NAKASAKAUPETA
NEC ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular Examinations, April-2023

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)

).No		Questions	KL	CO	M
1		Unit-I			
	a	i) Explain the difference between PERT and CPM?	2	1	6M
		ii) What is a milestone chart? How can a mile stone chart be developed into a network?	2	1	6M
		OR			
	b	i) What are the different types of floats involved in CPM	2	1	6M
		ii) What is a Gantt bar chart? Explain with the help of a suitable example, the method of preparing a bar chart	2	1	6M
2		Unit-II			
	a	i) What do you understand by 'earliest start time' and 'latest start time of an activity'? How are these determined?	2	2	6M
		ii) Explain the method of time –cost optimization of project network	2	2	6M
		OR			
	b	i) Explain about Project evaluation and review technique with one example?	2	2	6M
		ii) Draw a typical cost – duration curve and show on the optimum duration and minimum project Cost.	2	2	6M
3		Unit-III			
	a	i) Discuss about monitoring and controlling in project planning	2	3	6M
		ii) Explain about Contract document	2	3	6M
		OR			
	b	i) What is contract? Write the conditions of contracts?	2	3	6M
		ii) What is Tender? Discuss about tender document?	2	3	6M
4		Unit-IV			
	a	i) Explain in detail Resources Smoothing method of Resources allocation problems	2	4	12M
		OR			
	b	i) Explain in detail about the allocation of resources	2	4	6M
		ii) Write about the Functions of material management department	2	4	6M
5		Unit-V			
	a	i) Write on the safety precautions to be followed at construction sites	2	5	6M
		ii) Describe the quality control and safety engineering in construction.	2	5	6M
		OR			
	b	i) State and describe various causes of accidents at the construction site	2	5	6M
		ii) What do you understand by Quality Control in Construction industry? How it helps in good quality of workmanship	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 Regular Examinations, April-2023

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
		Unit-I			
1	a	i) What is Environmental Impact Assessment (EIA)? How it can be useful as a planning tool for Environmental Protection in various developmental projects?	1,2	1	6M
		ii) Explain the criteria for formalizing various alternatives for any project. How do you make a comparative evolution of different alternatives? Explain trade off analysis?	K2	1	6M
		OR			
	b	i) Explain various steps involved in adopting EIA as a planning tool for any major project activity.	K1	1	6M
		ii) What are the critical assessment criteria in any EIA methodology?	K1	1	6M
2		**Unit-II**			
	a	i) What are adhoc methods? Where they are useful? What are its draw backs?	K1	2	6M
		ii) What are overlay methods? How GIS is useful as advanced tool in overlay methods?	1,2	2	6M
		OR			
	b	i) Explain are different types of scales used in scaling check list methods	K1	2	6M
		ii) Discuss the salient features of Rapid assessment methods. What are various pollution load factors.	K2	2	6M
3		**Unit-III**			
	a	i) What are the important features of land, which have to be taken into consideration for assessing the impacts of different land uses in developmental projects?	K2	3	6M
		ii) What is water balance method for calculating leachate flow through a site? What is Darcy's law for describing ground water flow through a saturated porous medium?	K1	3	6M
		OR			
	b	i) Discuss the qualitative, simple quantitative and specific quantitative methods for impact prediction on soil and ground water environment?	K2	3	6M
		ii) Discuss various general guidelines for implementation of mitigation measures necessary to prevent soil erosion & compaction and ground water pollution.	K2	3	6M
4		**Unit-IV**			
	a	i) Discuss typical mitigation measures that should be adopted to various water related issues.	K2	4	6M
		ii) Discuss various phases involved using six step conceptual model for the study of biological impacts of any developmental activity.	K1	4	6M
		OR			
	b	i) What is meant by impact significance? How do you assess it with reference to biological and ecological effects?	K2	4	6M
		ii) List the steps that are to be followed when conducting an EIA for air environment.	K1	4	6M
5		**Unit-V**			
	a	i) What is meant by Environmental Risk Assessment? How it is different from EIA?	K1	5	6M
		ii) Enumerate the environmental Impact of developmental activities on deforestation.	K2	5	6M
		OR			
	b	i) Explain various key steps in performing an Environmental Risk Assessment	K1	5	6M
		ii) Enumerate the environmental Impact of developmental activities on wildlife.	K2	5	6M

NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular Examinations, April-2023

