AS–1437

B.Sc. Part—II (Semester—IV) Examination

COMPUTER SCIENCE/COMPUTER APPLICATIONS/INFORMATION TECHNOLOGY

(Advanced C++ and Web Designing)

Time : Three Hours] [Maximum Marks : 80

Note :—(1) **All** questions are compulsory.

(2) Question No. 1 carries 08 marks and all other questions carry 12 marks each.

(3) Assume suitable data wherever necessary.

1. (a) Fill in the blanks :

(i) Array is a collection of _____ elements.

(ii) The combination of two types of inheritance can be referred to as _____ inheritance.

(iii) DTD stands for _____.

(iv) W3C stands for _____. 2

(b) Choose correct alternative :

(i) Following is not a visibility mode :

(a) Public (b) Private

(c) Protected (d) Derived

(ii) While overloading binary operator using friend function then operator op ( ) requires _____ arguments.

(a) No (b) One

(c) Two (d) Three

(iii) CDATA stands for :

(a) Cashless Data (b) Character Data

(c) Change Data (d) None of the above

(iv) XML stands for :

(a) Extensible markup language (b) Exchange markup language

(c) Xerox markup language (d) None of the above 2

(c) Answer in **one** sentence each :

(i) What is two dimensional array ?

(ii) What is base class ?

(iii) What are the types of attributes ?

(iv) What is CSS ? 4

2.	(a)	Explain declaration and initialization of two dimensional array.	6
	(b)	What is Operator Overloading ? Explain with suitable example.	6
		OR	
3.	(a)	Explain pointer to object with suitable example.	6
	(b)	Write a program in C++ to overload unary ++ operator.	6
4.	(a)	Explain the hybrid inheritance with suitable example.	6
	(b)	Define class template with example.	6
		OR	
5.	(a)	What is inheritance ? What are the types of inheritance ?	6
	(b)	Define function template with suitable example.	6
6.	(a)	Explain dynamic binding with example.	6
	(b)	State and explain the rules for virtual function.	6
		OR	
7.	(a)	Explain hierarchy of file stream classes.	6
	(b)	Explain pointers to derived class with example.	6
8.	(a)	State and explain the features of XML.	6
	(b)	Create XML document to show employee details consisting of employee ID, employee name, department, salary.	6
		OR	
9.	(a)	Explain the basic structure of XML document.	6
	(b)	Explain document prolog and document instance.	6
10.	(a)	What is DTD ? Explain internal and external DTD with example.	6
	(b)	What is attribute ? Explain types of attribute.	6
		OR	
11.	(a)	Explain element content model with suitable example.	6
	(b)	What is Entity ? Explain with suitable example.	6
12.	(a)	Explain various features of XML schema.	6
	(b)	Explain default and prefix declaration of namespace.	6
		OR	
13.	(a)	Compare XML schema with DTD by giving suitable example.	6
	(b)	Explain schema elements with suitable example.	6