

B.Tech II Year II Semester (R19) Regular Examinations September/October 2021

COMPUTER ORGANIZATION

(Common to CSE & IT)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- List and explain the types of computers.
 - Explain the basic operations of computer briefly.
 - Write a short note on fast multiplication.
 - Write micro-operations for ADD R1, (R2).
 - What are the differences between the static and dynamic RAM.
 - List and explain briefly the types of ROM.
 - Explain about USB port briefly.
 - List the differences between parallel and serial port.
 - Write a short note on array processor.
 - Explain the basic concept of parallel processing.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Explain in detail about functional unit of digital computer.
(b) Briefly explain about bus structure.

OR

- 3 (a) List and explain the different types of number representation with an example.
(b) Explain the concept of integer flow in arithmetic.

UNIT – II

- 4 (a) Briefly explain the Booth algorithm with an example.
(b) Explain about full adder.

OR

- 5 (a) Explain the micro programmed control unit and control signals is generated using micro program.
(b) Explain the concept of multiple bus structure.

UNIT – III

- 6 (a) Write a short on mapping functions.
(b) What is locality of reference? Explain.

OR

- 7 (a) What is TLB? Explain address translation in virtual memory with neat diagram.
(b) Give a short note on magnetic disk principles.

UNIT – IV

- 8 (a) With neat diagram, explain the concept of I/O interface for input device.
(b) Give a short note on exceptions.

OR

- 9 (a) What are the uses of DMA controller in computer system?
(b) List and explain the standard interfaces used in the computer system.

UNIT – V

- 10 (a) List any three-interconnect network and explain in detail with neat diagram.
(b) List the differences between the UMA and NUMA.

OR

- 11 (a) What is hazard? List the different types of hazards.
(b) With neat timing diagram, explain the instruction pipeline.
