

# 17428

**21718**

**3 Hours / 100 Marks**

Seat No.

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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) 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) What is form factor? List different form factors of motherboard.
  - (ii) What is FAT? List features of FAT 32.
  - (iii) What is LCD? Write advantages of LCD.
  - (iv) What is RAM? Explain types of RAM.
  - (v) Compare online UPS and offline UPS (any 2 points)
  - (vi) Explain USB features.
  - (vii) State any four printer problems.
- b) **Attempt any TWO of the following:** **8**
- (i) Explain concept of cache memory with advantages and disadvantages.
  - (ii) List recording techniques. Explain MFM encoding scheme.
  - (iii) What are various key switches? Explain membrane switch.

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- 2. Attempt any FOUR of the following:** **16**
- a) Draw and explain North/South bridge architecture.
  - b) Explain hard disk drive construction.
  - c) Explain characteristic of CRT monitor.
  - d) With neat diagram explain working of opto mechanical mouse.
  - e) Draw and explain linear power supply.
  - f) Explain SCSI connectors.
- 3. Attempt any FOUR of the following:** **16**
- a) Draw and explain various terms related to hard disk.
  - b) Draw and explain block diagram of CRT colour monitor.
  - c) Explain working of flat bed scanner with the help of block diagram.
  - d) Explain following terms related to power supply problem:
    - (i) Blackouts
    - (ii) Brownouts
    - (iii) Surge
    - (iv) Spikes
  - e) Explain RS32 interface basics.
  - f) Explain any two types of maintenance of PC.
- 4. Attempt any FOUR of the following:** **16**
- a) List and explain processor modes.
  - b) Explain formatting in detail.
  - c) Explain LCD matrix types.
  - d) Describe different stages of the process of printing a document on laser printer.
  - e) Draw and explain block diagram of general UPS.
  - f) What is POST? Enlist different error codes and respective meaning provided by POST.

**5. Attempt any TWO of the following:****16**

- a) Explain AGP with its types. Write advantages of AGP over PCI.
- b) Describe FAT and explain FAT types compare FAT and NTFS.
- c) Explain working of Inkjet printer with neat block diagram.

**6. Attempt any FOUR of the following:****16**

- a) Explain PCI-X bus of pentium IV mother board.
  - b) State meaning of cluster? How it is rectified.
  - c) Explain block diagram of video accelerator card.
  - d) Explain use of output voltage of SMPS.
  - e) What is centronics? Explain modes of operations of centronics interface.
  - f) Explain any one software tool for debugging PC.
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