

2 0 2 1 (Voc)

Full Marks : 50

Time : 3 hours

The figures in the right-hand margin indicate marks

Answer from **all** the Sections as directed

Section—A

(Objective Type Questions)

1. Choose the correct answers from the given options of the following : 5×1

(a) Which of these parts would interpret a program's instructions to initiate the control operations?

- (i) Logic unit (ii) Control unit
(iii) Storage unit (iv) Input

(b) Which of these output devices are used for the translation of information from any computer into a pictorial form on the papers?

- (i) Card punch (ii) Touch panel
(iii) Plotter (iv) Mouse

(2)

(c) Which of the following devices can be used to directly input printed text?

- (i) OCR
- (ii) OMR
- (iii) MICR
- (iv) None of these

(d) Ethernet uses

- (i) BUS topology
- (ii) ring topology
- (iii) mesh topology
- (iv) star network

(e) A computer cannot 'boot' if it does not have the

- (i) compiler
- (ii) loader
- (iii) operating system
- (iv) assembler

2. Fill in the blanks of the following : 5×1

(a) ——— is the computer program that would convert an assembly language to the machine language.

(b) A memory that holds microprograms is ———.

(3)

- (c) The access method used for magnetic tape is ———.
- (d) ——— memories must be refreshed many times per second.
- (e) Daisy wheel printer is a type of ——— printer.

Section—B

(Short Answer Type Questions)

Answer *any two* questions of the following : 2×5

- 3. What is the function of a motherboard?
- 4. What are the different types of expansion slots?
- 5. Distinguish between Raster scanning and interleaved double scan.
- 6. Distinguish between digital and analog computer.

Section—C

(Long Answer Type Questions)

Answer *any three* questions : 3×10

- 7. Explain various types of plotters.

(4)

8. Describe the various types of secondary storage devices.

9. Write short notes on the following :

(a) SMPS

(b) RISC and CISC microprocessor

(c) Real-time processing.

10. Describe various applications of computer in business and industry, science and technology, education, health, communication, banking and other public services.

11. Convert the following to their given equivalent number system :

(i) $(11010111)_2 = (\underline{\hspace{2cm}})_8$

(ii) $(B561)_{16} = (\underline{\hspace{2cm}})_2$

(iii) $(121)_8 = (\underline{\hspace{2cm}})_{10}$

(iv) $(321)_{10} = (\underline{\hspace{2cm}})_8$

$$\begin{array}{r|l} 2 & 321 \\ \hline 2 & 160 & 1 \\ \hline 2 & 80 & 0 \\ \hline 2 & 40 & 0 \\ \hline 2 & 20 & 0 \\ \hline 2 & 10 & 0 \\ \hline 2 & 5 & 1 \\ \hline 2 & 2 & 1 \\ \hline 2 & 1 & 0 \end{array}$$

K2(H) = 600

$$\begin{array}{r|l} 2 & 5 \\ \hline 2 & 2 & 1 \\ \hline & 1 & 0 \end{array}$$

$$\begin{array}{r|l} 2 & 11 \\ \hline 2 & 5 & 1 \\ \hline 2 & 2 & 1 \\ \hline & 1 & 0 \end{array}$$
$$\begin{array}{r|l} 2 & 15 \\ \hline & 10 & 1 \\ \hline & 5 & 0 \\ \hline & 2 & 1 \\ \hline & 1 & 0 \end{array}$$

BCA (Sem - I) - (CC - 1) CF & O

$$2^8 \quad 2^7 \quad 2^6 \quad 2^5 \quad 2^4 \quad 2^3 \quad 2^2 \quad 2^1 \quad 2^0$$
$$101000001 - 2^0$$

$$\begin{array}{r} 256 \\ 64 \end{array}$$