



BS-1380

Seat No. _____

B. Sc. (Sem. III) Examination

April / May - 2014

**ESMAT-111 : Mathematical Programming
in C Language
(Subjective Elective)**

Time : 2 Hours]

[Total Marks : 50

- Instructions :** (1) This paper contains five parts, Part-A, Part-B, Part-C, Part-D and Part-E, all are compulsory.
(2) Figure to the right indicate marks of corresponding equations and questions.

PART - A

Fill in the blanks with appropriate words in each of the following sentences. 8

- 1 _____ is the largest value that an unsigned short int. type variable can store.
- 2 A global variable is also known as _____ variable.
- 3 The _____ header file contain mathematical functions.
- 4 The keyword _____ can be used to create a data type identifier.
- 5 A variable cannot starts with _____.
- 6 The _____ specification is used to read or write a short integer.
- 7 The escape sequence character _____ causes the cursor.

8 The _____ function is used to read data from keyboard.

PART - B

Answer the following question: (Q. 9 to 17) 9

- 9 What is global variable?
- 10 Why we use the # directives?
- 11 Describe the four basic Data type.
- 12 Write any two logical operator.
- 13 What is keyboard?
- 14 Write mantissa and exponent of real constant 0.65e4.
- 15 What is purpose of scanf() function?
- 16 What is the meaning of '\n' character.
- 17 What refers to stdio.h?

PART-C

Answer the following question: (any three) 6
(from Q. 18 to 21)

18 Find errors, if any in the following program.

```
#include(stdio.h)
void main(void)
{
    print ("Hello");
}
```

- 19 What is printed by the following program?
- ```
main
{
 int x=5,y=5,z;
 z=x*y;
 printf("%d",z);
}
```
- 20 Write c assignment statement to evaluate the following equation:
- $$\text{Area} = \pi r^2 + 2\pi rh$$
- 21 Determine the hierarchy of operation and evaluate the following expression.
- $$x=a+b/3+c*5-1$$
- when a=9, b=12 and c = 2

### PART - D

Answer the following questions: (any three) 12  
(from Q. 22 to 25)

- 22 Write a program to read marks of a student from keyboard whether the student is pass or fail using if else.
- 23 Two numbers are input through the keyboard and write a program to print division of them.
- 24 Write a program to find area of rectangle.
- 25 Write syntax and example
- (i) The for statement
  - (ii) The while statement.

## PART-E

Answer the following questions: (any three)  
(From Q.26 to 29)

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- 26 Describe the brief the History of c.
  - 27 Write a program to find area and perimeter of circle.
  - 28 If five digit number is input through the keyboard. write a program to calculate sum of its digits.
  - 29 The distance between two cities (in Km) is input through the keyboard. Write a program to convert and print this distance in meters and centimeters.
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