

H.T No:

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R22

Course Code: B455413



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

M.Tech III Semester Supplementary Examinations July/August-2024

Course Name: Embedded Networks

(Embedded Systems)

Date: 15.07.2024 AN

Time: 3 hours

Max.Marks: 60

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries ONE mark.

10x1=10M

1. Write down difference Between Serial and Parallel Communication. 1 M
2. What is Synchronous Serial Communication? 1 M
3. What is Bit stuffing with respect to CAN? 1 M
4. Write down Features of PIC 18 Microcontroller. 1 M
5. Draw Ethernet Message Frame. 1 M
6. Differentiate Internet with Intranet. 1 M
7. Where we are Using UDP Protocol? 1 M
8. Briefly Tell why Network Security is Important. 1 M
9. Define Wireless Sensor Networks. 1 M
10. Write down few Applications of WSN. 1 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). In Detail Discus about Parallel port Programming. 10M
- OR**
11. B). i) Write Short notes on RS232 Serial Standard. 5M
ii) Write short Notes on ISA/PCI Bus Protocols. 5M
12. A). Write an embedded C program to blink LED connected to the PIC controller after every 100µs. 10M
- OR**
12. B). Explain in detail about CAN-BUS. Also, mention the areas where it can be used in real-time applications. 10M
13. A). Explain Different Components needed for Constructing an Embedded Network. 10M
- OR**
13. B). Explain in Details what are the components available inside a Networks. 10M
14. A). How Messages are Being exchanged using TCP and UDP Protocols. 10M
- OR**
14. B). i) Explain about FTP Protocols in Details. 5M
ii) How we Serve Webpages with Dynamic data. 5M
15. A). i) Why Time Synchronization is Important in WSN. 5M
ii) With an example explain WSN use in Heath care sector. 5M
- OR**
15. B). Explain in details about Data Centric Routing Protocols. 10M

H.T No:

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R22

Course Code: B458601



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

M.Tech III Semester Supplementary Examinations July/August-2024

Course Name: Optimization Techniques

(Common for SE & CSE)

Date: 18.07.2024 AN

Time: 3 hours

Max.Marks: 60

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries ONE mark.

10x1=10M

1. What is design vector in optimization techniques? 1 M
2. Explain the simplex method geometrically. 1 M
3. What is the test of optimality? 1 M
4. List the types of Travelling salesman problem. 1 M
5. Explain the Lagrange multiplier method of optimization. 1 M
6. What is the Fibonacci method of optimization? 1 M
7. What is the Powell search method? 1 M
8. What is steepest descent method? 1 M
9. What is multistage decision process? 1 M
10. Explain calculus method. 1 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). How many different types of optimization are there and explain. 10M
- OR**
11. B). What are the properties of standard form of LPP? 10M
12. A). Explain Vogel's method to find initial basic feasible solution of transportation problem. 10M
- OR**
12. B). Discuss about the formulation of the assignment problem. 10M
13. A). Explain how multivariable optimization problem with equality constraints can be solved in detail. 10M
- OR**
13. B). Elaborate the Kuhn Tucker conditions in optimization techniques. 10M
14. A). What is the Hooke Jeeves search method and explain? 10M
- OR**
14. B). What is gradient descent method for optimization? 10M
15. A). Illustrate the table method of solution in dynamic programming. 10M
- OR**
15. B). Discuss about sub optimization and explain the principle optimality with example. 10M
