G 444

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B.TECH. DEGREE EXAMINATION, MAY 2014

Sixth Semester

Branch : Computer Science and Engineering

PC AND PC BASED SYSTEMS (R)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions briefly.
Each question carries 3 marks.

1. With a general block diagram, explain the various units in a linear power supply.
2. List any *four* types of bus with a brief introduction of them.
3. What are the different factors considered while choosing a hard disk type ?
4. Explain the logical block addressing principles.
5. Describe the operation of WORM devices.
6. Explain the data storage and reading from DVD.
7. What is the principle of Cache memory ? How the computation speed can be increased using it ?
8. With a neat diagram, explain the principle of a DRAM.
9. Explain how PCMCIA bus is used in a laptop.
10. Explain the bus mastering concept.

(10 × 4 = 40 marks)

Part B

Answer all questions.
Each question carries 12 marks.

11. With neat diagrams, explain the various units and their functions, in a motherboard.

Or

12. With neat diagrams, describe the different standard ports, slots and connectors and the purposes for which they are used ?

Turn over

13. Describe the operation of a HDD. How data is stored in it and read from it ? How it is (i) formatted ; and (ii) partitioned ?

Or

14. Explain the following types of data transfer schemes on hard disk (i) Programmed type ; (ii) DMA ; and (iii) Ultra DMA. Compare and contrast between them.

15. Describe the principle of CD-RW with reference to storage and reading of data. Explain the drive specifications.

Or

16. (a) Describe the principle of working of a magneto-optical drive.

   (b) What is the principle of holographic storage ? What are its merits and applications ?

17. Explain clearly 64 KB limits and 640 kB barrier. What are its significances ?

Or

18. Describe the principle of any *two* types of advanced memory technologies. What are their merits ?

19. Draw the conceptional diagram of PCI bus. Explain any *one* configuration clearly, giving its advantages.

Or

20. With neat diagrams, describe the working principle of (i) standard keyboard ; (ii) mouse. Also show clearly, how they are interfaced to the system.

(5 × 12 = 60 marks)