

(Time: 3 Hours)

[Total marks: 80]

Note (1) Question No. 1 is compulsory.

(2) Attempt any four out of remaining six questions.

(3) Answer to sub-questions should be grouped together.

- Q1. (a) Write short notes on any three of the following 12
1. Phantom deadlock
  2. MOLAP
  3. Neural network
  4. Data Mart
- (b) Differentiate between (Any two) 8
1. 2PC and 3PC
  2. Roll up and drill down
  3. OLTP & OLAP
  4. OID Vs URL
- Q2. (a) Explain Bitmap index and bitmap join index with example. 7
- (b) Explain architecture of parallel DBMS. 8
- Q3. (a) Explain KDD Process in detail. What is the role of data mining in KDD? 7
- (b) Why commit protocols are necessary in distributed systems? Describe 2PC in detail. 8
- Q4. (a) List the characteristics of XML. Explain XML documents and databases. 7
- (b) Use k-means algorithm to cluster the following points into 2 clusters: {2, 4, 10, 12, 3, 20, 30, 11, 25} 8
- Suppose that initial cluster centers (seed) are 2 & 4. Run K-means algorithm for three iterations.
- (The distance function between two points  $a=(x_1)$  and  $b=(x_2)$  is defined as:  $d(a, b) = |x_2 - x_1|$ )
- Q5. (a) What is metadata of DW? How it is different from metadata of OLTP systems? 7
- (b) What are the challenges associated with the implementation of ORDBMS with example. 8
- Q6. (a) Explain various deadlock detection schemes in DDBMS. Define web mining. 7
- (b) Compare web content mining and web usage mining. 8
- Q7. (a) Explain major functions of OLAP. 7
- (b) Explain Complex types and structured types in ORDBMS. 8

Please check whether you have got the right question paper.

- N.B: 1. Question.No.1 is compulsory.  
2. Attempt any four question between questions no. 2 to 7.

Q.1A) Explain in details Simulation application in any one of the following system. (10)  
(i) Patient flow analysis in Hospital (ii) Book counters analysis in a Library.

B) The inter- arrival time as well as service time at the Government Hospital is known to be exponentially distributed. Currently, only one emergency case can be handled at a time. The arrival rate of patient is 4 per hours and service rate is 6 per hour. Compute the steady-state parameters and the probabilities for Zero, one, two, three and four or more patient in the hospital. (10)

Q.2A) A taxi hire company has three taxis which it hires out daily. The number of demand for a taxi on each day is distributed as Poisson with mean 1.8. Find the proportion of days on which (i) there is no demand, (ii) demand is not satisfied. (08)

B) Explain the steps in simulation study. (07)

Q.3A) Give the inputs parameters, simulation variable, and output statistics for the Queuing system. (08)  
Calculate the output statistics for the Queuing system whose inter-arrival and service times for ten arrival are given below.

Inter arrival time (in min.)	-	8	6	1	8	3	8	7	2	3
Service time (in min.)	4	1	4	3	2	4	5	4	5	3

B) Explain the steps on Manual Simulation of Single Channel Queue. (07)

Q.4A) Explain the Goodness of fit test with an example. (08)

B) What are the measures of performance and estimation for output data? (07)

Q.5A) What are the properties of random numbers? Describe the random generation methods in short. (08)

B) Explain Time Series Inputs models in details. (07)

Q.6A) What do you mean input analysis? Explain the steps of inputs analysis. (08)

B) Explain the verification and validation of simulation models in short. (07)

Q.7 Write short notes (Any Three) (15)

1. Discrete event simulation
2. Stochastic simulation
3. Advantages and disadvantages of simulation
4. Weibull distribution

Q.P.Code: 37743

(3 Hours)

[Total Marks: 80]

N.B.: (1) **Question No. 1 is compulsory.**

(2) Attempt **any four** out of remaining six questions.

