

DAY - 18

SEAT NUMBER V 0 0 2 0 3 7

2018 III 15

1100

V - 434

(E)

COMPUTER SCIENCE
PAPER - I (D-9)

Time : 3 Hours

4 Pages

Max. Marks : 50

3

- Instructions :** (1) All questions are compulsory.
(2) Figure to the right indicate full mark.
(3) Use of any type of calculator not allowed.
(4) Draw a neat diagram wherever necessary.

1. (A) Select the correct alternative from the following and rewrite sentence :
- (a) If the page size for 2 MB memory is 2KB then the number of higher order bits on address bus used to denote page number is _____. 1
- (i) 11
(ii) 10
(iii) 9
(iv) 8
- (b) Data items are divided into sub item is called as _____. 1
- (i) Group Item
(ii) Elementary Item
(iii) Nodes
(iv) Arrays
- (c) Object is a are _____. 1
- (i) Variable
(ii) Data type
(iii) Run Time Entity
(iv) Both (i) and (iii)

(d) In HTML, for Red colour, RGB code is _____

1

(i) # 00 00 00

(ii) # ff 00 00

(iii) # 00 ff 00

(iv) # 00 00 ff

(B) Answer any two of the following :

(a) What is File System ? Explain tape based and disk based file system. 3

(b) What is VDU ? Explain following terms of VDU : 3

(i) Dumb Terminal

(ii) Intelligent Terminal

(c) What is Array ? Write an algorithm for Traversing Linear Array. 3

2. (A) Answer any two of the following :

(a) Define OOP. Write its features. 3

(b) Explain and tag used in HTML with example. 3

(c) Explain how member functions of class can be defined outside the class definition and inside class definition with example in C++. 3

(B) Answer any one of the following :

(a) Write the use of following file pointers with example : 4

(i) seekg()

(ii) seekp()

(iii) tellg()

(iv) tellp()

(b) What is GUI ? Explain the following components of GUI : 4

(i) Menu Bar

(ii) Title Bar

(iii) Scroll Bar

3. (A) Answer any two of the following :

(a) Explain the following process states : 3

1/2 (i) Running State

(ii) Ready State

(iii) Blocked State

1/2 (b) Explain Constructor and Destructor with example in C++. 3

(c) What is Data Structure ? Explain Linear Data Structure and Non-linear Data Structure. 3

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- (B) Answer any one of the following :
- (a) Write any eight basic rules for virtual function that satisfies the compiler requirements. 4
- 2 (b) Define Security. Explain the different elements of security. 4
4. (A) Answer any two of the following :
- (a) Differentiate between Traditional Procedural Programming Approach and Object Oriented Programming Approach. 3
- (b) Define following Terms : 3
- (i) Group Item
- (ii) Elementary Item
- (iii) Entity
- (c) What is Binary Tree ? With suitable example show the relationship between Total Number of Nodes and Depth of Binary Tree. 3
- (B) Answer any one of the following :
- (a) What is Record ? Explain how records are represented in memory using array ? 4
- (b) Explain following terms in case of Process Scheduling : 4
- (i) Turn-around Time
- (ii) Waiting Time
- (iii) Terminal Response Time
- (iv) Event Response Time
5. (A) Solve any two of the following :
- (a) Write a C++ program to accept an integer number and test whether it is prime or not. 5
- (b) Write a program in C++ using OOP technique to compute circumference of circle. 5
- (c) Write HTML code for following output : 5

Cricket Analysis

Country	Played	Won	Lose
INDIA	30	27	03
PAKISTAN	30	03	27

OR

5. Solve any two of the following :

(a) Write a C++ program to find the smallest of four given integers using function `min()` that returns the smallest of four given integers. The function prototype is as below `int min (int, int, int, int)`. 5

(b) Write an object oriented program in C++ to read an integer number and find the sum of digits of integer [Hint : input 125 output 8 i.e. $1+2+5=8$] 5

(c) Write the output of the following HTML code : 5

```
<html>
  <body>
    <UL type = "circle">
      <i> One
      <i> Two
      107 <i> Three
    <UL type = "square">
      <i> Monday.
      <i> Tuesday
      <i> Wednesday
    </UL>
    <UL>
  </UL>
</body>
</html>
```