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) Explain the Principle of Resistance heating	Rem	1	6M
		ii) Compare Direct and Indirect resistance heating Methods	Und	1	6M
		OR			
	b	i) Summarize the requirements of good heating material	Und	1	6M
		ii) Explain Induction heating and give its types	Rem	1	6M
2		Unit-II			
	a	i) State the advantages electrical welding	Rem	2	6M
		ii) What is Resistance welding and identify its types	Rem	2	6M
		OR			
	b	i) Briefly explain the types of electrodes	Und	2	6M
		ii) Compare and contrast between Resistance and Arc Welding	Und	2	6M
3		Unit-III			
	a	i)Explain the Laws of illumination	Rem	3	6M
		ii) What do you mean by discharge lamp? Explain Rousseau's construction for calculating MSCP of a lamp.	Rem	3	6M
		OR			
	b	i) Compare fluorescent and filament lamps on basis of equality of light, capital and running cost?	Und	3	6M
		ii) Identify sources of light	App	3	6M
4		Unit-IV			
	a	i) Describe the Systems of electric traction	Und	4	6M
		ii) identify the Special features of traction motor	App	4	6M
		OR			
	b	i) sketch the typical speed- time curves for(a)main line service and explain	app	4	6M
		ii) Explain the Mechanics of train movement	Und	4	6M
5		Unit-V			
	a	i) Derive the expression for the tractive effort for propulsion of a train on level track	App	5	6M
		ii) Define specific energy consumption and discuss the factors which affect the specific energy consumptions of trains operating at a given scheduled speed	Und	5	6M
		OR			
	b	i) Explain the Effect of varying acceleration and braking retardation	Und	5	6M
		ii) Write note on Adhesive weight and braking retardation	Und	5	6M

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

NEC NAKASAKAUPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular Examinations, April-2023

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) Classify I/O modules and explain interfacing	Und	1	6M
		ii) Identify input instructions	Und	1	6M
		OR			
	b	i) Describe about Programming formats in detail	Rem	1	6M
		ii) Construct a ladder diagram and explain with a flow chart for spray process system.	Und	1	6M
2		Unit-II			
	a	i) Identify the Characteristics of Registers	Rem	2	6M
		ii) Write about Holding registers	Und	2	6M
		OR			
	b	i) Explain the concept of module addressing	Und	2	6M
		ii) Compare Input registers and Output registers.	Und	2	6M
3		Unit-III			
	a	i) Outline the Timer functions with example	Rem	3	6M
		ii) Identify the industrial applications using Counter function	Und	3	6M
		OR			
	b	i) Summarize the Arithmetic functions	Rem	3	6M
		ii) Differentiate Number comparison functions and Number conversion functions.	Und	3	6M
4		Unit-IV			
	a	i)Why Master control Relay is used and explain	Und	4	6M
		ii) Explain Sweep functions and their applications with example	Und	4	6M
		OR			
	b	i) Write a program to control of two axes Robot	Und	4	12M
5		Unit-V			
	a	i)Explain multi bit data processing	Und	5	6M
		ii) Write about PID tuning	Und	5	6M
		OR			
	b	i) What is the principle PID and explain	Und	5	6M
		ii) explain the principle of Position indicator with PID control	Und	5	6M

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

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NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

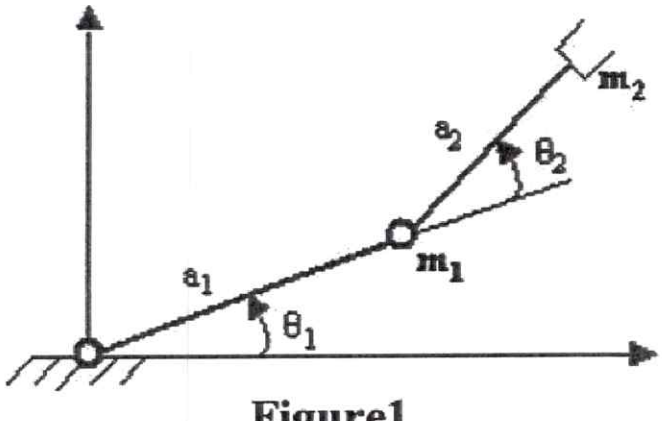
IV B.Tech II Semester Regular Examinations, April-2023

