

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

1. (a) Attempt any **SIX** of the following : **[12]**
(i) Define the terms cache hit and cache miss.
(ii) Enlist the types of key switches.
(iii) Write any four advantages of LCD display over CRT display.
(iv) Give any four features of USB.
(v) Write any two modes of operation of CPU. Also mention one effect of each.
(vi) Write two advantages and two disadvantages of Bluetooth.
(vii) What is FAT? List two features of FAT 32.
(viii) Give any four disadvantages of Ink-jet Printer.
- (b) Attempt any **TWO** of the following : **[8]**
(i) Explain conventional memory and extended memory.
(ii) With neat diagram describe working principle of plasma display.
(iii) With the block diagram, explain the working of dot matrix printer.
2. Attempt any **FOUR** of the following : **[16]**
(a) Write any important function of BIOS.
(b) With suitable diagram explain zone recording.
(c) Write any four important characteristics of colour CRT monitor.
(d) Explain the working of flat bed scanner with the help of neat diagram.
(e) Draw and explain the block diagram of external modem.
(f) What is formatting? Explain low level and high level formatting.
3. Attempt any **FOUR** of the following : **[16]**
(a) Describe the CMOS setup. State any two importance 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 **FOUR** of the following : **[16]**
(a) Write any four important characteristics of Dot Matrix Printers.
(b) Explain the working of optical mouse.

- (c) List and explain power supply characteristics.
- (d) With neat diagram explain :
 - (i) Surge (ii) Spike (iii) Blackout (iv) Brownout
- (e) What are the symptoms of power supply problem?
- (f) Draw and explain centronics interface diagram.

5. Attempt any **TWO** 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.

6. Attempt any **TWO** of the following : **[16]**

- (a) Describe Modified Frequency Modulation (MFM) and Run Length limited (RLL) techniques of recording with suitable example.
- (b) With the help of diagram explain the working of online UPS. Give the advantages of online UPS over offline UPS.
- (c) State any eight specifications of Blue ray disc with typical values.

