3BECS02 / 3BECT02 / CS305 / CT302 - Computer Architecture & Organization

P. Pages : 1

Time : Three Hours

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3567

Max. Marks : 80

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Notes : 1. All questions carry equal marks.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain single Bus structure with neat sketch. **8**

   b) Explain functional units in detail with diagram. **8**

OR

2. a) Explain various addressing modes in detailed. **8**

   b) Briefly explain Main Memory operations. **8**

3. a) Write the steps for conditional Branch Instruction. **8**

   b) Write the steps for execution of instruction for ADD (R3), R1. **8**

OR

4. a) Write short notes on different I/O Devices. **8**

   b) Briefly explain Array processor. **8**

5. a) Explain microprogrammed control with neat sketch. **8**

   b) Explain microinstruction with neat address with diagram. **8**

OR

6. a) Briefly explain prefetching of instructions and emulation. **8**

   b) Briefly explain the Bit slice? **8**

7. a) Multiply using Bit Recording of multiplier (+14) *(-5) **8**

   b) Multiply each of the pairs 2's complement number using Booth algorithm, assume A Multiplicand and B is multiplier **8**

   i) A= 010111   B= 110110   ii) A= 1111   B= 1111

OR

8. Write short note on: **16**

   i) Carry look ahead adder   ii) Logic Design for fast adder.

9. a) Draw and explain synchronous DRAM. **8**

   b) Explain ROM memories in detail. **8**

OR

10. Write short notes on:- **16**

   i) Interleaving
   ii) Virtual memory
   iii) Multiple module memories.

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