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IV B.TECH II SEM

SUPPLEMENTARY EXAMINATIONS

MARCH 2024

NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations,March-2024

Sub Code: 19BCE8TH01 CONSTRUCTION TECHNOLOGY AND MANAGEMENT

Time: 3 hours (CE) Max. Marks: 60

Note: Answer All **FIVE** Questions. All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i) Define project management and explain phases of project management.	K2	1	6M
		ii) Describe PERT and CPM	K1	1	6M
		OR			
	b	i) Define project scheduling and explain different types of scheduling tools.	K1	1	6M
		ii) What are the rules for drawing networks	K2	1	6M
2		Unit-II			
	a	i) Explain the different types of floats involved in CPM.	K2	2	6M
		ii) Details of activities of a construction project are given below. Draw network. Identify critical path. Determine values of total float, free float & independent float of all the activities.	K4	2	6M

Activity	1-2	1-3	1-4	2-5	3-5	4-6	5-6
Duration	7	5	6	8	5	4	3

		OR			
	b	i) Describe steps involved in optimization of cost.	K2	2	6M
		ii) Determine the optimum cost and optimum duration for the project. The data for each activity of the network is given in the following table. Indirect cost = Rs.300 / per day and Total normal cost = RS.10,000	K3	2	6M

Activity	Predecessor	Normal duration (days)	Cost slope (Rs/day)
A	-	3	500
B	A	7	100
C	A	4	400
D	C	5	200

3		Unit-III			
	a	i) What is contract and explain different types of contract.	K1	3	6M
		ii)What are the objectives involved in project planning and mention steps to develop project planning?	K1	3	6M
		OR			
	b	i) Write a note on specifications and important conditions of contract.	K1	3	6M
		ii) Explain (a) arbitration (b) Muster roll	K1	3	6M
4		Unit-IV			
	a	i) Write short notes on the following: (a)Resource smoothing (b) Resource leveling	K1	4	6M
		ii) Write a short note on green technologies and mention its merits and demerits	K1	4	6M

		OR			
	b	i) What are ABC classification materials?	K1	4	6M
		ii) Write about the purpose of NBC code book-2016.	K1	4	6M
5		Unit-V			
	a	i) List the possible accidents in case of building works.	K1	5	6M
		ii) What are the elements of quality. Describe quality assurance techniques.	K2	5	6M
		OR			
	b	i) Briefly discuss about accident prevention program and what is the immediate attention in case of accident?	K1	5	6M
		ii) Define quality control and its importance.	K1	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M: Marks

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NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BCE8PE04 **ENVIRONMENTAL IMPACT ASSESSMENT**

Time: 3 hours (CE) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i) Write a note on Screening.	K1	1	6M
		ii) Discuss the scooping	K1	1	6M
		OR			
	b	i) Explain the role of stakeholders in the EIA preparation	K2	1	6M
		ii) Write a note on initial environmental Examination	K1	1	6M
2		Unit-II			
	a	i) Explain the checklist method of impact assessment.	K2	2	6M
		ii) Write a short note on Adhoc method and its demerits	K1	2	6M
		OR			
	b	i) Discuss matrix method and its merits	K1	2	6M
		ii) Explain the network method and its merits	K2	2	6M
3		Unit-III			
	a	i) Discuss the effect of development activities on Air environment	K1	3	6M
		ii) Explain the effect of development activities on Ground water.	K2	3	6M
		OR			
	b	i) Write note on delineation of study area	K1	3	6M
		ii) Explain applications of GIS and Remote sensing for EIA	K2	3	6M
4		Unit-IV			
	a	i) Write a short note on surface water quality analysis and explain the standards for water quality.	K1	4	6M
		ii) Discuss the impacts of development activities on biological environment	K1	4	6M
		OR			
	b	i)Discuss the methodology for the assessment of impacts on surface water environment	K1	4	6M
		ii) Explain the general approach for assessment of air pollution impact	K2	4	6M
5		Unit-V			
	a	i) Discuss the impacts of development activities on vegetation	K1	5	6M
		ii) Explain the impacts of development activities on wildlife	K2	5	6M
		OR			
	b	i) Explain the advantages of environmental risk assessment	K2	5	6M
		ii) Discuss the impacts of development activities on deforestation	K1	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NAKASAKAPETA
NEC ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular & Supple. Examinations, March-2024

