

K.S.R.M COLLEGE OF ENGINEERING, KADAPA				Dept.:	Civil Engineering
(AUTONOMOUS)				Academic Year	
B. Tech Mid Term Examinations, June, 2024				2023 – 2024	
Subject Code	: 2001601	Subject Name: Environmental Engineering			
Mid Term	: II	Marks : 30	Regulation : R20 UG	Duration : 90 Min	
Year	: III	Semester : VI	Sections : A&B	Date : 26.06.2024, FN	

Q. No.	UNIT-III	Marks	Skills	CO
1	A city with a population of 200000 has an area of 200 Ha. Rate of water supply = 200 lpcd and average runoff coefficient for the entire area = 0.5, Time of concentration = 55 minutes. Assume 76 % of water supplied reaches the sewer. Find Dry Weather Flow and Wet Weather flow in m ³ /sec will be.	10M	L3	CO3
OR				
2	a). Define Sewage, Sullage and sludge ?	5 M	L1	CO3
	b). Describe briefly about Average, Peak and Minimum Sewage flows	5 M	L1	CO3
UNIT-IV				
3	a). A circular sewer of 45 cm diameter was designed for a time of papulation 30,000 the sewer was designed to carry 3.5 times of the Dry Weather Flow. What slope should be provided to the sewer, when running full n = 0.012 in manning's equation. Assume 80 % of water supplied converts in to sewage and rate of water supply is 150 lpcd	5 M	L3	CO4
	b). Listout Chemical Composition of sewage and Explain it briefly	5 M	L2	CO4
OR				
4	Explain briefly about at least five sewer appurtenances with neat sketch	10M	L2	CO4
UNIT-V				
5	Design a screen to treat a waste water flow of 25 MLD (0.289 m ³ /sec) with approach velocity of 0.8 m/s assume depth of flow 1 m. If screen basis are placed at angle of 60° inclination to horizontal with size of openings is 25 mm and diameter of bar is 10mm. Also find head loss through screen.	10M	L3	CO5
OR				
6	Explain briefly about Oxidation pond with neat sketch.	10M	L2	CO5

- L1 - Remembering
- L2 - Understanding
- L3 - Applying
- L4 - Analyzing
- L5 - Evaluating
- L6 - Creating

**K.S.R.M COLLEGE OF ENGINEERING, KADAPA
(AUTONOMOUS)**

B. Tech Mid Term Examinations, June / July, 2024

Dept.: Civil Engineering
Academic Year
2023 2024

Subject Code	:	2001501	Subject Name: Hydrology and Irrigation (Re-Admitted)
Mid Term	:	II	Marks : 30 Regulation : R20 UG Duration : 90 Min
Year	:	III	Semester : VI Sections : A (RA) Date : 26.06.2024 FN

Q. No	Question (s)	Marks	Blooms Level	CO
1	Explain about classification of canals?	10	L2	CO3
OR				
2	Design an irrigation channel by using Kennedy's theory to carry a discharge of 5 cumecs. Take Rugosity coefficient is 0.0025, Critical velocity ratio is 1.05 and B/D = 3.25	10	L5	CO3
3	a. Explain the component parts of diversion head work with a neat sketch.	6	L2	CO4
	b. Define weir, barrage and diversion head work?	4	L1	CO4
OR				
4	a. Briefly explain about the factors that affecting selection of type of a dam.	5	L2	CO4
	b. Explain about causes of failure of hydraulic structures?	5	L2	CO4
5	a. Explain about causes of failure of Gravity dam?	6	L2	CO5
	b. Derive an expression for base width of a dam for no tension condition, if the dam is having an elementary profile.	4	L5	CO5
OR				
6	List out the various types of earth dams?	3	L1	CO5
	Explain about causes of failure of Earthen dam?	7	L2	CO5
	<ul style="list-style-type: none"> • L1 – Remembering • L2 – Understanding • L3 – Applying • L4 – Analyzing • L5 – Evaluating • L6 – Creating 			

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations, June 2024				Dept.:	Civil Engineering	
				Academic Year		2023 – 2024
				Subject Code : 2001602		Subject Name: Water Resources Engineering
Mid Term	: II	Marks: 30	Regulation: R20 UG	Duration: 90 Min		
Year	: III	Semester : VI	Sections: A & B	Date: 27-06-2024		

Q. No	Question (s)	Marks	Bloom's Level	CO
1.	List out design principles of Cross regulatory works and explain briefly each one	10M	L2	CO3
	OR			
2	a) Define canal out let and explain different types of canal outlets	5 M	L2	CO 3
	b) Explain the significance of Proportionality and Flexibility derive expression	5 M	L1	CO3
3	a) Explain the importance of Cross Drainage works and list out types	5M	L2	CO 4
	b) List out what are the points considering during the selection of site for Cross Drainage work	5M	L3	CO 4
	OR			
4	Explain Design principles of Aqueduct with neat sketches	10 M	L4	CO 4
5	a) Explain Purpose of Water resources development	5 M	L2	CO5
	b) Explain Surface water resources in India	5M	L2	CO 5
	OR			
6	What are the steps in water resources planning and Project Management Strategies?	10 M	L5	CO5

L1-Remembering; L2-Understanding; L3-Applying; L4- Analyzing; L5-Evaluating; L6-Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations, June, 2024				Dept.:	Civil Engineering
				Academic Year	
Subject Code	: 2001603	Subject Name: Design of Reinforced Concrete Structures			
Mid Term	: II	Marks : 30	Regulation : R20UG	Duration : 90 Min	
Year	: III	Semester : VI	Sections : A & B	Date: 28-06-2024 FN	

Note:

Answer any three questions and one question from each section is mandatory
Use IS 456:2000 and SP16 code books for required design data

Q. No	Question (s)	Marks	BL	CO
1	Design a reinforced concrete slab for a room measuring 5 m x 6 m in size. Two adjacent edges of the slab are continuous and other edges are discontinuous and carries a super imposed load of 3000 N/m ² , inclusive of floor finishes etc. Use M20 mix & Fe415 grade steel.	10	L5	CO3
OR				
2	Write the design procedure of dog-legged stair case with neat sketches.	10	L2	CO3
3	Design a circular column to carry axial load of 1000 kN. Use M20 concrete & Fe415 grade steel.	10	L5	CO4
OR				
4	Design a reinforced concrete square column of size 400x400 mm to carry an ultimate load of 1000 kN and a ultimate moment of 750 kNm. Use M20 concrete & Fe415 grade steel.	10	L5	CO4
5	Discuss about different types of footings and their importance in construction with neat sketches.	10	L1	CO5
OR				
6	Design an isolated footing for a square column of size 400 mm x 400 mm, supporting a service load of 2100 kN on a concentrically loaded square footing. Assume SBC of soil as 250 kN/m ² at a depth of 1.5 m below the ground. Use M20 concrete and Fe 415 steel for the footing.	10	L5	CO5

L1-Remembering; L2-Understanding; L3-Appling; L4-Analyzing; L5-Evaluating; L6-Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations June/July 2024				Dept.:	H&S		
				Academic Year		2023 – 2024	
				Subject Code : 20MC609		Subject Name: Constitution of India	
Mid Term	:	II	Marks: 30	Regulation: R20UG	Duration: 90 Min		
Semester:	VI			Branch: ECE & CE	Date: 29-06-2024		

Answer **Three Questions** choosing One Question from each Part
All Questions carry equal marks

Q. No.	Questions	Marks	BL	Cos
1	Explain the Powers and Functions of the Governor of the state?	10	L2	CO3
OR				
2	Explain the following:	05	L2	CO3
	A) State Govt. Administrative Structure	05	L2	CO3
	B) Role of Chief Minister	05	L2	CO3
3	Describe the Role and Functions of District Administration Head?	10	L2	CO4
OR				
4	Explain the following:	05	L2	CO5
	A. Village Panchayath	05	L2	CO5
	B. Functions of Municipality	05	L2	CO5
5	Explain the features and Functions of the Election Commission of India?	10	L2	CO5
OR				
6	Explain the following:	05	L2	CO5
	A) National Commission for Women	05	L2	CO5
	B) National Commission for Schedule Tribes (ST)	05	L2	CO5

