H.T No: | | | | | | | | | | | R22 | Course Code: B458304

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

M.Tech II Semester Regular Examinations September-2023

Course Name: ADVANCED ALGORITHMS

(Computer Science & Engineering)

Date: 04.09.2023 FN | 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 time complexity? 1 M
2. How does selection sort work? 1 M
3. What is the use of MST? 1 M
4. Which is the best greedy algorithm? 1 M
5. What is the time complexity of Ford Fulkerson algorithm? 1 M
6. What is divide and conquer Method? 1 M
7. Expand LUP. 1 M
8. What is FFT? 1 M
9. Define NP Hardness. 1 M
10. List out recent trends in problem solving paradigm. 1 M

PART-B

Answer the following. Each question carries TEN Marks. 5x10=50M

11.A). Describe a state space with 5 states, where the number of nodes visited by iterative deepening search (including the start node) is 15. 10M

OR

11. B). What is DFS? Explain in detail. 10M

12. A). Discuss on Minimum Spanning Tree Algorithm. 10M

OR

12. B). Brief note on Edmond's Blossom's algorithm to compute augmenting path. 10M

13. A). What is maxflow min cut theorem. Explain. 10M

OR

13. B). Give detailed description on relation between the time complexities of basic matrix operation. 10M

14. A). Discuss on Floyd Warshall algorithm on dynamic programming. 10M

OR

14. B). What is Chinese remainder theorem? Explain. 10M

15. A). What is geometry of the region and simplex algorithm? Explain. 10M

OR

15. B). Explain in detail the recent problem solving algorithms using data structure. 10M

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H.T No: | | | | | | | | | | | R22 Course Code: B458305

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

M.Tech II Semester Regular Examinations September-2023

Course Name: ADVANCED COMPUTER ARCHITECTURE

(Computer Science & Engineering)

Date: 06.09.2023 FN | 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 SIMD? 1 M
2. Explain PRAM Model briefly. 1 M
3. What are the different hardware technologies? 1 M
4. Explain Virtual memory. 1 M
5. Compare RISC and CISC. 1 M
6. What is Shared Memory in computer architecture? 1 M
7. Explain Cache Coherence. 1 M
8. What is Synchronization? 1 M
9. Describe vector access memory schemes. 1 M
10. What is Compound Vector Processing? 1 M

PART-B

Answer the following. Each question carries TEN Marks. 5x10=50M

11.A). i) Explain the Multiprocessors and Multi computers. 5M
ii) Discuss the Multi vector and SIMD Computers 5M

OR

11. B). i) Discuss Program and network properties of computer architecture. 5M
ii) Explain Conditions of parallelism. 5M

12. A). How to compare the performance of computers? Give illustration. 10M

OR

12. B). Describe the processes and Memory Hierarchy. 10M

13. A). Explain differences between Linear and Non-Linear Pipeline Processors. 10M

OR

13. B). Illustrate the Instruction and Arithmetic Pipeline design. 10M

14. A). Write about:
i) Three generations of Multi computers. 5M
ii) Message-passing Mechanisms. 5M

OR

14. B). Discuss the challenges of parallel processing in multi processors. 10M

15. A). Explain vector processing principles. 10M

OR

15. B). Explain SIMD Computer Organizations. 10M

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H.T No: | | | | | | | | | | | R22 Course Code: B458408

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

M.Tech II Semester Regular Examinations September-2023

Course Name: ADVANCED COMPUTER NETWORKS

(Computer Science & Engineering)

Date: 08.09.2023 FN 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 about wireless mesh networks. 1 M
2. Define Unicast Routing. 1 M
3. What is TCP? 1 M
4. Write about Transport layer responsibilities. 1 M
5. Write about HTTP. 1 M
6. What is P2P file sharing? 1 M
7. List out main types of wireless networks. 1 M
8. Define GPRS. 1 M
9. What is VOIP? 1 M
10. What is streaming in video applications? 1 M

PART-B

Answer the following. Each question carries TEN Marks. 5x10=50M

11.A). Explain in detail about IEEE 802.11 wireless standard. 10M

OR

11. B). Discuss about routing protocols in network layer. 10M

12. A). Demonstrate in detail about transport layer protocols. 10M

OR

12. B). Explain about congestion control policy in TCP. 10M

13. A). Elaborate in detail about DNS. 10M

OR

13. B). Explain socket programming in TCP. 10M

14. A). Outline about CDMA and Explain about Forward and Reverse channels in CDMA. 10M

OR

14. B). Discuss in detail about principles of Mobility Management. 10M

15. A). List out multimedia networking applications. 10M

OR

15. B). Discuss about the protocols for real-time conversational applications. 10M

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H.T No: | | | | | | | | | | | R22 | Course Code: B458412

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

M.Tech II Semester Regular Examinations September-2023

Course Name: ROBOTIC PROCESS AUTOMATION

(Computer Science & Engineering)

Date: 11.09.2023 FN | 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 are the three capabilities of RPA? 1 M
2. What are the features of RPA? 1 M
3. What is the use of Insights? 1 M
4. What is Web control Room? 1 M
5. What are the different types of audit logs? 1 M
6. What is SLA in RPA? 1 M
7. List the different types of Recorder. 1 M
8. Name the Database Commands in RPA. 1 M
9. What are the terminal emulator commands? 1 M
10. What is the role of the report designer? 1 M

PART-B

Answer the following. Each question carries TEN Marks. 5x10=50M

11.A). Explain in detail Automation Anywhere Enterprise Platform. 10M

OR

11. B). What are the ways to create Bot? Discuss in detail. 10M

12. A). Discuss in detail Features Panel. 10M

OR

12. B). Explain in detail Dashboard. 10M

13. A). Briefly explain Devices in RPA with example. 10M

OR

13. B). Discuss in detail how to manage workload SLAs? 10M

14. A). Illustrate various String operation Commands. 10M

OR

14. B). Discuss in detail about Web Recorders and Screen Recorders. 10M

15. A). Explain in detail FTP Commands. 10M

OR

15. B). Discuss in detail mange Window Control Commands. 10M

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