

G 1854

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2012

Fourth Semester

Branch : Information Technology

IT 010 403—COMPUTER ORGANIZATION AND ARCHITECTURE (IT)

(Regular-2010 Admissions)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. Explain functional components of a computer.
2. Discuss the importance of ALU and Control unit.
3. Differentiate SRAM with DRAM.
4. Discuss the importance of I/O ports.
5. What are issues of a deadlock ? Explain.

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. Distinguish between autoincrement and autodecrement addressing mode.
7. What are the advantages and disadvantages of hardwired and microprogrammed control ?
8. Briefly explain different address translation schemes.
9. Discuss the operation of any two output devices.
10. Write a short note on Interconnection Network.

(5 × 5 = 25 marks)

Part C

Answer either (a) or (b) section of each module.

Each question carries 12 marks.

11. (a) Distinguish between RISC and CISC architecture.

Or

(b) Write a short note on functional components of a computer.

12. (a) What is instruction hazard ? Explain the methods for dealing with the instruction hazards.

Or

(b) What are the special registers in a typical computer ? Explain their purposes in detail.

Turn over

13. (a) Briefly explain organization of a cache memory.

Or

(b) Explain how the virtual address is converted into real address in a paged virtual memory system.

14. (a) Explain in detail about interrupt handling.

Or

(b) Describe the functions of SCSI with a neat diagram.

15. (a) Discuss the design issues of pipeline architecture.

Or

(b) Explain the different issues of deadlock, and scheduling.

(5 × 12 = 60 marks)