



12186

13141

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.

MARKS

1. A) Attempt **any three** : 12
- a) What is formatting ? Explain partitioning.
 - b) Explain the working of optical mouse. What are advantages of an optical mouse over an optomechanical mouse ?
 - c) List eight features of fire wire.
 - d) Explain electrostatic discharge.
- B) Attempt **any one** : 6
- a) Draw the block diagram and explain the working of off line UPS. Explain its advantages and disadvantages.
 - b) Give the 9 pin signal description with working of RS-232 communication with the help of neat diagram.
2. Attempt **any four** : 16
- a) Explain concept of cache memory. Also explain extended memory.
 - b) Differentiate between XT-type and AT-type motherboard.
 - c) Explain following terms :
 - i) Cluster
 - ii) Sector cylinder
 - iii) Track
 - iv) MBR
 - d) Give the construction of DVD. Also explain recording of it.
 - e) Draw block diagram of CRT colour monitor. Also explain functions of each block.
 - f) Describe working of LCD monitor with neat block diagram. Also state important characteristics of LCD monitor.

P.T.O.



3. Attempt **any four** : 16
- a) Draw the block diagram of flat bed scanner and explain.
 - b) Explain the working of inkjet printer with neat block diagram. Give its specifications.
 - c) Sketch and label block diagram of SMPS. Describe the function of PWM in SMPS.
 - d) Explain the working of surge suppressor.
 - e) What is SCSI ? Explain SCSI drive configuration.
4. A) Attempt **any three** : 12
- a) Give the overview and features of SDRAM and DDR.
 - b) Explain FM encoding scheme with its advantages.
 - c) Explain two features of each :
 - i) PATA
 - ii) SATA
 - d) Draw and explain block diagram of video accelerator card.
- B) Attempt **any one** : 6
- a) Compare Architecture of intel chip 915G and 945G.
 - b) What is preventive maintenance ? Give reason and explanation of three problems. Also explain their troubleshooting techniques.
5. Attempt **any four** : 16
- a) Explain the working of Hard disk with its construction.
 - b) Explain RLL and MFM data recording techniques. Draw waveform for data 10011100.
 - c) What is modem ? Draw and explain block diagram of external modem.
 - d) Write the construction and working of keyboard. Also give the installation procedure.
 - e) Explain the interface diagram of centronics.
 - f) Explain the working of logic probe.
6. Attempt **any four** : 16
- a) List and explain the four functions of BIOS Basics.
 - b) Compare passive matrix and active matrix. Give important characteristics.
 - c) Explain block diagram of Laser printer. Also give the specifications of it.
 - d) List the output voltages of ATX power supply and their uses.
 - e) Explain preventive maintenance of peripherals of PCS.
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