

17428

21819

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) 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 BIOS?
- (ii) List four recording techniques used in storage devices.
- (iii) What is dot pitch and frame rate?
- (iv) Define:
 - 1) Blackout
 - 2) Surge
- (v) What is cache memory?
- (vi) State any two differences between interlaced and non-Interlaced monitor.
- (vii) List any two features of SD-RAM.
- (viii) Write any four advantages of CRT display.

P.T.O.

- b) **Attempt any TWO of the following:** **8**
- (i) Describe the working of inkjet printer with the help of its block diagram.
 - (ii) State and explain the features of USB.
 - (iii) Draw and explain the block diagram of flatbed scanner.
2. **Attempt any FOUR of the following:** **16**
- a) Compare between the real mode and protected mode of processors (four points).
 - b) Draw the waveform of FM, MFM and RLL for 11100011.
 - c) Explain video accelerator card with neat diagram.
 - d) Explain opto-mechanical mouse with neat diagram.
 - e) Differentiate between firewire and USB.
 - f) Draw the block diagram of logic analyzer and explain it.
3. **Attempt any FOUR of the following:** **16**
- a) Define the terms related to hard disk drive.
 - (i) Track
 - (ii) Sector
 - (iii) Cluster
 - (iv) Cylinder
 - b) Explain active matrix and passive matrix LCD.
 - c) Explain the block diagram of internal modem.
 - d) With neat diagram explain the working of SMPS.
 - e) Draw the diagram of centronic interface and explain it.
 - f) What is active and passive preventive maintenance?

- 4. Attempt any FOUR of the following:** **16**
- a) Explain the term extended memory.
 - b) Explain the terms low level and high level formatting.
 - c) Describe any four characteristics of CRT color monitor.
 - d) Explain the working of offline UPS with neat diagram.
 - e) Explain the sequence of events in RS-232 communication.
 - f) Explain the POST sequence in detail.
- 5. Attempt any TWO of the following:** **16**
- a) Draw the block diagram of North Bridge/South Bridge architecture and explain it in detail.
 - b) Write about the hard disk drive construction and working with neat labeled diagram.
 - c) Name the different types of key switches in keyboard. Explain the principle of working of any one in detail.
- 6. Attempt any TWO of the following:** **16**
- a) Explain three modes of operation of CPU.
 - (i) Real mode
 - (ii) Virtual real mode
 - (iii) Protected mode
 - b) Write about the Blue Ray Disc Specification.
 - c) Draw 20 pin ATX power connector with color code and state the function of PS-ON, 5VSB, PW-OFF signals.
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