AE - 2318

M. C. A. First Semester / PGDCS First Semester (New)

Computer Organization

1 CS 1 / 1 MCA 1

P. Pages : 4

Time : Three Hours   Max. Marks : 80

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

1. a) Explain in brief the concept of operating system and its characteristics.   **6**

   b) Give the definition of speedup and explain Amdahl's law.   **7**

OR

2. a) Explain Computer Organization in a third generation computer with IBM 360.   **7**

   b) Draw processor block diagram and explain the processor and memory unit.   **6**

3. a) Explain in brief design of ALU and draw combinational logic circuit based ALU.   **7**

b) Explain with example, integer division with restoring algorithm. 7

OR

4. a) Explain binary coded decimal and add BCD number od89 & od22. 8

b) Explain IEEE 754 standard and its format. 6

5. a) Describe arithmatic instruction, logical instruction, compare & test instruction. 7

b) Describe the following terms. 7

   i) Stack based organization.

   ii) Processor organization.

   iii) Register organization.

OR

6. a) What is meant by instruction set ? Explain types and elements of instruction set. 7

b) What are the different addressing modes explain each in brief. 7

7. a) Merit and Demerit of VLIW with an suitable examples. 7

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b) Explain the following terms. 6

   i) Super scalar processor.

   ii) Multi threaded processor.

OR

8. a) Explain. 6

   i) Simple addressing mode.

   ii) Complex addressing mode.

b) Describe extracting parallelism with loop unrolling. 7

9. a) What is mean by secondary storage memory ? Also, write down the concept of hard disk organization. 7

b) Explain in brief the concept of RAM and ROM. 6

OR

10. a) What is scheduling ? Describe different scheduling policies. 7

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b) Explain the following features in cache.   **6**

     i) Capacity.

     ii) Line length.

     iii) Associativity.

11. a) Explain in brief the concept of process segmentation.   **7**

     b) Explain in brief the concept of SCSI bus.   **6**

OR

12. a) Describe Direct Memory Access.   **7**

     b) Explain the following terms.   **6**

     i) Laser printer.

     ii) Inkjet printer.

     iii) Dot Matrix printer.

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