

Roll No.

Total No. of Questions : 13]

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Paper ID [A0402]

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M.Sc. IT (102) (New/S05) (Sem. - 1st) PROGRAMMING IN C

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section -A is **Compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

(15 × 2 = 30)

Q1)

- a) What is an interpreter?
- b) What is difference between character and string?
- c) Define relational operator.
- d) Write a while loop to print numbers from 1 to 10.
- e) Explain the syntax of switch statement.
- f) Why do we use header files?
- g) Is the following statement valid? Justify your answer.
k = (char*)& m;
m = (float*)& p
- h) What is the output of following program fragment.
x = 5;
y = x++;
printf ("%d%d", x,y);
- i) Define a structure named 'student' containing two fields 'name' and 'marks'.
- j) Distinguish between run time error and logical error.
- k) Explain the pros and cons of goto statement.
- l) What is a file in C? Explain with example.

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P.T.O.

- m) What is a pointer? How the pointer variable can be declared and used in C?
- n) What are advantages of union over structure in C?
- o) What is the output of following program fragment

```
int *a;  
*a = 7;
```

Section - B

(9 × 5 = 45)

- Q2)** Write a C program to convert a binary number to its corresponding hexadecimal number.
- Q3)** Write a C program using 'while' loop to reverse the digits of a given number (for example, if input number is 123, then output number is 321).
- Q4)** Given are two one dimensional arrays A and B stored in descending order. Write a program to merge them into a single sorted array C that contains every element of A and B in ascending order.
- Q5)** Write a program in C to reverse a given string.
- Q6)** Define a function up (c) that converts c to uppercase if c is a lowercase letter and c is unchanged otherwise. Invoke this function in a main program.
- Q7)** What are advantages and disadvantages of macro? Write a nested macro that gives the maximum of three values.
- Q8)** Write a C program that reads a line of text and counts total number of spaces.
- Q9)** What is parameter passing? Explain call by reference with an example.
- Q10)** Write a C program to compute the value of Sin function.
- Q11)** Write a C function that returns 1 if the argument is a prime number and returns 0 otherwise.
- Q12)** What is a structure? Explain the difference between an array of structure variables and a structure variable that has an array as a member.
- Q13)** Write a program in C that copies the contents of file 'input.txt' to the output file 'output.txt'.

