



ARKAJAIN
University
Jharkhand

5th Semester Examination -2021-22

Subject : Microprocessor
Course : B.Tech (CSE)
Full Marks : 70

Roll No :
Time : 3 Hours.

Instructions to the Candidates:

- Read the question paper very carefully.
- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into Three Parts –A, B & C.
- Part-A is containing 12 multiple choice questions.
- Part- B containing SIX questions out of which FOUR questions are to be answered.
- Part C containing FOUR questions out of which TWO questions are to be answered.
- Do not write anything except your Roll No. on the question paper.
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PART A

MULTIPLE CHOICE QUESTIONS

(12x1=12)

1. When any data transfer instruction, to transfer the data from memory to microprocessor, is executed the condition flags are
a. Not Affected b. Always Set c. Always Reset d. Affected Indicating Specific Conditions
2. XCHG instruction exchanges the content of H-L with _____ register pair.
a. B-C b. PSW c. D-E d. Stack Pointer
3. In 8085 microprocessor, the RST6 instruction transfer program execution to following location
a. 0030H. b. 0024H. c. 0048H. d. 0060H
4. HLT op code means
a. Load data to accumulator c. Store result in memory.
b. Load accumulator with contents of register. d. End of program.
5. In 8085 name/names of the 16 bit registers is/are
a. Stack pointer. b. Program counter c. Both A and B d. None of these.
6. In Intel 8085A microprocessor ALE signal is made high to
a. Enable the data bus to be used as low order address bus
b. To latch data D0-D7 from data bus
c. To disable data bus
d. d. To achieve all the functions listed above.
7. Number of Hex digits needed to represent the 20-bit address of a memory location are
a. 20 b. 16 c. 5 d. 4

8. Which of the following statements for Intel 8085 is correct?
 - a. Program Counter (PC) specifies the address of the instruction last executed
 - b. PC specifies the address of the instruction being executed
 - c. PC specifies the address of the instruction to be executed
 - d. PC specifies the number of instructions executed so far
9. Which one of the following is not correct?
 - a. Bus is a group of wires
 - b. Bootstrap is a technique or device for loading first instruction
 - c. An instruction is a set of bits that defines a computer operation
 - d. An interrupt signal is required at the start of every program
10. The processor status word of 8085 microprocessor has five flags namely:

a. S, Z, AC, P, CY	c. S, OV, AC, P, CY
b. S, Z, OV, P, CY	d. S, Z, AC, P, OV
11. In an Intel 8085A, which is the first machine cycle of an instruction?

a. A memory read cycle	c. A memory write cycle
b. An op-code fetch cycle	d. An I/O read cycle
12. HLDA signal in 8085 performs the following operation:
 - a. Indicates that another master is requesting the use of the address and data buses.
 - b. Indicates that the CPU has received the HOLD request and that it will relinquish the bus in the next clock cycle.
 - c. Indicates that the CPU has not received the HOLD request.
 - d. Hold the data in the accumulator until the microprocessor is turned OFF.

PART B

ANSWER ANY FOUR OUT OF SIX

(4x7=28)

1. What is Tri-state logic? Explain the difference between the machine language and the assembly language of the 8085 microprocessor.
2. Explain the following instructions with suitable example of each (i) MVI (ii) MOV (iii) LHL. Explain flags in 8086 microprocessor.
3. What are the different types of flags in 8085 microprocessor? Explain function of each flag briefly.
4. Explain the function of ALE and IO/M signals of the 8085 microprocessor
5. Draw the timing diagram for execution of the instruction MVI A, 42H. If codes of this instruction are written in memory of memory location 3000H.
6. Describe the register organization in 8086 microprocessor.

PART C

ANSWER ANY TWO OUT OF FOUR

(2x15=30)

1. Construct a neat and clean diagram for 8085 microprocessor Pin out and signals. Explain each signal and print out in detail
2. Draw functional block diagram of 8085 microprocessor.
3. Write algorithm and assembly level program to find largest number in an array.
4. Draw functional block diagram of 8086 microprocessor.



