Code : 13CE4201

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech II Semester

DESIGN AND DRAWING OF IRRIGATION STRUCTURES

(Civil Engineering)

Time : 3 hours Max Marks: 60

Answer any ONE question

All questions carry equal marks

* * *

1.

It is intended to construct a canal regulator at a site for the following hydraulic particulars:

Hydraulic Particulars of Canal Upstream

Full supply discharge : 20 cumecs
Bed width : 15 m
Bed level +20.00 m
Full Supply Depth (FSD) : 2.00 m
Tope Level of Bank : +23.00 m
The top width of right bank is 5 m wide and the top width of left bank is 2 m wide.

Hydraulic Particulars of Canal Upstream

Full supply discharge : 16 cumecs
Bed width : 15 m
Bed level +20.00 m
Full Supply Depth (FSD) : 1.75 m
Tope Level of Bank : +22.75 m
The top widths of the banks are same as those on the upstream side.

Good foundation soil is available at +19.00 m, Assume the ground level at the site as +22.00 m.

Determine i) Dimensions of the ventway ii) Shutter dimensions iii) dimensions of Abutments iv) dimensions of wing walls and return walls v) length of solid aprons on u/s and d/s of regulator. [30M]

Also show the above mentioned components in the drawing in whichever view they are visible. [30M]

(OR)

2. A surplus weir is proposed to construct for an irrigation tank forming a part of a chain of tanks with the following particulars.

Particulars:

The combined catchment area of the group of tanks is 25.89 km^2 and
The area of the catchment intercepted by the upper tanks is 20.71 km^2

Full water level in the tank : +12.00 m
Maximum water level in the tank : +12.75 m
The general ground level : +11.00 m
Ground level below the proposed surplus slopes off till it reaches +10.00 m in about 6 m distance.

Top width of the tank bund : 2 m
Top level of the tank bund : + 14.50
Slopes of the bund on either sides : 2:1
The foundations are of hard gravel at a level of +9.50 m near the site of the work.
The tank bunds are to be designed for a saturation gradient of
4:1 with 1 m clear cover.
Provisions are to be made to store water M.W.L in times of necessity.

Assume i) Ryve's coefficient (C) as 9 and modified Ryve's coefficient (c) as 1.5. ii) broad crested weir with coefficient of discharge as 0.562 iii) any additional data if required, suitably.

Determine i) Flood Discharge entering the tank ii) Length of Surplus weir iii) Weir dimensions iv) dimensions of Abutments, wings and returns iv) upstream and downstream apron lengths and their thicknesses [30M]

Also show the weir, Abutments, wings and returns and upstream and downstream apron in the drawing in whichever view they are visible. [30M]

Code :13EE4217

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

HIGH VOLTAGE ENGINEERING
(Electrical & Electronics Engineering)

Time : 3 hours | Max. Marks :60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*
All Questions carry equal marks
* * *

SECTION - I

1 (a) Draw and explain the multistage impulse generator.

(b) Why is a cockroft - walton circuit preferred for voltage multiplier circuits?

2 (a) Discuss elaborately the principle and operation of Cascaded transformers for generating high AC voltages.

(b) Discuss elaborately the principle and operation of impulse current generator.

SECTION - II

3 (a) Explain Chubb-Fortescue method in measuring peak voltages.

(b) Describe the method of generation of impulse currents. Derive the related mathematical formulae.

4 (a) Describe with a neat sketch the working of a generating voltmeter used to measure high DC voltages.

(b) Briefly explain the factors affecting measurement of voltages using sphere gap.

SECTION - III

5 (a) Explain various tests conducted on circuit breakers.

(b) Discuss the different high voltage tests conducted on bushings.

6 (a) What are the different tests performed on the insulators?

(b) Explain the tests on transformers?

SECTION - IV

7 (a) Explain the measurement of partial discharges using balanced detection method.

(b) Discuss elaborately about Insulation coordination.

8 (a) Explain the operation of high voltage Schering bridge when the test specimen,
(i) is grounded
(ii) has high loss factor

(b) Write short note on the measuring impedance circuit for the estimation of partial discharges.

SECTION - V

9 (a) State and explain the Paschen's Law.

(b) Explain briefly various theories of breakdown in solid dielectrics.

