No. of Printed Pages—2

11 (CP)

[19-HBPGKOW-M1S(O) 20M]

MScIT/PGDCA/MCA 1st Semester (Old) Exam., 2019 (W)

COMPUTER PROGRAMMING USING C

[MScIT/PGDCA/MCA S1-03]

(Theory)

Full Marks : 50

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. Answer any *three* of the following questions : 2×3=6

(a) Define algorithm and flowchart.

(b) How does 'switch' keyword function?

(c) What do you mean by function definition and function declaration?

(d) How are one-dimensional and two-dimensional arrays represented using pointers?

2. Answer any *three* of the following questions : 4×3=12

(a) What are relational and logical operators? Explain operator precedence with suitable example. 2+2=4

(b) Define macros and functions. State one advantage and one disadvantage of each. 2+2=4

(c) What is the basic difference between a structure and an array? Explain how a pointer can be assigned to a structure. 2+2=4

(d) How is a data file opened? How is a file copied? Give the syntax of copying a file. 2+2=4

3. Answer any *two* of the following questions : 6×2=12

(a) Differentiate between structured programming and object-oriented programming.

(b) Write a program in C to find the maximum, minimum and average marks of a class of 40 students in Chemistry.

(c) Explain the recursive factorial algorithm for finding the factorial of 7.

4. Answer any *two* of the following questions : 10×2=20

(a) Why are conditional operators used? Write a program in C using conditional operators. 4+6=10

(b) Write short notes on the following (any *two*) : 5×2=10

(i) Static, auto and extern variables

(ii) Dynamic memory allocation

(iii) Use of getchar(), getche() and getch() functions

(c) Explain two-dimensional array. Write a C program to check whether the row and column of matrix 1 are equal to the row and column of matrix 2. Multiply both the matrices and store the result in matrix 3. 2+8=10

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