indirect Assessment

1. Direct Assessment

The UG program of the computer science and engineering department is credit based with continuous evaluation system. Evaluation is conducted by the subject teacher throughout the semester. Each subject contains four main components for evaluation:

- **Teacher Assessment:** In this component, Assignments, tutorials, problem solving, group discussions, quiz, etc. are given and evaluated regularly.
- **Mid Semester Examination:** Two Mid semester examinations are conducted within semester after the start of Academic Session.
- **End semester Examination:** End semester examination is conducted at the end of semester. Complete syllabus is covered in this examination. Major Weight age of marks is given to this component.
- **Practical Courses:** In these courses, continuous evaluation is done through viva-voce, Lab report submission and laboratory quiz.

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The weight age of components are given in the following table:

Subject Type	Assessment Components	Weight age (%)
Theory	Teacher Assessment	10 %
	Mid Semester Examination	20 %
	End Semester Examination	70 %
Lab / Project / Seminar	Lab Work and Sessional	20 %
	Lab Assignment/ MST and Quiz	20 %
	End Semester Examination	60 %

2. Indirect Assessment

Course Outcome Feedback: After the end of every semester, feedback is taken for individual subject.

ASSESSMENT TOOLS OF COURSE OUTCOMES

Mode of Assessment	Assessment Tool	Description	Evaluation of Course Outcomes	Frequency of Assessment
Direct	Teacher Assessment (Assignment and Quiz)	Two assignment and Two Quiz are given for each courses for continuous assessment	The Question in the internal examination and assignment /quiz is mapped against COs of respective course. The question for two internal examination and assignment and quiz are framed in such a way to cover all course outcomes. The final attainment for each Cos under direct assessment is calculated by taking average.	Continuous
Direct	Mid Semester Examination	Two Mid semester examinations are conducted within semester. Each MST Cover 2.5 Units		Twice in a Semester
Direct	Lab Work and Sessional	Continuous evaluation is done through viva-voce, Lab report submission and laboratory quiz.	The Question in the internal Lab examination/ assignment /quiz is mapped against COs of respective course. The question for two internal examination/ assignment / quiz is framed in such a way to cover all course outcomes and experiment list. The final attainment for each Cos under direct assessment is calculated by taking average.	Continuous
Direct	Lab Assignment / MST and Quiz			Twice in a Semester
Indirect	Course Outcome Feedback	After the end of every semester, feedback is taken for individual subject.		End of Semester

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ACADEMIC CALENDAR

Indore Institute of Science and Technology

Academic Calendar of 2023-24 (Session: July - Dec. 2023)

July

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29*	30

October

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25*	26	27	28
29	30	31				

November

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Events (Tentative)

Commencement of Classes

1st Year – 1st Sem. — 5th September 2023
2nd Year - 3rd Sem. and 3rd Year - 5th Sem. — 1st August 2023
4th Year - 7th Sem. — 3rd July 2023

Last date for Semester Registration

2nd Year - 3rd Sem. & 3rd Year - 5th Sem. — 14th Aug., 2023
4th Year - 7th Sem. — 11th July, 2023

Attendance

Short attendance notice and letter to parents after 15 days from the commencement of classes.
Display of 2nd short attendance list and intimation to Parents
3rd and 5th Sem. On 07th Sept. 2023 and 1st Sem. On 07th Oct. 2023
Display of 3rd short attendance list and intimation to Parents
3rd and 5th Sem. On 30th Sept. 2023 and 1st Sem. On 01st Nov. 2023

Internal Assessment

Centralized MST-I (Theory & Practical)
1st Sem. — 16th – 21st Oct. 2023*
3rd & 5th Sem. — 15th – 22nd Sept. 2023
7th Sem. — 21st – 26th Aug. 2023
Display of MST-I Result 1st Sem.-2nd Nov., 3rd & 5th Sem. - 30th Sept. & 7th Sem.-1st Sept. 2023

Centralized MST-II (Theory & Practical)
1st Sem. — 21st – 25th Nov. 2023*
3rd & 5th Sem. — 26th Oct. – 1st Nov. 2023
7th Sem. — 16th – 21st Oct. 2023
Display of MST-II Result 1st Sem.-1st Dec., 3rd & 5th Sem. - 10th Nov. and 7th Sem.-02nd Nov. 202.
Class Test/Quizzes to be conducted before each MST

Submission of Mid Semester & Sessional Marks to University
1st Sem. – 08th Dec. 2023*, 3rd & 5th Sem. - 26th Nov. and 7th Sem. - 20th Nov. 2023

Submission of Practical marks to University – On the date of Practical Exam.

Event (Extra Curriculum & Sports activities)
Apratim Sports - 2023 *(Inter School Sports activities)* — 30th, 31st Oct. & 1st Nov., 2023
Apratim Pragya - 2023 *(1. Model Presentation, 2. Hackathon)* — 4th to 5th Nov., 2023
(3. GK Competition) — *1st to 3rd Nov., 2023*
Institute level (Inter Branch Sports) — 21st – 26th Nov., 2023*

End of Teaching
1st Sem. - 30th Nov., 3rd and 5th Sem. - 18th Nov. & 7th Sem. - 10th Nov. 2023.

University Exam — Theory and Practical Examination
3rd & 5th Sem. — 28th Nov. – 27th Dec., 2023
7th Sem. — 20th Nov. – 22nd Dec., 2023

Online submission of Examination form to university
1st, 3rd & 5th Sem. - 17th Nov. and 7th Sem. till 13th Nov. 2023 *(Without late fee)**

*All Dates are subjected to change as per University guidelines & schedule.
Two Industry visit & Two Expert lectures for each department is mandatory.
Sports Activity: On all working Saturday & RGPV Sports Activities will be as per University Sports Calendar

List of Holidays for the session (July to Dec. – 2023)				
Moharrum	29/07/2023	Dushahara	24/10/2023	Deepavali Vacation From 11th Nov. to 14th Nov. 2023
Independence Day	15/08/2023	M Valmiki Jayanti	28/10/2023	
Raksha Bandhan	30/08/2023	Birsa Munda Jay.	15/11/2023	*Local holiday Day after Anant chaturdashi on 29/09/2023 Day after Dushahara on 25/10/2023 as per notified by District Administration
Janmashtami	07/09/2023	Gurunank Jayanti	27/11/2023	
Milad Un Nabi	28/09/2023	X-Mas	25/12/2023	
Gandhi Jayanti	02/10/2023			

Dr. Keshav Patidar
Principal

Shri Arun S Bhatnagar (IAS)
Group Advisor (SPARSH & SEWS)

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	COURSE PLAN	2023-24 Branch IT Year III Sem V

EVALUATION SCHEME

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula

V Semester Bachelor of Technology (B.Tech.) [Information Technology] (w.e.f. July 2020) Revised

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted – Theory: End Sem.	Theory: Mid Sem. Exam.	Theory: Quiz/ Assignment	Practical: End Sem	Practical: Term work Lab Work & Sessional	Total Marks	Contact Hours per week: L	T	P	Total Credits
1.	IT 501	DC	Operating System	70	20	10	30	20	150	3	-	2	4
2.	IT 502	DC	Computer Network	70	20	10	30	20	150	3	-	2	4
3.	IT 503	DE	Departmental Elective-I	70	20	10	-	-	100	3	1	-	4
4.	IT 504	OE	Open Elective-I	70	20	10	-	-	100	3	-	-	3
5.	IT 505	D Lab	Advanced Java Lab	-	-	-	30	20	50	-	1	2	2
6.	IT 506	HSMC Lab	Soft Skills and Interpersonal Communication	-	-	-	30	20	50	-	1	2	2
7.	IT 507	IN	Evaluation of Internship-II					100	100			6	3
8.		IN	Internship-III	To be completed anytime during Fifth/Sixth semester. Its evaluation credit to be added in Seventh Semester.									
9.	IT 508	P	Minor Project I/Seminar	-	-	-	-	50	50	-	-	4	2
10.	Additional Credits*	*Additional credits can be earned through successful completion of credit based MOOC's Courses available on SWAYAM platform (NPTEL) at respective UG level.											
			Total	280	80	40	120	220	750	12	3	18	24

Departmental Elective-I
IT 503 (A) Theory of Computation
IT 503 (B) Microprocessor & Interfacing
IT 503 (C) Object Oriented Analysis and Design

Open Elective-I
IT 504 (A) Artificial Intelligence
IT 504 (B) E Commerce & Governance
IT 504 (C) Java Programming

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Time Table

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
TIME TABLE
SESSION: July - Dec 2023

CLASS ROOM NO 23
Class: IT III Year Class Cordinator - Ms. Lalita Bargadiya EFFECTIVE FROM :07-08-2023

