

AU – 2875

Seventh Semester B. E. (Electronics Engineering) Examination

**COMPUTER ORGANIZATION**

Paper – 7 XN 01

( USC – 10686)

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) Separate answer book must be used for each section in the subject Geology, Engineering material of civil branch and Separate answer book must be used for Section A and B in Pharmacy and Cosmetic Tech.  
(2) Due credit will be given to neatness and adequate dimensions.  
(3) Assume suitable data wherever necessary.  
(4) Use pen of Blue/Black ink/refill only for writing the answer book.

**SECTION A**

1. (a) Define following basic functions performed by computer :
- (i) Data processing
  - (ii) Data storage
  - (iii) Data movement
  - (iv) Control. 7
- (b) List and briefly define the functional groups of signals line for PCI. 7

**OR**

2. (a) What is mean by performance balance of computer system ? Explain in detail. 7
- (b) Explain in brief following PCI commands
- (i) Memory read
  - (ii) Memory read line
  - (iii) Memory read multiple
  - (iv) Memory write. 7

AU-2875

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3. (a) What are the major functions of I/O module ? Explain. 7  
(b) Draw the block diagram of external Device ? Explain each part. 6

**OR**

4. (a) Explain fire wire protocol stack in detail. 7  
(b) Explain in detail swapping operation. 6

5. (a) What are the elements of machine Instructions ? Explain. 7  
(b) What are the various types of operands ? Explain. 6

**OR**

6. (a) Draw and explain six stage CPU instruction pipeline in detail. 7  
(b) Draw and explain internal structure of CPU ? 6

**SECTION B**

7. (a) Explain in brief characteristics of Reduced Instruction Set Architecture. 7  
(b) A SPAR implementation has register windows. What is the number of Physical register ? Explain. 6

**OR**

8. (a) Explain in detail compiler-based register optimization. 7  
(b) Compare large register file versus cache. 6
9. (a) What is the overall function of processor's control unit ? Explain. 7  
(b) Explain following :  
(i) Instruction sequencing  
(ii) Instruction interpretation. 6

**OR**

10. (a) Explain the hard wired control unit design in detail. 7  
(b) Draw the block diagram of typical microprogrammed control unit and explain. 6
11. (a) What is vector computation ? Explain approaches to vector computation. 7  
(b) Explain in detail following :  
(i) Multiprogramming  
(ii) Multiprocessing. 7

**OR**

12. (a) What is cache coherence ? Explain hardware solution for this. 7  
(b) Explain in detail benefits that can be achieved with clustering. 7



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