

**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 : 2019-2020**

**Instructions for Candidates:**

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

Q1. Explain the functioning of a computer system. Give the classification of computers according to their speed, capacity and purpose. Write any four applications of computers in education system.

Q2. (a) Convert the following numbers:

(i)  $(116.25)_{10} = ( \quad )_{16}$ .

(ii)  $(10111.010)_2 = ( \quad )_8$

(iii)  $(256.47)_8 = ( \quad )_{10}$

(iv)  $(BCD.A0)_{16} = ( \quad )_8$

(b) Perform the following arithmetic operation using signed 2's complement notation for negative numbers. Use 8 bits to accommodate each number together with its sign.

$(-34) + (-17)$

Q3. Differentiate between the following:

- (i) Serial Access and Random Access
- (ii) MICR and Bar-Code Reader
- (iii) Parallel port and Serial port
- (iv) Inkjet Printer and Laser Printer

Q4. Explain the memory hierarchy with the help of a diagram and categorize the various types of computer memory in terms of cost, storage and speed. Compare the features of primary memory with secondary memory.

- Q5. What do you mean by software package? Explain relationship between hardware and software. What is the role of system software in the computer system? Explain any four system software.
- Q6. Explain Cloud Computing and give its advantages as an emerging paradigm. What is the role of Cloud Computing in the field of research and education, with emphasis on its application in social sciences research?

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