C14–CM–304/C14–IT–**304**

4234

BOARD DIPLOMA EXAMINATION, (C–14)
MARCH/APRIL—2017
DCME—THIRD SEMESTER EXAMINATION

COMPUTER ORGANIZATION

Time : 3 hours] [*Total Marks* : 80

PART—A 3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Differentiate between microoperation and macrooperation.

2. Write about floating-point representation with an example.

3. Compare floating-point and fixed-point representations.

4. List addressing modes.

5. Write about two-address instruction with example.

6. Distinguish between main memory and auxiliary memory.

7. Briefly explain about handshacking.

8. Distinguish between system bus and data bus.

9. Explain about asynchronous data transfer.

10. List characteristics of pipeline processing.

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Draw the block diagram of accumulator based CPU and explain functions of each unit.

12. *(a)* Define sequential execution of stored program.   5

(b) Explain about binary fixed-point representation.   5

13. Explain fixed-point addition and subtraction with neat sketch.

14. Explain floating-point multiplication with neat sketch.

15. Explain the principle of virtual memory organization in a computer system.

16. *(a)* Explain about *(i)* destructive readout, *(ii)* dynamic storage and *(iii)* volatile memory.   2+2+2=6

(b) Explain about programmed I/O data transfer.   4

17. Explain DMA controlled data transfer.

18. *(a)* Write about polling.   5

(b) List any five advantages of parallel processing and pipeline processing.   5

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