

2E2006	Roll No. _____	Total No of Pages: 3
	2E2006 B. Tech. II Sem. (Back) Exam., May - 2019 206 Fundamentals of Computer Programming	

Time: 3 Hours

Maximum Marks: 80
Min. Passing Marks: 26

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL

2. NIL

UNIT- I

Q.1 (a) What are the various operators in C? Discuss each of them with suitable illustration. [10]

(b) Explain the terms variables and constants? How much type of variables and constants are supported in C? [6]

OR

Q.1 (a) Explain various storage classes in C with the help of example. [10]

(b) Write a short note on type casting. [6]

UNIT- II

- Q.2 (a) Explain the importance of switch case statement. In which situation is a switch case desirable? Explain the usefulness default statement in switch case statement with the help of program. [8]
- (b) What is array? Why are they needed? Write a C program to enter n elements in an array and find second smallest number from an array. [8]

OR

- Q.2 (a) What are the similarities and differences between while and do - while loop also give the example of both? <http://www.rtuonline.com> [8]
- (b) What is structure? Define a structure called book with book name, author name and price. Write a C program to read the details of book name, author name and price of 200 books in a library and display the total cost of the books and the book details whose price is above ₹ 500. [8]

UNIT- III

- Q.3 (a) What is an array of pointers? How is it different from pointer to an array? Can we assign a pointer variable to another pointer variable? Justify your answer with the help of an example. [8]
- (b) How do you create an array using dynamic memory allocation? Give example and also list benefits of this scheme. [8]

OR

- Q.3 What is a file? Why do we need to store the data in files? Write short note on the following functions. For each function, give a program code that demonstrate its usage. [4×4=16]

- (a) fopen ()
- (b) fclose ()
- (c) fgetc ()
- (d) fputc ()

UNIT- IV

- Q.4 (a) Define function, why are they needed? Differentiate between call by value and call by reference with the help of an example. [8]
- (b) What is recursive function? Write a C program using recursive function to print n terms of Fibonacci series. [8]

OR

- Q.4 Write a short note on – [8×2=16]
- (a) Array of structure
- (b) Void Pointer

UNIT- V

- Q.5 Convert the following numbers from one system to another – [4×4=16]
- (a) $(123.63)_{10} = (?)_2$
- (b) $(111.000L)_2 = (?)_{16}$
- (c) $(AB20 C.00C)_{16} = (?)_{10}$
- (d) $(1010.267)_8 = (?)_2$

OR

- Q.5 (a) What is pseudo code? How does it differ from flowchart? Draw and explain various symbols of flowchart and also draw the flowchart for finding a greatest among three numbers. [8]
- (b) Write a short note on – [4×2=8]
- (i) Difference between Primary and Secondary Memory.
- (ii) Basic organization of a computer with the help of block diagram.

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