

MASTER OF COMPUTER APPLICATION

ASSIGNMENTS

MCA – 1ST SEMESTER



Session (February/March-2026)

**Centre for Distance and Online Education
Guru Jambheshwar University
of Science & Technology
Hisar - 125001**

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course: Database Management System

Semester: 1st

Paper Code: MCA-11

Total Marks=30

Important Instructions

- Attempt all questions from each assignment given below.
- Each assignment carries 15 marks.
- All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal.

ASSIGNMENT-I

- Q1. Compare and contrast file systems with database systems. What are the key characteristics that distinguish a database approach?
- Q2. What are the primary responsibilities of a Database Administrator (DBA)? Discuss how these responsibilities contribute to the effective management of a database system.
- Q3. Define entity types, attributes, and relationships in the context of the E-R model. How can you represent these elements in an E-R diagram?

ASSIGNMENT-II

- Q1. Explain the process of normalization. What are database anomalies, and how does normalization help eliminate them?
- Q2. Describe the ACID properties of transactions in database systems. Why are these properties essential for maintaining the integrity of a database?
- Q3. Discuss the significance of locking techniques and time-stamp ordering in maintaining data consistency.

Prepared by:
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CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Web Designing
Code: MCA-12

Semester:1st
Total Marks: 30

Important Instructions

- Attempt all questions from each assignment given below.
- Each assignment carries 15 marks.
- All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal.

ASSIGNMENT-I

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|-----|--|---|
| Q1. | What is Navigation System? Explain various navigation systems in detail. | 5 |
| Q2. | Explain various HTML elements with proper example. | 5 |
| Q3. | What is the use of CSS in HTML documents. Discuss in detail | 5 |

ASSIGNMENT-2

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|-----|--|---|
| Q1. | What do you understand by JavaScript? Explain JavaScript Object model in detail. | 5 |
| Q2. | Discuss in detail about the programming languages for server-side scripting. | 5 |
| Q3. | Explain future and advance features of XML. | 5 |

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CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Java Programming
Code: MCA-13

Semester:1st
Total Marks: 30

Important Instructions

- Attempt all questions from each assignment given below.
- Each assignment carries 15 marks.
- All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal.

ASSIGNMENT-I

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|-----|---|---|
| Q1. | Discuss looping structures (For, While and Do-while) in Java with proper example. | 5 |
| Q2. | Explain different types of Inheritance with proper example. | 5 |
| Q3. | Differentiate between overloading and overriding methods with example. | 5 |

ASSIGNMENT-2

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|-----|--|---|
| Q1. | Explain Byte Stream classes with example. | 5 |
| Q2. | Explain various types of Events in Java. | 5 |
| Q3. | What do you understand by Frame? Write down a program to create frame. | 5 |

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CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Software Engineering
Code: MCA-14

Semester:1st
Total Marks: 30

Important Instructions

- Attempt all questions from each assignment given below.
- Each assignment carries 15 marks.
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ASSIGNMENT-I

Q1.	Define SRS. Explain different types of technique?	5
Q2.	Explain waterfall model in detail?	5
Q3.	Difference between cohesion and coupling.	5

ASSIGNMENT-2

Q1.	Write note on DFD and data dictionary?	5
Q2.	Write note on feasibility and oral presentation?	5
Q3.	Explain various types of testing technique?	5

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CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Computer Networks and Internet Protocols
Code: MCA-15

Semester:1st
Total Marks: 30

Important Instructions

- Attempt all questions from each assignment given below.
- Each assignment carries 15 marks.
- All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal.

ASSIGNMENT-I

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|-----|---|---|
| Q1. | Define computer network. Explain different types of computer network in detail. | 5 |
| Q2. | Give a complete description of TCP/IP reference Model with proper diagram. | 5 |
| Q3. | Discuss in detail about the ALOHA. | 5 |

ASSIGNMENT-2

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|-----|--|---|
| Q1. | Explain various congestion control algorithms in detail. | 5 |
| Q2. | What is IP addressing? Explain IPV4 and IPV6 in detail. | 5 |
| Q3. | Explain DNS, HTTP and WWW. | 5 |

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