

**2025 / FYUG / ODD / SEM /
STASEC-201T / 041**

FYUG Odd Semester Exam., 2025

STATISTICS

(3rd Semester)

Course No. : STASEC-201T

(Statistical Computing with R)

Full Marks : 50

Pass Marks : 20

Time : 2 hours

*the figures in the margin indicate full marks
for the questions*

UNIT—I

Answer any *three* of the following questions :

1×3=3

(a) Explain which one of the following is an invalid identifier :

(i) return_1

(ii) break

(b) What is a compound statement?

(c) How can comments be included in a C program?

(d) What are keywords?

(Turn Over)

(2)

2. Answer any one of the following questions :
- (a) What are data type qualifiers? Name various data type qualifiers in C.
 - (b) What is a string constant? How do string constants differ from character constants?

3. Answer any one of the following questions :
- (a) What are data types? Name various data types in C. Explain, with example, the basic data types in C.
 - (b) How does an array variable differ from an ordinary variable? Write a C program using array to compute the average of 10 real numbers.

UNIT—II

4. Answer any three of the following questions : 1×3=3
- (a) What is the relationship between operators and operands?
 - (b) If $a = 8$, $b = 3$, then what will be the value of $a \% b$?
 - (c) How are library functions accessed?
 - (d) What is the purpose of 'getchar' function?

(3)

- Answer any one of the following questions : 2
- (a) What is meant by operator precedence? What are the relative precedences of the arithmetic operators?
 - (b) What are the commonly used input/output functions in C? How are they accessed?

- Answer any one of the following questions : 5
- (a) Describe different types of relational and logical operators. Also explain conditional operator.
 - (b) What are unary operators? How many operators are associated with a unary operator? Explain various unary operators in C.

UNIT—III

7. Answer any three of the following questions : 1×3=3
- (a) What is the use of 'switch' statement?
 - (b) What is the purpose of 'continue' statement?
 - (c) What is the purpose of the index in a 'for' statement?
 - (d) How many times will a 'for' loop be executed?

(Turn Over)

(4)

8. Answer any one of the following questions :

- (a) What is the purpose of 'goto' statement? How is the associated target statement identified?
- (b) Discuss the syntactic rules associated with 'if-else' statement.

9. Answer any one of the following questions :

- (a) Summarize the syntax associated with 'do-while' statement. Compare it with the 'while' statement.
- (b) What is the purpose of 'if-else' statement? Describe the general form of 'if-else' statement. How are 'nested if' statements interpreted?

UNIT—IV

10. Answer any three of the following questions :

- (a) How are individual array elements identified?
- (b) Describe the array defined as `char name [30];`
- (c) How is an array passed to a function?
- (d) How are subscripts written in an array?

(5)

Answer any one of the following questions :

- (a) What is meant by a string? How is a string declared and initialized?
- (b) How do two-dimensional arrays differ from one-dimensional arrays?

Answer any one of the following questions :

- (a) Explain with an example how two-dimensional arrays are initialized. Write a C program to compute the addition of two matrices of order 3×3 . $2+3=5$
- (b) Summarize the rules for writing one-dimensional array definition. Write a program to read a string from the user and print it in reverse. $2+3=5$

UNIT—V

13. Answer any three of the following questions :

- (a) What is the purpose of 'return' statement in a function? $1 \times 3 = 3$
- (b) What is the difference between actual and formal parameters in a function?
- (c) What is the purpose of using arguments in a function?
- (d) State two advantages of user-defined function.

(Turn Over)

14. Answer any *one* of the following questions :

(a) Summarize the rules associated with function declarations.

(b) What is a function prototype? How do function prototypes differ from traditional function declaration?

15. Answer any *one* of the following questions :

(a) Discuss briefly about various types of functions in C.

(b) What is recursion? What advantage is there in its use? Write a program to compute factorial of an integer quantity using recursion.

★ ★ ★