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.	K2	CO1	12M
		OR			
	b	Determine the transformation matrix T that represents a translation of 'a' units along x-axis, followed by a rotation of β about x-axis and followed by a rotation of Θ about z-axis.	K3	CO1	12M
2		Unit-II			
	a	i) What are the uses of sensor in robotics? Explain the types of sensors used in robotics?	K4	CO2	6M
		ii) Distinguish between External and internal sensors with applications	K4	CO2	6M
		OR			
	b	Discuss the performance characteristics of actuators. Compare electrical, pneumatic & hydraulic actuators for their characteristics	K3	CO2	12M
3		Unit-III			
	a	Determine the manipulator jacobian matrix and singularities for the 3-DOF articulated arm.	K4	CO3	12M
		OR			
	b	Derive the Inverse kinematics of the 3-DOF manipulator by considering an example	K4	CO3	12M
4		Unit-IV			
	a	Determine the dynamic equations for the two-link manipulator shown in Figure 1, using Lagrange-Euler formulation. Assume that the whole mass of the link can be considered as a point mass located at the outermost end of each link. The masses are m1 and m2 and the link lengths are a_1 and a_2.  **Figure1**	K4	CO4	12M
		OR			
	b	Explain about Newton – Euler formulations by considering an example	K4	CO4	12M

5		Unit-V			
	a	i) Explain the applications of Robot in spot and continuous arc welding	K4	CO5	6M
		ii) What are general considerations in Robot material handling?	K4	CO5	6M
		OR			
	b	i) In which type of production, robots are preferred for loading and unloading function? Explain.	K4	CO5	6M
		ii) Explain use of robot in assembly operation	K4	CO5	6M

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

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NAKASARAOPETA ENGINEERING COLLEGE
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IV B.Tech II Semester Regular Examinations, April-2023

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	Define Production Planning and Control. Also explain its functions.	K2	CO1	12M
		OR			
	b	Explain the types of production systems with the help of examples. Also discuss the suitable layouts.	K4	CO1	12M
2		Unit-II			
	a	i)Define Forecasting and discuss its significance.	K1	CO2	6M
		ii) Distinguish between qualitative and quantitative forecasting methods.	K2	CO2	6M
		OR			
	b	i)list out the general principles of forecasting.	K1	CO2	6M
		ii) Explain any two methods for forecasting demand for new products.	K4	CO2	6M
3		Unit-III			
	a	i)Define Inventory. Also discuss the functions of Inventory.	K1	CO3	6M
		ii)List out the various Inventory cost. Also explain how they vary with respect to ordering quantity.	K4	CO3	6M
		OR			
	b	i) Elaborate the basic principle in ABC analysis with the help of an example.	K2	CO3	6M
		ii)Derive the expression for Economic ordering quantity.	K3	CO3	6M
4		Unit-IV			
	a	i) Define Routing. Explain the factors affecting routing procedure.	K2	CO4	6M
		ii) Mention the factors affecting routing procedure.	K1	CO4	6M
		OR			
	b	Explain in detail about the bill of material (BOM) in MRP	K2	CO4	12M
5		Unit-V			
	a	i)Differentiate between loading and scheduling.	K2	CO5	6M
		ii)State any three scheduling rules.	K1	CO5	6M
		OR			
	b	i)Outline the Dispatching procedure.	K1	CO5	6M
		ii) Discuss applications of computer in production planning and control.	K4	CO5	6M

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

NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular Examinations, April-2023

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) Describe the digital cellular land mobile systems and the limitations of AMPS standard	3	1	6M
		ii) Explain how co-channel interference is measured in real time mobile radio transceivers	3	1	6M
		OR			
	b	i) Explain the significance of following cellular concepts in detail i) Interference ii) System Capacity	2	1	6M
		ii) Differentiate the analog & digital cellular systems with their operating capacities	2	1	6M
2		Unit-II			
	a	i)Explain the following terms in detail (i) Polarization Diversity (ii) Time Diversity.	2	2	6M
		ii)write short notes on Adjacent Channel Interference	2	2	6M
		OR			
	b	i)Explain the concept of Antenna Parameters and Their Effects	3	2	6M
		ii) What is Near End Far End Interference and Explain?	3	2	6M
3		Unit-III			
	a	i) Discuss about the minimum separation of cell site antennas?	4	3	6M
		ii) Explain space diversity antennas	4	3	6M
		OR			
	b	i) Draw the symmetrical difference pattern and compare it with symmetrical sum pattern	5	3	6M
		ii) Explain about Umbrella pattern antennas	5	3	6M
4		Unit-IV			
	a	i) Explain how the handoffs implemented based on signal strength?	1	4	6M
		ii) How the dropped call rate is related to the capacity and voice quality	1	4	6M
		OR			
	b	i) What are the different types of handoffs? Explain how to implement them?	2	4	6M
		ii) What are the different factors that limit the size of splitting cells?	2	4	6M
5		Unit-V			
	a	i) Discuss the salient features of FDMA and TDMA techniques.	3	5	6M
		ii) With suitable block diagram explain the GSM architecture	3	5	6M
		OR			
	b	i) Why CDMA is needed and explain it with an example?	4	5	6M
		ii) Discuss about GSM channels	4	5	6M