BL – Bloom's Taxonomy Levels

1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid-Term Examinations, June - 2024			Dept.:	Civil Engineering
			Academic Year	
Subject Code	: 2001604	Subject Name: Pre-Stressed Concrete Structures		
Mid Term	: II	Marks : 30	Regulation : R20UG	Duration : 90 Min
Year	: III	Semester : VI	Sections : A & B	Date: 02-07-2024 (FN)

Answer any three questions and one question from each section is mandatory

Q. No	Question (s)	Marks	BL	CO
1	a) Explain the concept of Concentric and Eccentric Tendon	5	L1	CO1
	b) A rectangular concrete beam of cross section 30 cm deep and 20 cm wide is prestressed using 15 wires of 5mm diameter located 6.5 cm from the bottom of the beam and 3 wires of the diameter of 5mm, 2.5 cm from the top. Assuming the prestress in the steel is 840 MPa, calculate the stresses at the extreme fibers of the mid-span section when the beam is supporting its weight for 6m, if a UDL of 6 kN/m is imposed, evaluate the maximum working stress in concrete. The density of concrete is 24 kN/m ³ .	5	L3	CO1
OR				
2	A prestressed concrete beam of rectangular section has a 10m span, 120mm wide and 300 mm deep, and is axially prestressed by a cable carrying an effective force of 180 kN. The beam supports a total udl of 5 kN/m which includes the self-weight of the member. Compare the magnitude of the principal tension developed in the beam with and without the axial prestress.	10	L4	CO1
3	a) Explain the concept of shear and principal stresses with a neat sketch.	5	L2	CO1
	b) How do you estimate long-term deflections in the prestressed concrete beam	5	L3	CO1
OR				
4	a) What are the factors influencing deflections	5	L2	CO1
	b) Explain the effect of tendon profile on the deflection of prestressed concrete members with an example.	5	L4	CO1
5	A rectangular concrete beam of cross section 150 mm wide and 300 mm deep is simply supported throughout 8 m and is prestressed using a symmetric parabolic cable, at a distance of 75 mm from the bottom of the beam at mid-span and 125 mm from the top of the beam at support sections. If the force in the cable is 350 kN and the modulus of elasticity of concrete is 38 kN/mm ² , Calculate the deflection at mid-span when the beam is supporting its own weight.	10	L4	CO1
OR				

P.T.O

6	<p>A simply supported beam with a uniform section spanning over 6 m is post-tensioned by two cables, both of which have an eccentricity of 100 mm below the centroid of the section at the mid-span. The first cable is parabolic and is anchored at an eccentricity of 100 mm above the centroid at each end, the second cable is straight and parallel to the line joining the supports. The cross-sectional area of each cable is 100 mm² and they carry an initial stress of 1200 N/mm². The concrete has a cross-section of 2×10^4 mm² and a radius of gyration of 120 mm. The beam supports two concentrated loads of 20 kN each at the third point of the span, $E_c = 38$ kN/mm². Calculate the deflection at the center of the span after 2 years, assuming a 20% loss in prestress and the effective modulus of elasticity to be one-third of the short-term modulus of elasticity using Lin's simplified method.</p>	10	L4	CO1
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L1-Remembering; L2-Understanding; L3-Appling; L4-Analyzing; L5-Evaluating; L6-Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations June/July 2024				Dept.:	Civil Engineering
				Academic Year	
Subject Code	: 2001605	Subject Name: Bridge Engineering (PEC)			
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min	
Year:	III	Semester : VI	Section: A & B	Date: 02.07.2024 AN	

Note: IS 456-2000 are permitted in the Examination Hall.

Note: Answer any Three Questions & One question from each section is mandatory.

Q. No	Question (s)	Marks	BL	CO
1	Explain about Deck slab bridge by using neat sketches.	10	L2	CO3
OR				
2	As RCC deck slab bridge is to be constructed over a trapezoidal channel of 6m base width and side slopes 1:1 laid at a bed slope of 0.2m/Km. The following details are available. Design the slab bridge Chezys constant : 60 Bed level of stream : 100m FSL : 101.4m, BSL : 103m Materials : M25 concrete & Fe 415 Steel Loadings: IRC class AA tracked vehicles Road width : 7.5m Foot path : 600mm on either side	10	L4	CO3
3	What are the rational methods for calculating the live loads among the longitudinal girders in T-beam bridge?	10	L2	CO4
OR				
4	Design a RCC T-beam girder bridge to suit the following data. Clear width of carriage way : 7.5m Span (C/c of bearings) 16m Kerbs on either side : 600X300mm Cross girders : At every 4m interval C/c No. of main girders : 3 Nos Longitudinal girders : At every 2.5m C/c Thickness of deck slab : 200mm WC : 80mm Using the curbons method, compute the design moments, shear forces and also design the deck slab, main girders and cross girders confirming to the specifications.	10	L3	CO4
5	Design a mild steel rocker bearing for transmitting the super structure reactive load of 1200kN. Allowable pressure on bearing block: 3.8MPa Permissible bending stress : 165MPa Permissible bearing stress : 100MPa Permissible shear stress : 100MPa	10	L4	CO5
OR				
6	Explain the stability analysis of abutments in details.	10	L2	CO5

- L1 - Remembering
- L2 - Understanding
- L3 - Applying
- L4 - Analysing
- L5 - Evaluating
- L6 - Creating

K.S.R.M. College of Engineering, Kadapa (Autonomous) B. Tech Mid Term Examinations July-2024					Dept.:	CE		
					Academic Year		2023 – 24	
Subject Code	:	2001606	Subject:	Traffic Engineering (2001606)				
Mid Term	:	II	Marks:	30M	Regulation:	R20UG	Duration: 90 Min	
Semester	:	VI	Section:	A and B		Date:	02-07-2024	

Q. No	Question (s)	Marks	BL	CO
1.	Explain about the factors affecting level of service ?	10M	L2	CO3
(OR)				
2.	Briefly explain about (i) Basic, possible and practical capacity (ii) Passenger car unit	10M	L2	CO3
3.	Briefly explain about condition diagram and collision diagram with neat sketches?	10M	L2	CO4
(OR)				
4.	Explain in detail about road accidents & remedial measures in traffic management ?	10M	L2	CO4
5.	Discuss about the car following theories ?	10M	L2	CO5
(OR)				
6.	Explain the following (i) Theory of traffic flow (ii) Whithams theory	10M	L2	CO5

**L1-Remembering; L2-Understanding; L3-Applying; L4-Analyzing; L5-Evaluating;
L6-Creating**

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B.Tech Mid Term Examinations June 2024				Dept.:	EEE		
				Academic Year		2023 – 2024	
				Subject Code		: 2002601	Subject: Microprocessors & Microcontrollers
Mid Term		: II	Marks : 30	Regulation : R20 UG	Duration : 90 Min		
Year		: III	Semester : VI	Section : ----	Date :26-06-2024		

Q. No	Question (s)	Marks	BL	CO
1	Explain in detail about 8251 USART with neat block diagram?	10	L2	CO2
OR				
2	a) Write an ALP to generate Square waveform using DAC. b) Write 8051 ALP to find largest number.	10	L2	CO2
3	Explain internal architecture of 8051 microcontroller with neat block diagram.	10	L2	CO2
OR				
4	a) Explain the addressing modes of 8051 microcontroller. b) Write short notes on assembler directives.	10	L2	CO1
5	Write short notes on data processing instructions of ARM processor.	10	L4	CO3
OR				
6	a) Explain in detail about various registers in ARM. b) Explain Multi Register Load-Store Instructions	10	L4	CO1

K.S.R.M COLLEGE OF ENGINEERING, KADAPA
(AUTONOMOUS)

Dept: **EEE**
Academic Year
2023 - 2024

B.Tech Mid Term Examinations JUNE 2024

Subject Code : 2002602	Subject: FUNDAMENTALS OF ELECTRICAL DRIVES		
Mid Term : II	Marks : 30	Regulation : R20 UG	Duration : 90 Min
Year : III	Semester : II	Section :	Date :27.06.2024(FN)

Part

Q. No	Question (s)	Marks	Level	CO
1	Explain the concept of variable frequency control of induction motor by voltage source inverter?	10	BL2	CO3
OR				
2	Explain the mechanism of slip power recovery scheme? And explain about Static Kramer Drive?	10	BL2	CO3
3	What are the different types of speed control of synchronous motor?	10	BL1	CO4
OR				
4	Explain about BLDC Motor drive?	10	BL2	CO4
5	Explain about methods to improve power factor?	10	BL2	CO5
OR				
6	Explain about the losses and energy conservation in electrical drives?	10	BL2	CO5

Faculty In-charge

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS)				Dept.:	EEE
				Academic Year	
B. Tech Mid Term Examinations June - 2024					
Subject Code	: 2002603	Subject Name : SWITCHGEAR & PROTECTION			
Mid Term	: II	Marks: 30M	Regulation: R20UG	Duration: 90 Min	
Semester: VI Semester			Section: -----	Date: 28.06.2024	

Answer any **Three Questions** choosing One Question from each Unit.

