R16

III B.TECH I SEM

SUPPLEMENTARY EXAMINATIONS

OCTOBER 2023

2020

MBA

II sem-R- Dec 202-R 19.

sup. II sem -R16-oct 2020

IV sem-R-R16-Sep 2020

MCA

IV sem-R16-NOV 202

M.Tech

II sem-R16-oct 2020

B.Tech

4-2- R-Sep 2020

3-1-S- oct, 2020

3-2-R&S -NOV, 2020

1-1-R16-sup-oct, 2020

Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16ME3102

III B.Tech I Semester Supple Examinations, October-2023

HEAT POWER ENGINEERING

(ME)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from **Part-B**

All questions carry equal marks of 12.

PART-A

1. (a) What is meant by reheating in Rankine cycle and what are its advantages?
   (b) Define boiler accessories and mention any four accessories.
   (c) Discuss the effect of friction in steam nozzles.
   (d) Explain the necessity of compounding of a steam turbine.
   (e) Discuss the effect of presence of air in the condenser.
   (f) Draw the T-s Diagram of a simple gas turbine cycle and mention the processes.

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Explain the different processes of a regenerative Rankine cycle and draw T-s diagram.
   (b) A simple Rankine cycle works between the pressure limits of 30 bar and 0.04 bar, the initial condition of steam is dry saturated. Determine, the i) pump work ii) turbine work and iii) the Rankine efficiency. **[4+8]**

3. (a) Give the classification of boilers
   (b) Explain the working of Cochran boiler with the help of a neat sketch. **[4+8]**

4. (a) Derive the expression for exit velocity of steam through a nozzle assuming the expansion as isentropic.
   (b) The steam enters a nozzle with an inlet pressure and temperature of 10 bar and 200^{0}C respectively. The throat diameter is 12 mm. If the exit pressure is 0.5 bar, calculate the mass flow rate of steam. **[4+8]**

5. (a) Distinguish between impulse and reaction steam turbines.
   (b) Discuss the various methods of compounding of steam turbines. **[4+8]**

6. (a) Define condenser efficiency and vacuum efficiency.
   (b) Explain with the help of neat sketches the working of counter flow jet condenser and ejector condenser. **[4+8]**

7. (a) Explain with a neat sketch the working of a rocket. **[4+8]**
   (b) A gas-turbine power plant operates on the simple Brayton cycle with a pressure ratio of 6. The maximum and minimum temperatures of the cycle are 1000 K and 288 K respectively. Assuming an ideal cycle, calculate the efficiency and specific work output of the plant.

Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16ME3104

III B.Tech I Semester Supple Examinations,October-2023

PRINCIPLES OF MACHINE DESIGN

(ME)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) What are fits and tolerances?
   (b) Differentiate between modulus of elasticity and modulus of rigidity.
   (c) Define the term `stress concentration'.
   (d) List the assumptions made in the design of welded joint.
   (e) What is a key ? State its function.
   (f) Write the function of a spring and its applications.

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2 (a) A bar 3 m long is made of two bars, one of copper having E=105 GN/m^2 and the other of steel having E = 210 GN/m^2. Each bar is 25 mm broad and 12.5 mm thick. This compound bar is stretched by a load of 50 kN. Find the increase in length of the compound bar and the stress produced in the steel and copper. The length of copper as well as of steel bar is 3 m each. **[8]**

(b) Differentiate between 'hole basis system' and 'shaft basis system'. Mention which one is preferred and why? **[4]**

3 (a) A bar of circular cross-section is subjected to alternating tensile forces varying from a minimum of 200 kN to a maximum of 500 kN. It is to be manufactured of a material with an ultimate tensile strength of 900 MPa and an endurance limit of 700 MPa. Determine the diameter of bar using safety factors of 3.5 related to ultimate tensile strength and 4 related to endurance limit and a stress concentration factor of 1.65 for fatigue load. Use Goodman straight line as basis for design. **[8]**

(b) Write Soderberg's equation and state its application to different type of loadings. **[4]**

4 (a) Find the diameter of a solid steel shaft to transmit 20 kW at 200 r.p.m. The ultimate shear stress for the steel may be taken as 360 MPa and a factor of safety as 8. If a hollow shaft is to be used in place of the solid shaft, find the inside and outside diameter when the ratio of inside to outside diameters is 0.5. **[8]**

