G-3/380/22   Roll No. ....

III Semester Examination, January 2022

M.Sc.

MATHEMATICS

Paper V

[Programming in C-I (With ANSI Features)]

Time : 3 Hours]   [Max. Marks : 56

Note : *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION A   1×6=6

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. Who is the father of C programming language ?

(a) Steve Jobs   (b) James Gosling

(c) Dennis Ritchie   (d) Rasmus Lerdorf

2. Which of the following is not a valid C variable name ?

(a) int number

(b) float rate   P.T.O.

(c) int variable_count

(d) int $ main

3. What is an example of iteration in C ?

(a) for   (b) while

(c) do-while   (d) All of these

4. Functions in C language are always :

(a) Internal

(b) External

(c) Both (a) and (b)

(d) None of the above

5. C was primarily developed as :

(a) System programming language

(b) General purpose language

(c) Data processing language

(d) None of the above

6. Standard ANSI C recognizes .... number of keywords.

(a) 30   (b) 32

(c) 24   (d) 36

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SECTION B   3×5=15

(Short Answer Type Questions)

Note : *Answer the following questions.*

Unit-I

1. WAP for addition of any *two* numbers.

Or

WAP for cosine function.

Unit-II

2. Explain primary data types.

Or

Write a program to find value, when amount = 5000; interest-rate = 10%, year = 5 is given.

Unit-III

3. WAP for finding the average of any *ten* numbers.

Or

Write short note about arithmetic operator.

Unit-IV

4. Write short note about relational operator.

Or

Write a program to find ratio of any *two* numbers.

Unit-V

5. Write a program using for loop for obtaining weight and height of any *ten* members, where weight < 60 kg and height > 175 cm. Data of 10 members be as follow :

Weight (kg)	Height (cm)
50	172
65	182
58	176
59	174
64	180
57	177
62	159
57	177
59	178
61	174

Or

Write short about mantissa and exponent.

SECTION C   7×5=35

(Long Answer Type Questions)

Note : *Answer the following questions.*

Unit-I

1. Write note about evolution of C language.

Or

Write note about primary data types.

Unit-II

2. Write 32 keywords and their use in the program only 6 out of 32.

Or

Explain precedence of arithmetic operators.

Unit-III

3. Explain conversions of datatype in expressions.

Or

Write a program for conversion of characters lowercase to uppercase and its vice versa.

Unit-IV

4. Write note about formatting of numbers by the use of %wd.

Or

Write commonly used scanf format codes.

Unit-V

5. Write a program to find the value of $e^{-\lambda t}$, where $\lambda = 0.0001$ and the value of t be as follows :

$$0 = < t < = 3000$$

Or

Write a program to find largest of the three numbers using if .... else statements.

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