Sub Code: 19BEE8TH01 **UTILIZATION OF ELECTRICAL ENERGY**

Time: 3 hours (EEE) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No			Questions	KL	CO	M
1	Unit-I					
	a	i)	Give the justification of superiority of electrical heating?	2	1	6M
		ii)	A 22kW single phase, 206V resistance oven employs circular nichrome wire for its heating element. If the wire temperature is not to exceed 1022°C and the temperature of the charge is to be 387°C, find the size and length of the wire required. Assume e=0.7 and radiation efficiency K=0.55. What would be the temperature of the wire when the charge is cold?	3	1	6M
	OR					
	b	i)	Discuss in detail about the requirements and causes of failure of a heating element?	2	1	6M
		ii)	Draw and explain in detail about the performance characteristics of typical arc furnace?	2	1	6M
2	Unit-II					
	a	i)	Compare the resistance welding and arc welding with respect to the applications?	3	2	6M
		ii)	Discuss in detail about the properties of different types of electrodes used for the electrical welding process?	2	2	6M
	OR					
	b	i)	Compare the AC welding and DC welding with respect to the applications?	3	2	6M
		ii)	Draw the diagram and explain the operating principle of carbon arc welding?	2	2	6M
3	Unit-III					
	a	i)	Obtain the relation between solid angle and plane angles with relevant equations?	2	3	6M
		ii)	A lamp emits a total flux of light of 1550 lumens. What is its mean spherical candle power? A plane surface is placed 4.2m from a 204c.p uniform source of light. Find the intensity of illumination on the surface when it is normal, inclined at 55° and parallel to the rays?	3	3	6M
	OR					
	b	i)	Analyze the affect of incident angle on the radiant energy with necessary equations?	2	3	6M
		ii)	A 207 c.p lamp is hung 4.2m above the centre of a circular area of 4.7m diameter. Find the illumination at the centre of area, periphery of the area and the average illumination. Also determine the average illumination if reflector of 78% efficiency is used?	3	3	6M
4	Unit-IV					
	a	i)	Draw and explain the speed time curves of traction service with trapezoidal characteristics?	2	4	6M

		ii)	Describe the mechanics of train moment with necessary expressions?	2	4	6M
			OR			
	b	i)	Draw and explain the speed time curves of traction service with quadrilateral characteristics?	2	4	6M
		ii)	The distance between two stations is 1.8kms and the average speed of the train is 44 km.p.h. The acceleration, retardation during coasting and braking are 2.4 km.p.h.p.s, 0.18km.p.h.s and 2.8 km.p.h.p.s respectively. Assume quadrilateral approximation of speed time curve, find the duration of the accelerating, coasting and braking periods and the distance covered during these periods?	3	4	6M
5			Unit-V			
	a	i)	Derive and analyze the tractive effort during acceleration with relevant equations?	3	5	6M
		ii)	Describe the role of coefficient of adhesion in the operation of traction systems?	2	5	6M
			OR			
	b	i)	Derive and analyze the tractive effort for gradient with relevant equations?	3	5	6M
		ii)	Two 3 phase locomotives are coupled to haul a heavy train. The motors of both locomotives have a slip of 6% when the loco is delivering its full load tractive effort of 4775kg. Loco A has driving wheels of 1.11m in diameter where as B has 1.09m in diameter. Determine the tractive effort shared by two locomotives if the total tractive effort is 10355kg, 1207kg? How would the above tractive efforts have been shared, if in addition to the in equality of the driving wheel diameters, the loco B had a slip of 3% instead of 6%?	3	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NAKASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular & Supple. Examinations, March-2024