TIME / DAY	10.10 AM - 11.00 AM	11.00 AM - 11.50 AM	11.50 AM - 12.40 PM	12.40 PM - 1.30 PM	1.30 PM - 2.10 PM	2.10 PM - 3.00 PM	3.00 PM - 3.50 PM	3.50 PM - 4.40 PM
MONDAY	L TOC PB	L CN AK	Full Stack-SIG Auditorium-II PB		LUNCH	CDC PDP	CDC APTI AB	L Java NB
TUESDAY	Lab-2/Lab-3 CN B1/OS B2 AK/LB		Full Stack-SIG Auditorium-II PB			L OS LB	L CN AK	L TOC PB
WEDNESDAY	Lab-2/Lab-3 CN B2/OS B1 AK/LB		Full Stack-SIG Auditorium-II PB			L OS LB	Lab-2/Lab-3 Advanced Java B1/Soft Skill B2 LM/RT	
THURSDAY	L TOC PB	L Advanced Java NB	Full Stack-SIG Auditorium-II PB			CDC PDP	L CN AK	L Java NB
FRIDAY	L Java NB	L TOC PB	Full Stack-SIG Auditorium-II PB			L OS LB	Lab-2/Lab-3 Advanced Java B2/Soft Skill B1 LM/RT	
SATURDAY	MINE LAB MP Lab B1& B2 LB		CDC PDP	L CN AK		Library	CDC APTI AB	Sport

S. NO.	Sub. Code	Subject	Faculty
1	IT-501	OS	Lalita Bargadiya(LB)
2	IT502	CN	Mr. Amit Kanungo(AK)
3	IT-503	TOC	Mr. Pradeep Baniya(PB)
4	IT-504	JAVA Programming	Ms. Lakshmi Manjhi(LM)
5	IT-505	Advanced Java Lab	Ms. Lakshmi Manjhi(LM)
6	IT-506	Soft Skill	Ms. Rupali Tiwari(RT)
7	IT-508	Minor Project	Ms. Lalita Bargadiya(LB)

DEPARTMENT OF INFORMATION TECHNOLOGY IIST

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

COURSE PLAN / LESSON PLAN

S.No	Topics to be covered	Time	Ref	Teaching Aids
1.	UNIT 1. Introduction to Operating Systems	50 min	1,5	BB/PPT
2.	Different Types of OS	50 min	1,5	BB/PPT
3.	Characteristics and features of an O/S	50 min	1,5	BB/PPT
4.	Operating Systems Services: Utility Programs	50 min	1,5	BB/PPT
5.	System Calls.	50 min	1,5	BB/PPT
6.	UNIT 3. CPU Scheduling: Process Concept, Scheduling Concepts, Types of Schedulers	50 min	1,5	BB/PPT
7.	Process State Diagram, Scheduling Algorithms,	50 min	1,5	BB/PPT
8.	Algorithms Evaluation	50 min	1,5	BB/PPT
9.	System calls for Process Management	50 min	1,5	BB/PPT
10.	Multiple Processor Scheduling; Concept of Threads	50 min	1,5	BB/PPT
11.	Memory Management Techniques – Partitioning, Swapping	50 min	1,5	BB/PPT
12.	Liner, loader, Segmentation,	50 min	1,5	BB/PPT
13.	Paging,	50 min	1,5	BB/PPT
14.	Paged Segmentation	50 min	1,5	BB/PPT
15.	Comparison of Overlay	50 min	1,5	BB/PPT
16.	Dynamic Linking and Loading	50 min	1,5	BB/PPT
17.	Virtual Memory Concept	50 min	1,5	BB/PPT
18.	Implementation by Demand Paging etc.	50 min	1,5	BB/PPT
19.	UNIT 4. Principles and Programming, Input/Output Problems	50 min	1,5	BB/PPT
20.	Asynchronous Operations, Speed gap Format conversion	50 min	1,5	BB/PPT
21.	I/O Interfaces, Programme Controlled I/O	50 min	1,5	BB/PPT
22.	Interrupt Driven I/O, Concurrent I/O	50 min	1,5	BB/PPT
23.	Real and Virtual Concurrency, Mutual Exclusion, Synchronization	50 min	1,5	BB/PPT
24.	Inter- Process Communication	50 min	1,5	BB/PPT
25.	Critical Section Problem	50 min	1,5	BB/PPT
26.	Semaphores – Binary and Counting Semaphores	50 min	1,5	BB/PPT
27.	WAIT & SIGNAL Operations and their implementation	50 min	1,5	BB/PPT
28.	Deadlocks: Deadlock Problems	50 min	1,5	BB/PPT
29.	Characterization, Prevention	50 min	2,3	BB/PPT
30.	Avoidance, Recovery	50 min	2,3	BB/PPT
31.	UNIT 2. File Systems: File Concept, User's and System Programmer's view of File System	50 min	2,3	BB/PPT

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

32.	Disk Organization, Tape Organization	50 min	2,3	BB/PPT
33.	Different Modules of a File System, Disk Space	50 min	2,3	BB/PPT
34.	Allocation Methods – Contiguous, Linked, Indexed	50 min	2,3	BB/PPT
35.	Directory Structures, File Protection	50 min	2,3	BB/PPT
36.	System Calls for File Management	50 min	2,3	BB/PPT
37.	Disk Scheduling Algorithms	50 min	2,3	BB/PPT
38.	UNIT 5. Introduction to Network	50 min	2,3	BB/PPT
39.	Distributed and Multiprocessor Operating Systems	50 min	2,3	BB/PPT
40.	Case Studies: Unix/Linux, WINDOWS, and other Contemporary Operating Systems	50 min	2,3	BB/PPT

TEXT BOOKS RECOMMENDED:

1. Silberschatz, Galvin, Gagne, "Operating System Concepts'', Wiley, 9/E

2. William Stalling, "Operating Systems", Pearson Education

REFERENCE BOOKS:

1. Andrew S. Tanenbaum, "Modern Operating Systems", 3/e, Prentice Hall

2. Maurice J. Bach, " The Design of Unix Operating System", Prentice Hall of India,

3. Bovet & Cesati, "Understanding the Linux Kernel", O'Reily, 2/E.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

COMPREHENSIVE RESULT ANALYSIS

Continuous assessment – Assignment
Continuous assessment – Quiz
Continuous assessment – Midterm 1
Continuous assessment – Midterm 2
Continuous assessment – Lab Quiz
Continuous assessment – Lab Files
Continuous assessment – Lab Viva
Continuous assessment – Lab MST
Continuous assessment – Internal Marks
Continuous assessment – University Result

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

- Assignment Paper & Solution
- Sample of Assignment copy
- Mid Sem 1 & 2 Paper & Solution
- Sample of Mid Sem Copy
- Theory & Lab Quiz Paper & Solution
- Quiz paper Submit by Students
- Internal Viva Marks
- Tutorial Attendance
- Tutorial Sheet with Solution
- Attendance Register
- Remedial Class Attendance
- Notes
- Lab Manual
- University result analysis
- University Question Papers

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

Assignment Paper & Solution

Question: Difference between network OS and distributed OS.

Answer:

The difference Between Network Operating System and Distributed Operating System are given below:

S.NO	Network Operating System	Distributed Operating System
1.	Network Operating System's main objective is to provide the local services to remote client.	Distributed Operating System's main objective is to manage the hardware resources.
2.	In Network Operating System, Communication takes place on the basis of files.	In Distributed Operating System, Communication takes place on the basis of messages and shared memory.
3.	Network Operating System is more scalable than Distributed Operating System.	Distributed Operating System is less scalable than Network Operating System.
4.	In Network Operating System, fault tolerance is less.	While in Distributed Operating System, fault tolerance is high.
5.	Rate of autonomy in Network Operating System is high.	While The rate of autonomy in Distributed Operating System is less.
6.	Ease of implementation in Network Operating System is also high.	While in Distributed Operating System Ease of implementation is less.
7.	In Network Operating System, All nodes can have different operating system.	While in Distributed Operating System, All nodes have same operating system.

Question: Distinguish program and process?

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Answer: **1. Program :**

When we execute a program that was just compiled, the OS will generate a process to execute the program. Execution of the program starts via GUI mouse clicks, command line entry of its name, etc. A program is a passive entity as it resides in the secondary memory, such as the contents of a file stored on disk. One program can have several processes.

2. Process :

The term process (Job) refers to program code that has been loaded into a computer's memory so that it can be executed by the central processing unit (CPU). A process can be described as an instance of a program running on a computer or as an entity that can be assigned to and executed on a processor. A program becomes a process when loaded into memory and thus is an active entity.

Difference between Program and Process :

Sr.No.	Program	Process
1.	Program contains a set of instructions designed to complete a specific task.	Process is an instance of an executing program.
2.	Program is a passive entity as it resides in the secondary memory.	Process is a active entity as it is created during execution and loaded into the main memory.
3.	Program exists at a single place and continues to exist until it is deleted.	Process exists for a limited span of time as it gets terminated after the completion of task.
4.	Program is a static entity.	Process is a dynamic entity.
5.	Program does not have any resource requirement, it only requires memory space for storing the instructions.	Process has a high resource requirement, it needs resources like CPU, memory address, I/O during its lifetime.
6.	Program does not have any control block.	Process has its own control block called Process Control Block.

	COURSE PLAN	2023-24
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Question: Explain multiprogramming and multiprocessing OS.

Answer: Multiprogramming is interleaved execution of two or more process by a single CPU computer system. Whereas, Multiprocessing is the simultaneous execution of two or more process by a computer having more than one CPU.

Multiprogramming occurs by switching from one process to others (a phenomenon called context switching) whereas, Multiprocessing occurs by means of parallel processing.

Multiprogramming includes executing a portion of the program, then a segment of another in the consecutive time period. But in Multiprocessing it is possible for a system to simultaneously work on several program segments of one or more program.

