AU–93

B.Sc. Part–II (Semester–III) Examination

3S : COMPUTER SCIENCE/COMPUTER APPLICATIONS/INFORMATION TECHNOLOGY

(Object Oriented Programming with C++ and Web Technology)

Time : Three Hours]   [Maximum Marks : 80

Note :—(1) All questions are compulsory.

(2) Question No. 1 carries 8 marks and all other questions carry 12 marks each.

(3) Assume suitable data wherever necessary.

1. (A) Fill in the blanks :

(i)   The variables declared inside a class are known as _____.

(ii) The qualifier _____ tells the compiler that the function should not modify the argument.

(iii) Fiber optical cable transmits the data or signal in the form of _____.

(iv) _____ tag is used to control the color and background of the document.   2

(B) Choose the correct alternative :

(i)   _____ is not the feature of OOPs.

(a) Polymorphism   (b) Inheritance

(c) Data Abstraction   (d) Top-Down Approach

(ii) _____ is a user defined data types in C++.

(a) Void   (b) Char

(c) Enum   (d) Const

(iii) _____ is the medium sized network.

(a) WAN   (b) LAN

(c) MAN   (d) PAN

(iv) The correct html tag for smallest page heading is _____.

    (a)   \<H1\>   (b)   \<Head\>

    (c)   \<H6\>   (d)   \<HEAD\>   2

(C) Answer in **one** sentence :

    (i)   What is the use of manipulators ?

    (ii)   What is default constructor ?

    (iii)   What is network ?

    (iv)   What is hyperlink ?   4

2. (A) Explain the basic data types with different qualities supported in C++.   6

    (B) Explain with example the initialization of variables at run time.   6

OR

3. (A) Explain the structure of C++ program.   6

    (B) Explain procedure oriented programming with its main characteristics.   6

4. (A) Explain the following :

    (i)   Implicit conversions

    (ii)   Explicit conversions   6

    (B) Explain the concept of functions with default arguments with suitable example.   6

OR

5. (A) Explain the mechanism of calling a function by reference with suitable example.   6

    (B) Explain the concept of function prototype with example.   6

6. (A) Explain class specification, defining objects and accessing class members with suitable example.   6

    (B) Explain the concept of returning objects from functions.   6

OR

7. (A) What is a friend function ? What are the characteristics of friend function ?   6

    (B) Explain the purpose and use of destructor with suitable example.   6

8. (A) What is data communication ? Explain the modes of data transmission. 6

   (B) Explain Ring Topology with its advantages and disadvantages. 6

OR

9. (A) Explain the following with advantages :

   (i) Star topology

   (ii) Hybrid topology. 6

   (B) Explain in brief the OSI Reference Model with suitable diagram showing seven layers. 6

10. (A) Explain the basic structure of HTML with suitable example. 6

    (B) What is table ? Explain all table related tag with example. 6

OR

11. (A) Explain the following tags with example :

    (i) <HR>

    (ii)

    (iii) <HEAD> 6

    (B) Explain the <IMG> tag of HTML with example. 6

12. (A) Give the advantages and applications of stylesheet. 6

    (B) Explain the following properties of CSS :

    (i) Font

    (ii) Color. 6

OR

13. (A) Write an HTML code using CSS stylesheet to display three different headings. 6

    (B) Explain the following properties of CSS :

    (i) Background

    (ii) Height

    (iii) Line. 6