

2025**SKILL ENHANCEMENT COURSE**

Course Name : C. Programming

Course Code : MAT-SEC-1013

Full Marks : 30

Time : 1½ Hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions: 1×5=5

(a) What value does the expression $c = 4\%3 + 1$ return?

(b) Write the output of a :

```
int a;
```

```
a = 5/2;
```

(c) What is the use of “\n”?

(d) Which of the following can be used as a variable :

$x1, x-1, x\%1$?

(e) The **continue** statement is used to transfer the control to the.....of the loop.

2. Answer **any five** of the following questions : 2×5=10

(a) Mention any four library functions in C.

(b) Write the purpose of **scanf()** and **printf()** functions. Also write the general syntax of **scanf()** function to read the integer variable a.

(c) Give the equivalent C expression for

(i) $e^{x+y} - \sin \sqrt{|x + ny|} + \log 2a$.

(ii) $z = \frac{5x + 6}{3x^2 + 2} - \frac{\sin x^2}{\sqrt{x}}$

(d) What is the header files in C ? List any two header files.

(Turn over)

- (e) Write the general syntax of **if-else** statement in C.
- (f) What are the differences between **break** and **exit()** function?
- (g) Write the output of the following:

$c = 0$

for ($i = 1; i \leq 5; i++$)

$c = c + i;$

3. Answer *any three* of the following questions : $5 \times 3 = 15$

- (a) Write a C program to find the area of a triangle using three sides. 5
- (b) Write a C program to find the biggest of given three numbers. 5
- (c) Write a C program to generate the Fibonacci series 5
0 1 1 2 3 5 8 ... up to n terms.
- (d) What is an 'array'? How can we declare and access one and two-dimensional array? Give examples. $2+3=5$
- (e) Write a C program to add 1 to each element of a 3×3 matrix. 5