10 (a) Define Townsend's first and second ionization coefficients. Derive the condition for breakdown obtained in a Townsend discharge.

(b) Explain the breakdown in solid insulating materials?

Code : 13EC4201

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

DIGITAL IMAGE PROCESSING

(ELECTRONICS AND COMMUNICATION ENGINEERING)

Time : 3 hours Max. Marks :60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*

All Questions carry equal marks

* * *

SECTION - I

1 a) Define the terms : sampling and quantization. What is their roles in image quality and size.

b) Explain the process of Image Acquisition using linear and Array sensors.

2 a) Explain various basic pixel relationships with suitable examples.

b) Determine the pixel adjacencies of the image

0	1	1
0	2	0
0	0	1

For v= {1,2}

SECTION - II

3 a) Explain the following properties of 2D DFT : i)Convolution ii) Correlation and Mention their physical significance in image processing

b) What is the importance of DCT? How is DCT useful in image processing.

4 a) Discuss the properties of Hadamard Transform.

b) Compute Haar Transform of the following 2x2 image

$$F(x,y) = \begin{vmatrix} 3 & -1 \\ 6 & 2 \end{vmatrix}$$

SECTION - III

5 a) Explain image sharpening using butterworth High pass filter and Gaussian High pass filter.

b) How is Histogram statistics used for image enhancement.

6 a) With necessary equations, explain about Homomorphic filtering.

b) What s the purpose of color models. Explain the procedure to convert colors from RGB to HIS.

SECTION – IV

7 a) What are the two approaches for blind image restoration. Explain in detail..

b) Elaborate the process of dam construction along with water shed Image segmentation algorithm.

8 a) Explain various methods of detection of discontinuities in an image.

b) Explain image restoration using inverse filtering . What is the drawback of this method.

SECTION – V

9 a) Mention various types of redundancies present in the image. How are they minimized to achieve better coding efficiency.

b) Explain lossless predictive coding with necessary block diagram.

10 a) With an example explain run length coding and decoding process with a suitable example.

b) Explain various types of image file formats used for storing digitized images. Mention their features.

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Code: 13ME4201

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech II Semester

AUTOMOBILE ENGINEERING

(Mechanical Engineering)

Time: 3 hours Max Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section

All questions carry equal marks

* * *

SECTION – I

1. a) Explain the functions of transmission system in automobiles
   b) Explain the terms turbo charging and super charging in brief.

2. a) Explain the classification of I C Engines.
   b) Explain the construction details of a piston.

SECTION-II

3. a) Explain the functions of air cleaners.
   b) Explain the working of AC mechanical fuel pump with help of neat diagram.

4. a) Explain the functions of a carburetor.
   b) Explain the working of SU carburetor with a simplified diagram.

SECTION-III

5. a) Explain the air cooling system and list the advantages and disadvantages.
   b) Explain the working of bellows and wax type thermostat in brief with diagrams.

6. a) With the help of a neat sketch, explain the full flow oil filtration system.
   b) Explain the battery ignition system for a 4-cylinder engine with a neat sketch.

SECTION-IV

7. a) Explain the working of multiple plate clutch with the help of a neat sketch.
   b) Write a note on Fluid coupling

8. a) With help of a neat sketch ,explain the construction & operation of a constant mesh gear box.
   b) Write a note on Hotch-Kiss drive.

SECTION-V

9. a) Explain the working of parallel link type independent suspension system.
   b) Write a note on power steering.

10. a) Explain the working of hydraulic brake system with neat sketch.
    b) Explain the principle of working of an antilock brake system.

Code: 13CS4201

N.B.K.R. INSTITUTE OF SCIENCE AND TECHNOLOGY

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

CLOUD COMPUTING

(Computer Science & Engineering)

Time: 3 Hours | Max. Marks: 60

Anwer **Five** Questions, Choosing **ONE** Question from each section

All Questions carry equal marks

* * *

SECTION - I

1 a. Give the Prons and Cons of Cloud Computing

b. Discuss in brief who should be using Cloud Computing and who shouldn't be using Cloud computing.

2 a. How does cloud architecture overcome the difficulties faced by traditional architecture?

b. Explain in brief how cloud computing matters.

