School of Engineering
First Sessional Examination, Odd Semester (AS: 2023-24)
B. Tech: CSE

Year: II   **Semester: III**

Course Title: Computer Concepts & Programming in C	M.M.: 30
Course Code: BCS3305	Time: 1 hr

Instructions if any: Read the question Carefully.

SECTION 'A' Q.N.1. Attempt all parts of the following:		Course Objective	Marks
a)	What is an algorithm? Define.	CO1	1
b)	What are the format specifiers of int, float, char and longint?	CO1	1
c)	Define flowchart.	CO1	1
d)	What is identifier? Give any example.	CO1	1
e)	Define 'keyword' in C language. Write any five keywords in C.	CO1	1
SECTION 'B' Q.N.2. Attempt any two parts of the following:		Course Objective	Marks
a)	Explain storage classes in detail.	CO1	7.5

b)	Solve the given number type conversions
	   i. $(167.45)_8 = (?)_{10}$
	   ii. $(961.12)_{10} = (?)_{16}$
	   iii. $(2CB.AD)_{16} = (?)_2$
	   iv. $(1101011101101110.10100111)_2 = (?)_{16}$
		CO1	7.5

		Course Objective	Marks
c)	Write an algorithm and draw a flowchart for calculating simple intrest using the formula $SI=(P*T*R/100)$, where, P denotes principal amount, T denotes time and R denotes rate of interest.	CO1	7.5
d)	Explain the procedure of systematic development of software.	CO1	7.5

SECTION 'C' Q.N.3. Attempt any one part of the following	Course Objective	Marks
a) Explain various strategies of developing algorithms in detail.	CO1	10

b) Explain the following:
   i.   Assembler
   ii.   Compiler
   iii.   Interpreter
   iv.   Linker
   v.   Loader
	CO1	10

c) Write a program to print following pattern 1 12 123 1234 12345	CO2	10

Table 1: Mapping between COs and questions
(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	1a,1b,1c,1d,2a,2b,2c,2d,3a,3b	35
CO2	3c	10