

**Unique Paper Code : 62341101**  
**Name of the Course : B.A. (Prog.) Computer Applications**  
**Name of the Paper : Computer Fundamentals**  
**Semester : I**  
**Duration : 3 Hours**  
**Maximum Marks : 75**  
**Year of Admission : 2021-2022**

**Instructions for Candidates:**

**Attempt any four questions. All questions carry equal marks.**

Q1. Suppose you have purchased a computer system, what type of characteristics do you expect, explain at least five of them. Also, explain the areas where the computer system can be used. Give a brief description of the three main components of the computer.

Q2. Do the following:

- (i) Convert  $(111001.1101)_2$  to  $(\dots)_8$
- (ii) Convert  $(567.25)_8$  to  $(\dots)_{10}$
- (iii) Convert  $(26435.625)_{10}$  to  $(\dots)_{16}$
- (iv) Convert  $(AB.A8)_{16}$  to  $(\dots)_{10}$
- (v) Subtract  $(1011101)_2$  from  $(101101)_2$
- (vi) Subtract  $(100011)_2$  from  $(010010)_2$  using 1's complement
- (vii) Addition  $(1100110)_2$  and  $(101011)_2$

Q3. Explain the role of a device controller and a device driver for the peripheral devices in a computer system. Write about the various types of expansion slots used in a computer. Explain storage mechanism of a hard disk with the help of a diagram. What is the access time for a hard disk?

Q4. Explain the role of operating system in working of a standard computer. Differentiate between system software and application software. Describe any three-system utility software present in a standard system.

Q5. Differentiate between the following:

- (i) Joystick and Laser printer
- (ii) Sequential and Direct access
- (iii) OCR and Touch Screen
- (iv) OMR and Bar Code Reader
- (v) RAM and ROM

Q6. Write short notes on the following:

- (i) Characteristics of Data Mining and its five applications
- (ii) Advantages and disadvantages of four deployment model of cloud computing
- (iii) Role of Big Data in research, its characteristics, advantages and disadvantages