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Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) **Attempt any SIX of the following :**   12

(i) Write any two modes of operation of CPU. Also mention one effect of each.

(ii) Write any four recording techniques.

(iii) Write two advantages and two disadvantages of LCD monitor.

(iv) Write four types of key switches used in keyboard.

(v) Write two advantages and two disadvantages of Opto-mechanical mouse.

(vi) State the meaning of black out and brown out problem in power supply.

(vii) Write any four important features of USB port.

(viii) Write two advantages and two disadvantages of Bluetooth.

Marks

b) **Attempt any <u>TWO</u> of the following :**   **8**

    (i)   Explain the terms extended memory and expanded memory with suitable example.

    (ii)   Explain the following

        1)   Interlaced scanning

        2)   Non interlaced scanning

    (iii) Draw functional block diagram of LCD monitor.

2.   **Attempt any <u>FOUR</u> of the following :**   **16**

a) Write any important function of BIOS.

b) Explain the following with the help of neat diagram :
    (i)   Track

    (ii)   Sector

    (iii) Cylinder

    (iv) Cluster

c) Draw and explain block diagram of CD drive.

d) Distinguish between FAT-32 and NTFS.

e) Write any four important characterstics of colour CRT monitor.

f) Draw and explain the block diagram of external modem.

Marks

3. Attempt any <u>FOUR</u> of the following :   **16**

  a) Describe the CMOS setup. State any two importances of CMOS setup.

  b) State the difference between touch screen monitor and normal LCD monitor.

  c) Draw and explain the RS232.

  d) What is POST ? Write applications of POST in trouble-shooting.

  e) Explain active and passive maintenance with suitable example.

  f) State and interpret the meaning of beep codes.

4. Attempt any <u>FOUR</u> of the following :   **16**

  a) Draw and explain the Block diagram flat bed scanner.

  b) Write any four important characteristics of Dot Matrix Printers.

  c) Draw the pin out diagram of ATX connector.

  d) What are the symptoms of power supply problem ?

  e) Draw and explain centronic interface diagram.

  f) Write any four firewire features.

5. Attempt any <u>TWO</u> of the following :   **16**

  a) Write two important features of the following :

    (i) SDRAM

    (ii) DDR

    (iii) Cache

    (iv) DDR2

  b) Draw and explain the north and south bridge chipset architecture.

  c) Draw and explain the Laser printer block diagram and mention any two important specifications.

Marks

6. **Attempt any <u>TWO</u> of the following :** 16

  a) Write two features of each of the following :

     (i) Jumper

     (ii) Blue Ray Disc

     (iii) SCSI

     (iv) IDE

  b) Mention differences between following :

     (i) IDE and SCSI

     (ii) IDE and SATA

  c) Draw and explain the functional block diagram of UPS.

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