All Questions carries equal marks

Q. No	Question (s)	Marks	BL	CO
1	a) What is protective relay? What are the fundamental requirements of protective relay?	5M	L1	CO3
	b) Classify electromagnetic relays?	5M	L2	CO3
OR				
2	a) Discuss about the operating characteristics of impedance relay and reactance relay.	5M	L2	CO3
	b) A 11 kV, 100MVA alternator is grounded through a resistance of 5 ohms. The CT's have a ratio of 1000/5. The relay is set to operate when there is an out-balance current of 1A. What percentage of the generator winding will be protected by the percentage differential protection.	5M	L4	CO3
3	a) Explain about restricted earth fault protection by differential protection.	5M	L2	CO4
	b) A 11 kV, 100 MVA alternator is provided with differential protection. The percentage of winding to be protected against phase to ground fault is 85%. The relay is set to operate when there is 20% out of balance current. The value of resistance to be placed in the neutral to ground connection is?	5M	L4	CO4
OR				
4	Explain about the working principle of a Buchholz relay with a neat diagram.	10M	L2	CO4
5	a) Explain about the protection of Radial feeders?	5M	L2	CO4
	b) Explain about the protection of Ring-Main feeders along with time Zone protection?	5M	L2	CO4
OR				
6	a) Explain about differential protection applied to Bus-Zone protection.	5M	L2	CO4
	b) Explain the three zone distance relay protection scheme.	5M	L2	CO4

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS)			Dept.:	H&S
			Academic Year	
B. Tech Mid Term Examinations June/July 2024			2023 – 2024	
Subject Code	: 20MC612	Subject Name: Management & Organizational Behaviour		
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Semester:	VI	Branch: CSE, ME & EEE		Date: 29-06-2024

Answer **Three Questions** choosing One Question from each Part
All Questions carry equal marks

Q. No.	Questions	Marks	BL	Cos
1	Explain the Need and Importance of Organisational Behaviour?	10	L2	CO3
OR				
2	Define Motivation? Explain Maslow's and Herzberg's Motivational Theories?	10	L2	CO3
3	Elaborate Group Formation and Development?	10	L2	CO4
OR				
4	Explain Traits theory & Managerial Grid Leadership theory?	10	L2	CO4
5	Explain Organisational Culture and Organisational Climate?	10	L2	CO5
OR				
6	Explain the following:			
	A) Conflict Management	05	L2	CO5
	B) Change Management	05	L2	CO5

BL – Bloom's Taxonomy Levels

1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B.Tech Mid Term Examinations June/July 2024				Dept.:	EEE
				Academic Year	
				2023– 2024	
Subject Code	: 2002606	Subject: Signals & Systems			
Mid Term	: II	Marks: 30	Regulation: R20 UG	Duration: 90 Min	
Year	:	Semester: VI	Section: -	Date: 02/07/2024	

Q. No	Question (s)	Marks	Skills	CO
1	With necessary sketches, explain about (i) Transfer function of LTI system (ii) Distortion less transmission.	10	L2	CO1
OR				
2.	State and prove Sampling theorem.	10	L5	CO3
3	Explain about the concepts of (i) Sampling (ii) Aliasing (iii) Reconstruction of a signal from its samples	10	L2	CO3
OR				
4	Define Laplace Transform and analyze the following properties of Laplace Transform: (i) Time Shifting Property (ii) Differentiation in time (iii) Convolution	10	L4	CO4
5A	Find $X(Z)$ of $x(n) = a^n u(n)$. Explain about region of convergence.	5	L2	CO5
5B	What are the properties of Region of Convergence (RoC) in terms of z-transform?	5	L1	CO5
OR				
6	Define Z-Transform and analyze the following properties of Z-Transform: (i) Time Shifting (ii) Time Reversal (iii) Multiplication by n	10	L4	CO5

K.S.R.M COLLEGE OF ENGINEERING, KADAPA
(AUTONOMOUS)

Dept.: **MECHANICAL**

Academic Year

2023 – 2024

B. Tech Mid Term Examinations JULY 2024

Subject Code : **2003601** Subject: **Operations research**

Mid Term : **II** Marks : **30** Regulation : **R20 UG** Duration : **90 Min**
Year : **III** Semester : **VI** Section : **A&B** Date : **26-06-2024**

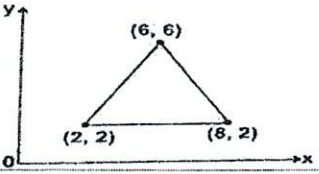
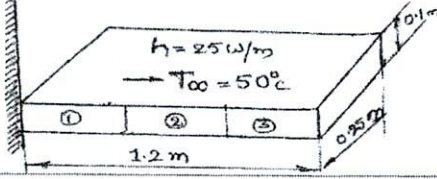
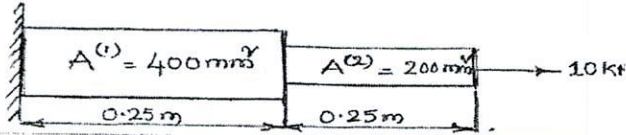
Answer all four questions. All questions carry equal marks.

S.N O	QUESTION	MA RKS	Co' s	BLOOM' S LEVEL																										
1.	<p>There are six jobs each of which must go through two machines A and B in the order AB. Processing time in hours are given below. Determine the sequence for the six jobs Which will minimize the elapsed time and idle time.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">JOB</th> <th colspan="2">Processing Time</th> </tr> <tr> <th>Machine-A</th> <th>Machine-B</th> </tr> </thead> <tbody> <tr><td>1</td><td>30</td><td>80</td></tr> <tr><td>2</td><td>120</td><td>100</td></tr> <tr><td>3</td><td>50</td><td>90</td></tr> <tr><td>4</td><td>20</td><td>60</td></tr> <tr><td>5</td><td>90</td><td>30</td></tr> <tr><td>6</td><td>110</td><td>10</td></tr> </tbody> </table>	JOB	Processing Time		Machine-A	Machine-B	1	30	80	2	120	100	3	50	90	4	20	60	5	90	30	6	110	10	10	CO3	L6			
JOB	Processing Time																													
	Machine-A	Machine-B																												
1	30	80																												
2	120	100																												
3	50	90																												
4	20	60																												
5	90	30																												
6	110	10																												
(or)																														
2	<p>Solve the following game, using the Dominance Principle..</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="5" style="writing-mode: vertical-rl; transform: rotate(180deg);">FirmaA</td> <td></td> <td>B1</td> <td>B2</td> <td>B3</td> <td>B4</td> </tr> <tr> <td>A1</td> <td>3</td> <td>2</td> <td>4</td> <td>0</td> </tr> <tr> <td>A2</td> <td>3</td> <td>4</td> <td>2</td> <td>4</td> </tr> <tr> <td>A3</td> <td>4</td> <td>2</td> <td>4</td> <td>0</td> </tr> <tr> <td>A4</td> <td>0</td> <td>4</td> <td>0</td> <td>8</td> </tr> </table>	FirmaA		B1	B2	B3	B4	A1	3	2	4	0	A2	3	4	2	4	A3	4	2	4	0	A4	0	4	0	8	10	CO3	L3
FirmaA			B1	B2	B3	B4																								
	A1		3	2	4	0																								
	A2		3	4	2	4																								
	A3		4	2	4	0																								
	A4	0	4	0	8																									
3.	<p>Let on the average 96 patients per 24-hour day require the service of an emergency clinic. Also, on average, a patient requires 10 minutes of active attention. Assume that the facilities can handle only one emergency at a time. Suppose that it costs the clinic Rs. 100/- per patient treated to obtain an average servicing time of 10 minutes and that each minute of decrease in this average time would costs Rs. 10/- per patient treated. How much would have to be budgeted by the clinic to decrease the average size of the queue from one and one third patient to half a patient?</p>	10	Co4	L3																										
(or)																														
4	<p>a) Explain what is ABC analysis and what is its significance b) What is inventory? Describe the types of inventory you know.</p>	10	Co4	L2																										