SECTION - II

3 Give the various types of cloud service development

4 List the various Cloud services Development services and tools offered by Amazon, Google

SECTION - III

5 Explain how Cloud computing be used to collaborate school projects, Sharing family photos.

6 Discuss how cloud coputing is used for the Corporation.

SECTION - IV

7 Explain how do you store, share files and other online content.

8 Discuss how to collaborate word processing application.

SECTION - V

9 Discuss how to collaborate via social networks and groupware.

10 Evaluate the wiki for collaboration

L.B.

Code : 13CE4202

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech II Semester

ENVIRONMENTAL STUDIES
(Civil Engineering)

Time : 3 hours Max Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section
All questions carry equal marks

* * *

SECTION-I

1 (a) Write briefly about the different types of diversity in ecosystems.

(b) Distinguish between consumptive and productive use.

2. (a) Enumerate the different services that are contributed in various ways by biodiversity?

(b) What do you understand about conservation of bio diversity.

SECTION-II

3 (a) How exactly need the study of natural resources.

(b) What are the remedial measures taken as soon as shortage of food resources?

4 (a) Discover the over exploitation of forest and their effects tribal people.

(b) Interrelate between rain water harvesting and watershed management.

SECTION-III

5 (a) List out the effects of nuclear hazards in environment.

(b) Describe the nature of thermal pollution and their source.

6 (a) Explain the global warming prediction on environment.

(b) Discuss any one of composting method in detail.

SECTION-IV

7 (a) Explain the necessary steps taken to minimize the risk of flood hazards.

(b) Compile the economy and environment interaction.

8 (a) Interpret the effects of Industrialization on the quality of environment.

(b) What do you mean sustainability and how it relates to the environment.

SECTION-V

9 (a) Discuss the detailed document of Environmental protection Act.

(b) Construct an environmental case study about existing Taj Mahal monument.

10 (a) Discover how to solve the Fluorosis.

(b) Provide an assessment report and environmental assets of a local river.

Code: 13EE4218

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

POWER SYSTEM OPERATION & CONTROL
(Electrical & Electronics Engineering)

Time: 3 hours | Max. Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section
All Questions carry equal marks

* * *

SECTION – I

1 Explain the following terms with reference to power plants heat input – power output curve, heat rate input, incremental input, generation cost and production cost.

2 The cost curves of two generators may be approximated by second degree polynomials: $C_1=0.1P_1^2+20\ P_1+\alpha_1$; $C_2=0.1P_2^2+30P_2+\alpha_2$ where α_1 and α_2 are constants. If the total demand on the generators is 200 MW, find the optimum generator settings. How many rupees per hour would you lose if the generators were operated about 15% of the optimum settings?

SECTION – II

3 Explain about hydro – thermal co-ordination with necessary equations.

4 Explain the dynamic programming method in unit commitment with the help of flow chart.

SECTION – III

5 Discuss the static performance of AVR loop.

6 What is an infinite bus? Explain the analysis of single machine connected infinite bus.

SECTION – IV

7 How speed governor mechanism is modeled and Explain its operations with the speed load characteristics.

8 Draw the block diagram of uncontrolled two area load frequency control system and explain the salient features under static condition.

SECTION – V

9 Explain about the features of SCADA systems.

10 Discuss the system operating states.

Code: 13EE4218

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

POWER SYSTEM OPERATION & CONTROL
(Electrical & Electronics Engineering)

Time: 3 hours | Max. Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section
All Questions carry equal marks

* * *

SECTION – I

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SECTION – V

9 Explain about the features of SCADA systems.

10 Discuss the system operating states.

Code :13EC4202

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

SATELLITE COMMUNICATION
(Electronics & Communication Engineering)

Time : 3 hours Max. Marks :60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*
All Questions carry equal marks

* * *

SECTION - I

1 (a) List and explain the different orbital effects in satellite communication system performance
(b) A satellite is in an elliptical orbit with a perigee of 1000km and apogee 4000km. Find the period of the orbit and eccentricity of the orbit

2 Draw the block diagram for satellite communication system. Explain the function of each block.

SECTION - II

3 (a) Illustrate the block diagram of typical onboard control system for a spinner satellite and explain its operation.
(b) Write a short note on Telemetry and Tracking.

