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**PG (NEW) CBCS**  
**M.Sc. Semester-II Examination, 2019**  
**Computer Science**  
**PAPER: MTM 204 (CBCS)**  
**ELECTIVE – I**  
**Computer Fundamentals and Programming Concepts**  
**Full Marks: 40** **Time: 2 Hours**

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**Use separate Answer-scripts for M1 & M2**

**M1: Computer Fundamentals**

**Marks: 20**

- 1. Answer any four questions of the following: 4×2=8**
- a) Convert  $(2795)_{10}$  to hexadecimal equivalent.
  - b)  $(29)_{10} - (23)_{10}$  using twos complement method.
  - c) Convert  $(1259)_{10}$  to octal equivalent.
  - d)  $(1101101011)_2$  to equivalent hexadecimal.
  - e)  $(111011011011)_2$  to hexadecimal equivalent.
  - f) How call by value differ from call by reference.
  - g) Write recursive function to generate fibonacci series.
  - h) What should be the output of the P=5, print f (“%d ”, ++(P+1)).
- 2. Answer any four questions of the following: 4×4=16**
- a) What is system software? What is application software? What are different types of operating system?
  - b) Write a ‘c’ program to find factorial of a .....
  - c) Discuss call by value and call by reference with suitable example.
  - d) Write a ‘c’ program to find reverse of a number.

(Turn over)

(2)

e) Write a 'c' program to display the following:

1

2 1 2

3 2 1 2 3

f) Write a 'c' program to sort out of integers using bubble sort method.

**3. Answer any two questions of the following: 8×1=8**

- a) Write a 'C' program to multiplication of two matrix.
- b) Write a 'C' program to check the number is palindromic or not.
- c) Write a 'C' program to find factorial and number using recursion.
- d) Write short notes on following: 2.5×4
  - i) Programming language.
  - ii) Modern computer architecture.
  - iii) Operating system
  - iv) www

**M2: Programming Concepts**

**Marks: 20**