

**MASTER OF COMPUTER APPLICATION**

# **ASSIGNMENTS**

**MCA – 4<sup>th</sup> SEMESTER**



**(SESSION 2023-2024)**

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

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

**Course Name: IoT and Cloud Computing**  
**Paper Code: MCA-41**

**Semester: 4<sup>th</sup>**  
**Total Marks: 30**

**Important Instructions**

1. Attempt all questions from each assignment given below.
2. Each assignment carries 15 marks.
3. 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. Explain an information driven value chain for IoT with a neat diagram.
- Q2. Explain how gateways are used for data management, local applications and device management in IoT.
- Q3. What is the difference between Real Time and Local Analytics?

**ASSIGNMENT-2**

- Q1. Explain various IoT Applications. And also explain the Legal challenges in IoT.
- Q2. Explain about Wireless Technologies for the IoT and discuss about Edge Connectivity in IPBased Protocol for IoT.
- Q3. Write short notes on Arduino function libraries.

Prepared By:  
Dr. Ritu  
Assistant Professor (CSE)  
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**CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)  
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR**

**Course Name: Mobile Application Development**  
**Paper Code: MCA-42**

**Semester: 4<sup>th</sup>**  
**Total Marks: 30**

**Important Instructions**

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

**ASSIGNMENT-I**

- Q1. What is operating system? Discuss various services provided by operating system.
- Q2. Discuss Android framework libraries with their classes.
- Q3. What is interpreter? explain it uses in program.

**ASSIGNMENT-2**

- Q1. Define Activity. Explain its lifecycle with diagram.
- Q2. What are the various functions of the Menu class.
- Q3. What is SQLite? What are the advantages of using SQLite? Explain various data types supported by SQLite?

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

**Course Name: High Speed Network**  
**Code: MCA-43(iv)**

**Semester: 4<sup>th</sup>**  
**Total Marks: 30**

**Important Instructions**

1. Attempt all questions from each assignment given below.
2. Each assignment carries 15 marks.
3. 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. Explain throughput, delay and reliability in high-speed LAN.
- Q2. Explain Frame Relay protocol architecture in detail
- Q3. What is ATM adaption layer? Explain in detail.

**ASSIGNMENT-2**

- Q1. What do you understand by Wireless Network? Describe Bluetooth network in detail.
- Q2. Explain in detail GSM with its architecture.
- Q3. Describe in detail IPv6 with its header format. Also differentiate IPv4 and IPv6.

Prepared by:  
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**CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)  
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**Programme: MCA**  
**Semester: 4<sup>th</sup>**  
**Paper Code: MCA-44(iv)**

**Course: Computer Graphics**  
**Total Marks=30**

**Important Instructions**

- I. Attempt all questions from each assignment given below.**
- II. Each assignment carries 15 marks.**
- III. All questions are to be attempted in legible handwriting on plane white A-4 sizepaper.**

**ASSIGNMENT-I**

- Q1. Explain raster scan with neat and clean diagram in detail.
- Q2. Define DDA line drawing algorithm, also take a example to explain DDA algorithm.
- Q3. Explain mid-point algorithm? Write algorithm in your own words.

**ASSIGNMENT-II**

- Q1. Discuss about 2D transformation. Why we use 2D transformation in computer graphics?
- Q2. What do mean by polygon clipping algorithm, explain any polygon clipping algorithm with example.
- Q3 Explain parallel projection & their types with example.

Prepared by:  
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