Sub Code: 19BEE8PE04 **PROGRAMMABLE LOGIC CONTROLLER & APPLICATIONS**

Time: 3 hours (EEE) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i)Sketch the functional components of a PLC system and explain?	4	1	6M
		ii)Explain the construction of PLC ladder diagrams?	4	1	6M
		OR			
	b	Explain the i) I/o modules and Interfacing ii) Programming formats of PLC'S?	4	1	12M
2		Unit-II			
	a	Discuss different input and output registers of Programmable logic controllers?	4	2	12M
		OR			
	b	What are the characteristics of PLC registers? Explain in detail the Holding Registers?	2	2	12M
3		Unit-III			
	a	Explain different timer instructions in PLC with suitable examples?	4	3	12M
		OR			
	b	i)How many configurations are there for PLC counter functions? Explain	2	3	6M
		ii) Explain the Number conversion functions in PLC'S?	4	3	6M
4		Unit-IV			
	a	Discuss the master control Relay (MCR) function in PLC'S? Also explain its application with the help of an application program?	4	4	12M
		OR			
	b	i)Explain the FAL function of a PLC with a schematic of its operations?	4	4	6M
		ii) Explain the operation of the SKIP function?	4	4	6M
5		Unit-V			
	a	i)Explain about the position indicator with PID control?	4	5	6M
		ii) Discuss in briefly about the PID modules, PID tuning?	4	5	6M
		OR			
	b	Explain the following i) Analog modules and systems ii) PID functions	4	5	12M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

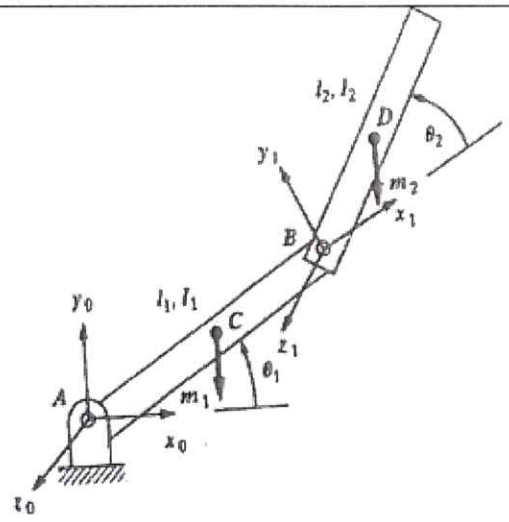
IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BME8PE04 **ROBOTICS AND APPLICATIONS**

Time: 3 hours (ME) Max. Marks: 60

Note: Answer All **FIVE** Questions. All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	Sketch and explain the four basic robot configurations classified according to the coordinate system.	K4	1	12M
	OR				
	b	For the point P = (3,7,5) perform following operations a). Rotate 30° about the Y-axis b). Translate 8 units along y-axis c). Rotate 30o about x then translate 6 units along Y- axis. d) Rotate 90o about z-axis	K4	1	12M
2		Unit-II			
	a	Briefly explain the working principle of any two types of position sensors with neat sketch	K2	2	12M
		OR			
	b	i)Classify the different types of Actuators	K2	2	4M
		ii) Explain the working of a stepper motor.	K2	2	8M
3		Unit-III			
	a	What is the role of D-H notation? Explain their importance in solving Forward Kinematics.	K3	3	12M
		OR			
	b	Derive the Inverse kinematics of the 3-DOF manipulator by considering an example.	K3	3	12M
4		Unit-IV			
	a	How will you compute Jacobian for a rotary Joint? Explain with an example	K4	4	12M
		OR			
	b	Using Lagrangian method, derive the equations of motion for the two degree of freedom robot arm, shown in figure, the center of mass for each link is at the center of link. The moments of inertia are I_1 and I_2	K4	4	12M

