

B.E. Seventh Semester (Electrical Engineering (Electronics & Power)) (CGS)

10576 : Elective - I : Computer Organization

7 EP 05 / 7 EX 05 / 7 EL 05 / 7 EE 05

P. Pages : 2

Time : Three Hours



AU - 2910

Max. Marks : 80

- Notes :
1. Due credit will be given to neatness and adequate dimensions.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.
 4. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) With the help of flowchart explain a typical instruction cycle. 8
b) Explain the big endian assignment with example. 6

OR

2. a) Explain the various component of computer with block diagram. 6
b) Explain the following addressing modes with example- 8
 - i) Indirect
 - ii) Relative
 - iii) Register
 - iv) Autoincrement
3. a) Draw and explain Register transfer mechanism of single bus organization. 6
b) What do you mean by micro-instruction? Describe a typical micro-instruction format. 7

OR

4. a) Explain hardwired control unit with the help of diagram. 6
b) Explain the execution of complete instruction. 7
5. a) What is Interrupt? Explain implementation of interrupt priority using individual interrupt request and acknowledge lines with the help of diagram. 7
b) Briefly describe the SCSI bus signals. 6

OR

6. a) How DMA controller is used in computer system? Explain with diagram. 7
b) What is Bus arbitration? Explain in brief centralized arbitration. 6
7. a) Explain the following: 8
 - i) Latency
 - ii) Bandwidth
 - iii) Fast page mode
 - iv) Double Data rate
- b) Draw and explain the connection of the memory to the processor. 6

OR

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|----|----|--|---|
| 8. | a) | Explain the terms hit rate and miss penalty. | 7 |
| | b) | Draw the diagram of synchronous DRAM and explain it briefly. | 7 |
| 9. | a) | Explain signed addition and subtraction with suitable example. | 6 |
| | b) | Explain Binary multiplier using sequential circuits. | 7 |

OR

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|-----|----|---|---|
| 10. | a) | Draw and explain four bit carry look ahead adder. | 7 |
| | b) | Explain the rules for performing arithmetic operations on floating point number system. | 6 |
| 11. | a) | Explain the use of Modem in communication Network. | 6 |
| | b) | Explain the working of keyboard and Mouse. | 7 |

OR

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| 12. | a) | What is Modem? Explain its working in detail. | 6 |
| | b) | Explain working of magnetic disk in terms of organisation and accessing of data on disk. | 7 |