- Q.1 (a) What is non-verbal communication? Why is it important for effective communication? 8
- (b) What is perception? How does it affect an individual's decision making? 7
- Q.2 (a) What is personality? Why is it important to understand personality of your colleagues at your work place? 8
- (b) Discuss in brief ways to do time management? Why is it essential for you as a student to manage your time? 7
- Q.3 (a) Draft a report to be submitted to your college Principal on the possibility of starting an Entrepreneurship Cell in your college. Write the report including a brief statement of the finances required. 8
- (b) Explain Maslow's theory of need? How does it affect a person's motivation level? 7
- Q.4 (a) Write a sales letter to business houses in your city offering to provide AMC for their computers. 8
- (b) 'Diversity should be there in an organization'. Discuss. 7
- Q.5 (a) What are the barriers to communication? What steps can be taken to remove them? 8
- (b) Discuss what preparation you should be doing before giving a presentation. 7
- Q.6 (a) Write a notice along with agenda for a meeting of the Student's Council, to plan industrial visit of your college. 8
- (b) What is the difference between a leader and a manager? An organization needs more leaders or managers? Comment. 7
- Q.7 Write Short Note (any three) 15
- (a) Blogging
- (b) Assertive behavior
- (c) Ethical communication
- (d) Positive thinking

**N.B.:** (1) Question No. 1 is **Compulsory**.

(2) Attempt any **four** questions from the remaining **six** questions.

(3) Answers to **sub-questions** should be **grouped** and written **together**.

(4) Draw the **diagrams** wherever **required**.

- Q.1 (a) What is E-Business? Discuss various categories of E-Business with appropriate illustrations. 10
- (b) Why is a long range plan of MIS necessary? Explain the content of MIS plan in detail. 10
- Q.2 (a) What do you mean by Entrepreneurial Process? Explain with the help of process diagram. 8
- (b) Explain the importance of information system in a digital firm and its new opportunities with technology. 7
- Q.3 (a) What is EDI? Explain business implications of EDI. 8
- (b) What is information? How do you ascertain the class of information in the organization? 7
- Q.4 (a) What is Electronic Market? Explain advantages and disadvantages associated with Electronic Market. 8
- (b) How information system impact organizations and business firms? Explain. 7
- Q.5 (a) What do you mean by Enterprise applications? Discuss different Enterprise applications. 8
- (b) Explain various security issues in E-Business. 7
- Q.6 (a) What is Business Process? Explain various types of Business Information System from a functional perspective. 8
- (b) Explain various factors affecting E-Business success in detail. 7
- Q.7 Write short notes on any **three** :-- 15
- (a) Value Chain Model
- (b) E-Business: Current global situation
- (c) Factors for success and failure of MIS
- (d) Whiteley's Model

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# MCA/SEM IV (CBSSGS) / Human Computer Interface / MAY 2018

Q. P. Code: 02858

Duration: 3 hrs.

Marks: 80

Note: Question 1 is compulsory

Attempt any four from question number 2 to 7

Appropriate diagram carries marks

- Q1. a) Apply HCI principles for designing the user interface for Railway reservation system.  
Assume suitable data and screen elements and draw user friendly interface [10]  
b) Explain Principles of User Interface Design. Write Design characteristics for attractive layout [10]
- Q2. a) List and Explain various windows management schemes provided by Windows. [8]  
b) List and Explain different presentation controls. [7]
- Q3. a) Explain Effective Internationalization and Accessibility for International consideration [8]  
b) Explain the different kinds of graphical menus with example. [7]
- Q4. a) List and Compare Device and Screen-Based Control [8]  
b) Explain Methods for Gaining and Understanding of Users [7]
- Q5. a) Explain the various types of windows components and presentation style [8]  
b) How text messages are important to communicate with user, explain with examples. [7]
- Q6. a) List the different System Menus and explain the guidelines for selecting menus in brief. [8]  
b) Describe the different ways and means to provide an effective feedback while designing HCI application with suitable example. [7]
- Q7 a) Explain Characteristics of Web Interface for user friendly nature [8]  
b) List and Design standards or Style Guides [7]
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