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(201217) Roll No. .....

B.C.A.- I Sem.

18002

B.C.A. Examination, Dec. 2017

Programming Principles & Algorithm

(BCA-102)

(New Course)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from all sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Answer all the **five** questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words. 3×5=15

1. What do you understand by swapping?

P.T.O.

2. Define time complexity.
3. What is flowchart? What are the various symbols used in drawing flow chart?
4. What is algorithm? Explain.
5. What are general characteristics of C?

Section - B

(Short Answer Questions)

Note : Answer any **two** questions out of the following three questions. Each question carries 7.5 marks. Short answer is required not exceeding 200 words. 7.5×2=15

6. Explain difference between Do-while and while loop with suitable example.
7. Define following terms with suitable example.
   (i) Constant
   (ii) Identifier
8. Write a flowchart to find the average of the marks obtained by a student in five subjects.

Section-C

(Detailed Answer Questions)

Note : Answer any **three** questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15×3=45

9. What is function? Explain with suitable examples.

10. What is Big-oh notation? What are limitations and properties of Big-oh notation? Explain in brief.

11. What is Operator? Explain it with its all types in C with complete description.

12. Attempt any **four** of the following :

    (i) Explain Local and Global variables.

    (ii) Write a 'C' program to accept number and find out whether it is even or odd.

(iii) Write a 'C' program to find the sum of the first n numbers.

(iv) Distinguish between Break and Continue statement.

(v) Explain if-else and Nested-if-else with example.

13. Explain :

    (i) Recursion with suitable example.

    (ii) Storage class

    (iii) Switch statement