In Multiprogramming context switching takes place but multiprocessing permits parallel processing.

Question: Write the difference between Job and CPU scheduling?

Answer: A process is a program in execution. There are multiple processes running parallel in a computer system. It is important to maximize CPU utilization. The operating system can make the computer productive by switching the CPU among processes. For maximum CPU utilization, it is important to run some process every time. The processes that should execute are placed in the ready queue. The job scheduling is the mechanism to select which process has to be brought into the ready queue. The CPU scheduling is the mechanism to select which process has to be executed next and allocates the CPU to that process. That is the key difference between Job Scheduling and CPU Scheduling. The job scheduling is known as the long-term scheduling while the CPU scheduling is known as the short-term scheduling. The job scheduling is done by the job scheduler or the long-term scheduler. The CPU scheduling is done by the CPU scheduler or the short-term scheduler.

Question: What is the difference between Job and Process?

Answer: A process is any running program with its own address space.

A job is a concept used by the shell - any program you interactively start that doesn't detach (ie, not a daemon) is a job. If you're running an interactive program, you can press CtrlZ to suspend it. Then you can start it back in the foreground (using fg) or in the background (using bg).

While the program is suspended or running in the background, you can start another program - you would then have two jobs running. You can also start a program running in the background by appending an "&" like this: program &. That program would become a background job. To list all the jobs you are running, you can use jobs.

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

Question: Given five memory partitions of 100Kb, 500Kb, 200Kb, 300Kb, 600Kb (in order), how would the first-fit, best-fit, and worst-fit algorithms place processes of 212 Kb, 417 Kb, 112 Kb, and 426 Kb (in order)? Which algorithm makes the most efficient use of memory and why?

Answer:

First fit

212 K is put in 500 K partition.

417 K is put in 600 K partition.

112 K is put in 288 K partition. (New partition 288 K = 500 K - 212 K)

426 K must wait.

Best-fit

212 K is put in 300 K partition.

417 K is put in 500 K partition.

112 K is put in 200 K partition.

426 K is put in 600 K partition.

Worst-fit

212 K is put in 600 K partition.

417 K is put in 500 K partition.

112 K is put in 388 K partition. (600 K - 212 K)

426 K must wait.

In this example Best-fit is the best solution.

Question: Suppose a disk has 201 cylinders, numbered from 0-200. At sometime the disk arm is at cylinder 100, and there is a queue of disk access requests for cylinders 30, 85, 90, 100, 105, 110, 135 and 145. If shortest seek time first (SSTF) and SCAN are being used for scheduling the disk access. Then find the number of requests if cylinder 90 is requested for servicing in both cases. And also compare the results to conclude which of them is better.

Answer:

Explanation: In Shortest-Seek-First algorithm, request closest to the current position of the disk arm and head is handled first.

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		Branch IT Year III Sem V

In this question, the arm is currently at cylinder number 100. Now the requests come in the queue order for cylinder numbers 30, 85, 90, 100, 105, 110, 135 and 145.

The disk will service that request first whose cylinder number is closest to its arm. Hence 1st serviced request is for cylinder no 100 (as the arm is itself pointing to it), then 105, then 110, and then the arm comes to service request for cylinder 90. Hence before servicing request for cylinder 90, the disk would had serviced 3 requests.

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Saturday, December 21, 2024

	COURSE PLAN	2023-24
		Branch IT Year III Sem V

Mid Sem Papers

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE
DEPARTMENT OF INFORMATION TECHNOLOGY
MID SEMESTER TEST-I (SEPT 2023)

SUBJECT NAME: - OPERATING SYSTEM **SUBJECT CODE: IT-501**
SEMESTER: V **BRANCH: IT** **ENROLLMENT NO: _____**
MAX MARKS: 20 **TIME: 2 Hrs.**

QN	Questions	Mark	CO	BL	PO
PART –A (ATTEMPT ANY TWO QUESTIONS)					
Q.1	How Operating System work like interface between user and hardware? Justify it. And What are the various functionalities of Operating System?	4	CO-1	L2	1,2,3,7
Q.2	Explain the functionalities of system call in operating System.	4	CO-1	L1	1,2,3,7
Q.3	What do you mean by PCB? Where is it used? What are its contents?	4	CO-2	L1	1,2,3,7
PART –B (ATTEMPT ANY TWO QUESTIONS)					
Q.4	Discuss the types of Operating system.	4	CO-1	L2	1,2,3,7
Q.5	Compare long term and short-term scheduler.	4	CO-2	L3	1,2,3,7
Q.6	Illustrate the concept of Context Switching.	4	CO-2	L1	1,2,3,7
PART –C (ATTEMPT ANY ONE QUESTION)					
Q.7	In the given case, there are six jobs P1, P2, P3, P4, P5 and P6. Their arrival time and burst time are given below in the table. Process ID / Arrival Time / Burst Time P1 / 0 / 8 P2 / 1 / 4 P3 / 2 / 2 P4 / 3 / 1 P5 / 4 / 3 P6 / 5 / 2 Apply the Shortest Remaining Time First (SRTF) Scheduling Algorithm on the given data and prepare Giant Chart. Find out the completion time, turnaround time, waiting time, response time for each of the processes. Also calculate Average Turnaround and Average Waiting time.	4	CO-1	L4	1,2,3
Q.8	Draw and explain process state diagram of the process.	4	CO-2	L4	1,2,3,7

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		Branch IT Year III Sem V

INDORE INSTITUTE OF SCIENCE & TECHNOLOGY, INDORE
DEPARTMENT OF INFORMATION TECHNOLOGY
MID SEMESTER TEST-II NOVEMBER 2023
PART II

SUBJECT NAME: OS **SUBJECT CODE: IT-501**
SEMESTER: **ENROLLMENT NO.:**
MAX MARKS: 20

Q. No.	Questions	Marks	CO	BL	PO
	PART –A (ATTEMPT ANY ONE QUESTIONS)				
1.	Demonstrate the concept of Paging. How the logical address are converted intro physical address.				
2.	What do you mean by Semaphore? Explain its uses and its implementation.				
	PART –B (ATTEMPT ANY TWO QUESTIONS)				
3.	Define the concept of Virtual Memory. How the page fault occurs?	4	CO4	L2	1,2,3,7
4.	Consider the main memory with capacity of 3 frames. Assume that pages of a process are referenced in the order as given below: 7, 0, 1, 2, 0, 3, 0, 4 , 2, 3, 0, 3. Which one is better FIFO or LRU and why?	4	CO4	L4	1,2,3
5.	What is meant by Thrashing? Explain various causes of thrashing.	4	CO4	L1	1,2,3,7
	PART –C (ATTEMPT ANY TWO QUESTION)				
6.	Consider a disk with 200 tracks and the queue has random requests from different processes in the order:5 5, 58, 39, 18, 90, 160, 150, 38, 184 Initially arm is at 100. Find the Average Seek length using FIFO, SSTF, SCAN and C-SCAN algorithm.	5	CO5	L4	1,2,3
7.	Define the concept of File Allocation method.	4	CO5	L1	1,2,3,7
8.	Explain Distributed system.	4	CO5	L1	1,2,3,7

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Saturday, December 21, 2024

	COURSE PLAN	2023-24
		Branch IT Year III Sem V

University Question Papers

Roll No .....

IT-501-CBGS

B.Tech., V Semester

Examination, December 2020

Choice Based Grading System (CBGS)

Operating system

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any Five questions.
किन्हीं पाँच प्रश्नों को हल कीजिए।

ii) All questions carry equal marks.
सभी प्रश्नों के समान अंक हैं।

iii) All parts of each question to be attempted at one place.
प्रश्नों के सभी भाग एक ही स्थान पर लिखिए।

iv) In case of any doubt or dispute the English version question should be treated as final.
किसी भी प्रकार के संदेह अथवा विवाद की स्थिति में अंग्रेजी भाषा के प्रश्न को अंतिम माना जायेगा।

1. a) What are the different functions of an Operating System? Explain in brief. 7
ऑपरेटिंग सिस्टम के विभिन्न कार्य क्या हैं? संक्षिप्त में समझाइए।

b) Describe Architecture of operating system. 7
ऑपरेटिंग सिस्टम का आर्किटेक्चर बताइये।

2. a) Explain critical section problem with suitable example. 7
क्रिटिकल सेक्शन समस्या को उचित उदाहरण सहित समझाइए।

b) Discuss the classical problem of Synchronization. 7
समकालीनता की क्लासिक समस्या पर चर्चा करें।

IT-501-CBGS PTO

3. a) What do you mean by Deadlock? Explain various methods of handling deadlock. 7
डेडलॉक से आप क्या समझते हैं। डेडलॉक संभालने के विभिन्न तरीकों को समझाइए।

b) Describe process, states and transition. 7
प्रोसेस, स्टेट एवं ट्रांजिशन बताइये।

4. a) What is virtual memory? Discuss the benefits of virtual memory techniques. 7
आभासी मेमोरी क्या है? आभासी मेमोरी तकनीकों के फायदे बताइए।

b) Explain Paging Memory Management in detail. 7
पेज मेमोरी प्रबंधन को विस्तार से समझाइए।