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

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NARASARAOPETA ENGINEERING COLLEGE
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IV B.Tech II Semester Regular Examinations, April-2023

Sub Code: 19BEC8PE06 **RADAR SYSTEMS**

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
		Unit-I			
1	a	i) With the help of a neat block diagram, explain the principle of operation of Radar	2	1	6M
		ii) What are the various Radar system losses? Explain in detail	2	1	6M
		OR			
	b	i) Derive the expression for Radar range equation in terms of Signal-to-noise ratio.	3	1	6M
		ii) Write the applications of Radar	3	1	6M
		Unit-II			
2	a	i) Explain the principle of operation of Continuous Wave Radar with non-zero IF receiver	4	2	6M
		ii) Explain the principle of operation of FM-CW altimeter with a near diagram	4	2	6M
		OR			
	b	i) What are the factors that limit the amount of isolation between Transmitter and Receiver of CW Radar? Explain	2	2	6M
		ii) Calculate the Doppler frequency seen by a Stationary Continuous Wave Radar with a transmit frequency of 5 GHz when the target radial velocity is 100 km/h	2	2	6M
		Unit-III			
3	a	i) What is the importance of staggered pulse repetition frequencies in the design of an MTI Radar? Explain	1	3	6M
		ii) Explain the function of a single delay line canceller and derive an expression for the frequency response function.	1	3	6M
		OR			
	b	i) Explain the operation of an MTI Radar with power amplifier transmitter	2	3	6M
		ii) MTI radar is operating at a frequency of 9 GHz with a PRF of 3000 Hz. Calculate the first two lowest blind speeds for this radar. Derive the formula used.	2	3	6M
		Unit-IV			
4	a	i) Explain the Monopulse tracking in two angel coordinates	4	4	6M
		ii) Compare the various tracking techniques.	4	4	6M
		OR			
	b	i) Explain the basic principle of a sequential lobing tracking Radar with neat diagrams.	3	4	6M
		ii) What are the factors need to be considered for optimum squint angle? Explain	3	4	6M
		Unit-V			
5	a	i) What is a Duplexer and explain the principle of operation of typical Duplexer with a schematic diagram.	5	5	6M
		ii) How the beam width of a Phased array antenna varies with the steering angle? Explain	5	5	6M
		OR			
	b	i) Derive the expression for the frequency response of a Matched filter receiver with non white noise input.	4	5	6M
		ii) Draw and explain the structures of balanced duplexer during transmission and reception modes.	4	5	6M

NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular Examinations, April-2023

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 Stochastic Gradient Descent algorithm with an example.	2	1	6M
		ii) Distinguish between Supervised and Unsupervised learning Algorithms.	2	1	6M
		OR			
	b	i) Discuss how hyper parameter tuning can be done.	2	1	6M
		ii) Discuss how hyper parameter tuning can be done.	2	1	6M
2		Unit-II			
	a	i) Explain about Gradient-Based Learning.	2	2	6M
		ii) What is regularization? How is it applied in deep learning?	2	2	6M
		OR			
	b	Discuss about back-propagation. Explain in detail how it can be applied with an example.	2	2	12M
3		Unit-III			
	a	i) Discuss how learning algorithms differ from pure optimization.	2	3	6M
		ii) What are Parameter Initialization Strategies? Explain any one strategy in detail.	2	3	6M
		OR			
	b	i) Discuss various challenges in Neural Network optimization.	2	3	6M
		ii) Distinguish between optimization strategies and Meta-algorithms.	2	3	6M
4		Unit-IV			
	a	i) Explain the working of convolutional neural networks in detail.	2	4	12M
		OR			
	b	i)|What are unsupervised features? Give example.	2	4	6M
		ii) Define pooling. How is it useful?	2	4	6M
5		Unit-V			
	a	i) What is a Bidirectional RNN? How is it different from RNN?	2	5	6M
		ii)Discuss the challenges of Long-Term Dependencies.	2	5	6M
		OR			
	b	Explain the working of recurrent neural networks in detail.	2	5	12M

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

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NARASARAOPETA ENGINEERING COLLEGE
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IV B.Tech II Semester Regular Examinations, April-2023

