

Sem-I

2020(Voc)

Time : 3 hours

Full Marks : 50

*Candidates are required to give their answers in
their own words as far as practicable.*

The figures in the margin indicate full marks.

Answer from all the Parts as directed.

Part – A

1. Multiple choice questions : 1×5 = 5

(a) Raw Data is processed by the system to
produce meaningful _____.

- (i) Information (ii) Bytes
(iii) Bits (iv) Datum
(v) None of these

(b) Which of the following is an example of
'Mechanical Analog Computer' ?

- (i) Television (ii) Slide Ruler
(iii) Oscilloscope (iv) Sound Processor
(v) All of these

(c) Which one of the following is an electromechanical input devices used for tactile sensing and fine-motion control in robotics and virtual reality ?

- (i) Digitizer (ii) Image Scanner
- (iii) Data Gloves (iv) All of these
- (v) None of these

(d) Which of the following statement(s) is / are correct about the BIOS ?

- (i) Program used by PC's Microprocessor
- (ii) Manages data flow between OS and devices attached to it
- (iii) Starts the Computer system after it is switched on
- (iv) All of the above
- (v) Only (iii)

(e) $(255)_{10} = (?)_{16}$

- (i) 0 (ii) F
- (iii) FB (iv) FD
- ~~(iv) FF~~

2. Fill in the blanks :

1×5 = 5

(a) video Raster Scanner is the rectangular pattern of image capture and reconstruction in any VDU.

- (b) Joystick is an input device consisting of a stick that pivots on a base which are used in Video Game Consoles.
- (c) Binary type data can take only possible values, 0 and 1.
- (d) Online processing involves continuous input, process, and output of data.
- (e) LAN is a type of computer network that connects standalone computers through an ethernet cable or through wireless technology.

Part – B

(Short-answer Type Questions)

There are four questions. Each question carries **five** marks. Answer any **two** questions. Each question should be answered in not more than **200** words :

$$5 \times 2 = 10$$

3. What is 'Data' in Computer Science ? Explain with example. Explain the storage units of Data-Byte and Word.
4. What is ROM ? write short notes on : PROM, and EPROM.
5. Explain the Gates – OR, AND, NOT and XOR of Boolean Algebra, with diagram.

$$A'B + AB'$$

$$A \oplus B$$

6. What is Batch Processing ? Explain with example.
How it is different from On-Line Processing ?

Part – C

(Long-answer Type Questions)

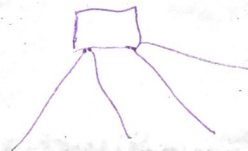
There are **five** questions. Each question carries **ten** marks. Answer any **three** questions.

$$10 \times 3 = 30$$

7. Explain 'Computer Network Topology' and its different types, with diagram.

8. Explain the following :

- (a) Winchester Disk
- (b) Magnetic Taped
- (c) SRAM
- (d) DRAM



9. What are Register memories ? Explain any 3(three) register memories.

10. What is Operating System Software ? Explain briefly its main features and functions ?

11. Explain any **two** of the following :

- (a) Microprocessor and its types
- (b) Transmission Media and its types
- (c) Internet, its merits and demerits
- (d) Difference between LAN and WAN