E 6953 (Pages : 3) Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2013

First Semester

Core Course—METHODOLOGY OF PROGRAMMING AND PROGRAMMING IN C

(Common to B.Sc. Computer Science and B.C.A.)

[2013 Admissions]

Time : Three Hours Maximum : 80 Marks

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. What do you mean by cohesion ?
2. What is debugging ?
3. What is the advantage of using enumerated data type ?
4. Define a compound statement.
5. What are nested loops ?
6. How will you initialize an array ?
7. Define scope and lifetime of a variable.
8. What are user defined functions ?
9. Write the syntax of declearing a union.
10. What is the function of a typedef statement ?

(10 × 1 = 10)

Part B

Write short answer on any **eight** *out of twelve.*
Each question carries 2 *marks.*

11. What are the characteristics of writing a program ?
12. What are the rules for making a flow chart ?
13. What is recursion ? Write a program to find the factorial of a number using recursion.
14. What is the difference between an identifier and a keyword ?
15. What are the datatypes used in C ?

Turn over

16. Why do we use library functions in a program ? Write *two* examples.
17. Explain the function of a continue statement.
18. Write a program to reverse the digits of a number.
19. What are the different methods for passing arguments to a function ?
20. Explain structures in C.
21. Write a program to illustrate the use of else-if ladder.
22. Briefly explain precedence and associativity of operators.

(8 × 2 = 16)

Part C

Write short answer on any **six** *out of nine.*
Each question carries 4 *marks.*

23. Write a program to search a given number in an array.
24. Explain switch statement with an example program.
25. Briefly explain the storage classes in C.
26. What is a pointer ? What is the relationship between an array and a pointer ?
27. Explain the different functions used for dynamic memory allocation.
28. Write a program to sort a set of numbers in ascending order.
29. Write an algorithm to generate in prime numbers.
30. Briefly explain the operators available in C.
31. Distinguish between while and do..... while Statement with syntax.

(6 × 4 = 24)

Part D

Write essays on any **two** *questions out of* 4.
Each question carries 15 *marks.*

32. Explain the different programming techniques used. List the merits and demerits of each.

(15 marks)

33. Write notes on :

    (a) Program testing tools. (7 marks)

    (b) Input/output functions in C. (8 marks)

34. (a) Write a program to append two arrays. (7 marks)

(b) Write a program to find the sum of two matrices. (8 marks)

35. Explain the following :—

(a) String handling functions. (6 marks)

(b) Arrays within structures. (3 marks)

(c) Goto statement. (3 marks)

(d) Performing artithmetic operations on pointers. (3 marks)

[2 × 15 = 30]