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 about anatomy of E-Commerce applications.	K2	1	12M
		OR			
	b	Discuss about " Quick Response Chain" with neat sketch	K2	1	12M
2		Unit-II			
	a	i) Explain consumer – oriental applications.	K2	2	6M
		ii) Explain mercantile models from the merchant's perspective.	K2	2	6M
		OR			
	b	i) Explain E-cash & E-cheques.	K3	2	6M
		ii) Explain risks in electronic payment systems.	K3	2	6M
3		Unit-III			
	a	i) Explain the role of E-Commerce in Retailing	K2	3	6M
		ii) Illustrate product or service customization in Intra organizational E-Commerce	K2	3	6M
		OR			
	b	i) Identify how work flow automation and coordination helps in Intra organizational E-Commerce.	K2	3	6M
		ii) Explain the role of E-Commerce in Supply chain management.	K2	3	6M
4		Unit-IV			
	a	i)Write the functions performed by Data Ware house	K2	4	6M
		ii)Explain about Digital Document Management Issues and Concerns	K2	4	6M
		OR			
	b	i) Discuss about Corporate Data Warehouse	K2	4	6M
		ii)Explain the key components of online advertising.	K2	4	6M
5		Unit-V			
	a	i)What is information filtering? Discuss about different information filters.	K4	5	6M
		ii) Write a short note on Market Research.	K4	5	6M
		OR			
	b	What is indexing? How indexing had its impact on data searching? Justify.	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 Regular Examinations, April-2023

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)Explain IOT Levels and Deployment Templates?	2	1	6M
		ii)Explain Logical Design and Characteristics of IOT?	2	1	6M
		OR			
	b	i)What are different IOT Protocols? Explain Briefly?	2	1	6M
		ii)Explain Physical Design of IOT?	2	1	6M
2		Unit-II			
	a	i)Analyze Domain model Specification of IOT?	4	2	6M
		ii) Explain Device and Component integration of IOT?	2	2	6M
		OR			
	b	i)Analyze IOT Level Specification?	4	2	6M
		ii)Compare functional and operational Views of IOT?	4	2	6M
3		Unit-III			
	a	i)How you prototype embedded device using ARDUINO? Explain?	2	3	6M
		ii) Explain the necessity of sensors and micro controllers in IOT device design?	2	3	6M
		OR			
	b	i) Develop the prototype of Embedded device using Raspberry pi, Explain in brief?	3	3	6M
		ii)What are extension boards? Explain their usage in Prototype development?	2	3	6M
4		Unit-IV			
	a	i)Explain different IOT Cloud storage models?	2	4	6M
		ii)Analyze how WAMP is useful for IOT Developments?	4	4	6M
		OR			
	b	i)Explain IOT Physical servers?	2	4	6M
		ii)Explain Xively cloud for IOT	2	4	6M
5		Unit-V			
	a	i)Analyze IOT Design for Home applications?	4	5	6M
		ii)Justify is IOT suitable to develop smart cities?	2	5	6M
		OR			
	b	i)Explain the smart agriculture with an application?	2	5	6M
		ii)Explain smart home automation process sing IOT?	2	5	6M

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

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NEC NAKASAKAUPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IV B.Tech II Semester Regular Examinations, April-2023

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) Compare and Contrast proactive reactive and hybrid routing protocols	3	1	6M
		ii) Explain about WRP protocol	2	1	6M
		OR			
	b	i) Explain about LANMAR routing	2	1	6M
		ii) Discuss about Cluster Based Routing Protocol	2	1	6M
2		Unit-II			
	a	i) Explain the mobility related solutions of TCP	2	2	6M
		ii) Explain the path asymmetry impact on TCP	2	2	6M
		OR			
	b	i) Explain the MAC layer impact on TCP over adhoc	2	2	12M
3		Unit-III			
	a	i) Explain the Energy Conservation in WSN	2	3	6M
		ii) Explain any three WSN Applications	2	3	6M
		OR			
	b	i) Compare and contrast the regularly placed sensors and randomly distributed sensors	3	3	6M
		ii) Explain about Heterogeneous and Mobile Sensors	2	3	6M
4		Unit-IV			
	a	i) Explain the SMAC protocol	2	3	6M
		ii)Discuss about EAR protocol	2	3	6M
		OR			
	b	i) Discuss Directed Diffusion with neat sketch	2	3	6M
		ii)Explain about Energy aware routing protocol	2	3	6M
5		Unit-V			
	a	i) Explain the ingredients of heterogeneous architecture	2	4	12M
		OR			
	b	i) Explain the comparison of integrated architectures	2	4	12M

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

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