

Q.P. Code :23693

[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 question out of remaining five question.
 3. Assume suitable data if necessary
 4. Figures to right indicate marks.

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| Q.1 | Solve any four out of five | 20 |
| | <ol style="list-style-type: none"> a) Write a note on scanner b) Draw and explain the flowchart of Add & shift method of integer multiplication c) Briefly explain Flynn's classification d) With the help of diagram, explain Von- Neumann's architecture e) What are the major functions of I/O module? | |
| Q.2 | <ol style="list-style-type: none"> a) Divide 6 by 2 using restoring division algorithms b) Discuss various pipline hazards with example | 10
10 |
| Q.3 | <ol style="list-style-type: none"> a) Multiply (-2) and (2) using Booth's Algorithm. b) Consider the string 9,4,2,3,2,9,5,9,4,2,6,7,5,3,4,2,3,2,4,
Find the page faults for 3 frames using FIFO, Optimal & LRU page replacement policies | 10
10 |
| Q.4 | <ol style="list-style-type: none"> a) Explain various cache mapping function b) Draw and explain instruction cycle with interrupt execution | 10
10 |
| Q.5 | <ol style="list-style-type: none"> a) Explain the various characteristics of memory b) Describe the register organization within the CPU | 10
10 |
| Q.6 | <ol style="list-style-type: none"> a) What is bus arbitration? Explain its techniques b) What is the need of DMA? Explain its various techniques of data transfer | 10
10 |