5	A truck owner from his past records that the maintenance costs per year of a truck whose Purchase price is Rs.8000 are as given below. When should the machine be replaced?								10	Co5	L2	
	Year(n)	1	2	3	4	5	6	7				8
	Running cost (MC) in Rs.	1000	1300	1700	2000	2900	3800	4800				6000
	Resale Price(Rs)	4000	2000	1200	600	500	400	400	400			
(or)												
6	a) Explain the Bellman's principle of optimality b) Describe the various types of replacement situations and Explain about group replacement?								5+5	Co5	L2	

FACULTY: Dr. D. Ravikanth

Subject Code	: 2003602	Subject Name:	FINITE ELEMENT METHODS
Mid Term	: II	Marks: 30	Regulation: R20UG
Semester:	VI	Section: A&B	Duration: 90 Min
			Date: 27-06-2024

Q. No	Question (s)	Marks	BL	CO
1	Evaluate Strain-Displacement Matrix [B] & Stiffness matrix [K] for a Constant strain triangular element shown in Fig, Take $t = 1 \text{ cm}$ and $E = 2 \times 10^7 \text{ N/cm}^2$, Poisons ratio $\mu = 0.3$.	10	L5	CO3
				
	OR			
2	Explain the following Terms with neat sketches a) Iso Parametric element b) Super parametric element c) Sub parametric element	10		CO3
3	Derive the Shape functions for a 4- noded Quadrilateral element using Natural Co-ordinates.	10	L4	CO4
	OR			
4	Find the Integral $I = \int_{-1}^{+1} (2x^3 + 5x^2 + 6) dx$ by Using Gaussian Quadrature method with 2-point scheme, the Gauss points are ± 0.5774 and the weights at the two points are Equal to unit	10	L3	CO4
5	Calculate the Temperature Profile in a Rectangular Fin of $1.2\text{m} \times 0.25\text{m} \times 0.1\text{m}$ size divided into 3 Elements and 4 Nodes as shown in fig.5. The cross-sectional Area $A=0.025\text{m}$, Perimeter $P=0.7\text{m}$, Thermal conductivity $K= 25\text{W/mk}$ and Base Temperature $T_b=800^\circ\text{C}$	10	L5	CO4
				
	OR			
6	Calculate the Natural frequency, Displacements and Mode shapes of a Stepped bar shown in fig. Area of the element-1= 400 mm^2 , Area of the element-2= 200 mm^2 , Length of element -1= 0.25m , Length of element -2= 0.25m , $E = 2 \times 10^5 \text{ N/mm}^2$, Density = 7200 kg/m .	10	L3	CO5
				

BL – Bloom’s Taxonomy Levels (1- Remembering, 2- Understanding, 3 - Applying, 4- Analyzing, 5 – Evaluating, 6 - Creating)

K.S.R.M COLLEGE OF ENGINEERING, KADAPA
(AUTONOMOUS)

B.Tech. II Mid Term Examinations, June- 2024

Dept.: Mechanical Engineering

Academic Year

2024 – 2025

Subject Code	: 2003603	Subject: INTRODUCTION TO CAD/CAM		
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Year	: III	Semester: VI	Section: A & B	Date: 28-06-2024

NOTE: Answer All Questions

		Marks	BL	CO
1.	List out the Fundamentals of 2D and 3D modeling?	10M	L2	CO3
	(OR)			
2.	Illustrate the importance of Bezier curve and surface representations	10M	L3	CO3
3.	(a) Define Group technology, and discuss various types of GT?	5M	L3	CO4
	(b) Analyze the types of classification and coding?	5M	L4	CO4
	(OR)			
4.	Highlight the role of Flexible manufacturing systems with advantages?	10 M	L3	CO4
5.	Summarize the concepts of CAPP?	10M	L4	CO5
	(OR)			
6.	Explain about MRP and Barcoding technology?	10M	L5	CO5

K.S.R.M COLLEGE OF ENGINEERING, KADAPA
(AUTONOMOUS)

B.Tech. II Mid Term Examinations, June/july-2024

Dept.: **Mechanical
Engineering**

Academic Year

2023 – 2024

Subject Code	: 2003605	Subject: SOLAR AND WIND ENERGY SYSTEMS		
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Year	: III	Semester: VI	Branch & Section: ME A&B	Date: 02-07-2024

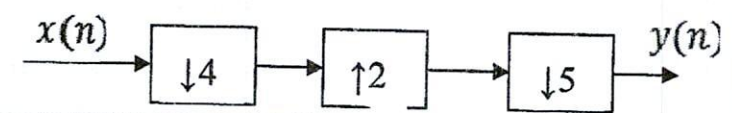
NOTE: Answer All Questions

			Marks	BL	CO
1.		Describe different type's anemometers using measurements of wind? and Explain any one with neat sketch?	10M	L3	CO3
		(or)			
2.	(a)	Analyze the status of wind energy in global scenario?	5M	L4	CO3
	(b)	Explain the wind power potential in India?	5M	L2	CO3
3.		Describe with neat sketch of horizontal axis wind turbine and its working process?	10M	L4	CO4
		(or)			
4.	(a)	What are the classifications of wind energy conversion systems?	5M	L2	CO4
	(b)	Describe the safety precautions of a wind turbine?	5M	L1	CO4
5.		Choose the factors for good site selection of wind power plants?	10M	L1	CO4
		(or)			
6.	(a)	Explain the environmental benefits and impacts of wind power plants?	5M	L2	CO5
	(b)	What is the difference between onshore and offshore wind Energy discuss it's briefly?	5M	L1	CO5

- L1 - Remembering
- L2 - Understanding
- L3 - Applying
- L4 - Analyzing
- L5 - Evaluating
- L6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B.Tech Mid Term Examinations-June 2024		Dept.:	ECE	
		Academic Year		
		2023 – 2024		
Subject Code	: 2004601	Subject: Digital Signal Processing		
Mid Term	: II	Marks : 30	Regulation : R20	Duration : 90 Min
Year	: III	Semester : VI	Section : A,B &C	Date : 26-06-2024

Note: Answer all questions choosing *one* from each unit

Q. No	Question (s)	Marks	BL	CO
1	Design analog Chebyshev filter that satisfies the constraints $\frac{1}{\sqrt{2}} \leq H(j\Omega) \leq 1 \text{ for } 0 \leq \Omega \leq 2 \text{ and } H(j\Omega) < 0.1 \text{ for } \Omega \geq 4$	10	L4	CO4
OR				
2	a) For the analog transfer function $H(s) = 2 / (s+1)(s+2)$. Determine $H(z)$ using impulse invariance technique. With $T=1$ sec	7	L4	CO2
	b) Describe frequency Warping and Pre-warping	3	L3	CO3
3	Design a FIR filter with $H_d(e^{j\omega}) = e^{-3j\omega}$, $-\pi/4 \leq \omega \leq \pi/4$ 0 , $\pi/4 \leq \omega \leq \pi$ using a Hamming window with $N=7$	10	L4	CO4
OR				
4	a) Compare IIR and FIR filters	5	L3	CO3
	b) Discuss about Symmetric and anti-symmetric FIR digital filter.	5	L2	CO4
5	Compare different types of windows used to design FIR filters	10	L3	CO4
OR				
6	Find $y(n)$ for the following multirate system if $x(n)$ is given by $x(n) = \{2, 1, 4, 2, 0, 5, 1, -2, 4, -1\}$ and plot the outputs of each block 	10	L4	CO2 CO2

