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COMPUTER SCIENCE

(Major)

Paper : 1.1

(Computer Fundamentals and Programming)

Full Marks : 60

Time : 3 hours

The figures in the margin indicate full marks
for the questions

1. Answer the following questions as directed :

$1×7=7$

(a) ROM is a volatile memory.

(State true or false)

(b) The 1's complement of $(27)_{10}$ is ____.

(Fill in the blank)

(*Turn Over*)

(c) Choose the correct output for the following code segment :

```
#include<stdio.h>
main( )
{
    int i, j = 5;
    i = j++;
    printf ("%d %d", i, j);
}
```

(i) 5   6

(ii) 5   5

(iii) 6   5

(iv) 6   6

(d) Choose the correct option :

NULL in C is a

(i) keyword

(ii) identifier

(iii) variable

(iv) constant

(Continued)

(e) Choose the correct option :

What is meant by 'a' in the following operation?

fp = fopen ("Random.txt","a");

(i) Attach

(ii) Append

(iii) Apprehend

(iv) Add

(f) If there are two equal strings str1 and str2, the strcmp( ) function returns _____.

(Fill in the blank)

(g) Choose the correct option :

Which printer is very commonly used for desk top publishing?

(i) Laser printer

(ii) Ink jet printer

(iii) Daisy wheel printer

(iv) Dot matrix printer

2. Answer the following questions :   2×4=8

(a) Find out the hexadecimal equivalent of $(1728)_{10}$.

(Turn Over)

(b) Differentiate between *analog computer* and *digital computer*.

(c) Differentiate between *arrays* and *pointers* used in C programming language.

(d) What are the functions of an *Assembler*?

3. Answer any *three* questions : 5×3=15

(a) Differentiate between *primary* and *secondary* memory. Explain briefly the different classification of primary memory.

(b) What is an *algorithm*? Write an algorithm to find out the sum of three real numbers.

(c) What are L-value and R-value in C? Give examples of each.

(d) What is *function prototype*? Differentiate between *formal parameter* and *actual parameter*.

(e) What do you mean by backup system? Why is it needed?

(Continued)

(f) What is *flow chart*? Explain briefly the different symbols used in *flow chart* representation.

(g) What is the purpose of *switch* statement in C? What are the advantages of *switch* statement over *if....else* statement?

4. Answer any *three* questions : 10×3=30

(a) Write a program to check whether a character is vowel or consonant.

(b) Write a program using structure to accept names of *n* subjects, their code number, total marks, and print them.

(c) Write a program to find out the maximum and minimum in an integer array. The size of the array should be inputted by the user.

(d) Write a program to find out the sum of rows of a 3×3 matrix.

(e) Write a function to find out the sum of digits of a given integer number. (*e.g., if a given number is 857, then sum should be 8+5+7=19*).

(f) Explain the following functions with examples :

  (i) strrev ( )

  (ii) strcpy ( )

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3 (Sem–1) CSC M 1