

13003

MCA DEGREE EXAMINATION, DECEMBER 2019.

FIRST SEMESTER

Paper III – COMPUTER ORGANIZATION

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceeding 1 page

1. What are decoders and encoders
2. What is the purpose of digital logic circuit?
3. What is address sequencing
4. Write about micro instruction and micro program
5. What is stack organization
6. What is instruction set
7. Describe memory hierarchy
8. Give a note on instruction pipeline

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceeding 6 page

9. Write a short note on the following
  - (a) flip flops
  - (b) logic gates
  - (c) binary counters

Or

10. Write a short note on the following
  - (a) Boolean algebra
  - (b) map simplification
  - (c) Combinational circuits

11. With a block diagram explain the organization of micro programmed control unit.

Or

12. What is registrar transfer language? Discuss about register transfer and bus and memory transfer
13.
  - (a) Explain the various phases of an instruction cycles in detail
  - (b) Discuss about CPU organization and general register organization

Or

14. What are addressing modes? Explain the various addressing modes in detail with an example for each
15. (a) Discuss about pipeline and vector processing with a neat diagram.
- (b) What is virtual memory? With a neat diagram explain the method for translating virtual address to physical address.

Or

16. Write a short note on
- (a) Main Memory
- (b) Memory address maps
- (c) Memory management hardware

