

Scheme-G

Sample Test Paper- I

Course Name :- Diploma in Computer Engineering Group

Course Code :- CO /CD /CM / CW /IF

Semester :-Fourth

Subject Title :- Computer Hardware & Maintenance

Marks :- 25

17428

Time:- 1 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any THREE of the following

(9 Marks)

- a. State any three functions of BIOS.
- b. What is FAT? Enlist different types of FAT.
- c. What are the advantages of LCD monitor over CRT monitor?
- d. Describe the use of address bus, data bus, and control bus.

Q2. Attempt any TWO of the following

(8 Marks)

- a. State any four differences between interlaced and non-interlaced monitor.
- b. For the data stream 10110111 how MFM recording technique will be applied?
- c. What is cache memory? What is L1, L2, L3 cache?

Q3. Attempt any TWO of the following

(8 Marks)

- a. Define the terms related to CRT monitor: Frame rate, video band width, Resolution, Dot Pitch.
- b. Draw the block diagram of North bridge / South bridge architecture and describe the various blocks.
- c. Enlist types of servo techniques. Describe embedded servo technique.

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Sample Test Paper- II

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Course Code :- CO /CD /CM / CW /IF

Semester :-Fourth

Subject Title :- Computer Hardware & Maintenance

Marks :- 25

17428

Time:- 1 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q.1 Attempt any THREE of the following

(9 Marks)

- a. Give advantages of ink jet printer over dot matrix printer. (any three)
- b. Define: Blackout, Brownout, and Surge.
- c. Describe any three signals from printer to PC in centronics interface.
- d. State any three applications of BGA work station

Q.2 Attempt any TWO of the following

(8 Marks)

- a. Write the working principle of mechanical key switch with neat diagram.
- b. With the help of suitable block diagram explain working of UPS.
- c. Give four features of USB.

Q.3 Attempt any TWO of the following

(8 Marks)

- a. List any four virus infection symptoms. What precaution should be taken to prevent virus infection?
- b. Draw the block diagram of RS232 connector and give the function of each signal.
- c. With neat sketch describe external modem.

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Sample Question Paper

Course Name :- Diploma in Computer Engineering Group

Course Code :- CO /CD /CM / CW /IF

Semester :- Fourth

Subject Title :- Computer Hardware & Maintenance

Marks :- 100

17428

Time:- 3 hour

Instructions:

- 1) All questions are compulsory
- 2) Illustrate your answers with neat sketches wherever necessary
- 3) Figures to the right indicate full marks
- 4) Assume suitable data if necessary
- 5) Preferably, write the answers in sequential order

Q.1) (A) Attempt any SIX:

12 Marks

- a. Write any four features of PCI bus.
- b. Write any two features each of FAT32, NTFS, File System.
- c. Write any four advantages of CRT display over LCD display.
- d. Define the terms TWAIN, and OCR with reference to scanner.
- e. Give disadvantages of ink jet printer. (Any two points)
- f. Define Line regulation and load regulation for a power supply.
- g. Give any four features of SCSI-3.
- h. List any four firewire features.

Q.1) (B) Attempt any TWO

8 Marks

- a. Compare DDR2 and DDR3 (Any four points)
- b. Describe the construction and working of plasma display.
- c. Compare the characteristics of CRT and LCD monitors (Any four)

Q.2) Attempt any FOUR:

16 Marks

- a. State any four features of P67 chipset.
- b. Describe the following terms related to hard disk: MBR, sector, Cylinder, Track

- c. Describe Write pre compensation with its use.
- d. Describe use of jumper selections. (Any four)
- e. Describe any six characteristics of CRT color monitor.
- f. List any four advantages of optical mouse.

Q.3) Attempt any FOUR:

16 Marks

- a. What is hyper threading technology? What is its requirement?
- b. Write any four differences between CRT and LCD.
- c. Explain the sequence of events in RS- 232 communication with signals.
- d. Name two hardware tools and two software tools used for trouble shooting of PC.
- e. Describe logic Analyser and state its two advantages
- f. Give the test sequence of POST.

Q.4) Attempt any FOUR:

16 Marks

- a. With neat diagram explain the working of opto mechanical mouse.
- b. With neat diagram explain the working principle of flat bed scanner.
- c. Give the signal voltages for following colors of ATX connectors: Red, Black, Orange and Purple.
- d. State four advantages of UPS over normal power supply.
- e. Sate four feature of USB.
- f. Draw the diagram of centronics interface and explain function of any four signals.

Q.5) Attempt any TWO:

16 Marks

- a. What is cache hit and cache miss? Describe L1, L2 and L3 cache.
- b. State any eight motherboard selection criterion.
- c. Explain the working of dot matrix printer with neat diagram.

Q.6) Attempt any TWO:

16 Marks

- a. With suitable block diagram, describe the construction of CDROM drive.
- b. Describe frequency modulation (FM) and modified frequency modulation (MFM) method of recording with suitable example.
- c. With suitable block diagram describe the working of SMPS.