

# 12186

**21112**

**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.

- |   | <b>Marks</b> |
|---|--------------|
| <b>1. (A) Attempt any THREE :</b>                                 | <b>12</b>    |
| (a) Compare PCI and PCI Express.                                  |              |
| (b) Explain the terms related to Hard Disk :                      |              |
| (i) MBR (ii) Zone recording                                       |              |
| (c) Draw and explain the functional block diagram of LCD display. |              |
| (d) Explain any four features of USB.                             |              |
| <b>(B) Attempt any ONE</b>  | <b>6</b>     |
| (a) Draw RS 232 signal interface and explain the signals.         |              |
| (b) Draw and explain the block diagram of Laser Printer.          |              |
| <b>2. Attempt any FOUR :</b>                                      | <b>16</b>    |
| (a) Explain power supply characteristics.                         |              |
| (b) Explain active preventive maintenance.                        |              |
| (c) Explain any four features of firewire.                        |              |
| (d) Draw the architecture of Intel chipset 915G.                  |              |
| (e) Draw and explain the block diagram of internal modem.         |              |
| (f) Explain the working of logic probe and logic pulser.          |              |

**P.T.O.**

- 3. Attempt any FOUR :** **16**
- (a) Explain any four characteristics of CRT monitor.
  - (b) Explain features of PATA.
  - (c) What is BIOS ? Explain the functions of BIOS.
  - (d) Draw the waveform in FM and MFM recording technique for the bit pattern 101101011.
  - (e) Explain any four advantages of LCD over CRT monitor.
- 4. (A) Attempt any THREE :** **12**
- (a) Explain preventive maintenance of keyboard.
  - (b) Draw and explain the block diagram of UPS.
  - (c) Draw the construction of optomechanical mouse and explain its working.
  - (d) What is cache memory ? Explain the different types of cache memory.
- (B) Attempt any ONE :** **6**
- (a) Draw and explain block diagram of video accelerator card.
  - (b) Draw and explain centronics interface.
- 5. Attempt any FOUR of the following :** **16**
- (a) Explain expanded memory with diagram.
  - (b) Draw North / South Bridge architecture.
  - (c) Explain High level formatting.
  - (d) Draw the block diagram of scanner and explain its working.
  - (e) Explain passive preventive maintenance.
  - (f) Diagnose the following problem :  
“Junk character displayed on the screen”.
- 6. Attempt any FOUR :** **16**
- (a) Draw and explain the block diagram of SMPS.
  - (b) Compare between Dot Matrix and Laser Printer.
  - (c) Draw and explain the construction of CD-ROM drive.
  - (d) Explain the features of AGP.
  - (e) Draw and explain mechanical and membrane key switches.
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