(b) Distinguish between cotter joint and knuckle joint. **[4]**

5 (a) A plate 75 mm wide and 12.5 mm thick is joined with another plate by a single transverse weld and a double parallel fillet weld as shown in **Fig.1.** The maximum tensile and shear stresses are 70 MPa and 56 MPa respectively. Find the length of each parallel fillet weld, if the joint is subjected to both static and fatigue loading. Take stress concentration factor for transverse welds is 1.5 and for parallel fillet welds is 2.7 respectively. **[8]**

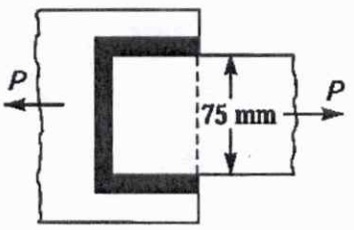

Fig.1.

(b) Distinguish between caulking and fullering. **[4]**

6 Design and draw a neat sketch of a muff coupling which is used to connect two steel shafts transmitting 40 kW at 350 r.p.m. The material for the shafts and key is plain carbon steel for which allowable shear and crushing stresses may be taken as 40 MPa and 80 MPa respectively. The material for the muff is cast iron for which the allowable shear stress may be assumed as 15 MPa. **[12]**

7 (a) A helical spring is made from a wire of 6 mm diameter and has outside diameter of 75 mm. If the permissible shear stress is 350 MPa and modulus of rigidity 84 kN/mm^2, find the axial load which the spring can carry and the deflection per active turn. **[8]**

(b) Explain about A.M. Wahl's factor and state its importance in the design of helical springs. **[4]**

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16ME3105

III B.Tech I Semester Supple Examinations, October-2023

OPERATIONS RESEARCH

(ME)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) Explain the different models used in OR.

   (b) What is degeneracy in transportation problem? Explain.

   (c) What are the types of job sequencing problem?

   (d) What are the assumptions of a single channel Queue?

   (e) Explain the terms (i) Saddle Point (ii) Value of the Game.

   (f) State applications of simulation. **[2+2+2+2+2+2]**

PART-B

4 X 12 = 48

2. Use Big-M method to solve the following LPP:

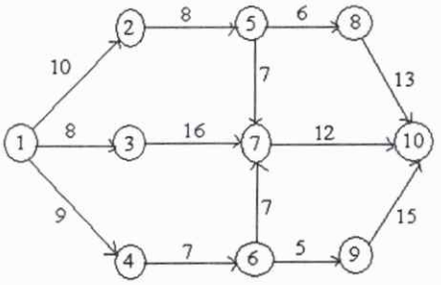
   Min $Z = x_1 + x_2 + 3x_3$; Subject to $3x_1 + 2x_2 + x_3 \leq 3$, $2x_1 + x_2 + 2x_3 \geq 3$

   and $x_1 \geq 0$, $x_2 \geq 0$, $x_3 \geq 0$.

3. Certain equipment needs 5 repair jobs which have to be assigned to 5 machines. The estimated time (in hours) that a mechanic requires to complete the repair job is given in the table. Assuming that each mechanic can be assigned only one job, determine the minimum time assignment.

	J1	J2	J3	J4	J5
M1	7	5	9	8	11
M2	9	12	7	11	10
M3	8	5	4	6	9
M4	7	3	6	9	5
M5	4	6	7	5	11

4. Determine the early start and latest completion in respect of all node points and identify critical path for the following network.



5. Patients arrive at a clinic in a poisson manner at an average rate of 6 per hour. The doctor on average can attend to 8 patients per hour. Assuming that the service time distribution is exponential, find
   (a) Average number of patients waiting in the queue.
   (b) Average time spent by a patient in the clinic.
6. Solve the following game whose payoff matrix is given below by graphical method.

	B1	B2
A1	1	2
A2	5	4
A3	-7	9
A4	-4	-3
A5	2	1

7. A firm is considering replacement of a machine, whose cost price is Rs 12,200 and the scrap value Rs 200. The running (maintenance and operating) cost in rupees are found from experience to be as follows

Year	1	2	3	4	5	6	7	8
Running cost of Rs	200	500	800	1,200	1,800	2,500	3,200	4,000

When should the machine be replaced?

