

S.No. : 17

BCS 3405

No. of Printed Pages : 04

Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 33219

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No.

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## B. Tech. Examination 2021-22

(Even Semester)

### PROGRAMMING IN 'C'

**Time : Three Hours]** **[Maximum Marks : 60**

- Note :-** (i) Attempt all questions.  
(ii) All questions carry equal marks.

### SECTION-A

1. Attempt all parts of the following :  $8 \times 1 = 8$
- (a) Describe the significance of 'C' programming.
  - (b) Explain looping statements in C.
  - (c) What do you mean by header file?
  - (d) What are the main data type in 'C'?
  - (e) What are scanf( ) and printf( ) function.

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- (f) Explain the concept of pointer.
- (g) Write down the difference between while and do while loop.
- (h) Explain the difference between structure and union.

### SECTION – B

2. Attempt any two parts of the following :  $2 \times 6 = 12$

- (a) What are identifiers in 'C'? Explain with examples.
- (b) Explain the difference between algorithm and flowchart with example.
- (c) Differentiate between assembler, compiler and interpreter.
- (d) Write short note on structured programming.

### SECTION – C

**Note :-** Attempt all questions. Attempt any two parts from each questions.  $5 \times 8 = 40$

3. (a) Explain how do we evaluate an expression in 'C' programming.



- (b) Discuss various arithmetic operators in 'C' with examples.
  - (c) Write a program in 'C' to check whether a given number is Armstrong or not?
4. (a) Write a program in 'C' to find out the greatest number among three.
- (b) What is Searching? Discuss various searching techniques.
- (c) Write a program in 'C' to add two matrices of order  $3 \times 3$ .
5. (a) What is dynamic memory allocation? Show how it is performed?
- (b) Write a program in 'C' to print following pattern :

```
3
3 4
3 4 5
3 4 5 6
3 4 5 6 7
```

- (c) What are storage classes in 'C'? List and explain various storage classes in detail,.

6. (a) What is recursion? Write a program in 'C' to find factorial of a number using records.
- (b) What is file? How do we report string in C? List and explain any five string manipulation functions.
- (c) Write short notes on the following :
- (i) Preprocessor directive
  - (ii) Command line arguments in 'C'

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