					
5		Unit-V			
	a	Explain about arc welding operations of robot with neat sketch.	K2	5	12M
		OR			
	b	Explain the future manufacturing applications of robot?	K2	5	12M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NEC NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BME8PE07 PRODUCTION PLANNING AND CONTROL

Time: 3 hours (ME) Max. Marks: 60

Note: Answer All **FIVE** Questions. All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No			Questions	KL	CO	M
1			Unit-I			
	a	i)	Define the term "Production Planning and Control". State its objectives.	K1	CO1	6M
		ii)	Describe the functions of production planning and control.	K2	CO1	6M
			OR			
	b	i)	Name the various types of production systems.	K1	CO1	6M
		ii)	State the purpose of a manufacturing organization in an industry. Give a typical organization structure of a manufacturing organization.	K3	CO1	6M
2			Unit-II			
	a	i)	Explain the basic steps in a Forecasting Task.	K1	CO2	6M
		ii)	The super snow paint shop has recorded the demand for a particular colour during the past 6 weeks as shown below.	K5	CO2	6M

Week	Demand in Litre
1st Week May	19
2nd Week May	17
3rd Week May	22
4th Week May	27
1st Week June	29
2nd Week June	33

(a) Calculate a 3-week moving average for the data to forecast demand for the next week.

(b) Calculate a weighted average forecast for the data, using a weight of 0.6 for the most recent data and weights of 0.3 and 0.1 for successive older data.

			OR			
	b	i)	Explain the different categories of Forecasting Techniques.	K2	CO2	6M
		ii)	A firm uses simple exponential smoothing with α=0.3 to forecast demand. The forecast for the first week of January was 500 units, whereas actual demand turned out to be 450 units. (a) Forecast the demand for the second week of January. (b) Assume that the actual demand during the second week of January turned out to be 550 units. Forecast the demand up to February third week, assuming the subsequent demands as 475, 450, 470, 525, and 470 units.	K5	CO2	6M
3			Unit-III			
	a	i)	Define inventory. What are the various types of inventory? Why they are maintained?	K2	CO3	6M
		ii)	A company requires 16000 units of raw material costing Rs.2 per unit. The cost of placing an order is Rs.45 and the carrying costs are 10% per year per unit of the average inventory. Determine: (i) the economic order quantity (ii) cycle time (iii) total variable cost of	K5	CO3	6M

			managing the inventory.			
			OR			
	b	i)	What is Economic Order Quantity? Derive the formula for determining EOQ.	K6	CO3	6M
		ii)	Describe in details ABC analysis. State its advantages limitations and applications.	K2	CO3	6M
4			Unit-IV			
	a	i)	Define Routing. Explain the routing procedure, in brief.	K1	CO4	6M
		ii)	Explain how the routing differs in job order, intermittent and continuous production systems.	K2	CO4	6M
			OR			
	b	i)	State the objectives of routing.	K2	CO4	6M
		ii)	Describe 'route sheet' with a suitable example.	K3	CO4	6M
5			Unit-V			
	a	i)	Describe briefly the Line Of Balance (LOB) technique of project scheduling.	K3	CO5	6M
		ii)	Describe: (a) Master Scheduling (b) Production Scheduling	K2	CO5	6M
			OR			
	b	i)	What is dispatching? State the various activities of dispatching, in brief.	K1	CO5	6M
		ii)	Name and describe the common forms used for dispatching.	K2	CO5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BEC8PE01 **CELLULAR & MOBILE COMMUNICATION**