5. a) What do you mean by Distributed file systems? Explain its properties. 7
वितरित फाईल सिस्टम से आप क्या समझते हैं? इसकी विशेषताओं को समझाइए।

b) Explain the performance Evaluation Techniques in Distributed file systems. 7
वितरित फाईल सिस्टम में क्षमता आकलन तकनीकि को समझाइए।

6. a) Define Monitor Program? Explain how it overcomes the Drawback of Semaphores. 7
मॉनिटर प्रोग्राम को परिभाषित कीजिए। यह सेमाफोर की कमियों को कैसे दूर करता है? समझाइए।

b) What is Multiprocessor operating system? Explain its types. 7
मल्टीप्रोसेसर ऑपरेटिंग सिस्टम क्या है? इसके प्रकारों को समझाइए।

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Indore Institute of Science and Technology, Indore

Saturday, December 21, 2024

	COURSE PLAN	2023-24
		Branch IT Year III Sem V

Roll No

IT-501 (GS)

B.Tech., V Semester

Examination, November 2022

Grading System (GS)

Operating System

Time : Three Hours *Maximum Marks : 70*

Note: i) Attempt any five questions.
किन्हीं पाँच प्रश्नों को हल कीजिए।

ii) All questions carry equal marks.
सभी प्रश्नों के समान अंक हैं।

iii) In case of any doubt or dispute the English version question should be treated as final.
किसी भी प्रकार के संदेह अथवा विवाद होने स्थिति में अंग्रेजी भाषा के प्रश्न को अंतिम माना जाएगा।

1 a) Explain how protection is provided for the hardware resources by the operating system? 7
ऑपरेटिंग सिस्टम द्वारा हार्डवेयर संसाधनों के लिए सुरक्षा कैसे प्रदान की जाती है?

b) Suppose that a disk drive has 5000 cylinders numbered 0 to 4999. The drive is currently serving a request at cylinder 143, and the previous request was at cylinder 125. The queue of pending request in the FIFO order is 86,1470,913,1774, 948,1509, 1022,1750,130 starting from the current head position, what is the total distance (in cylinders) that the disk arm moves to satisfy all the pending requests, for each of the following disk scheduling algorithms? 7
निम्नलिखित डिस्क शेड्यूलिंग एल्गोरिदम के लिए डिस्क आर्म द्वारा सभी लंबित अनुरोधों को पूरा करने के लिए कुल दूरी (सिलेंडर में) क्या है?

i) FCFS ii) SSTF
iii) SCAN iv) Look

2 a) In the round-robin scheduling, new processes are placed at the end of the queue, rather than at the beginning. Suggest a reason for this. 3
राउंड-रॉबिन शेड्यूलिंग में, नई प्रक्रियाओं को शुरुआत के बजाय कतार के अंत में रखा जाता है। इसका कारण सुझाइए।

b) Explain why wait and signal operations on semaphores need to be atomic? 4
सेमाफोर के सेमाफोर पर प्रतीक्षा और सिग्नल संचालन परमाणु होने की आवश्यकता क्यों है?

c) Show how to implement the wait() and signal() semaphore operations in multiprocessor environments using the TestandSet() instruction. The solution should exhibit minimal busy waiting. Develop pseudo code for implementing the operations. 7
TestandSet() निर्देश का उपयोग करके मल्टीप्रोसेसर वातावरण में wait() और signal() सेमाफोर संचालन को लागू करने का तरीका दिखाएं। समाधान को न्यूनतम व्यस्त प्रतीक्षा प्रदर्शित करनी चाहिए। संचालन को लागू करने के लिए pseudo कोड विकसित करें।

3 a) Consider a system ... scenario. At time T Process P1 request for a resource A, process P2 requests for a resource Y. Both the resources are available and they are allocated to the requesting process. At time t_1 where $t_1 > t_0$ both the processes are still holding the resources, however process P1 request for Y which is held by P2. process P2 request for X held by P1. Will there be a deadlock? If there is a deadlock discuss the four necessary conditions for deadlock, else justify there is no deadlock. 7
निम्नलिखित परिदृश्य के लिए संसाधन आवंटन ग्राफ का विश्लेषण करें। समय पर T संसाधन X के लिए P1 अनुरोध को संसाधित करता है। संसाधन Y के लिए P2 अनुरोधों को संसाधित करता है। दोनों संसाधन उपलब्ध हैं और उन्हें अनुरोध करने वाली प्रक्रिया के लिए आवंटित किया गया है। समय t_1 पर जहां $t_1 > t_0$ दोनों प्रक्रियाएं अभी भी संसाधनों को धारण कर रही हैं। हालांकि Y के लिए P1 अनुरोध की प्रक्रिया करने को P2 द्वारा आयोजित की जाती है। P1 द्वारा आवंटित X के लिए P2 अनुरोध की प्रक्रिया करें। क्या कोई गतिरोध होगा? यदि गतिरोध है तो गतिरोध के लिए चार आवश्यक शर्तों पर चर्चा करें। अन्यथा कोई गतिरोध नहीं होने का औचित्य सिद्ध करें।

b) Assume the following processes arrive for execution at the time indicated and also mention with the length of the CPU-burst time given in milliseconds. 7
मान लें कि निम्नलिखित प्रक्रियाएं निर्दिष्ट समय पर निष्पादन के लिए पहुंचती हैं और मिलीसेकंड में दिए गए CPU-विस्फोट समय की लंबाई के साथ भी उल्लेख करती हैं।

Job	Burst time		
P1	6	2	0
P2	2	2	1
P3	3	4	1
P4	1	1	2
P5	2	3	2

Give a Gant chart illustrating the execution of these processes using FCFS, Round Robin (quantum = 1), and Priority (Preemptive and Non preemptive) Calculate the average waiting time and average turnaround time for each of the above scheduling algorithm. Which algorithm will give the minimum average waiting time? Discuss.
FCFS, Round Robin (quantum = 1) और प्राथमिकता (प्रीएम्प्टिव और नॉन प्रीएम्प्टिव) का उपयोग करके इन प्रक्रियाओं के निष्पादन को दर्शाने वाला एक गैंट चार्ट दें। उपरोक्त शेड्यूलिंग एल्गोरिथ्म में से प्रत्येक के लिए औसत प्रतीक्षा समय और औसत टर्नअराउंड समय की गणना करें। कौन-सा एल्गोरिथ्म होगा न्यूनतम औसत प्रतीक्षा समय दें। चर्चा करें।

4 a) What is the difference between local and global page allocation? What are their respective advantages and disadvantages? 3
स्थानीय और वैश्विक पेज आवंटन के बीच क्या अंतर है? उनके संबंधित फायदे और नुकसान क्या है?

b) Compare the segmented paging scheme with the hashed page table scheme for handling large address spaces. Under what circumstances is one scheme preferable over the other? 4
बड़े पहुंच स्थान को संभालने के लिए हैशेड पेज टेबल स्कीम के साथ संगठित पेजिंग स्कीम की तुलना करें। किन परिस्थितियों में एक योजना दूसरी योजना से बेहतर है?

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c) Consider the following page ...
निम्नलिखित पेज संदर्भ स्ट्रिंग पर विचार करें:

1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6

How many page faults would occur for the following page replacement algorithm, assuming one, two three, four, five, six or seven frames? Assume that all the frames are initially empty, so your first unique pages will all cost one fault each

i) LRU replacement

ii) FIFO replacement

iii) Optimal replacement

एक, दो, तीन, चार, पाँच, छह या सात फ्रेम मानते हुए, निम्न पृष्ठ प्रतिस्थापन एल्गोरिथम के लिए कितने पृष्ठ दोष होंगे? मान लें कि सभी फ्रेम प्रारंभ में खाली हैं, इसलिए आपके पहले अद्वितीय पृष्ठों में प्रत्येक की एक लागत होगी

i) LRU प्रतिस्थापन

ii) FIFO प्रतिस्थापन

iii) इष्टतम प्रतिस्थापन

5. a) Find out the effective memory-access time with an 80% hit ratio and the following access times: TLB access time: 20ns, Memory access time: 100ns 3

80% हिट अनुपात और निम्नलिखित एक्सेस समय के साथ प्रभावी मेमोरी-एक्सेस टाइम का पता लगाएं: TLB एक्सेस टाइम: 20ns; मेमोरी एक्सेस टाइम: 100ns.

b) Consider a paging system with the page table stored in memory. If a memory reference takes 200 nano seconds, how long does a paged memory reference take? If we add associative registers, and 75 percent of all page table references are found in the associative registers, what is the effective memory reference time? (Assume that finding a pager table entry in the associative registers takes zero time, if the entry is there? 7

मेमोरी में संग्रहीत पेज टेबल के साथ पेजिंग सिस्टम पर विचार करें। यदि स्मृति संदर्भ में 200 नैनो सेकेंड लगते हैं, तो पृष्ठांकित स्मृति संदर्भ में कितना समय लगता है? यदि हम सहयोगी रजिस्टरों को जोड़ते हैं, और सहयोगी रजिस्टरों में सभी पृष्ठ तालिका संदर्भों का 75 प्रतिशत पाया जाता है, तो प्रभावी स्मृति संदर्भ समय क्या है? (मान लें कि सहयोगी रजिस्टरों में पेजर तालिका प्रविष्टि खोजने में शून्य समय लगता है, यदि प्रविष्टि है?

c) On a system with paging, a process cannot access memory that it does not own, why? How could the operating system allow access to other memory? Why should it or should it not? 4

पेजिंग के साथ एक सिस्टम पर, एक प्रक्रिया उस मेमोरी तक नहीं पहुंच सकती है जो उसके पास नहीं है, क्यों? ऑपरेटिंग सिस्टम अन्य मेमोरी तक कैसे पहुंच की अनुमति दे सकता है? ऐसा क्यों होना चाहिए या नहीं होना चाहिए?

