

[22-HKPD1SN-23A]

DCA/PGDCA/MScIT 1st Semester (New) Exam. 2022 (W)

(*Computer Programming Using C*)

[PGCA/SCIT S1-03]

Full Marks : 50

Time : 2 hours

The figures in the right-hand margin indicate marks.

1. Answer any *four* of the following questions : 2 × 4 = 8

(a) Specify the role of precedence among operators used in C programming language.

(b) Explain the importance of SWITCH-CASE statement. What is the use of default statement in a switch statement ?

(c) Write different format specifiers used in C language.

(d) Write the output of the following for-loop statement :

```
int i;  
for (i = 1; i < 5; i++);  
printf ("%d", i);
```

(e) Specify the rules of naming an identifier in C.

2. Answer any *two* questions of the followings : 4 × 2 = 8

(a) Discuss the term array and its merits and demerits.

(Turn Over)

(2)

- (b) Write a C program to count the number of vowels in a string.
- (c) Write a C program to calculate the area of a circle using macro.

3. Answer any *three* questions from the following : $6 \times 3 = 18$

- (a) How is a pointer initialized ? What is dynamic memory allocation ? Differentiate between `calloc()` and `malloc()` function with their syntax.
- (b) Give the difference between call-by-value and call-by-reference giving a suitable example.
- (c) Give the basic difference between do-while and while loop. What is a recursive function ? Give one example writing a simple program. $2+4 = 6$
- (d) Distinguish between append mode and write mode in handling file in C. Mention the use of conditional operator and size of operator in C programming language. $3+3 = 6$

4. Answer any *two* questions from the followings : $8 \times 2 = 16$

- (a) Define the concept of structure and union. Explain how a structure is different from an array. Write a structure to represent a bank account.
- (b) How do you initialize a two-dimensional array in C programming ? Write a C program to add two matrices and display the resultant matrix. $2+6 = 8$
- (c) Explain any four string handling functions with their appropriate syntax. Which function is used to read a string ?