Note: L1-Remembering L2-Understanding L3-Applying L4- Analyzing L5-Evaluating L6-creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS)				Dept.:	ECE
				Academic Year	
B. Tech Mid Term Examinations June 2024					
Subject Code	: 2004602	Subject Name: Microwave Engineering			
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min	
Semester: VI			Section: A,B & C	Date: 27-06-2024	

Answer any **Three Questions** choosing One Question from each Unit.
All Questions carries equal marks

Q. No	Question (s)	Marks	BL	CO
1	How is amplification achieved in a helix TWT amplifier? Describe the process with neat sketches.	10	2	CO 2
OR				
2	a) What are different types of magnetron? Describe structure of travelling wave cylindrical magnetron.	5	2	CO 2
	b) Illustrate how PI mode oscillations are sustained in travelling wave magnetron.	5	4	
3	a) Write short notes on Microwave Attenuators.	5	2	CO 4
	b) With a neat sketch explain the operation of the microwave isolator.	5	2	
OR				
4	a) Draw a typical two-hole directional coupler. List out the characteristics and obtain its S-matrix.	5	3	CO 4
	b) Define S-Matrix. Draw a neat sketch and obtain a scattering matrix of Magic Tee.	5	3	
5	What is the Gunn effect? Explain this phenomenon using two-valley theory with neat sketches.	10	2	CO 5
OR				
6	Write short notes on:			
	(a) Bolometer type microwave power measurement.	5	2	CO 3
(b) High VSWR measurement.	5	2		

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 – Evaluating, 6 - Creating)

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K.S.R.M COLLEGE OF ENGINEERING, KADAPA (UGC – AUTONOMOUS) Mid Term Examinations, JUNE – 2024				Dept.:	ECE
				Academic Year	
				2023 – 2024	
Subject Code	: 2004603	Subject: Control Systems			
Mid Term	: II	Marks: 30M	Regulation: R20UG	Duration: 90 Min	
Year	: ----	Semester: VI	Sections: A, B & C	Date: 28.06.2024 (FN)	

Note: Answer all questions (Each Question Carries Equal Marks)

Q.No.	Question (s)	Marks	CO	Skills
1	With the help of Routh's stability criterion find the stability of the following systems represented by the characteristic equations: (a) $S^4 + 8S^3 + 18S^2 + 16S + 5 = 0$ (b) $S^6 + 2S^5 + 8S^4 + 12S^3 + 20S^2 + 16S + 16 = 0$ (c) $S^5 + S^4 + 2S^3 + 2S^2 + 3S + 5 = 0$	10M	CO1	L3
(OR)				
2	For a feedback control system $G(S)H(S) = \frac{K}{s(s+2)(s+4)}$, draw the complete root locus.	10M	CO1	L6
3	Explain in detail, the steps in constructing the Root Locus.	10M	CO1	L6
(OR)				
4	The open loop transfer function of a unity feedback system is $G(S) = \frac{20}{s(1+3s)(1+4s)}$. Sketch the bode plot and determine the gain margin and phase margin.	10M	CO1	L6
5	What is the significance of State Transition Matrix? Also explain its properties?	10M	CO1	L3
(OR)				
6	Construct a state model for a system characterized by the differential equations, (i) $\ddot{Y} + 6\dot{Y} + 11Y = U$ (ii) $\ddot{Y} + 2\dot{Y} + Y = \dot{U} + U$	10M	CO1	L6

K.S.R.M COLLEGE OF ENGINEERING, KADAPA		Dept.:	ECE
(AUTONOMOUS)		Academic Year	
B. Tech Mid Term Examinations July 2024		2023 – 2024	
Subject Code	: 2004604	Subject Name: CMOS VLSI Design	
Mid Term	: II	Marks: 30	Regulation: R20UG
Semester: VI		Section: A, B&C	Duration: 90 Min
			Date: 02/07/2024

Answer any **Three Questions** choosing **One Question** from each Unit.

All Questions carries equal marks

Q.No	Question (s)	Marks	BL	CO
UNIT-I				
1	(a) Explain the concept of Pass Transistor logic and Domino CMOS logic.	5	3	CO3
	(b) Calculate the delay value of 2 CMOS inverters cascaded having 4:1 ratio?	5	4	CO3
OR				
2	(a) Explain basic circuit concepts (i) sheet resistance (ii) area capacitance.	5	2	CO3
	(b) Explain about limitations of scaling?	5	1	CO3
UNIT-II				
3	(a) Draw and explain the design flow of FPGA.	5	2	CO4
	(b) Write about RTL synthesis.	5	2	CO4
OR				
4	(a) Explain about High level synthesis.	5	2	CO4
	(b) Explain about classification of FPGA families?	5	3	CO4
UNIT-III				
5	(a) Explain about sources of power dissipation?	5	1	CO5
	(b) What is the significance of reduction of switched capacitance?	5	3	CO5
OR				
6	(a) What is the significance of reduction of switching activity?	5	4	CO5
	(b) Compare VTCMOS and MTCMOS techniques?	5	2	CO5

BL – Bloom’s Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 – Evaluating, 6 - Creating)

K.S.R.M COLLEGE OF ENGINEERING, KADAPA
(AUTONOMOUS)

B.Tech Mid Term Examinations June,2024

Dept.: **CSE**

Academic Year

20223 – 2024

Course Code	: 2005601	Course Name: INTERNET OF THINGS		
Mid Term	: II	Marks : 30	Regulation : R23 UG	Duration : 90 Min
Year	: III	Semester : VI	Section : A,B&C	Date :26.06.2024 FN

Q. No	Question (s)	Marks	BL	CO
1	List and explain the steps involved in IoT Design Methodology with example?	10	L2	CO3
OR				
2	a) Difference between SDN and NFV for IoT?	5	L1	CO3
	b) Explain in detail about M2M?	5	L2	CO3
3	a) Write an Arduino program to control LED using push button?	5	L1	CO4
	b) Explain The Arduino Platform & Getting started with Arduino.	5	L2	CO4
OR				
4	A) Write about Transducer & Sensors characteristics.	5	L1	CO4
	B) Explain in detail about The Arduino way?	5	L3	CO4
5	Define Raspberry Pi and installation of Linux on Raspberry Pi?	10	L1	CO5
OR				
6	Explain Basic building blocks of an IoT Device.	10	L1	CO5

Faculty In-charge

- L1-Remembering
- L2-Understanding
- L3-Applying
- L4- Analyzing
- L5-Evaluating
- L6-Creating

K.S.R.M. COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B.Tech Mid Term Examinations June- 2024				Dept.:	CSE
				Academic Year	
Subject Code	:	2005602	Subject: Data Mining		
Mid Term	:	II	Marks : 30	Regulation : R20 UG	Duration : 90 Min
Year	:	III	Semester :VI	Branch: CSE	Date : 27/06/2024

Q.No	Question (s)	Marks	CO	Blooms Level
1.a	Explain the steps to construct FP-Tree and discuss how frequent item sets are generated from FP-Tree.	5	CO3	L3
1.b	Examine in detail about the Pattern Mining in Multilevel Associations	5	CO3	L4
OR				