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16EC3101

III B.Tech I Semester Supple Examinations, October-2023

LINEAR AND DIGITAL IC APPLICATIONS

(ECE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) Define Slew rate and CMRR? [2M]
   (b) Draw the pin diagram of IC 555 timer [2M]
   (c) Write applications of PLL [2M]
   (d) How to drive CMOS gate to TTL gate [2M]
   (e) Draw the pin diagram of IC 74x85 Comparator [2M]
   (f) Compare between ROM (vs) RAM [2M]

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Explain with the help of neat circuit diagram op-amp as Differential amplifier. Derive the equation for output voltage? [6M]
   (b) Design a Differentiator that will differentiate an input signal with f_{max} = 100Hz [6M]

3. (a) Explain the operation of Successive Approximation Register (SAR) ADC technique with the help of neat diagram [6M]
   (b) Draw and explain the operation of Monostable multivibrator by using IC 555 timer and write its applications [6M]

4. (a) Design First order HPF at a cutoff frequency of 200Hz with a pass band gain of 6 and Plot the frequency response curve for the designed filter [6M]
   (b) Draw the block schematic of IC 565 PLL and explain its operation. [6M]

5. (a) Design NAND gate using CMOS logic and explain its operation [6M]
   (b) What is the tri state gate logic? Explain TTL tristate gate logic with neat diagram [6M]

6. (a) Design 4x16 decoder using IC 74x138 [6M]
   (b) Explain the operation of IC 74x194 Universal Shift Register with neat diagram. [6M]

7. (a) Explain the write and read operation of 6T SRAM cell with neat circuit diagram and draw its timing waveform [6M]
   (b) Write a VHDL program to simulate the behaviour of a Positive edge triggered JK flipflop [6M]

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16EC3102

III B.Tech I Semester Supple Examinations, October-2023

DIGITAL COMMUNICATIONS

(ECE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) List the major functions of source encoder and channel encoder?
   (b) Draw PSK signal for the input data source [1 1 0 0 1 0 1]?
   (c) Write the probability of error expressions for PSK and FSK?
   (d) Find the entropy of a source having 4 symbols with probabilities {0.2, 0.4, 0.3, 0.1}?
   (e) The parity check matrix of a linear block code

$$H = \begin{bmatrix} 1 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 1 & 0 & 0 & 0 & 1 \end{bmatrix}.$$

   Determine the generator Matrix
   (f) Differentiate Convolution codes and Block codes?

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Describe and explain the advantages of digital communication system over analog communication system?
   (b) What is slope overload effect in DM system and derive the necessary condition to avoid it for a sinusoidal signal?

3. (a) Explain in detail about QPSK scheme and draw the constellation diagram of QPSK.
   (b) Draw and explain DPSK modulator & demodulator with and example?

4. (a) Derive the probability of error expression for coherent PSK scheme?
   (b) By comparing the probability of errors for ASK and PSK, show that PSK has a 3dB power advantage than ASK?

5. (a) A source emits an independent sequence of symbols from an alphabet consisting of five symbols A, B, C, D, E with symbols probabilities 1/4, 1/8, 3/16, 5/16, respectively. Find entropy of the source.
   (b) A source with 6 emitting messages A, B, C, D, E, F having probabilities P(A) = 1/3, P(B) =1/4, P(C) = P(D) = 1/8, P(E) = P(F) =1/12. Find coding efficiency using Huffman coding.

6. (a) Consider a (7,4) linear code whose generator matrix is

$$G = \begin{bmatrix} 1 & 0 & 0 & 0 & 1 & 0 & 1 \\ 0 & 1 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 1 & 0 & 1 & 1 \end{bmatrix}$$

(a) Find all the code vectors of this code.
(b) Find the parity check matrix for this code.
(c) Discuss about the error correcting capabilities of this code

7. A convolution encoder has 3 shift registers with two stages, two modulo-2 adders and an output multiplexer. The generator sequences of the encoder are as follows.

$$g^{(1)} = (1, 1, 1, 1) ; g^{(2)} = (1, 1, 0, 1).$$

Draw the block diagram of the encoder. Find the encoder output produced by the message sequence 1011101 using time domain approach and transform domain approach?

