

17428

21314

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.
- (7) Preferably, write the answers in sequential order.

Marks

1. a) Attempt any **SIX** of the following: **12**
- i) Define the terms cache hit and cache miss.
 - ii) Give four specifications of Blue-ray disk.
 - iii) State any two differences between interlaced and non-interlaced monitor.
 - iv) State any four printer characteristics.
 - v) Enlist the types of keyswitches.
 - vi) What is 'Power Good Signal'? What is its use?
 - vii) List any four firewire features.
 - viii) State any four bluetooth features.

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- b) **Attempt any TWO of the following:** **8**
- i) Compare DDR2 and DDR3 with respect to clock frequency, transfer rate, bank used and voltage required.
 - ii) Describe the construction and working of resistive touch screen display.
 - iii) With neat block diagram, describe video accelerator card.
2. **Attempt any FOUR of the following:** **16**
- a) What factors to be considered in the selection of motherboard? (any four)
 - b) With suitable diagram explain zone recording.
 - c) With suitable diagram explain write precompensation.
 - d) Explain following terms related to hard disk-cluster, cylinder, sector, landing zone.
 - e) Describe any four characteristics of CRT monitor.
 - f) Explain the working of flat bed scanner with the help of neat diagram.
3. **Attempt any FOUR of the following:** **16**
- a) Compare PCI with PCI - express bus.
 - b) Describe the construction and working of plasma display.
 - c) Explain four features of USB.
 - d) Differentiate between active and passive preventive maintenance with example.
 - e) Draw and explain the use of logic probe.
 - f) Give the meaning of following POST beep codes -
 - i) 1 short beep
 - ii) No beep
 - iii) Continuous beep
 - iv) 2 short beeps

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

- a) What is modem? Explain working of external modem with suitable diagram.
- b) Explain the working of optical mouse.
- c) List and explain power supply characteristics. (any four)
- d) With neat diagram explain
 - i) Surge
 - ii) Spike
 - iii) Blackout
 - iv) Brownout
- e) Explain the following RS-232 signals -
 - i) TXD
 - ii) RXD
 - iii) RTS
 - iv) CTS
- f) Draw the timing diagram of centronics interface and explain.

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

- a) What are the different modes of operation of CPU. Explain any two.
- b) Draw the block diagram of Northbridge / Southbridge architecture and describe various blocks.
- c) With the block diagram, explain the working of dot matrix printer.

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) Enlist types of servo techniques. Describe embedded servo technique with diagram.
 - c) With the help of diagram explain the working of online UPS. Give the advantages of online UPS over offline UPS.
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