6. a) Which file-allocation method would you use for a system whose main task is database management? Why? 7

आप किसी सिस्टम के लिए किस फाइल-आवंटन विधि का उपयोग करेंगे जिसका मुख्य कार्य डेटाबेस प्रबंधन है? क्यों?

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b) When a file is removed, the blocks it occupies are simply placed back onto the free list. Can you see any problems with this? If so, how would you overcome them and what problems, if any, would now exist and how would you resolve these? 7

जब कोई फाइल हटा दी जाती है, तो इसको रखने वाले ब्लॉकों को आसानी से मुक्त सूची में वापस रखा जाता है। क्या आप इसमें कोई समस्या देख सकते हैं? यदि ऐसा है, तो आप उन्हें कैसे दूर करेंगे और कौन सी समस्याएँ, यदि कोई हैं, अब मौजूद होंगी और आप इनका समाधान कैसे करेंगे?

a) Explain the indexed and linked file allocation methods. Discuss the advantages and disadvantages in those methods.4

इंडेक्स्ड और लिंक्ड फाइल एलोकेशन मेथड्स को समझाइए। उन विधियों के लाभ और हानियों की चर्चा कीजिए।

b) Give an example for an application that could benefit from operating system support for random access to indexed files. 3

एक ऐसे एप्लिकेशन का उदाहरण दें जो अनुक्रमित फाइलों के लिए रैंडम एक्सेस के लिए ऑपरेटिंग सिस्टम समर्थन से लाभान्वित हो सकता है।

c) Some file system allows disk storage to be allocated at different levels of granularity. For instance, a file system could allocate 4KB of disk space as a single 4KB block or as eight 512 byte blocks. How could we take advantage of this flexibility to improve performance? What modifications would have to be made to the free-space management scheme in order to support this feature? 7

कुछ फाइल सिस्टम डिस्क स्टोरेज को ग्रैन्युलैरिटी के विभिन्न स्तरों पर आवंटित करने की अनुमति देते हैं। उदाहरण के लिए, एक फाइल सिस्टम 4KB डिस्क स्थान को एक 4KB ब्लॉक या आठ 512 बाइट ब्लॉक के रूप में आवंटित कर सकता है। प्रदर्शन सुधारने के लिए इस लचीलेपन का लाभ कैसे उठा सकते हैं? इस सुविधा का समर्थन करने के लिए मुक्त-स्थान प्रबंधन योजना में क्या संशोधन करने होंगे?

[P.T.O.]

a) How long does it take to load 64 Kbyte program from a disk whose average seek time is 10msec, rotation time is 20msec and track holds 32 Kbytes. Calculate time when page size is 2 Kbyte and also when page size is 4 Kbyte. Assume that pages are spread around the disk and no two pages are on the same cylinder. 7

डिस्क से 64 किलोबाइट प्रोग्राम को लोड करने में कितना समय लगता है जिसका औसत खोज समय 10msec है, घूर्णन समय 20msec है और ट्रैक 32 किलोबाइट रखता है। समय की गणना करें जब पृष्ठ का आकार 2 किलोबाइट हो और जब पृष्ठ का आकार 4 किलोबाइट हो। मान लें कि पृष्ठ डिस्क के चारों ओर फैले हुए हैं और एक ही सिलेंडर पर दो पृष्ठ नहीं हैं।

b) Given a disk with 200 tracks, where track requests are received in the following order: 7

200 ट्रैक वाली एक डिस्क दी गई है, जहां ट्रैक अनुरोध निम्न क्रम में प्राप्त होते हैं।

55, 58, 39, 18, 90, 160, 150, 38, 184.

The starting position for the arm is track 100. Calculate the number of tracks crossed when the following algorithms are used

i) First Come First Serve

ii) Shortest Seek First

iii) The elevator algorithm starting in the direction

आर्म के लिए प्रारंभिक स्थिति ट्रैक 100 है। निम्न एल्गोरिथम का उपयोग करने पर क्रॉस की गई पटरियों की संख्या की गणना करें।

i) फर्स्ट कम फर्स्ट सर्व।

ii) शॉर्टेस्ट सीक फर्स्ट।

iii) लिफ्ट एल्गोरिथम दिशा में शुरू हो रहा है।

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Total No. of Questions : 8] Total No. of Printed Pages : 7

Roll No .....

IT-501 (GS)

B.Tech., V Semester

Examination, November 2023

Grading System (GS)

Operating System

Time : Three Hours *Maximum Marks : 70*

Note: i) Attempt any five questions.
किन्हीं पाँच प्रश्नों को हल कीजिए।

ii) All questions carry equal marks.
सभी प्रश्नों के समान अंक हैं।

iii) In case of any doubt or dispute the English version question should be treated as final.
किसी भी संशय या संदेह अथवा विवाद की स्थिति में अंग्रेजी भाषा के प्रश्न को अंतिम माना जायेगा।

1. a) Mention the difference(s) between single-processor and multi-processor systems? What are the major advantages of multi-processor? 6
सिंगल-प्रोसेसर और मल्टी-प्रोसेसर सिस्टम के बीच अंतर बताएं। मल्टी-प्रोसेसर के प्रमुख लाभ क्या हैं?

b) Explain the operating system functions that are specific to (i) users and (ii) computing systems. Clearly explain the significance of each functionality with respect to the user/system itself. 8
ऑपरेटिंग सिस्टम फंक्शन को समझाएं जो (i) उपयोगकर्ताओं और (ii) कंप्यूटिंग सिस्टम के लिए विशिष्ट हैं। उपयोगकर्ता/सिस्टम के संबंध में प्रत्येक कार्यक्षमता के महत्व को स्पष्ट रूप से समझाएं।

IT-501 (GS) P.T.O.

[2]

2. a) Given *n* CPUs, what is the maximum no of processes that can be in ready state? Does the size of the ready queue depends on the number of CPUs available in a system? 6
n CPUs दिए जाने पर, तैयार अवस्था में होने वाली प्रक्रियाओं की अधिकतम संख्या क्या हो सकती है? क्या तैयार queue का आकार किसी सिस्टम में उपलब्ध CPU की संख्या पर निर्भर करता है?

b) You are given an arbitrary set of CPU bound processes with unequal CPU burst lengths that are submitted at the same time to a computer system. In this scenario, which process scheduling algorithm would minimize the average waiting time in the ready queue? Justify your answer in terms of average waiting time and turn-around time for choosing the right scheduling algorithm. 8
अलग-अलग असमान CPU बर्स्ट लंबाई के साथ CPU बाउंड प्रक्रियाओं का एक मनमाना सेट दिया जाता है जो एक ही समय में कंप्यूटर सिस्टम पर सबमिट किये जाता है। इस परिदृश्य में, कौन सी प्रक्रिया शेड्यूलिंग एल्गोरिथम तैयार queue में औसत प्रतीक्षा समय को कम करेगी? सही शेड्यूलिंग एल्गोरिथम चुनने के लिए औसत प्रतीक्षा समय एवं-अराउंड समय के संदर्भ में अपने उत्तर को उचित ठहराएं।

3. a) What is critical section problem? Mention the conditions that a critical section solution must satisfy. 6
क्रिटिकल सेक्शन समस्या क्या है? उन शर्तों का उल्लेख करें जिन्हें एक महत्वपूर्ण अनुभाग समाधान को संतुष्ट करना होगा।

b) Given a non-negative counting semaphore S. The operation P(S) decrements S and V(S) increments S. During an execution, 20 P(S) operations and 12 V(S) operations are issued in some order. Find the largest initial value of S for which at least one P(S) operations will remain blocked. 8

IT-501 (GS) Contd.

