

Code: CBCS11

Roll No. ....

**CBCS for PG Semesters-I Examinations-2017**  
**Computer Fundamentals**

Max Marks: 75

Time: 2 Hours

- Write your Roll No. on the top immediately on receipt of the question paper.
- Attempt ALL questions by selecting any TWO parts. All questions carry equal marks.

1. (a) Explain the followings:-

- Representation integer number in Computer Memory
- Unicode and ASCII.

(b) Carry out the following conversions:-

- $(200)_{10} = (?)_2$   $\rightarrow 11001000$
- $(110011001)_2 = (?)_{10}$   $\rightarrow 193$
- $(1010110101)_2 = (?)_{10}$   $\rightarrow 139$
- $(1024)_{10} = (?)_8$   $\rightarrow 2000$
- $(1FF)_{16} = (?)_{10}$   $\rightarrow 511$

(c) Briefly explain any two input and any two output devices. Is there any device which acts as an input as well as an output device? If yes, name the device(s).

2. (a) Explain full adder with the help of logic diagram and truth table.

(b) What is Multiplexer? Explain. Also, explain XOR gate.

(c) Explain register and cache memory, their advantages and need.

3. (a) What is functionality of Imperative Language? Explain with help of suitable examples.

(b) Explain the concepts of Object Oriented Programming. Also explain how is it different from procedural programming languages.

(c) Explain Machine Language and High Level Language with the help of examples. Also, Discuss their advantages and disadvantages, if any.

4. (a) What is real time operating system? How does it differ from normal operating system? Give examples.

(b) Explain the following:-

- Process, thread and program
- Process state and process control block

(c) Explain the following concepts:

- Multithreading and Multiprogramming OS
- Multitasking and Multiprocessing OS

5. (a) Discuss Network Topologies with their advantages and disadvantages, if any.

(b) What is a Computer Network? Explain the different type of Computer Networks. Also, explain about the firewall.

(c) How to develop Website using HTML? Explain with the help of one example.