

14-17-18

23.05.2019

Paper / Subject Code: 39404 / COMPUTER ORGANIZATION AND ARCHITECTURE

Q.P. Code :23709

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Question.No.1 is compulsory.
 2. Solve any **three** questions out of remaining five questions.
 3. Assume suitable data if necessary
 4. Figures to right indicate marks

Q. 1 Solve **any four** out of five.

- a) Write a note on Computer evolution. (05)
- b) Draw and explain 6 stage instruction pipeline. (05)
- c) What are the various functions performed by I/O module? (05)
- d) Differentiate between SRAM & DRAM. (05)
- e) Represent $(5.125)_{10}$ in IEEE 754 single precision floating point standard. (05)

Q. 2

- a) Multiply (-5) and (2) using Booth's Algorithm. (10)
- b) Discuss various pipeline hazards with example (10)

Q. 3

- a) Explain the register organization of a CPU (10)
- b) Consider the string 8,3,9,4,9,8,5,8,3,9,6,7,5,4,3,9,4,9,3 Find the page faults for 3 frames using FIFO, Optimal, & LRU page replacement policies (10)

Q. 4

- a) Divide 4 by 2 using non restoring division algorithm. (10)
- b) Explain Flynn's classification in detail. (10)

Q. 5

- a) Discuss the various characteristics of Memory. (10)
- b) Explain design of control unit w.r.t. microprogrammed and hardwired approach. (10)

Q. 6

- a) Explain different addressing modes with example (10)
- b) What is the need of DMA? Explain its various techniques of data transfer. (10)