4 (a) What is Doppler Effect? Explain how it is useful for Tracking.
(b) Compile short notes on spacecraft sub-system.

SECTION - III

5 (a) Discuss about G/T ratio for the Earth station.
(b) Examine the design procedure of satellite communication link.

6 (a) Derive the equation for the power received by an earth station from a satellite transmitter.
(b) Discuss about the noise temperature.

SECTION - IV

7 (a) Explain the Time Division Multiple Access (TDMA) frame structure.
(b) Briefly explain the process of spread spectrum transmission and reception?

8 Describe the general features of an on –board signal processing transponder that would allow a network to operate with FDMA uplink and a TDMA downlink.

SECTION - V

9 (a) Draw and explain the simplified Earth station receiver.
(b) Explain the operation on deriving mechanism of antenna employed in the earth station.

10 (a) Outline different tracking techniques used in tracking satellite with a large antennae.
(b) Compile the design considerations of large antennae.

Code : 13ME4202

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech II Semester

FINITE ELEMENTS METHOD

(Mechanical Engineering)

Time : 3 hours Max Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section
All Questions carry equal marks

* * *

SECTION - I

1. (a) Tabulate the Comparison of Finite Element and Finite Difference Methods.
   (b) Enumerate General Procedure for Finite Element Analysis with simple examples
2. (a) Explain FEM formulation for two elements spring using potential energy principle.
   (b) List out the typical Applications of FEM.

SECTION - II

3. The functional form of a bar clamped at one end and left free at the other end and subjected to uniform axial load q is given by

$$I=\int_0^L\left[\frac{1}{2}AE\left(\frac{du}{dx}\right)^2-qu\right]dx$$

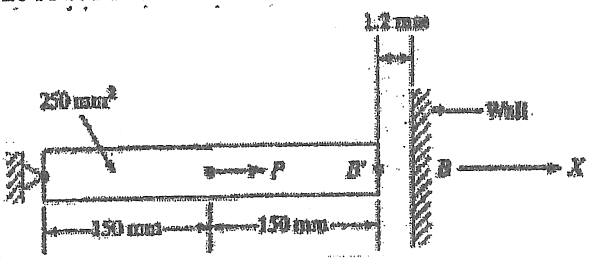
Obtain the approximate solution to the problem by using Rayleigh-Ritz method.

4. Find the approximate solution to the following boundary value problem by using Galerkin method. Compare the solution with the exact solution.

$$\frac{d^2u}{dx^2}=x \quad 0<x<1; \quad u(0)=0 \quad and \quad u(1)=0$$

SECTION - III

5 Determine the displacements stress and support reactions in the structure shown in the figure. Take P = 62 kN, E=20 X 103 N/mm^2.



6. Calculate the surface temperature in a circular solid cylinder of radius 25 mm with a volumetric heat generation of 50 MW/m3 . The external surface of the cylinder is exposed to a liquid at a temperature of 20^{0}c with a surface heat transfer coefficient of 4000 W/m^2 -oC. The thermal conductivity of the material is 20 W/m- 0C. Use three one dimensional elements to solve the problem.

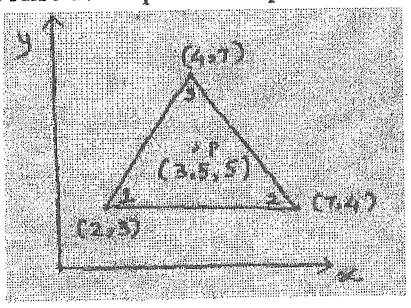
SECTION - IV

7. Derive shape functions and stiffness matrix for quadratic bar element . Let A:Area of cross section, E:Yongs modulus and L: Length.

8. A fixed beam of length 1m is loaded with uniformly distributed load of intensity 1kN/m. Assume EI is constant throughout. Analyze the beam by dividing it into two elements and find the following at mid span. (a) Deflection (b) Slope (c) Shear force (d) Bending moment. Take E=200GPa and $I=10^4 mm^4$.

SECTION - V

9 Determine the shape functions N1, N2 and N3 at the interior point P for the triangular element shown in the figure. Also develop Strain displacement Matrix [B].



