



Computer Organisation (174114 / 224114)

P. Pages : 2

Time : Three Hours

Max. Marks : 80

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Answer **any two** sub questions from each unit.
5. Figures to right indicate full marks.
6. Assume suitable data if necessary.

UNIT - I

1. Processor P_0 , P_1 , P_2 and P_3 are zero, one, two and three address processor respectively. Write down set of instructions for P_0 , P_1 , P_2 , P_3 to compute functions.
 $Z = [(A - B) \times (C + D)] + E$ 8
2. Draw and discuss different bus structure used to connect basic functional unit of computer to form a operational system. 8
3. Explain any five general addressing modes with suitable example. 8

UNIT - II

4. Perform division using Non - Restoring algorithm. 8
 - i) $13 \div 9$
 - ii) $15 \div 6$
5. Perform multiplication using bit pairing method.. 8
 - i) 33×15
 - ii) -18×22
6. Perform multiplication using Booths algorithm. 8
 - i) -17×15
 - ii) -12×13

UNIT - III

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| 7. | Explain basic organization of micro programmed control unit along with organization of control unit to allow conditional branching in micro program. | 8 |
| 8. | Explain Wilkes design by drawing labelled diagram. | 8 |
| 9. | Explain single bus organization of data paths inside CPU with suitable diagram. | 8 |

UNIT - IV

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| 10. | Write short note on.

i) Flash Memory

ii) SDRAM. | 8 |
| 11. | Explain concept of virtual memory. How address translation takes place in virtual memory ? | 8 |
| 12. | Explain Associative mapped cache and set associative mapped cache techniques used in cache organization. | 8 |

UNIT - V

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| 13. | Compare features of RISC and CISC. | 8 |
| 14. | Write note on.

i) Initiator and target concept in SCSI.

ii) USB objectives. | 8 |
| 15 | Write short notes on.

i) Bus arbitration using polling.

ii) Bus arbitration using daisy chaining. | 8 |