Time: 3 hours (ECE) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i) Compare first, second, third and fourth generations of cellular wireless system.	K3	1	6M
		ii) Explain cell splitting and sectoring.	K2	1	6M
		OR			
	b	i) Explain about third generation cellular wireless systems	K2	1	6M
		ii) Explain concept of frequency reuse and co-channel interface.	K2	1	6M
2		Unit-II			
	a	Explain different diversity techniques in detail.	K2	2	12M
		OR			
	b	Explain factors effect cell coverage for signal and traffic.	K2	2	12M
3		Unit-III			
	a	i) Explain Umbrella pattern antennas and mobile antennas.	K2	3	6M
		ii) Explain non fixed channel assignment.	K2	3	6M
		OR			
	b	i) Explain space diversity and minimum separation of cell site antennas.	K2	3	6M
		ii) Explain channel sharing and borrowing.	K2	3	6M
4		Unit-IV			
	a	i) Explain mobile assisted and soft handoff.	K3	4	6M
		ii) Explain dropped call rates and their evaluation.	K2	4	6M
		OR			
	b	i) What are advantages of handoff and delaying handoff.	K2	4	6M
		ii) Explain power difference handoff and forced handoff.	K2	4	6M
5		Unit-V			
	a	Explain CDMA architecture and channels in detail.	K2	5	12M
		OR			
	b	Explain TDMA architecture and channels in detail.	K2	5	12M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BCS8PE03 **E-COMMERCE**

Time: 3 hours (CSE) Max. Marks: 60

Note: Answer All **FIVE** Questions. All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	Explain the Generic Frame work of the E-Commerce with diagram.	2	1	12M
		OR			
	b	What is e-commerce? State how e-commerce differ from traditional commerce.	2	1	12M
2		Unit-II			
	a	i) Explain about e-cash and the properties of e-cash.	2	2	6M
		ii) Explain the Four dimensions that are useful for handling electronic tokens	2	2	6M
		OR			
	b	i) Explain how purchase consumption is implemented in electronic commerce.	2	2	6M
		ii) Discuss about pre purchase preparation in mercantile model.	2	2	6M
3		Unit-III			
	a	i) Explain the various issues and limitations in EDI.	2	3	6M
		ii) Explain about intra-organizational electronic commerce	2	3	6M
		OR			
	b	i) Explain the supply chain management characteristics in electronic commerce	2	3	6M
		iii) Discuss on Agile Manufacturing in supply chain management.	2	3	6M
4		Unit-IV			
	a	i) Explain about capabilities provided by structured documents.	2	4	6M
		ii) What are various functions and features of data warehouse?	2	4	6M
		OR			
	b	i) Describe online marketing research. Explain the procedure for conducting online marketing research	2	4	6M
		i) Write and Explain various limitations of on-line Marketing	2	4	6M
5		Unit-V			
	a	i) Explain the various information search challenges.	2	5	6M
		ii) Explain different information filtering features.	2	5	6M
		OR			
	b	i) Explain about E-Commerce catalogs or directories.	2	5	6M
		ii) Explain about wide area internet service (WAIS) Engine.	2	5	6M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NEC NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BCI8PE08 **INTERNET OF THINGS**

Time: 3 hours (CSE) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i)Why do IoT systems have to be self-adapting and self-configuring.	K2	1	6M
		ii)With neat diagram explain about functional blocks of IoT.	K4	1	6M
		OR			
	b	i)Describe an example of IoT service that uses publish – subscribe communication channel.	K2	1	6M
		ii)Explain the characteristics of IoT.	K2	1	6M
2		Unit-II			
	a	i) Explain about domain model specification in IoT.	K4	2	6M
		ii) Illustrate deployment design system of IoT with an suitable example.	K4	2	6M
		OR			
	b	i) Explain about information model specification in IoT.	K4	2	6M
		ii) Explain about operational view specification.	K4	2	6M
3		Unit-III			
	a	i)Explain about sensors and actuators.	K2	3	6M
		ii) Write in detail about journey of circuit board.	K4	3	6M
		OR			
	b	Discuss about RASPBERRY PI in detail	K2	3	12M
4		Unit-IV			
	a	Discuss about publish subscribe messaging using WAMP.	K2	4	12M
		OR			
	b	Write about device creation and communication in Xively Cloud for IoT.	K2	4	12M
5		Unit-V			
	a	Determine the IoT levels for designing home automation IoT system including smart lighting and intrusion detection.	K4	5	12M
		OR			
	b	Determine the various communication models that can be used for Agricultural applications. Which is a more appropriate model for this system?	K4	5	12M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BCI8PE01 **DEEP LEARNING**

