SG | IT | CBGS | IV | COA | 12 | 12 | M

Sub:- Computer Organization and Architecture

Q.P. Code :23710

[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 Attempt **any 4** sub questions.

a) Define the terms Computer Organization and Computer Architecture. (05)
b) Draw and explain single and double precision IEEE 754 binary floating point representation formats. (05)
c) List and Explain important parameters significant in choosing a computer memory. (05)
d) Draw and explain five stage instruction pipelining. (05)
e) Explain Programmed I/O technique of Data transfer. (05)

Q. 2 a) Calculate the number of page hits and faults using FIFO, LRU and OPTIMAL page replacement algorithms for the following page frame Sequence: 5,6, 6, 3, 8, 5, 7, 8, 6, 5, 8, 5. (FRAME SIZE = 3). (10)
b) Draw and explain basic instruction execution cycle. (10)

Q. 3 a) Explain memory hierarchy of a computer. (10)
b) Describe Flynn's classification in detail. (10)

Q. 4 a) Describe different addressing modes. (10)
b) Draw the flowchart of Booths algorithm and multiply (6)*(-4) using Booths algorithm. (10)

Q. 5 a) Explain interrupt driven I/O technique of Data transfer. (10)
b) Explain hardwired approach to the design of a control unit. (10)

Q. 6 Write notes on **(any three)** (20)
a) Register Organization of a processor
b) Von Neumann architecture
c) Associative memory
d) Nano Programming
e) Pipeline Hazards

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Seat No:-

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