

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

Question paper consists of three parts.
All THREE parts are compulsory

Part - I (very short answer) consists 10 questions of two marks each with two questions from each unit. Maximum limit for each question is up to 40 words.

Part - II (short answer) consists 5 questions of four marks each with one question from each unit. Maximum limit for each question is up to 80 words.

Part - III (Long answer) consists 5 questions of twelve marks each with one question from each unit with internal choice.

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

Part – I

Attempt all questions. Each question carries 2 marks.

10 x 2=20

1. (i) What is System Clock?
- (ii) What are magnetic tape?.
- (iii) What is instruction word?
- (iv) Discuss about the shift micro operation with example?
- (v) Explains the design of client server computer?
- (vi) What are the features of Pentium Microprocessor?
- (vii) What is the EPROM and EEPROM?
- (viii) What is the main memory?
- (ix) What are auxiliary storage devices?
- (x) Discuss about the buses?

Part – II

Attempt all questions. Each question carries 4 marks.

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| 2. | Explain Von Neumann architecture? | 4 |
| 3. | Discuss about the Control Unit and its function. | 4 |
| 4. | What do you mean by decoding of instruction? | 4 |
| 5. | Explain Static and Dynamic RAM? | 4 |
| 6. | Give the difference between Microcontroller and Microprocessor. | 4 |

Part – III

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| 7. | Discuss following points the storage devices: | 12 |
| | (i) Von Neumann Architecture. | |
| | (ii) Mother Board | |
| | (iii) Bus Architecture. | |

OR

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|----|--|----|
| | Discuss Following: | 12 |
| | (i) Computer Ports | |
| | (ii) Network Cables | |
| | (iii) Network Adaptor Card | |
| 8. | What do you mean by instruction execution cycle? Discuss in details with branch, skip, jump and shift instruction. | 12 |

OR

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| | Discuss the classification of computer system with advantage and limitation of each. | 12 |
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- 9 Discuss about the Register Transfer Language and Draw the block diagram of the hardware that implements the following statement. 12
 $X+YZ: R1 \leftarrow R2, R2 \leftarrow R1$

OR

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 subsystem. 12

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

OR

What do you mean by locality of reference? Also discuss about the Cache Memory. 12

- 11 Explain about the 8085 microprocessor with suitable diagram 6

OR

Discuss about the RISC and RISC computer with merits and demerits. 12