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16EC3103

III B.Tech I Semester Supple Examinations, October-2023

ANTENNA AND WAVE PROPAGATION

(ECE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) **Define** radiation intensity, directivity
   (b) **What** are short Antennas and list out various types?
   (c) **Explain** three different types of arrays with regard to beam pointing direction
   (d) **Define** axial ratio
   (e) **Draw** the structure of microstrip antenna and mention the field distribution
   (f) **Find** the electron density of the Layer? If the critical frequency of ionized layer is 2 MHz

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) **Explain** the current distribution on a thin-wire antenna **[6]**
   (b) **Define** Power Gain of an Antenna. Estimate power gain (Gp) if R_{loss}=10 ohms, R_{rad}= 0 ohms and D = 100. **[6]**
3. (a) **Derive** the radiation fields from small electric dipole at far field **[7]**
   (b) **Find** the radiation resistance of a loop antenna(i) single turn (ii) Number of turns =10 of diameter 0.5 m and operating at 1 MHz . **[5]**
4. (a) **Design** and explain the working principle of binomial array. List out the differences between binomial array and linear uniform Amplitude distributed antenna. **[6]**
   (b) **Find** the radiation pattern of 4 isotropic elements fed in phase, spaced $\lambda/2$ apart by using pattern multiplication. **[6]**
5. (a) **Explain** the working principle of a helical antenna in normal mode? **[6]**
   (b) **Explain** the operation of Yagi-Uda array with a neat sketch **[6]**
6. (a) **Explain** the gain measurement of an antenna by comparison method. **[6]**
   (b) Design a microstrip patch antenna at f=5 GHz and ε_r =2.2. **[6]**
7. (a) Derive the field strength equation in a space wave propagation? **[6]**
   (b) An HF radio communication is to be established between two points on the Earth's surface. The points are at a distance of 2600 km. The height of the ionospheric layer is 200 km and critical frequency is 4 MHz. Find MUF. **[6]**

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16EC3104

III B.Tech I Semester Supple Examinations, October-2023

COMPUTER ORGANIZATION AND MICROPROCESSORS

(ECE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) Define Computer Organization.
   (b) What are the advantages of RISC over CISC?
   (c) Define Microoperation.
   (d) What is a Signal Description of 8086
   (e) What is an assembler?
   (f) How does a Stepper Motor move?

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Draw and explain common Bus transfer. [6M]
   (b) Perform the arithmetic operations (+70) + (+80) and (-70)+(-80) with binary numbers in signed 2's complement representation. Use eight bits to accommodate each number together with its sign. Show that overflow occurs in both cases, that the last two carries are unequal and that there is a sign reversal. [6M]

3. (a) Explain the instruction cycle with help of a flow chart. [6M]
   (b) Explain in detail about pipeline hazards. [6M]

4. Explain about Direct Memory Access (DMA) with block diagram. [12M]

5. (a) Explain the addressing modes of 8086 microprocessor each with an example. [8M]
   (b) What are the different segment registers in 8086? Why need memory segmentation? [4M]

6. What is an Interrupt? Explain about interrupt cycle of 8086. [12M]

7. (a) What are the different modes of operations in 8255 [6M]
   (b) Explain about 8257 DMA controller with neat diagram. [6M]

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16CS3101

III B.Tech I Semester Supple Examinations, October-2023

DESIGN AND ANALYSIS OF ALGORITHMS

(CSE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) List the different characteristics of an algorithm.
   (b) Write Control Abstraction of Divide – and – Conquer.
   (c) Define Spanning tree.
   (d) State the principle of optimality.
   (e) What is Hamiltonian cycle?
   (f) Write any two applications of Branch and Bound method

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Explain the terms used to measure the performance of an Algorithm
   (b) Compare and contrast Big Oh, Omega, Theta and Little Oh notations
3. (a) Sort the records with the following index values in the ascending order using quick sort algorithm. 2, 3, 8, 5, 4, 7, 6, 9, 1
   (b) Derive time complexity of the Strassen's matrix multiplication.
4. State the Job – Sequencing with deadlines problem. Find an optimal sequence to the n = 5 Jobs where profits (P1, P2, P3, P4, P5) = (20,15, 10, 5, 1) and deadlines (d1, d2, d3, d4, d5) =(2, 2, 1, 3, 3)
5. (a) Describe the Dynamic 0/1 Knapsack Problem. Find an optimal solution for the dynamic programming 0/1 knapsack instance for n=3, m=6, profits are (p1, p2,p3) = (1,2,5), weights are (w1,w2,w3)=(2,3,4).
   (b) Consider A1=5X4, A2=4X6, A3=6X2, A4=2X7.P1=5, P2=4, P3=6,P4=2, P5=7 and Apply matrix chain multiplication to obtain optimal sequence.
6. (a) State the Sum of Subsets problem. Find all sum of subsets for n=4, (w1, w2, w3, w4) = (11, 13, 24, 7) and M=31.Draw the portion of the state space tree using Backtracking approach
   (b) Explain 4-queen problem and apply back tracking to solve this problem
7. Solve TSP using LCBB procedure and draw the portion of the state space tree