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MULTIPLE CHOICE QUESTIONS

PART A

(12x1=12)

1. The view of total database content is
a. Conceptual view b. Internal view c. External view d. Physical view
2. Key to represent relationship between tables is called
a. Primary key b. Secondary key c. Foreign key d. None of the above
3. The.....can be used to ensure database integrity.
a. Entity integrity b. Database constraints c. Referential integrity d. Cardinality.
4. Which of the following is not a characteristic of a relational database model?
a. Table b. Tree like structure c. Complex logical relationship d. Records.
5. Which are the join types in join condition:
a. Cross join c. Natural join
b. Join with USING clause d. All of the mentioned.
6. If $A \rightarrow B, A \rightarrow C$ then which of the following is true?
a. $A \rightarrow BC$ b. $A \rightarrow B$ c. $A \rightarrow C$ d. All of the mentioned
7. Which of the following is true regarding views?
a. The user who creates a view cannot be given update authorization on a view without having update authorization on the relations used to define the view
b. The user who creates a view cannot be given update authorization on a view without having update authorization on the relations used to define the view

- c. If a user creates a view on which no authorization can be granted, the system will allow the view creation request
- d. A user who creates a view receives all privileges on that view.
8. An advantage of the database management approach is
- a. Data is dependent on programs
- b. Data is integrated and can be accessed by multiple programs
- c. data redundancy increases
- d. None of the above
9. Grant and revoke are statements.
- a. DDL
- b. TCL
- c. DCL
- d. DML
10. To change column value in a table the command can be used.
- a. Create
- b. Insert
- c. Alter
- d. Update
11. Architecture of the database can be viewed as
- a. Two levels
- b. Four levels
- c. Three levels
- d. One level
12. Introduced the relational database rules.
- a. Atul kahate
- b. James Gosling
- c. EF Codd
- d. Dennies Rithchie

PART B

ANSWER ANY FOUR OUT OF SIX

(4x7=28)

1. What is E-R model? What is an E-R Model Entity set? Explain with example.
2. What is Data Independence? Explain BCNF with example.
3. What is a Relation Schema and a Relation? Explain various types of relationships among entities?
4. What are the advantages of DBMS? Write short notes on recovery system in DBMS
5. What is the difference between weak entity set and strong entity set?
6. Describe recovery system in DBMS

PART C

ANSWER ANY TWO OUT OF FOUR

(2 x15=30)

1. What is Normalization? Explain all normal forms (1st, 2nd, and 3rd)?
2. Discuss any five SQL commands with syntax and examples.
3. Explain the architecture of DBMS.
4. What do you mean by data models? Explain various record-based data models with examples.



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5th Semester Examination -2021-22

Subject: Formal Language and Automata Theory
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PART A

MULTIPLE CHOICE QUESTIONS

(12x1=12)

1. Languages of a automata is:-
 - a. If it is accepted by automata
 - b. If it halts
 - c. If automata touch final state in its life time
 - d. All language are language of automata
2. The basic limitation of finite automata is that:-
 - a. It can't remember arbitrary large amount of information
 - b. It sometimes recognize grammar that are not regular
 - c. It sometimes fails to recognize regular grammar
 - d. All of the mentioned
3. There are _____ tuples in finite state machine.
 - a.4
 - b.5
 - c.6
 - d. Unlimited
4. A Language is Regular if and only if
 - a. Accepted by DFA
 - b. Accepted by PDA
 - c. Accepted by LBA
 - d. Accepted by Turing Machine
5. The entity which generates language is termed as:-
 - a. Automata
 - b. Token
 - c. Grammar
 - d. Data
6. Which of the following sentence is/are correct?
 - a. All regular grammar are context free but not vice versa
 - b. All context free grammar are regular but not vice versa
 - c. Regular grammar and Context free grammar both are same
 - d. None of the mentioned.