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एक गैर-नकारात्मक गिनती सेमाफोर S दिया गया है। ऑपरेशन P(S) S को घटाता है, और V(S) S को बढ़ाता है। एक निष्पादन के दौरान, 20 P(S) ऑपरेशन और 12 V(S) ऑपरेशन कुछ क्रम में जारी किए जाते हैं। S का सबसे बड़ा प्रारंभिक मान ज्ञात करें जिसके लिए कम से कम एक P(S) ऑपरेशन अवरुद्ध रहेगा।

onsider the given set of processes with length of CPU burst, rival time and priority. You are required to draw the (i) Gantt art to show the schedule. Also, find out (ii) normalized turn-ound time for each process and (iii) average waiting time r the following scheduling algorithms. 14

- Preemptive priority
- Round-Robin with time quantum of 4 units

PU बर्स्ट की लंबाई, आगमन समय और प्राथमिकता के साथ प्रक्रियाओं दिए गए सेट पर विचार करें। शेड्यूल दिखाने के लिए आपको (i) गैंट र्ट बनाना होगा। इसके अलावा (ii) प्रत्येक प्रक्रिया के लिए सामान्यीकृत र्न-अराउंड समय और (iii) निम्नलिखित शेड्यूलिंग एल्गोरिदम के लिए सत प्रतीक्षा समय का पता लगाएं।

) प्रीएम्प्टिव प्राथमिकता

) 4 यूनिट की समय मात्रा के साथ राउंड-रॉबिन

Process	Burst Time	Priority	Arrival Time
P1	8	12	4
P2	6	4	3
P3	5	10	0
P4	3	5	2
P5	4	6	1

(GS) PTO

5\. a) A system shares 9 tape drives. The current allocation and maximum requirement of tape drives for three processes are shown below. Find if there exist a deadlock in the system. In case the deadlock is not found, write the safe sequence. 6

एक सिस्टम 9 टेप ड्राइव शेयर करता है। तीन प्रक्रियाओं के लिए टेप ड्राइव का वर्तमान आवंटन और अधिकतम आवश्यकता नीचे दिखाई गई है। पता लगाएं कि क्या सिस्टम में कोई गतिरोध मौजूद है। यदि गतिरोध न मिले तो सुरक्षित अनुक्रम लिखिए।

Process	Current Allocation	Maximum Requirement
P1	3	7
P2	1	6
P3	3	5

b) Given a graph where a set of vertices P = {P1, P2, P3} represents all active processes in the system and R = {R1, R2, R3, R4} depicts resource types. The association between elements of P and R is given as E = {P1 → R1, P2 → R3, R1 → P2, R2 → P2, R2 → P1, R3 → P3}. Considering this situation, draw the resource allocation graph. Also, figure out if there is any cycle that leads to deadlock in the entire system? Would there be a deadlock if a new association P3 → R2 is added to the given graph? 8

एक ग्राफ दिया गया है जहाँ शीर्षों का एक सेट P = {P1, P2, P3} सिस्टम में सभी सक्रिय प्रक्रियाओं का प्रतिनिधित्व करता है और R = {R1, R2, R3, R4} संसाधन प्रकारों को दर्शाता है। P और R के तत्वों के बीच संबंध E = {P1 → R1, P2 → R3, R1 → P2, R2 → P2, R2 → P1, R3 → P3} के रूप में दिया गया है। इस स्थिति को ध्यान में रखते हुए संसाधन आवंटन ग्राफ बनाएं। साथ ही, यह भी पता लगाएं कि क्या कोई ऐसा चक्र है जो पूरे सिस्टम में गतिरोध पैदा करता है? यदि दिए गए ग्राफ में एक नया एसोसिएशन P3 → R2 जोड़ा जाए तो क्या कोई गतिरोध होगा?

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6. a) What do mean by file attributes and operations? Briefly explain file access methods. 6
फाइल विशेषताएँ और संचालन से क्या तात्पर्य है? फाइल एक्सेस विधियों को संक्षेप में समझाएँ।

b) Consider a disk queue with requests for I/O to blocks on cylinders ordered 98, 183, 37, 122, 14, 124, 65, 67. If the disk head is initially at cylinder 53, write the total head movement using FCFS, SSTF, SCAN, and C-SCAN disk scheduling algorithms. 8
98, 183, 37, 122, 14, 124, 65, 67 आदेश किए गए सिलेंडरों पर ब्लॉक के लिए I/O के अनुरोध के साथ डिस्क queue पर विचार करें। यदि डिस्क हेड प्रारंभ में सिलेंडर 53 पर है FCFS, SSTF, SCAN और C-SCAN डिस्क शेड्यूलिंग एल्गोरिथम का उपयोग करके कुल हेड मूवमेंट लिखें।

7. a) What is the difference between starvation and deadlock? Describe necessary conditions for a deadlock. 6
Starvation और deadlock के बीच क्या अंतर है? गतिरोध के लिए आवश्यक शर्तों का वर्णन करें।

b) Consider the following snapshot of a system having four processes (P0 to P3) and three resources (E, F, and G).

	Max Claim		
	E	F	G
P0	4	3	1
P1	2	1	4
P2	1	3	3
P3	5	4	1

	Allocation		
	E	F	G
P0	1	0	1
P1	1	1	2
P2	1	0	3
P3	2	0	0

The availability vector

E	F	G
3	3	0

is:

i) Find the need matrix. 2
ii) Is the system currently in safe or unsafe state? Why? In case it is in safe state give the safe sequence. 6

IT-501 (GS) PTO

b) चार प्रक्रियाओं (P0 से P3) और तीन संसाधनों (E, F और G) वाले सिस्टम के निम्नलिखित स्नैपशॉट पर विचार करें।

	Max Claim		
	E	F	G
P0	4	3	1
P1	2	1	4
P2	1	3	3
P3	5	4	1

	Allocation		
	E	F	G
P0	1	0	1
P1	1	1	2
P2	1	0	3
P3	2	0	0

उपलब्धता वेक्टर

E	F	G
3	3	0

है:

i) आवश्यकता मैट्रिक्स ज्ञात कीजिए।
ii) क्या सिस्टम वर्तमान में सुरक्षित या असुरक्षित स्थिति में है? क्यों? यदि यह सुरक्षित स्थिति में है, तो सुरक्षित क्रम दें।

8. a) What is optimal page replacement algorithm? Explain the reason for its consideration as the best page replacement? 4
इष्टतम पृष्ठ प्रतिस्थापन एल्गोरिथम क्या है? इसे सर्वोत्तम पृष्ठ प्रतिस्थापन मानने का कारण स्पष्ट करें।

b) Describe demand paging. Let m and p represent the memory-access time and probability of a page fault, how to calculate the effective access time? 4
डिमांड पेजिंग का वर्णन करें। मान लीजिए कि m और p मेमोरी-एक्सेस समय और पेज गलती की संभावना का प्रतिनिधित्व करते हैं, प्रभावी एक्सेस समय की गणना कैसे करें।

Contd.

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Quiz paper Submit by Students

Questions Responses 125 Settings Total points:

OS Quiz II

Form description

This form is automatically collecting emails from all respondents. Change settings

In segmentation, each address is specified by _____ *

- a segment number & offset
- an offset & value
- a value & segment number
- a key & value

The segment base contains the _____ *

- starting logical address of the process
- starting physical address of the segment in memory
- segment length
- none of the mentioned

The segment limit contains the _____ *

- starting logical address of the process
- starting physical address of the segment in memory
- segment length
- none of the mentioned

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A set of techniques that allow to execute a program which is not entirely in memory is called *

- demand paging
- virtual memory
- auxiliary memory
- secondary memory

Page fault frequency in an operating system is reduced when the *

- processes tend to the I/O-bound
- size of pages is reduced
- processes tend to be CPU-bound
- locality of reference is applicable to the process

A process that execute only in main memory is referred to as _____ and that allocated in disk is referred to a _____ *

- virtual memory, true memory
- virtual memory, real memory
- real memory, virtual memory
- imaginary memory, real memory

A swapper manipulates _____ whereas the pager is concerned with individual _____ of a process. *

- the entire process, parts
- all the pages of a process, segments
- the entire process, pages

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A page fault occurs when? *

- a page gives inconsistent data
- a page cannot be accessed due to its absence from memory
- a page is invisible
- all of the mentioned

When a page fault occurs, the state of the interrupted process is _____ *

- disrupted
- invalid
- saved
- none of the mentioned

When a process begins execution with no pages in memory? *

- process execution becomes impossible
- a page fault occurs for every page brought into memory
- process causes system crash
- none of the mentioned

Which of the following page replacement algorithms suffers from Belady's Anomaly? *

- Optimal replacement
- LRU
- FIFO
- Both optimal replacement and FIFO

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A process refers to 5 pages, A, B, C, D, E in the order : A, B, C, D, A, B, E, A, B, C, D, E. If the page replacement algorithm is FIFO, the number of page transfers with an empty internal store of 3 frames is? *

- 8
- 10
- 9
- 7

A The aim of creating page replacement algorithms is to _____ *

- replace pages faster
- increase the page fault rate
- decrease the page fault rate
- to allocate multiple pages to processes

What is the Optimal page – replacement algorithm? *

- Replace the page that has not been used for a long time
- Replace the page that has been used for a long time
- Replace the page that will not be used for a long time
- None of the mentioned

Optimal page – replacement algorithm is difficult to implement, because _____ *

- it requires a lot of information
- it requires future knowledge of the reference string
- it is too complex
- it is extremely expensive