∞	11	10	9	6
8	∞	7	3	4
8	4	∞	4	8
11	10	5	∞	5
6	9	5	5	∞

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District

Subject Code: R16CS3103

III B.Tech I Semester Supple Examinations, October-2023

COMPILER DESIGN

(CSE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) What is a compiler? List different types of Compiler
   (b) Define the left recursion elimination
   (c) List down the conflicts during shift-reduce parsing.
   (d) What is semantic rule? How to evaluate the semantic rules
   (e) Define Peephole Optimization
   (f) What is machine independent code optimization?

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Explain in brief about Lexical errors.
   (b) Discuss in brief about the Role of Lexical analyser in a compiler

3. (a) Check the following grammar is LL (1) grammar or not

   $S \rightarrow aB / \varepsilon$

   $B \rightarrow bC / \varepsilon$

   $C \rightarrow cS / \varepsilon$

   (b) Use G as the grammar

   $E \rightarrow I$, $E \rightarrow E+E$, $E \rightarrow E*E$, $E \rightarrow (E)$, $I \rightarrow a/b/c$. For the string (a + b * c).

   Find i) Leftmost Derivation. ii) Rightmost Derivation

4. (a) Construct the CLR (1) parse table for the following grammar:

   $E \rightarrow T+E \mid T$

   $T \rightarrow id$

   (b) Differentiate between LR and LALR parsers.

5. (a) Define Intermediate code generator. Explain in brief about different forms of Intermediate Code generation.
   (b) Explain in brief about Type checking and Type Conversion.

6. (a) Explain the use of symbol table in compilation process. List out the various attributes for Implementing the symbol table.
   (b) Explain the different issues in the design of a code generator

7. (a) What is the purpose of code optimization? Explain in detail loop optimization with example.
   (b) Explain in detail inter procedural optimization.

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16CC31OE6

III B.Tech I Semester Supple Examinations, October-2023

AUTOMOTIVE ELECTRONICS (OPEN ELECTIVE-I)

(ECE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) Discuss the importance of Electronics in an automobile industry
   (b) Differentiate combinational and sequential circuits
   (c) Compare the principle of digital and analog computers
   (d) What are the primary purposes of spark timing controls
   (e) Explain the various types of Sensors
   (f) Briefly explain the operation of GPS navigation system

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Discuss the survey of major Real-time automotive systems [6]
   (b) Explain the major components of automobile unit [6]

3. (a) Explain the operation of Full wave rectifier with neat wave forms [6]
   (b) Realize 8 × 1 Mux using only 2 × 1 Mux [6]

4. (a) Draw and explain the typical Microprocessor architecture [8]
   (b) Differentiate the operation of Digital to Analog converter and Analog to Digital converter with practical application [4]

5. (a) Explain the common terms used to describe an engine's performance [6]
   (b) Discus the operation of Electronic fuel control configuration with block diagram [6]

6. (a) Discuss the operation of Magnetic reluctance position sensor [6]
   (b) Compare the operation of different types of actuators [6]

7. Draw and explain the Collision avoidance Radar warning system with block diagram. [12]

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R16CS3108

III B.Tech I Semester Supple Examinations, October-2023

NETWORK MANAGEMENT SYSTEMS

(CSE)

Time: 3 hours **Max Marks: 60**

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. (a) Define Analogy of telephone Network Management?
   (b) How are the managed object defined in network management?
   (c) Write the features of SNMP V1
   (d) List the major Changes in SNMPv2,
   (e) What is Remote Monitoring?
   (f) What is system management?

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) Explain the Challenges of Information Technology Managers.
   (b) Explain Network and System Management in detail

3. (a) Explain clearly the function of two-tier and three tier SNMP organization Model?

4. (a) With a neat sketch, explain proxy server organizational Model?
   (b) Explain the functional model with neat sketch

5. (a) Explain the SNMPv2 System Architecture with neat sketch

6. (a) With a neat diagram, explain the RMON1 group and functions?
   (b) Difference between RMON1 & RMON2?

7. (a) Discuss about Network Management Tools
   (b) Explain about Network Management systems in detail

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