

2122
B.E. (Information Technology)
Third Semester
PC-IT-302: Computer Architecture and Organization

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following:-

- a) What is meant by pseudoinstruction?
- b) How control memory is different from main memory?
- c) What is Hit Ratio?
- d) What is cycle stealing?
- e) What is virtual memory?
- f) Explain synchronous and asynchronous data transfer.
- g) What is the use of program Counter register?
- h) How logical shift is different from arithmetic shift operation?
- i) What do you mean by divide overflow?
- j) Explain the term Instruction format. (10x1)

UNIT - I

- II. a) What do you mean by hardwired Control unit? Explain with the help of diagram.
b) What is sequencer in microprogrammed control organization? What are its functions? Explain. (5,5)
- III. a) Compare RISC and CISC characteristics.
b) Write a short note on Interrupt cycle. (5,5)
- IV. a) Explain stack organization and compare it with general Register organization with example.
b) What is meant by processor level design? Explain. (5,5)

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(2)

UNIT - II

- V. a) Explain the memory management hardware.
b) What is virtual memory? Explain the concept of paging and segmentation in detail. (5,5)
- VI. a) Differentiate between tightly coupled and loosely coupled multiprocessor system.
b) What do you mean by Interconnection structure? Explain in detail. (5,5)
- VII. a) Differentiate between Memory space and address space.
b) Differentiate between Burst transfer and cycle stealing
c) Write short note on I/O processor (3,4,3)

x-x-x