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Internal Viva Marks

S.No.	Enrollment No.	Student Name	Mark
1	0818IT201026	KHEMCHAND MEHRA	16
2	0818IT201061	SOURABH SANKHERE	12
3	0818IT211001	AASHI RATHOD	13
4	0818IT211002	AASHISH YADAV	16
5	0818IT211003	AJAY MEHAR	17
6	0818IT211004	AMAN SINGH THAKUR	14
7	0818IT211005	AMIT PANCHAL	17
8	0818IT211006	ANKIT LOVANSHI	16
9	0818IT211007	ANKITA SINGH BAIS	14
10	0818IT211009	CHANDA YADAV	17
11	0818IT211010	DEVENDRA KUSHWAH	13
12	0818IT211011	DEVENDRA MANKAR	12
13	0818IT211014	DIVYANSHI RAGHUVANSHI	12
14	0818IT211015	FAZLUL KHAN	10
15	0818IT211016	HARSH GURJAR	18
16	0818IT211017	HIMANK YADAV	18
17	0818IT211018	ISHA JATAV	15
18	0818IT211019	JANKI JATAV	14
19	0818IT211020	JAYESH SHARMA	18
20	0818IT211021	KAJAL DHANAWAT	19
21	0818IT211022	KAJAL GUPTA	18
22	0818IT211023	KAMAL NARAYAN BAJPAI	19
23	0818IT211024	KANISHKA DUBEY	14
24	0818IT211025	KASHISH RATHORE	14
25	0818IT211026	KASHISH RITHE	15
26	0818IT211027	KHUSHBOO SONI	19
27	0818IT211028	MADHUSUDAN SINGH CHOUHAN	13

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	COURSE PLAN	2023-24
		Branch IT Year III Sem V

28	0818IT211029	MAHIMA DHAKAD	14
29	0818IT211031	MOHAMMAD ANAS KHAN	12
30	0818IT211033	MOHIT LOWANSHI	13
31	0818IT211034	NANDANI TRIVEDI	15
32	0818IT211035	NAVEEN KIRAR	8
33	0818IT211036	NEELESH BHARGAV	16
34	0818IT211037	NIKITA MALVIYA	17
35	0818IT211038	NIKUNJ SHARMA	12
36	0818IT211040	NISHCHAY TIWARI	14
37	0818IT211041	NITIN TIWARI	12
38	0818IT211043	PANKAJ SINGH	9
39	0818IT211045	PRAKASH	15
40	0818IT211046	PRATHAM PATIDAR	17
41	0818IT211047	PREETI SHARMA	18
42	0818IT211048	RAHUL JADHAW	17
43	0818IT211049	RAHUL YADAV	17
44	0818IT211050	RAJVEER SINGH THAKUR	17
45	0818IT211051	RAVI PARMAR	15
46	0818IT211052	REENA PATIDAR	16
47	0818IT211053	RISHIKESH HEDAOO	17
48	0818IT211054	RITIK RAJPUT	11
49	0818IT211055	RUPANSHU SONI	19
50	0818IT211056	SANSKAR GOUR	17
51	0818IT211057	SIDDHARTH GOYAL	14
52	0818IT211058	SNEHA CHOUHAN	18
53	0818IT211059	SUMIRAN BHAWSAR	15
54	0818IT211060	TANISH BHATI	16
55	0818IT211061	TANUSHREE MAHAJAN	16
56	0818IT211062	VEDANSHI MISHRA	15
57	0818IT211063	VIJAY CHOUHAN	12
58	0818IT211064	VIKAS JADHAW	12
59	0818IT211065	VISHAL	11
60	0818IT211066	VISHAL DEWDA	11
61	0818IT211067	VISHAL SHARMA	11
62	0818IT211068	YUKTA KUKREJA	17

Tutorial Attendance

Tutorial Sheet with Solution

Attendance Register

Remedial Class Attendance

Notes https://classroom.google.com/c/NjE3ODI4NTg3MDkz

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Lab Manual https://classroom.google.com/c/NjE3ODI4NTg3MDkz

University result analysis

Sr No.	Enrollment NO.	Students Name	Boys OBC (NCL)	SC/ST/ OBC/ GEN	Pass/ Fail	SGPA	CGPA
1.00	0818IT211001	AASHI RATHOD			PASS	7.00	7.26
2.00	0818IT211002	AASHISH YADAV			PASS	7.13	7.11
3.00	0818IT211003	AJAY MEHAR			PASS	7.17	7.29
4.00	0818IT211004	AMAN SINGH THAKUR			PASS	7.13	7.46
5.00	0818IT211005	AMIT PANCHAL			PASS	7.33	7.54
6.00	0818IT211006	ANKIT LOVANSHI			PASS	7.04	7.26
7.00	0818IT211007	ANKITA SINGH BAIS			PASS	7.38	7.33
8.00	0818IT211009	CHANDA YADAV			PASS	7.42	7.64
9.00	0818IT211010	DEVENDRA KUSHWAH			PASS	7.04	7.64
10.00	0818IT211011	DEVENDRA MANKAR			PASS	6.63	6.69
11.00	0818IT211014	DIVYANSHI RAGHUVANSHI			PASS	7.50	7.20
12.00	0818IT211015	FAZLUL KHAN			PASS	6.33	6.29
13.00	0818IT211016	HARSH GURJAR			PASS	8.46	7.92
14.00	0818IT211017	HIMANK YADAV			PASS	8.29	8.31
15.00	0818IT211018	ISHA JATAV			PASS	7.46	7.36
16.00	0818IT211019	JANKI JATAV			PASS	7.13	7.21
17.00	0818IT211020	JAYESH SHARMA			PASS	8.88	8.36
18.00	0818IT211021	KAJAL DHANAWAT			PASS	8.63	8.45
19.00	0818IT211022	KAJAL GUPTA			Fail	7.29	7.50
20.00	0818IT211023	KAMAL NARAYAN BAJPAI			PASS	7.88	8.26
21.00	0818IT211024	KANISHKA DUBEY			PASS	7.75	7.82
22.00	0818IT211025	KASHISH RATHORE			PASS	7.63	7.47
23.00	0818IT211026	KASHISH RITHE			PASS	7.04	7.08
24.00	0818IT211027	KHUSHBOO SONI			PASS	8.21	8.72
25.00	0818IT211028	MADHUSUDAN SINGH CHOUHAN			PASS	6.50	6.21
26.00	0818IT211029	MAHIMA DHAKAD			PASS	7.38	7.01
27.00	0818IT211031	MOHAMMAD ANAS KHAN			PASS	6.25	6.14
28.00	0818IT211033	MOHIT LOWANSHI			Fail	6.25	6.76
29.00	0818IT211034	NANDANI TRIVEDI			PASS	7.46	7.19
30.00	0818IT211035	NAVEEN KIRAR			PASS	6.79	6.89
31.00	0818IT211036	NEELESH BHARGAV			PASS	7.38	7.24
32.00	0818IT211037	NIKITA MALVIYA			PASS	7.96	8.04
33.00	0818IT211038	NIKUNJ SHARMA			PASS	7.17	7.34
34.00	0818IT211040	NISHCHAY TIWARI			PASS	7.00	6.76
35.00	0818IT211041	NITIN TIWARI			PASS	7.25	6.99
36.00	0818IT211043	PANKAJ SINGH			PASS	6.83	6.68
37.00	0818IT211045	PRAKASH			PASS	7.33	7.32
38.00	0818IT211046	PRATHAM PATIDAR			PASS	7.42	7.26
39.00	0818IT211047	PREETI SHARMA			PASS	7.54	7.49
40.00	0818IT211048	RAHUL JADHAV			PASS	6.83	6.78
41.00	0818IT211049	RAHUL YADAV			PASS	7.29	7.44
42.00	0818IT211050	RAJVEER SINGH THAKUR			PASS	7.33	7.07
43.00	0818IT211051	RAVI PARMAR			PASS	7.04	7.02
44.00	0818IT211052	REENA PATIDAR			PASS	7.92	7.82
45.00	0818IT211053	RISHIKESH HEDAOO			PASS	7.25	7.59
46.00	0818IT211054	RITIK RAJPUT			PASS	7.00	6.56
47.00	0818IT211055	RUPANSHU SONI			PASS	7.29	7.16
48.00	0818IT211056	SANSKAR GOUR			PASS	8.25	7.98
49.00	0818IT211057	SIDDHARTH GOYAL			PASS	7.04	7.04
50.00	0818IT211058	SNEHA CHOUHAN			PASS	7.58	7.38
51.00	0818IT211059	SUMERAN BHAVSAR			PASS	7.08	7.24
52.00	0818IT211060	TANISH BHATI			PASS	7.00	7.03
53.00	0818IT211061	TANUSHREE MAHAJAN			Fail	6.88	7.44

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54.00	0818IT211062	VEDANSH SHUKLA			PASS	[illegible]	[illegible]
55.00	0818IT211063	VIJAY CHOUHAN			PASS	6.96	6.41
56.00	0818IT211064	VIKAS JADHAW			PASS WH	6.71	6.85
57.00	0818IT211065	VISHAL			PASS	6.92	6.76
58.00	0818IT211066	VISHAL DEWDA			PASS	7.13	7.11
59.00	0818IT211067	VISHAL SHARMA			PASS	7.33	7.40
60.00	0818IT211068	YUKTA KUKREJA			Fail	6.88	7.76
61.00	0818IT201026	KHEMCHAND MEHRA			PASS	7.13	8.01

CERTIFICATE

I, the undersigned, have completed the course allotted to me as shown below.

S.No	Semester	Subject with Code	Total Units/ Chapters	Remarks
1.	III	OS IT501	5	DONE

Date: 15.12.24

Signature of Faculty
(Lakshita Mandpe)

Submitted to HOD

Certificate by HOD

I, the undersigned, certify that Ms Lakshita Mandpe has completed the course work allotted to him/ her satisfactorily/ not satisfactorily.