2	Explain and Apply the Apriori algorithm for discovering frequent item sets of the below transactional table. Note: minimum support =2.	10	CO3	L3																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><i>TID</i></th> <th style="text-align: left;"><i>List of item_IDs</i></th> </tr> </thead> <tbody> <tr><td>T100</td><td>11, 12, 15</td></tr> <tr><td>T200</td><td>12, 14</td></tr> <tr><td>T300</td><td>12, 13</td></tr> <tr><td>T400</td><td>11, 12, 14</td></tr> <tr><td>T500</td><td>11, 13</td></tr> <tr><td>T600</td><td>12, 13</td></tr> <tr><td>T700</td><td>11, 13</td></tr> <tr><td>T800</td><td>11, 12, 13, 15</td></tr> <tr><td>T900</td><td>11, 12, 13</td></tr> </tbody> </table>					<i>TID</i>	<i>List of item_IDs</i>	T100	11, 12, 15	T200	12, 14	T300	12, 13	T400	11, 12, 14	T500	11, 13	T600	12, 13	T700	11, 13	T800	11, 12, 13, 15	T900	11, 12, 13
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T700	11, 13																							
T800	11, 12, 13, 15																							
T900	11, 12, 13																							
3.a	What are the features of Bayesian classification? Explain in detail with an example.	5	CO4	L3																				
3.b	Describe the following model evaluation metrics i) Accuracy ii) Sensitivity iii) Specificity iv) Precision	5	CO4	L2																				

OR																																																																																														
4	Apply the decision trees(ID3) algorithm on below “tennis play” data set to evaluate i) Entropy of data set ii) Entropy and information gain of the attribute “Outlook”	10	CO4	L5																																																																																										
	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Outlook</th> <th>Temperature</th> <th>Humidity</th> <th>Windy</th> <th>PlayTennis</th> </tr> </thead> <tbody> <tr><td>1</td><td>Sunny</td><td>Hot</td><td>High</td><td>Weak</td><td>No</td></tr> <tr><td>2</td><td>Sunny</td><td>Hot</td><td>High</td><td>Strong</td><td>No</td></tr> <tr><td>3</td><td>Overcast</td><td>Hot</td><td>High</td><td>Weak</td><td>Yes</td></tr> <tr><td>4</td><td>Rainy</td><td>Mild</td><td>High</td><td>Weak</td><td>Yes</td></tr> <tr><td>5</td><td>Rainy</td><td>Cool</td><td>Normal</td><td>Weak</td><td>Yes</td></tr> <tr><td>6</td><td>Rainy</td><td>Cool</td><td>Normal</td><td>Strong</td><td>No</td></tr> <tr><td>7</td><td>Overcast</td><td>Cool</td><td>Normal</td><td>Strong</td><td>Yes</td></tr> <tr><td>8</td><td>Sunny</td><td>Mild</td><td>High</td><td>Weak</td><td>No</td></tr> <tr><td>9</td><td>Sunny</td><td>Cool</td><td>Normal</td><td>Weak</td><td>Yes</td></tr> <tr><td>10</td><td>Rainy</td><td>Mild</td><td>Normal</td><td>Weak</td><td>Yes</td></tr> <tr><td>11</td><td>Sunny</td><td>Mild</td><td>Normal</td><td>Strong</td><td>Yes</td></tr> <tr><td>12</td><td>Overcast</td><td>Mild</td><td>High</td><td>Strong</td><td>Yes</td></tr> <tr><td>13</td><td>Overcast</td><td>Hot</td><td>Normal</td><td>Weak</td><td>Yes</td></tr> <tr><td>14</td><td>Rainy</td><td>Mild</td><td>High</td><td>Strong</td><td>No</td></tr> </tbody> </table>	S. No.	Outlook	Temperature	Humidity	Windy	PlayTennis	1	Sunny	Hot	High	Weak	No	2	Sunny	Hot	High	Strong	No	3	Overcast	Hot	High	Weak	Yes	4	Rainy	Mild	High	Weak	Yes	5	Rainy	Cool	Normal	Weak	Yes	6	Rainy	Cool	Normal	Strong	No	7	Overcast	Cool	Normal	Strong	Yes	8	Sunny	Mild	High	Weak	No	9	Sunny	Cool	Normal	Weak	Yes	10	Rainy	Mild	Normal	Weak	Yes	11	Sunny	Mild	Normal	Strong	Yes	12	Overcast	Mild	High	Strong	Yes	13	Overcast	Hot	Normal	Weak	Yes	14	Rainy	Mild	High	Strong	No			
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5.a	Compare and contrast the following hierarchical based clustering methods i) Agglomerative ii) Devisive	5	CO5	L4																																																																																										
b)	Briefly write about different outlier detection methods	5	CO5	L2																																																																																										
OR																																																																																														
6	Explain the working principles of the following Partition based clustering methods? i) K-means ii) K-medoids	10	CO5	L3																																																																																										

- L1-Remembering
- L2-Understanding
- L3-Applying
- L4- Analyzing
- L5-Evaluating
- L6-Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA			Dept.:	CSE
(AUTONOMOUS)			Academic Year	
B.Tech Mid Term Examinations JUNE 2024			2023 – 2024	
Subject Code	: 2005603	Subject: CRYPTOGRAPHY and NETWORK SECURITY		
Mid Term	: II	Marks : 30	Regulation : R18 UG	Duration : 90 Min
Year	: III	Semester : VI	Section : A,B,C	Date : 28.06.2024 FN

Part -1

Q. No	Question (s)	Marks	BL	CO
1	a) Write RSA algorithm. Explain it with suitable example.	5	2	CO2
	b) Write Diffie-Hellman key exchange algorithm. Explain with suitable example.	5	2	CO2
OR				
2	Describe Secure Hash Algorithm	10	3	CO3
3	a) Explain Message authentication Requirements	5	2	CO4
	b) Explain HMAC.	5	2	CO4
OR				
4	Define Digital Signatures. Explain RSA and DSS approaches of Digital Signatures	10	2	CO4
5	a) Write Classification of Virus	3	2	CO5
	b) Describe Kerberos	7	2	CO4
OR				
6	a) Explain Types of firewalls	3	2	CO5
	b) Describe Pretty Good Privacy	7	3	CO5

K.S.R.M COLLEGE OF ENGINEERING, KADAPA				Dept.:	CSE
(AUTONOMOUS)				Academic Year	2023-2024
B. Tech Mid Term Examinations June- 2024					
Subject Code	: 2005604	Subject Name : Artificial Intelligence		Duration:	90 Min
Mid Term	: II	Marks: 30	Regulation: R20UG	Date:	02.07.2024
Semester: VI		Section: A,B & C			FN

Answer any **Three Questions** choosing One Question from each Unit.

All Questions carries equal marks

Q.No	Question (s)	Marks	BL	CO
1	Explain detail about Dependency Directed Backtracking.	10	1	CO4
OR				
2	Justify Bayesian networks provide a good basis for reasoning under uncertainty	10	1	CO4
3	What are Semantic nets? Explain knowledge representation with suitable example	10	4	CO3
OR				
4	How do you represent knowledge using Conceptual dependency	10	4	CO3
5	Explain in detail about gold stack planning.	10	2	CO5
OR				
6	a) What is minimax problem. Explain it with suitable example b) Explain different phases in natural language process.	5+5	5	CO5

BL – Bloom’s Taxonomy Levels

- (1- Remembering,
- 2- Understanding,
- 3 – Applying,
- 4 – Analysing,
- 5 – Evaluating,
- 6 - Creating)

K.S.R.M. College of Engineering, Kadapa (Autonomous)				Dept	AIML	
B. Tech Mid Term Examinations June – 2024				Academic Year		
				2023 – 2024		
Subject Code	:	2039601	Subject:	DEEP LEARNING		
Mid Term	:	II	Marks:	30 M	Regulation:	R20UG
Semester	:	VI	Section:	-	Date:26.06.2024	

Q. No	Question (s)	Marks	BL	CO
1.	Briefly explain about following terms. a) Sigmoid function b) ReLU function c) Softmax function d) Linear activation function	10M	L3	CO3
(OR)				
2.	a) Briefly explain about feed forward neural network.	5M	L3	CO3
	b) Describe briefly the backpropagation	5M	L3	CO3
3.	Explain about following terms a) Regularization b) Dropout c) Batch norm d) RCNN	10M	L1	CO4
(OR)				
4.	Explain GoogLeNet and VGG architecture with clear block diagram.	10M	L6	CO4
5.	Give brief overview on RNN and LSTM architectures	10M	L4	CO5
(OR)				
6.	a) Give brief description on denoising autoencoder	5M	L2	CO5
	b) Explain about sparse auto encoders	5M	L2	CO5

