

**3 (Sem-1) CSC M 1**

**2017**

**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)**

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**( 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

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( 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  $(1728)_{10}$ .

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- (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?

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- (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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