Date: 15.12.24

Signature of HOD
(Ms. Margi Pate)

Submitted to Principal

Date: 05.01.25

Signature of Principal
(Mr. Keshav Pathdar)
Principal
Indore Institute of Science and Technology, Indore

Principal
Indore Institute of Science and Technology, Indore

Sample Course Outcome

Subject Code	Subject Name	CO Description
BT-201	Engineering Physics	The Coursework is designed to provide students the opportunity to learn key concepts of Wave nature of particles and the Schrodinger equation.
		Student will able to understand the knowledge of Wave optics i.e. interference and diffraction.
		To introduce the idea of solids like semiconductors (P type and N Type semiconductors), Diodes and Hall effect. Students will also be able to understand the basic concept of superconductivity.
		To develop the understanding of Lasers, fiber optics and their applications in field of engineering sciences.
		To provide you to basic understanding of Electrostatics in vacuum.
BT-102	Mathematics-I	To introduce the fallouts of Rolle's Theorem that is fundamental to application of analysis to Engineering problems.
		To introduce the idea of applying differential and integral calculus to notions of curvature and to improper integrals. Apart from some applications it gives a basic introduction on Beta and Gamma function
		To develop the tool of power series and Fourier series for learning advanced Engineering Mathematics.
		To familiarize the student with functions of several variables that is essential in most branches of engineering
		To develop the essential tool of matrices and linear algebra in a comprehensive manner.
CE304	Building Planning and Architecture	The students able to understand and to draw various building components.
		The students able to deals with the building planning, orientation and drawing.
		The students able to understand and deals with building services.
		The students able to deals with the architectural design aspects.
		The students able to Representation of a building on Paper.
CE305	Strength of Material	Understand the stress and strain calculation and its importance for different materials.
		Understand the analysis of bending moments and stresses generated on a beam subject to different load conditions.
		Understand the importance of slope and deflection in a beam and to analyze it for different scenarios.
		Analyze the behavior of columns and struts under different

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		loading conditions.
		Understand the determination of torsion on shafts and able to analyze the problems based on combined bending and torsion and also able to analyze unsymmetrical bending in beams.
CE -503	Departmental Elective - Quantitative Surveying and Costing	Students understood the purpose, importance and types of estimates.
		Students are able to analyze the rates of various items of work.
		Students learned to prepare the estimates of various types of construction works.
		Students gained the knowledge of all the terms, rules and regulations of estimating.
		Students understood the purpose, importance and methods of valuation.
CE -504	Open Elective- Urban Town and Planning	Students will be able to understand planning process of an urban area & surveys conducted for urban development and designing in relation with spatial organization, utility, demand of the area and supply considering future growth of an urban area.
		Students shall know about Urban Planning agencies and their functions. Also public participation in planning, development control regulations, sustainability, components of sustainable urban and regional development and emerging concepts for city.
		Students will gain complete knowledge about town and country planning act, building bye-laws, elements of city planning, landscaping and urban planning standards.
		Students shall know about traffic transportation systems and management for urban roads considering Legal issues in planning and professional practice for preparation of DPR.
		Students will be able to understand types of development plans and Water Supply & sanitation for urban areas, planning agencies and their purpose.
CE -701	Geotechnical Engineering	Understand the soil formation, terminologies of soil properties and there relation. Able to classify the type of soil.
		Able to determine the coefficient of permeability and permeability of layered soil. Understand the application of flow net, quick condition and Laplace equation for two dimensional flow
		Understand the Boussinesqs and Westergards theory, Newmarks influence chart for irregular areas. Understand the factors affecting the compaction of soil
		Understand the type of Consolidation of soil, Terzaghi's One Dimensional Consolidation theory and method of finding coefficient of consolidation

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		Understand the type of Shear Stress test i.e., Direct Shear test, Triaxial test and Vane Shear test. Able to understand the mohr colomb shear strength envelope and failure envelope. Understand the soil stabilization
		Develop thinking ability and polish his expression in group discussions.
		Be prepared for the personal interview through mock interviews while being aware of Civil Engineering
ME404	Fluid mechanics	To understand the Newton's law of viscosity and able to explain the mechanics of fluids at rest and in motion by observing the fluid phenomena.
		Compute force of buoyancy on a partially or fully submerged body and able to analyze the stability of a floating body.
		To understand Euler's Equation of motion and Deduce Bernoulli's equation.
		To find energy losses in pipe transitions and to draw energy gradient lines.
		Evaluate pressure drop in pipe flow using Hagen-Poiseuille's equation for laminar flow in a pipe and distinguish the types of flows and determine sonic velocity in a fluid.
ME405	Manufacturing technology	Upon completion of this course, the students will be able to understand and compare the functions and applications of different metal cutting tools
		Understand the basic concepts of gear machining
		Understand the basic concepts of plastics and molding method
		Understand the basic concepts of NTM
		The student will be able to write the programming to control and operate NC machines
CS-305	Object Oriented Programming & Methodology	Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
		Understand dynamic memory management techniques using pointers, constructors, destructors etc.
		Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
		Understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism.
		Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.
CS-306	Computer Workshop	Understand the concepts of Java programming.
		Understand fundamentals of programming such as variables, conditional and iterative execution, methods, etc.

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		Understand fundamentals of object-oriented programming in Java and be familiar of the important concepts like class, inheritance and multithreading, AWT and JDBC.
		Use the Java SDK environment to create, debug and run Java programs.
		Develop Java applet.
EC402	Signals & Systems	Students will able to generate and characterize various continuous and discrete time signals.
		Students will able to develop input output relationship for linear shift invariant system and understand the convolution operator for continuous and discrete time system
		Students will able to analyze the spectral characteristics of signals using Fourier analysis.
		Students will able to analyze DT systems & their realization using Z-transforms.
		Students will able to evaluate and analyse the reconstruction of signals.
EC403	Analog Communication	Develop an understanding of the basic electronic communication process and use it for the solution of electronics and communication engineering with signals
		Derive the mathematical models for analog modulation schemes ie for AM
		Derive the mathematical models for analog modulation schemes ie for FM
		Analyze and design transmitters & receivers.
		Analyze the effects of noise in continuous wave modulation systems.
EC 502	Digital Communication	Students can able to differentiate various sampling methods and pulse modulation schemes.
		Students can able to understand mathematical model, spectrum, advantages, disadvantages and application various Analog to Digital conversion methods.
		Students can able to understand mathematical model, spectrum, advantages, disadvantages and application of various digital modulation schemes.
		Students can able to understand probability of error and signal space representation of various digital modulation Schemes.
		Students can able to understand Information theory, Source coding and channel coding.

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Sample PO CO Mapping Table from CSE

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Department of CSE

COURSE OUTCOME (Session 2022-23)

S.No.	Subject Code	Subject Name	CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Semester - III																		
1	ES-301	Energy & Environmental Engineering	2.3.1.1	3	2	3	2				3	2				3	2	1
			2.3.1.2	3	1		3	3								3	1	1
			2.3.1.3	3		2	1		3	3						3		1
			2.3.1.4	2	1	3		3	2							3	2	1
			2.3.1.5		3	2	3	3									2	1
			CO Avg	2.75	1.75	2.5	2.25	3	2.5	3	3	2				3	1.75	1
2	CS-302	Discrete Structure	2.3.2.1	2	2	3	2		1						1	2	3	1
			2.3.2.2	1			3									1	3	
			2.3.2.3	2		3										2	3	
			2.3.2.4	1		2			3					2		1	2	3
			2.3.2.5		3		2										3	
			CO Avg	1.5	2.5	2.67	2.33		2					2	1	1.5	2.8	2
3	CS-303	Data Structure	2.3.3.1	2	1	3			1						2	2	3	1
			2.3.3.2	2	1	2	3									2	3	
			2.3.3.3	1	2	2										1	2	
			2.3.3.4	1	2	3			2							1	3	2
			2.3.3.5	1	2	3	3	1								1	3	
			CO Avg	1.4	1.6	2.6	3	1	1.5						2	1.4	2.8	1.5
4	CS-304	Digital Systems	2.3.4.1	2	1											2	1	
			2.3.4.2	3	2		1									3	2	
			2.3.4.3	3	3											3	3	
			2.3.4.4	3	1	2	2					2	1	3	1	3	3	2
			2.3.4.5	3	2											3	2	
			CO Avg	2.8	1.8	2	1.5					2	1	3	1	2.8	2.2	2
5	CS-305	Object Oriented Programming & Methodology	2.3.5.1	3	2	1	2									3	2	
			2.3.5.2	3	2		2									3	2	
			2.3.5.3	3	1		3							2		3	3	
			2.3.5.4	3	2	2	3					2	1	3	2	3	3	2
			2.3.5.5	3	1		3					2		2	1	3	3	2
			CO Avg	3	1.6	1.5	2.6					2	1	2.33	1.5	3	2.6	2
6	CS-306	Computer Workshop	2.3.6.1	3	1											3	1	
			2.3.6.2	3	2		2									3	2	
			2.3.6.3	3	2	2	3					3		2	2	3	3	3
			2.3.6.4	3	1		2					1		3	1	3	3	1
			2.3.6.5	3		2	1					2		3	1	3	3	2
			CO Avg	3	1.5	2	2					2		2.67	1.33	3	2.4	2
			1.1.7.1	3	1							2		2		3		

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