K.S.R.M. College of Engineering, Kadapa (Autonomous) B. Tech Mid Term Examinations June – 2024				Dept	AIML
				Academic Year	
				2023 – 2024	
Subject Code	: 2039602	Subject:	SOFTWARE ENGINEERING		
Mid Term	: II	Marks:	30M	Regulation:	R20UG
Semester	: VI	Section:	-		Duration: 90 Min
					Date: 27.06.2024

S.No	QUESTION		MARKS	BL	CO
1	a	Discuss about different architectural styles	5M	L1	CO3
	b	Explain about Architectural Design.	5M	L1	CO3
OR					
2	a	Write about Design concepts.	5M	L2	CO3
	b	Write a short notes on Architectural Genres.	5M	L2	CO3
OR					
3	a	Explain Golden Rules.	5M	L1	CO4
	b	Compare the Testing in the Large versus Testing in the Small	5M	L2	CO4
OR					
4	a	Write the differences between Black-Box Testing and White-Box Testing?	5M	L5	CO4
	b	Write a short notes on Interface Design steps.	5M	L1	CO4
OR					
5	a	Describe about Risk Management?	5M	L3	CO5
	b	Write about Project Estimation Techniques.	5M	L2	CO5
OR					
6	a	Write about Metrics for Project Size Estimation.	5M	L3	CO5
	b	Explain about COCOMO-A Heuristic Estimation Technique.	5M	L1	CO5

**K.S.R.M. College of Engineering, Kadapa
(Autonomous)**

B.Tech. Mid Term Examinations April-2024

Dept.:	AI&ML
Academic Year	
2023 – 2024	

Subject Code	:	2039603	Subject:	PREDICTIVE ANALYTICS MODELER			
Mid Term	:	II	Marks:	30M	Regulation:	R20UG	Duration: 90 Min
Semester	:	VI	Section:	---		Date: 06-05-2024	

Q. No	Question (s)	Marks	BL	CO
1.	a. Define Node and Stream and draw a sample stream diagram	5	L2	CO3
	b. Write general rules for creating a stream	5	L2	CO3
(OR)				
2.	a. Define super node and write steps to create a super node	5	L2	CO3
	b. List different pallets in IBM SPSS and relevant tasks can be performed	5	L2	CO4
3.	Explain CRISP-DM and how to deal with incorrect data	10	L3	CO4
(OR)				
4.	Explain field measurement levels	10	L2	CO4
5.	Explain Classification, Segmentation and Association	10	L2	CO5
(OR)				
6.	Explain types of classification models	10	L2	CO5

K.S.R.M. College of Engineering, Kadapa (Autonomous) B.Tech. Mid Term Examinations June/July – 2024				Dept.:	AI&ML	
				Academic Year		
				2023 – 2024		
Subject Code	: 2039605	Subject:	CLOUD COMPUTING			
Mid Term	: II	Marks:	30M	Regulation:	R20UG	Duration: 90 Min
Semester	: VI	Section:	---			Date: 2 nd July 2024

Q. No	Question (s)	Marks	BL	CO
1.	A) Explain about Platform as a Service	5M	L2	CO3
	B) Write short notes on Hypervisors	5M	L2	CO3
(OR)				
2.	A) What are the new challenges of software development in cloud.	5M	L2	CO4
	B) Discuss different perspectives on SaaS development.	5M	L2	CO4
3.	A) Explain different cloud application development platforms	5M	L2	CO4
	B) Explain Cloud-Aware Software development using PaaS technology	5M	L2	CO4
(OR)				
4.	Explain how Amazon Web Services support cloud computing.	10M	L2	CO5
5.	Discuss Captiva Cloud Toolkit by EMC.	10M	L2	CO5
(OR)				
6.	Discuss the overview of Data center environment.	10M	L2	CO5

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations June/July 2024				Dept.:	H&S
				Academic Year	
Subject Code	:	2006602	Subject Name: Digital Marketing (OE)		
Mid Term	:	II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Semester:	VI		Branch: ECE - C/S	Date: 01-07-2024	

Answer Three Questions choosing One Question from each Part
All Questions carry equal marks

Q. No.	Questions	Marks	BL	Cos
1	Explain the Need and Elements of Digital Marketing Plan?	10	L2	CO3
OR				
2	Explain the following:			
	A) Marketing Strategy & Action Plan	05	L2	CO3
	B) Situational Analysis	05	L2	CO3
3	Elaborate SEM (Search Engine Marketing) and Understanding Web Search?	10	L2	CO4
OR				
4	Briefly explain about CPM (Cost Per Thousand) and CPC (Cost Per Click)?	10	L2	CO4
5	What is Social Media Marketing & Explain its various types?	10	L2	CO5
OR				
6	What is digital media and analyse digital media performance?	05	L2	CO5

BL – Bloom's Taxonomy Levels

1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating

Subject Code	: 20OE309	Subject: NON-CONVENTIONAL SOURCES OF ENERGY		
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Year	: III	Semester: VI	Branch & Section: OE-III	Date: 01-07-2024

NOTE: Answer All Questions

		Marks	BL	CO
1.	Classify the types of OTEC system and its types , working with neat sketches	10M	L4	CO3
	(OR)			
2.	(a) Explain the principles of Bio conversion digestion process? Briefly discuss about merits and demerits and its applications?	5M	L5	CO3
	(b) What are the five general categories' of geothermal sources?	5M	L2	CO4
3.	Classify the methods of harnessing the geothermal energy and Explain Binary cycle plant with neat sketch?	10M	L4	CO4
	(OR)			
4.	(a) Define tidal power plant , working with neat sketch and give its advantages and dis advantages ?	5M	L1	CO4
	(b) Identify the potential and conversion techniques of mini-Hydel power Plant with neat sketch and its working?	5M	L3	CO4
5.	Explain MHD power generation, types with neat sketch and its working Principle?	10M	L2	CO5
	(OR)			
6.	(a) Write Short Notes On Fuel Cells, types, their working with neat sketches?	5M	L2	CO5
	(b) Discuss need for DEC and explain the thermo-electric power generation With neat sketch and mention their applications?	5M	L5	CO5

- L1 - Remembering
- L2 - Understanding
- L3 - Applying
- L4 - Analyzing
- L5 - Evaluating
- L6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations June/July - 2024			Dept.:	H & S
			Academic Year	
			2023 - 2024	
Course Code	: 20OE611	Course Name: Basic Financial Management for Engineers		
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Semester:	VI	Branch: OE-II (A/S & B/S)		Date: 01-07-2024

Answer **Three Questions** choosing One Question from each Part
All Questions carries equal marks

Q. No.	Questions	Marks	COs	BL																		
1	Define Budget and explain the different types of Budgets.	10	CO-3	L-1																		
OR																						
2	What is Budgetary Control and explain the steps in Budgetary control system.	10	CO-3	L-2																		
3	Define Working capital and explain the types of working capital	10	CO-4	L-1																		
OR																						
4	What are the factors affecting working capital needs.	10	CO-4	L-2																		
5	Define Capital Budgeting? Explain the methods of Capital Budgeting.	10	CO-5	L-1																		
OR																						
6	<p>ABC company having an investment proposal for a project costing Rs. 2,50,000 and the expected cash flows after tax are as follows.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Year</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>Cash Inflows</td> <td>45,000</td> <td>60,000</td> <td>75,000</td> <td>85,000</td> <td>90,000</td> </tr> <tr> <td>PV Factor @10%</td> <td>0.909</td> <td>0.826</td> <td>0.751</td> <td>0.683</td> <td>0.621</td> </tr> </tbody> </table> <p>Calculate Net Present Value for the project.</p>	Year	1	2	3	4	5	Cash Inflows	45,000	60,000	75,000	85,000	90,000	PV Factor @10%	0.909	0.826	0.751	0.683	0.621	10	CO-5	L-4
Year	1	2	3	4	5																	
Cash Inflows	45,000	60,000	75,000	85,000	90,000																	
PV Factor @10%	0.909	0.826	0.751	0.683	0.621																	

1- Remembering, 2- Understanding, 3 - Applying, 4 - Analysing, 5 - Evaluating, 6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS)			Dept.:	H&S
			Academic Year	
B.Tech., Mid Term Examinations – June/July, 2024			2023 – 2024	
Course Code	20OE612	Course: TRANSFORMS & THEIR APPLICATIONS (OE)		
Mid Term	II	Marks : 30	Regulation : R20 UG	Duration : 90 Minutes
Year	III	Semester : VI	Section : Open Elective	Date : 01-07-2024

Answer ALL the questions. All Questions carry Equal Marks.