Time: 3 hours (IT) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i) Define Machine Learning and explain its significance in modern technology.	**K2**	**CO1**	6M
		ii) Identify and explain the key challenges in traditional machine learning approaches that deep learning aims to address.	**K2**	**CO1**	6M
		OR			
	a	Discuss two widely used supervised learning algorithms, such as Decision Trees and Support Vector Machines (SVMs).	**K2**	**CO1**	12M
2		Unit-II			
	a	Define gradient-based learning in the context of deep learning and explain its significance in training neural networks.	**K2**	**CO2**	12M
		OR			
	b	i) Discuss the role of regularization techniques in mitigating overfitting in deep learning models.	**K2**	**CO2**	6M
		ii) Discuss active learning strategies in the context of semi-supervised learning	**K2**	**CO2**	6M
3		Unit-III			
	a	i) Discuss regularization techniques as optimization strategies in deep learning.	**K2**	**CO3**	6M
		ii) Describe the concept of meta-algorithms in deep learning	**K2**	**CO3**	6M
		OR			
	a	Discuss the key challenges encountered in optimizing neural networks for various deep learning tasks.	**K2**	**CO3**	12M
4		Unit-IV			
	a	Illustrate with examples of how Convolutional Networks are applied in various applications.	**K3**	**CO4**	12M
		OR			
	a	Discuss the neuroscientific basis underlying Convolutional Neural Networks (CNNs) and their inspiration from biological visual processing systems	**K2**	**CO4**	12M
5		Unit-V			
	a	i) Discuss the advantages and limitations of Bidirectional RNNs compared to traditional RNNs.	**K2**	**CO5**	6M
		ii)Explain recursive neural networks with an example	**K2**	**CO5**	6M
		OR			
	a	Explain the importance of capturing long-term dependencies in sequential data	**K2**	**CO5**	12M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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NAKASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Supple. Examinations, March-2024

Sub Code: 19BIT8PE05 MOBILE ADHOC AND SENSOR NETWORKS

Time: 3 hours (IT) Max. Marks: 60

Note: Answer All **FIVE** Questions.

All Questions Carry Equal Marks (5 X 12 = 60M)

Q.No		Questions	KL	CO	M
1		Unit-I			
	a	i) Explain about MANETS and it's challenges.	2	1	6M
		ii) Explain about greedy routing approach	2	1	6M
		OR			
	b	i)Explain about DSR protocol	2	1	6M
		ii) Analyze the AODV protocol	4	1	6M
2		Unit-II			
	a	i)Explain the TCP header with neat sketch	2	2	6M
		ii)Explain the challenges of TCP over Adhoc	2	2	6M
		OR			
	b	i)Explain the DSR and TORA impact on TCP	2	2	6M
		ii) Explain the fairness related solutions of TCP	2	2	6M
3		Unit-III			
	a	i) Explain any two WSN Applications	2	3	6M
		ii)Discuss about sensing and Communication range	2	3	6M
		OR			
	b	i) Analyze the design issues of WSN	4	3	12M
4		Unit-IV			
	a	i) Explain the Sensor MAC with neat sketch	2	3	6M
		ii) Discuss about STEM protocol	2	3	6M
		OR			
	b	i) Discuss APTEEN protocol with neat sketch	2	3	6M
		ii) Explain the routing in fixed size clusters	2	3	6M
5		Unit-V			
	a	i) Explain the design factors of integrated network	2	4	6M
		ii) Explain the data link layer and network layer in protocol stack	2	4	6M
		OR			
	b	i) Compare and Contrast the integrated architectures	3	4	12M

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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