AQ – 2620

First Year First Semester MCA Examination

COMPUTER ORGANIZATION

P. Pages : 2

Time : Three Hours]   [Max. Marks : 80

Note : (1) Assume suitable data wherever necessary.

(2) Illustrate your answer wherever necessary with the help of neat sketches.

1. (A) Explain AMDAHL's Low to measure the performance of the computer system.　　6

   (B) Explain system Bus structure of advance computer with the help of block diagram.　　7

   OR

2. (A) Explain important features of 4th generation computer system.　　7

   (B) Explain Arithmetic and Logic unit of advance Computer system.　　6

3. (A) Explain "voltage profile" or "mapping voltages to bit" for high and low voltage at 1/p and o/p stage.　　6

   (B) Explain "IEEE 754" standard for floating point number presentation with example.　　7

   OR

4. (A) Explain how negative number is represented in Computer system.　　6

   (B) Draw and explain Sequencial Logic Circuit based ALU.　　7

5. (A) Explain CISC and RISC processors.　　7

   (B) Explain microprogrammed control unit that execute microinstruction.　　7

   OR

6. (A) Explain structure of stack, stack pointer and PUSH, POP operation with stack.　　7

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(B) Explain Branching instruction processing in microprocessor. 7

7. (A) Explain how to overcome hazard using a pipeline with forwarding path. 7

(B) Explain vector processor that processing array. 6

OR

8. (A) Discuss influence of simple and complex addressing modes on pipelining. 7

(B) Define the terms of parallel Computer system.

(i) VLIW processor

(ii) Multithreaded processor. 6

9. (A) List and explain the features of different types of Semiconductor ROMs. 7

(B) What is Cache memory ? Explain datacache instruction cache and unified cache. 7

OR

10. (A) Explain internal organization of Semiconductor main memory chip. 7

(B) Explain construction and working of optical disk or CDROM. 7

11. (A) What is requirement of virtual memory in the system ? Explain virtual memory organi-zation. 7

(B) Explain I/O device interfacing circuit. 6

OR

12. (A) Explain following about virtual memory "Demand paging and swapping". 6

(B) What is interrupt ? Explain process of device interrupt and execution of ISR program ? 7

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