10. $\int_{-1}^{+1} \frac{\cos x}{1-2x^2} dx$

Use Gaussian quadrature with two points to evaluate the integral
The gauss points are ± .0 5774and the weights at the two points are equal to unity. Compare the result with actual integral value.

Code: 13CS4202

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

STORAGE AREA NETWORKS
(Computer Science & Engineering)

Time : 3 hours | Max. Marks :60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*
All Questions carry equal marks
* * *

SECTION – I

1. Explain about SAN paradigm shift with neat sketch.
2. What are the ten ways the SAN paradigm shift changes information processing for better? Explain.

SECTION – II

3. Explain in detail about storage network technologies.
4. Define data replication. Explain different approaches to data replication

SECTION – III

5. Differentiate storage area network and network storage systems.
6. What are the challenges for network storage?

SECTION – IV

7. What are the software required for SAN? Explain.
8. Define data replication in storage network. Explain different types of data replication.

SECTION – V

9. What is the purpose of clustering? Explain different cluster data models.
10. Why should you protect the enterprise data? How it is protected? Explain.

L-B

Code : 13CE42E1

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech II Semester

REMOTE SENSING & GIS

(Civil Engineering)

Time : 3 hours Max Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section

All questions carry equal marks

* * *

SECTION-I

1 (a) Explain about energy interaction with the earth surface features.

(b) What are the advantages and disadvantages of using remotely sensed data.

2. (a) Briefly explain about the atmospheric effects on radiation.

(b) What are the ranges of wave length's in the different E.M.R. spectrum?

SECTION-II

3 (a) Explain about various types of platforms used in remote sensing.

(b) What are sensors? How the sensors are classified based on their functions?

4 (a) Define Satellite and explain any two remote sensing satellites with their resolution.

(b) Briefly explain : (i) Spatial Resolution
(ii) Radiometric Resolution

SECTION-III

5 (a) What is scattering? Explain about different types of scatterings.

(b) What are the different digital image data formats? Explain.

6 (a) Explain the various elements of image interpretation.

(b) Briefly explain about the various visual interpretation keys.

SECTION-IV

7 (a) Explain briefly: (i) Preprocessing (ii) Radiometric correction.

(b) Explain the supervised classification of an image.

8 Explain the various image enhancement techniques in detail.

SECTION-V

9 (a) Define GIS. Explain various components of GIS.

(b) Explain about various applications of GIS in civil engineering.

10 (a) Write short notes on:

(i) Geographical entities
(ii) Topology
(iii)GIS Architecture

(b) Explain about Raster GIS model and Vector GIS model.

Code : 13EE42E1

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

HVDC TRANSMISSION
(Electrical & Electronics Engineering)

Time : 3 hours Max. Marks :60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*
All Questions carry equal marks

* * *

SECTION - I

1 a. Explain the types of HVDC links and its purpose with neat diagrams.

b. Draw the typical layout of HVDC transmission system and explain each part.

2 a. What are the different applications of dc transmission system? Explain them in detail?

b. Explain the comparison of AC and DC transmission in detail.

SECTION - II

3 a. For a 3 phase 6 pulse gratez's circuit draw the timing diagram considering overlap angle is less than 60 degree and without overlap for the following
a)Voltage across load
b) Voltage across any two pair of conduction valves

b. Explain the analysis of 12 pulse converter with bridge rectifier

4 a. Explain the individual characteristics of a rectifier and an inverter with sketches

b. Explain the choice of converter configuration for any pulse number

SECTION - III

5 a. Explain in detail about equidistance firing angle scheme. Also list the draw backs of this scheme.

b. Enumerate the desired features of control for a HVDC converter station

6 a. Briefly explain the converter control characteristics

b. Mention the basic requirement of control philosophy adopted in HVDC system.

SECTION - IV

7 a. Briefly explain about the protection against over currents in a HVDC system.

b. Discuss the operation of surge arresters for overvoltage protection of HVDC Systems.

8 a. Explain in detail about the smoothing reactors.

b. Explain the nature of transient over voltages due to disturbances on DC side.

SECTION - V

9 a. What are the requirements of reactive power control in HVDC system

b. Explain in detailed about STATCOM enabled HVDC transmission system.

10 a. Explain AC and DC side harmonics in detail and discuss how to reduce the harmonics

b. Write short note on the various types of filters used in HVDC substation.

