

Hall Ticket No:

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Question Paper Code: 18MCAP112

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA(2Yrs) I Year II Semester (R18) Supplementary End Semester Examinations – March 2022

(Regulations: R18)

DATA STRUCTURES AND ALGORITHMS

Time: 3Hrs

Max Marks: 60

Attempt all the questions. All parts of the question must be answered in one place only.

In Q.no 1 to 5 answer either Part-A or B only

- Q.1(A) i. Discuss about the performance analysis of an algorithm. 4M
ii. Write an algorithm or program to convert infix form of expression into postfix form. 8M

OR

- Q.1(B) What is Circular queue? Explain the Insertion, Deletion and Searching of an element in the Circular queue. 12M

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- Q.2(A) i. Write the applications of queues. 12M
ii. How to sort the given set of elements using heap sort? Explain it with example.

OR

- Q.2(B) Write Bubble Sort algorithm. Explain each step with the suitable example. 12M

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- Q.3(A) Write the short notes on the following with the help of suitable example: 3*4=
- i. Multigraph 12M
 - ii. Diagraph
 - iii. Simple Graph

OR

- Q.3(B) What is graph? Discuss graph traversal techniques with an example. 12M

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- Q.4(A) What is Minimum Spanning Tree? Explain single source shortest path algorithm and trace with an example? 12M

OR

- Q.4(B) Define Knapsack problem. Explain it with the help of example. 12M

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- Q.5(A) Discuss Dynamic Programming approach along its applications. 12M

OR

- Q.5(B) Explain Graph Coloring problem using backtracking approach with the help of suitable example. 12M

***** END*****

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MCA(2Yrs) I Year II Semester (R18) Supplementary End Semester Examinations – March 2022

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WEB PROGRAMMING THROUGH PHP

Time: 3Hrs

Max Marks: 60

Attempt all the questions. All parts of the question must be answered in one place only.

In Q.no 1 to 5 answer either Part-A or B only

- Q.1(A) i. Write a program on sorting of an array by taking the user input from single textbox of HTML 6M
ii. How web pages are formed using CSS? Explain. 6M
- OR**
- Q.1(B) i. Explain the syntax and usage of 'for' loop used in PHP. Also create a script using for loop to add all the integers between 0 and 10 and display the total. 8M
ii. List any four advantages of PHP 4M
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- Q.2(A) Explain the following string functions with example. 12M
i) str_replace() ii) ucwords() iii) strlen() iv) strtoupper()
- OR**
- Q.2(B) i. What is Recursion? Also write a function in PHP that calculates factorial of a number N using Recursion 8 M
ii. Explain the concept of anonymous function in detail. 4M
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- Q.3(A) i. Differentiate between Exceptions to Errors. 6M
ii. How to creation of Classes and Operations in PHP using OOPs? Explain with an example. 6M
- OR**
- Q.3(B) Explain in detail about various types of inheritance with suitable examples and syntax 12M
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- Q.4(A) i. What is RDBMS? How to create a connection between PHP and My SQL? 6M
ii. Discuss in detail about Web Database Architecture with a neat diagram. 6M
- OR**
- Q.4(B) i. Create student Marks maintains table using primary key and foreign key. 6M
ii. Explain how to manipulate the data with MySQL databases using join queries. 6M
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- Q.5(A) How is a form connected to a database? How can the data in the result set of database using PHP be retrieved and edited? Explain by considering any suitable example. 12M
- OR**
- Q.5(B) i. What is the difference between session and cookie? Explain with an example. 6M
ii. How data transaction is secured using PHP and MySQL 6M

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