M 5477

Reg. No. : ....

Name : ....

I Semester B.A./B.Sc./B.Com./B.B.A./B.B.A.T.T.M./B.B.M./B.C.A./B.S.W./
B.A. Afsal-Ul-Ulama Degree (CCSS – Regular/Supple./Improvement)
Examination, November 2013
(2010 and Earlier Admn.)
CORE COURSE IN PHYSICS
1B01 PHY : C++ Programming

Time: 3 Hours

Max. Weightage : 30

Instructions : Section – **A** : Answer **all** questions. **Each** bunch carries a
weightage of **four**.
Section – **B** : Answer **any six**. **Each** carries a weightage of **one**.
Section – **C** : Answer **any nine**. **Each** carries a weightage of **two**.
Section – **D** : Answer **any one**. **Each** carries a weightage of **four**.

SECTION – A

(Multiple choice questions in bunches of **four**. **Each** bunch carries a weightage of 1) :

1. I) The operator used for obtaining the remainder of an integer division is
   a) \   b) /
   c) %   d) ∧

   II) The operator < < is called
   a) Const_cast operator   b) Dynamic_cast operator
   c) Insertion operator   d) Extraction operator

   III) When accessing a structure member, the identifier to the left of the dot operator
   is the name of
   a) a structure member   b) a structure tag
   c) the key word struct   d) a structure variable

   IV) Three different variables A,B,C are stored on same physical memory location.
   Where is the data stored ?
   a) Array   b) Union
   c) Structure   d) Pointer

2. I) Which of the key word is used to control access in a class ?
   a) default
   b) break
   c) private
   d) continue

   II) Which of the following is a key word ?
   a) NULL
   b) abstract
   c) protected
   d) string

   III) The general syntax for initgraph() function is
   a) initgraph(int mode, int driver, int path)
   b) initgraph(int driver, int mode, int path)
   c) initgraph(int driver, int path, int mode)
   d) initgraph(int mode, int path, int driver)

   IV) The number of arguments used for the declaration of an ellipse() function is
   a) two
   b) three
   c) four
   d) six   (2×1 2)

SECTION – B

(Short answer questions. **Eight** questions: Answer **any six**. **Each** question carries a weightage of **1**)

3. Arrange the following data types from smallest to largest float, char, double, long double, long, short, int

4. What is the meaning of prefix and postfix increment operators ?

5. What is the action of break statement in a nested loop ?

6. What do you mean by the nested if ?

7. Determine the total bytes required to store A[16], an int array.

8. Which character marks the end of a string ?

9. What is inheritance ?

10. What is polymorphism ?   (6×1=6)

SECTION – C

(Short essay/problem or both. **Twelve** questions; Answer **any nine**. **Each** question carries a weightage of **2**) :

11. Write the syntax of while loop and show its working on using the continue statement after the first statement in the body of the loop.

12. Write a program to find the focal length of a convex lens using lens maker's formula. $(1/f) = (n - 1) [(1/R1) - (1/R2)]$ by accepting the values of refractive index and radii of curvature.

13. Write the syntax of the for loop and show its working on using the exit (0) function after second statement in the body of the loop.

14. Explain function declaration and function definition with the help of a simple program.

15. Write a program to find the smallest element in an array.

16. What are unions ? What is the difference between a union and a structure ?

17. What are objects ? How are they created ?

18. Explain recursion with the help of a recursive function.

19. How are public members differ from private members ?

20. How does a class accomplish data abstraction and encapsulation ?

21. Write a simple program to draw an arc.

22. Explain the significance of scope resolution operator with example.   (9×2=18)

SECTION – D

(Long essay questions. **Two** questions; Answer **any one**. **Each** question carries a weightage of **4**) :

23. Discuss the various operators used in C++

24. Differentiate between private, public and protected data members of the class with example.   (1×4=4)