

B.C.A. (Part-I) EXAMINATION, 2019

(Faculty of Science)

(Three Year Scheme of 10+2+3 Pattern)

COMPUTER ORGANIZATION - 135

Time Allowed : Three Hours

Maximum Marks : 100

No supplementary answer-book will be given to any candidate. Hence the candidates should write the answer precisely in the main answer-book only.

All the parts of one question should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before start writing answers of questions.

PART - I

Each question is of 2 marks. Word limit for the answer is 40 words.

10x2=20

1. (a) What is system clock ?
- (b) What are magnetic tapes ?
- (c) What is instruction word ?
- (d) Discuss about the shift microoperation with example.
- (e) Explain the design of client server computer.
- (f) What are the features of Pentium Microprocessor ?
- (g) What is the EPROM and EEPROM ?
- (h) What is main memory ?
- (i) What are auxiliary storage devices ?
- (j) Discuss about the buses.

PART - II

Each question is of 4 marks. Word limit for the answer is 80 words.

5x4=20

2. Explain Von Neumann Architecture.
3. Discuss about the control unit and its functions.
4. What do you mean by decoding of instruction ?
5. Explain static and dynamic RAM.
6. Give the differences between microcontroller and microprocessor.

PART - III

Each question is of 12 marks.

7. Discuss following points about the storage devices :

3x4=12

- (a) Von Neumann Architecture
- (b) Mother Board
- (c) Bus Architecture

OR

Discuss following :

- (a) Computer Ports
- (b) Network Cables
- (c) Network Adaptor Card

8. What do you mean by Instruction Execution Cycle ? Discuss in detail with branch, skip, jump and shift instruction. 12

OR

Discuss the classification of Computer Systems with advantages and limitations of each.

9. Design a common bus system using multiplexer for 4 registers of 4 bit each. Also discuss the simple organization of CPU with memory and I/O subsystems. 12

OR

Discuss about the Register Transfer Language and Draw the block diagram of the hardware that implements the following statement.

$$X+YZ : R1 \leftarrow R2, R2 \leftarrow R1$$

10. Why do we need so many addressing modes ? Explain addressing modes in detail. 12

OR

What do you mean by locality of reference ? Also discuss about the cache memory.

11. Explain about the 8085 microprocessor with suitable diagram. 12

OR

Discuss about the RISC and CISC Computer with merits and demerits.

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