Internal Exam Paper

Python Programming MCA –I Sem Session 2022-23

Date: 2/2/2023

Max. Marks: 20

All questions carry equal marks. Attempt any three questions from Q1 to Q4. Q5 is compulsory.

Q1. Explain various types of operators used in python with the help of python program.

Q2. What is String in python? Describe string slicing with the help of proper example. Write a program to replace the double spaces with single spaces in a string.

Q3. What is difference between (Quote example wherever necessary):

a. List and String

b. Set and Tuple

c. Dictionary and Set

d. Can we add list, dictionary and tuple in a given set? Justify your answer

Q4. What is utility of data comprehension in python? Describe it's any three types in detail.

Q5. What will the following program return:

a.
```
L1= [8,20,"Geeta", "Ram", 8.9]
print (L1[-3: ])
```

b.
```
a=(1,10,33)
a[0]=56
print(a)
```

c.
```
z='''RRR'''
z[0]='M'
print(z)
```

d.
```
s={}
s1=Set()
what is type of s and s1?
```

e.
```
i=0
while i<8 :
        print("hello")
```

Department of Computer Science

Mohanlal Sukhadia University, Udaipur

MCA I Sem Internal Examination – Feb 2023

Subject : MCA-T104 MIS & E-Commerce

Date : 1/2/2023 Time : 2:30 PM to 4:00 PM

Giant Food Stores, LLC, is a regional US supermarket chain based in Pennsylvania, the United States. The company had a 30-year-old pricing and promotion system that was very labor intensive. That could no longer keep up with the pricing decisions required in the fast-paced grocery market. The system also limited the company's ability to execute more sophisticated pricing strategies. Giant Foods was interested in executing its pricing strategy more consistently based on a definitive set of pricing rules. It worked with DemandTec to deploy a system for its pricing decisions. The DemandTec computer based interactive system was able to handle massive amount of point-of-sale and competitive data to model and forecast consumer demand. This helped the analyst and managers in Giant Foods effectively use their organizational knowledge to automate and streamline complex rule-based pricing schemes. The system also had forecasting capabilities. These capabilities allowed Giant Foods to predict the impact of pricing changes and new promotions before they hit the shelves.

(a) Which type of organisational information system has been described in the above case study? Explain its main features.

(b) Describe the types of decisions that have been mentioned here and how information systems help in taking such decisions.

(c) Describe how information systems help retail organisations such as Giant Food Stores in managing the competitive forces .

MCA I Semester Internal Examination Session 2023

MCA-T101: Web Technologies

11

TIME: - $1\frac{1}{2}$ Hours

M.M. 20

Note: - Attempt 6 out of 8 Questions: -

1. Explain in detail about the DHTML.
2. Explain about the basic HTML Forms.
3. Explain the various operators used in JavaScript.
4. What is <table> tag? Explain about all the attributes.
5. Write any five formatting tags with sample codes in HTML.
6. Explain Array Handling in JavaScript with suitable examples.
7. What is the syntax of JavaScript and why JavaScript is enclosed in HTML comments.
8. Describe the structure of an HTML document with an example. Give description for the major tags used.

MCA I Semester Internal Assessment 2023

Paper Code: MCA-T106 **Advanced Data Structures** **MM: 15**

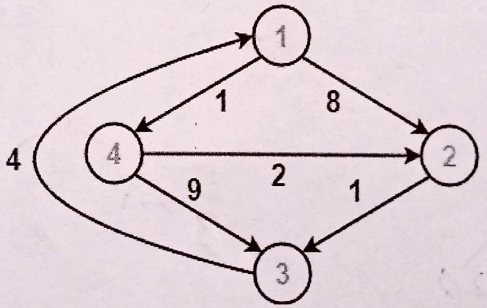
(11)

Note: Q.3 is compulsory. Attempt any two out of remaining questions.

Q.1 What is priority queue? How it can be implemented using a linked list, Discuss by writing algorithm?

Q.2 Write the significance and properties of Red black tree? How one can balance a red-black tree, illustrate by taking suitable example?

Q.3 When should Floyd Warshall Algorithm is used? Compare and contrast it with other algorithms for finding shortest path. Also find the solution of the given graph using Floyd Warshall Algorithm?



Q.4 What is Max Heap? Write an algorithm for inserting node in binary heap and sort the elements given below using the same: 12, 20,17,10,11,15,8

OS Internal Exam Session 2022-23

Note: All questions carry equal marks **Max. Marks 20**

5 1. What is an operating system? List the typical functions of operating systems.

5 2. Draw the state diagram of a process from its creation to termination, including all transitions, and briefly elaborate every state and every transition.

10 3. Suppose there are 2 copies of resource A, 3 copies of resource B, and 3 copies of resource C. Suppose further that process 1 holds one unit of resources B and C and is waiting for a unit of A; that process 2 is holding a unit of A and waiting on a unit of B; and that process 3 is holding one unit of A, two units of B, and one unit of C. Draw the resource allocation graph. Is the system in a deadlocked state? Why or why not?