03 X 10 = 30 Marks

Q. No	Question (s)	Marks	BL	CO
1	(a) Determine the Fourier transform of $f(x) = \begin{cases} 1, & x < a \\ 0, & x > a \end{cases}$	5 M	L5	CO3
	(b) Evaluate the Fourier transform of $f(x) = x e^{-x}, 0 \leq x \leq \infty$.	5 M	L5	CO3
OR				
2	Evaluate the Fourier sine and cosine transform of $x e^{-ax}$.	10 M	L5	CO3
3	Determine Fourier cosine transform of e^{-4x} and hence evaluate $\int_0^{\infty} \frac{\cos 2x}{x^2+16} dx = \frac{\pi}{8} e^{-2}$.	10 M	L5	CO4
OR				
4	Use Parseval's identity to prove that $\int_0^{\infty} \frac{dt}{(a^2+t^2)(b^2+t^2)} = \frac{\pi}{2ab(a+b)}$	10 M	L5	CO4
5	(a) Evaluate u_2, u_3 if $U(z) = \frac{2z^2+5z+14}{(z-1)^4}$.	5 M	L5	CO5
	(b) Apply convolution theorem to find $Z^{-1} \left[\frac{z^2}{(z-a)(z-b)} \right]$.	5 M	L3	CO5
OR				
6	Solve $u_{n+2} + 6u_{n+1} + 9u_n = 2^n$ with $u_0 = u_1 = 0$ using Z-transforms.	10 M	L3	CO5

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations- June/July, 2024				Dept.:	Humanities and Sciences		
				Academic Year		2023 – 2024	
				Course Code	: 20OE615	Course Name: Academic Writing	
Mid Term	: II	Marks : 30	Regulation : R20 UG	Duration : 90 Min			
Year	: III	Semester : VI	Branch & Section : (Common to all sections)	Date : 01-07-2024 (Mon) F.N.			

Answer the following questions. All questions carry equal marks.

Q. No.	QUESTIONS	Marks	CO	Blooms Level
1	Describe the process of writing in detail.	10 M	CO3	L1
	OR			
2	a) "Summarizing is a brief overview of an entire discussion or argument"- Explain. b) Determine the ways to avoid plagiarism.	5M 5M	CO3	L2 L5
3	Explain the structure of a research paper elaborately.	10M	CO4	L5
	OR			
4	a) List out the characteristics of a research paper. b) Write briefly about the data implementation and display in submitting research paper	5M 5M	CO4	L4 L2
5	Explain the following - (a) Precision (b) Clarity (c) Concise	10 M	CO5	L2
	OR			
6	a) What do you know about Academic Vocabulary? b) How does word choice play a key role in Academic Writing?	5 M 5M	CO5	L1 L1

- L1 - Remembering
- L2 - Understanding
- L3 - Applying
- L4 - Analyzing
- L5 - Evaluating
- L6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS) B. Tech Mid Term Examinations June/July 2024				Dept.:	H&S
				Academic Year	
				2023 – 2024	
Subject Code	:	2006603	Subject Name: Project Management (OE)		
Mid Term	:	II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Semester:	VI		Branch: CE B/S & ECE A/S	Date: 01-07-2024	

Answer Three Questions choosing One Question from each Part
All Questions carry equal marks

Q. No.	Questions	Marks	BL	Cos
1	Define Risk and explain the role of risk management in Project management?	10	L2	CO3
OR				
2	What is value engineering and explain the steps involved and process of value engineering?	10	L2	CO3
3	Illustrate the rules to be followed while drawing the network diagram?	10	L2	CO4
OR				
4	Define PERT & CPM? Distinguish PERT from CPM.	10	L2	CO4
5	Explain the process of project execution and control?	10	L2	CO5
OR				
6	Describe the process of project performance evaluation?	10	L2	CO5

BL – Bloom's Taxonomy Levels

1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA			Dept.:	H&S	
(AUTONOMOUS)			Academic Year		
B. Tech Mid Term Examinations June/July - 2024			2023 - 2024		
Subject Code	:	2006601	Subject Name: Human Resource Development (Humanities Open Elective)		
Mid Term	:	II	Marks: 30	Regulation: R20UG	Duration: 90 Min
Semester:	VI		Branch: ECE B/S & CE A/S		Date: 01-07-2024

Answer Three Questions choosing One Question from each Part
All Questions carry equal marks

Q. No.	Questions	Marks	COs	BL
1	Define Training and explain about Methods of Training.	10	CO-3	L-1
OR				
2	Kirkpatrick's evaluation framework model – Explain it.	10	CO-3	L-3
3	Define Career Development and explain the stages in life and Career Development.	10	CO-4	L-1
OR				
4	Discuss the issues in career development.	10	CO-4	L-3
5	What are the qualities of a great Organizational Culture?	10	CO-5	L-2
OR				
6	Define Labour discrimination and explain the types of Labour discrimination.	10	CO-5	L-1

1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating

K.S.R.M. College of Engineering, Kadapa (Autonomous) B. Tech Mid Term Examinations July 2024				Dept.:	OE
				Academic Year	
				2022 – 2023	
Subject Code	: 20OE104	Subject:	SOLID WASTE MANAGEMENT		
Mid Term	: II	Marks: 30	Regulation: R20UG	Duration: 90 Min	
Year	: III	Semester: VI	Section :	Date: 01/07/2024	

Q. No	Question (s)	Marks	Skills	CO
1.	Explain the concept of Pyrolysis and Gasification	10M	L2	CO3
(OR)				
2.	Explain the working principle of material recovery system	10M	L2	CO3
3.	Distinguish between landfill and dump along with various design characteristics of landfill	10M	L4	CO4
(OR)				
4.	Explain the problems linked to landfill on the Ground water Air and Land.	10M	L2	CO4
5.	Explain the sources and characteristics of hazardous waste	10M	L2	CO5
(OR)				
6.	Describe briefly about e waste management	10M	L3	CO5

L1-Remembering; L2-Understanding; L3-Applying; L4- Analyzing; L6-Evaluating; L6: Creating

K.S.R.M COLLEGE OF ENGINEERING, KADAPA (AUTONOMOUS)		Dept.:	CSE	
		Academic Year		2023 – 2024
B. Tech Mid Term Examinations July 2024				
Subject Code	:	20OE503	Subject Name/Code: <i>JAVA PROGRAMMING (OE-II)</i>	
Mid Term	:	II	Marks: 30	Regulation: R20UG
Semester: III			Section: A&B&C	Duration: 90 Min
				Date:01/07/2024

Answer any **Three Questions** choosing One Question from each Unit.

All Questions carries equal marks

Q.No	Question (s)	Marks	BL	CO
UNIT-III				
1	Define Exception? Explain exception hierarchy in detail.	10	1	CO3
OR				
2	Explain the following keywords with an example program a) try b)catch c)finally	10	2	CO3
UNIT-IV				
3	Explain button and text components in java with example program.	10	3	CO5
OR				
4	Explain Layout types in AWT with suitable examples	10	1	CO4
UNIT-V				
5	What is an applet? Explain in detail about applet life cycle with suitable diagram	10	1	CO5
OR				
6	Develop a java program to create Combobox and Radiobutton using swings.	10	4	CO5

BL – Bloom’s Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes

Note: - Please mention only Number in BL and CO