1E3106

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B.Tech. I Sem. (Main) Examination, April/May - 2022
1FY3-06/Programming For Problem Solving

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

Attempt all ten questions From Part A, five Questions out of seven questions from Part B and three questions out of five questions from Part C .

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 (As mentioned in form No. 205).

Part - A

(Answers should be given up to 25 words only)

All questions are compulsory. **(10×2=20)**

1. Differentiate between primary & Secondary memory?
2. What are the basic organization of computer? Explain using a block diagram.
3. What do you mean by pseudo code?
4. Justify the term assembly and low level language.
5. Name different type of assignment operators in C programming.
6. How a flow chart is different from algorithm?
7. How may types of access methods are present in computer system?
8. Define & Explain scanf( ) and printf ( ) function.
9. Define pointers & statements in C programming.
10. Define switch case with pseudo code (with example)?

Part - B

(Analytical/Problem solving questions)

Attempt any five questions: **(5×4=20)**

1. Draw a flowchart with algorithm & Write a C program to compute simple interest.

2. Write r's complement of the following numbers, where r is a radix(base) of these numbers with conversion-

   i) $(1056)_{16}$ *to* $(?)_{8}$

   ii) $(11672)_{8}$ *to* $(?)_{16}$

   iii) $(2724)_{8}$ *to* $(?)_{5}$

3. Explain Von neumann architecture in detail with block diagram.

4. Explain the concept of file handling in 'C' language write a program to copy the data source file to destination file.

5. What do you mean by the term array also create an array? Find the Kth largest and Kth smallest number in an array.

6. Define algorithm with flow chart. Write algorithm for finding factorial of a number.

7. Write the difference between input device & output device in tabular form.

Part - C

(Descriptive/Analytical/Problem solving/Design Questions)

Attempt any three questions. **(3×10=30)**

1. What are the data types in C programming? Explain with its definition Y pseudo code along with output. Write a C program to find Fibonacci series.

2. What do you mean by parameter passing in 'C' also write the important method of parameter passing example with code along with output.

3. Write a program in 'C' to print half pyramid of alphabets and *:

A

B B

C C C

D D D D

E E E E E

4. Write a program in C to display the first 10 natural numbers also find the sum of first 10 natural numbers.

5. Write a program in C to read 10 numbers from keyboard and find their sum and average using loops.
