This question paper contains 2 printed pages.

Roll No. 0241315

BCA (Part-I)

Comp.Org.

135

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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⇐R2, R2⇐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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This question paper contains 3 printed pages]

Roll No. 175257

Sl.No. 1479

135

B.C.A. (Part - I)

B.C.A. (Part - I) EXAMINATION, 2017
(Faculty of Science)
(Three - Year Scheme of 10 +2 + 3 Pattern)
Paper - 135
COMPUTER ORGANIZATION

Time : Three Hours] *[Maximum Marks : 100*

Answer of all the questions (short answer as well as descriptive) are to be given in the main answer -book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part 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 numbers on question paper before start writing answers of questions.

PART - I

Each question is of 2 marks.

Words limit for the answers is 40 words.

1. a) What was the first generation of computer?

   b) What is cache memory?

   c) What do you mean by data path?

   d) What are the major parts of a central processing unit?

   e) What is the function of program counter.

   f) Write the basic instruction processing steps?

   g) What are the inputs of a sequence computer (SC)?

   h) What is instruction cycle and opcode fetch?

   i) What is the full form of EEPROM?

   j) Write the name of auxiliary storage devices.

[10 × 2 = 20]

PART - II

Each question is of 4 marks

Words limit for the answers is 80 words.

2. Write short note on historical evolution of the computers.

3. Write the operations of control unit.

4. Write the features of pentium microprocessor.

5. Write the functions of data transfer instruction.

6. Write the major difference between microprocessor and microcontroller.

[5 × 4 = 20]

PART - III

Each question is of 12 marks

7. What is a Von-Neumann architecture of a computer? Explain the functions of different units used in it. **[12]**

OR

Explain the various types of output devices of computer. **[12]**

8. Draw the Basic building block diagram of computer system. Explain its blocks in brief. **[12]**

OR

Write the classification of computers, Compare mini computers, micro computers and mainframe computers. **[12]**

9. What do you mean by 'system buses'? Draw the common bus system diagram and explain it. [12]

OR

Explain the phases of instruction cycle of the computer system. [12]

10. What do you mean by 'registers'? Write the name of basic registers they are used in computer system. Explain any four registers. [12]

OR

Draw the diagram for memory hierarchy in a computer system. Discuss the magnetic disk in detail. [12]

11. Explain the 8085 microprocessor with block diagram. [12]

OR

Explain the characteristics of RISC and CISC computers. [12]

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System

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B.C.A. (PART-I) EXAMINATION - 2018

(Faculty of Science)

(Under your Scheme of 10+2+3 Pattern)

Paper - 135

COMPUTER ORGANIZATION

Time : Three Hours

Maximum Marks - 100

PART - I

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

1 (a) What do you mean by Von Neumann machine architecture?

(b) What is the utility of system clock in computer architecture?-

(c) What is instruction cycle?

(d) What do you mean by memory hierarchy?

(e) What do you mean by I/O subsystem organization?

(f) What are the system buses?

(g) What are stack pointer and accumulator?

(h) What are EPROM and EEPROM?

(i) What is Microprocessor and Microcontroller?

(j) Give the introduction of 8085. [10x2=2

PART - II

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

2. Write about the Mother Board and Network Adapter Card.

3. Discuss about the control unit and its functions.

4. Discuss the shift micro operations with suitable diagram.

5. What do you mean by Static and Dynamic RAM?

6. Draw the block diagram of Common bus of 4 Registers of 4 bit each. [5x4=

PART - III

Each question is of 12 marks.

7. Discuss following points about the storage devices.

   (a) Random versus Sequential access.

   (b) Tracks and Sector

   (c) Optical Disk

OR

Discuss following

(a) Magnetic Tape

(b) TV Tuner card

(c) Input Devices [3 x 4 = 12]

8. Discuss about the Control Unit and its functionality in details. [6 + 6]

OR

Give the classification of computer systems and discuss the merit and demerit of each. [12]

9 Explain the Instruction cycle with the Fetch and Decode phase. [12]

OR

Discuss about the Register Transfer Language and Draw the block diagram of the hardware that implements the following statement. [6 + 6]

P: $R2 \leftarrow R1$

10. Explain the cache memory and directmapping. [6 + 6]

OR

Explain virtual memory in detail. [12]

11. Draw the pin diagram of 8085 and discuss each pins in brief. [6 + 6]

OR

11. Discuss about the RISC and CISC Computer with merits and demerits. [6 + 6]