Code :13EC42E3

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech. II Semester

CELLULAR MOBILE COMMUNICATION

(Electronics & Communication Engineering)

Time : 3 hours Max. Marks :60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*
All Questions carry equal marks

* * *

SECTION - I

1 (a) Briefly describe about the Operation of Cellular Systems.
(b) Discuss about Uniqueness of Mobile Radio Environment.

2 (a) What is interference? Explain types of interference in detail.
(b) Briefly explain about cell cite antennas.

SECTION - II

3 (a) Obtain the mobile point to point Lee model with its characteristics.
(b) Write short notes on foliage loss.

4 (a) Discuss about propagation in near distance.
(b) Write short notes on mobile to mobile propagation?

SECTION - III

5 (a) What are the various methods of reducing co-channel interference/
(b) Explain about the co-channel interference reduction factor and derive the general formula for C/I.

6 (a) Briefly explain the design of a directional antenna system in co-channel interference reduction.
(b) Discuss the effects of reduced power, reduced antenna height and beam tilt on coverage area and interference.

SECTION - IV

7 (a) What are the different techniques to utilize the frequency spectrum, give a brief explanation?
(b) Distinguish clearly the channel assignment to cell sites and the mobile units?

8 (a) Explain about the dynamic channel assignment?
(b) Explain the hand off mechanism.

SECTION - V

9 (a) What are the advantages of digital cellular systems over analogue?
(b) What are the channel types of GSM system? Explain

10 Compare the spectrum efficiencies of CDMA and TDMA

Code :13ME42E1

B.TECH. DEGREE EXAMINATION, APRIL 2018

IV B.Tech II Semester

AUTOMATION & ROBOTICS
(Mechanical Engineering)

Time: 3 hours | Max. Marks: 60

*Answer **FIVE** Questions, Choosing **ONE** Question from each section*
All Questions carry equal marks

* * *

SECTION - I

1 Define Automation? Explain the Basic elements of automation with functional diagram?

2 Explain mechanical feeder, hopper and orienter as feeding devices in automation?

SECTION - II

3 Explain the analysis of two stage transfer lines with storage buffer and without buffer storages?

4 Briefly explain the assembly systems?

SECTION - III

5 Explain the laws of robots? With a neat sketch explain 3-degree of freedom robot?

6 What is end effector? Explain the types of end effectors.

SECTION - IV

7 List various types sensor used in Robots? With neat sketch explain tactile sensors and proximity sensors?

8 Explain about the homogenous transformation with pure translation and rotation?

SECTION - V

9 Explain the following Path Planning's: i) Skew Motion ii) Joint Integrated Motion. iii) Straight Line Motion.

10 Explain various Robot applications in Manufacturing Industries?

Code : 13CS42E1

B.TECH. DEGREE EXAMINATION, APRIL 2018

IVB.Tech. II Semester

ADVANCED DATABASE MANAGEMENT SYSTEMS
(Computer Science & Engineering)

Time : 3 hours | Max. Marks: 60

Answer FIVE Questions, Choosing ONE Question from each section
All Questions carry equal marks

* * *

SECTION – I

1 (a) Explain Client–Server system with neat diagram?
(b) What are Network Types? Explain.

2 (a) List out and Explain various Join Operations in Query Processing?
(b) Define Pipelining? Discuss the role of Pipelining in Evaluation of Expressions?

SECTION – II

3 (a) Discuss in detail about Intraoperation Parallelism?
(b) Explain about Handling of skew?

4 What is I/O Parallelism? Explain Partitioning techniques in I/O Parallelism?

SECTION – III

5 Explain in detail about approach techniques used in Distributed Data Storage?

6 (a) Differentiate Homogeneous and Heterogeneous Databases.
(b) Discuss about Distributed Transactions?

SECTION – IV

7 (a) Discuss Complex Data Types in Object Databases?
(b) Explain about Object identity and reference Types in SQL?

8 (a) Differentiate between the Object-Oriented and Object-Relational Data Bases
(b) Explain Table inheritance in Object Databases?

SECTION – V

9 Explain about Query Processing and Optimization in ORACLE?

10 Discuss in detail about Concurrency Control and recovery in ORACLE Data Bases?