Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 22MCAP111

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

MOBILE APPLICATION DEVELOPMENT

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain the concept of Logging Messages in Android with a simple program.	12M	1	2
	OR			
Q.1(B)	Illustrate the anatomy of an Android project in detail	12M	1	3
Q.2(A)	Write a short note on the following with a neat syntax: i) Text View and Image View ii) Pop Up Menu and Option Menu	12M	2	4
	OR			
Q.2(B)	List and explain the Types of Adapters.	12M	2	2
Q.3(A)	Elaborate in detail the Service Life Cycle in Android with a neat figure.	12M	3	2
	OR			
Q.3(B)	Discuss in detail the Async Task in Android Threading.	12M	3	2
Q.4(A)	Discuss the SQLite Operation in detail.	12M	4	4
	OR			
Q.4(B)	Explain the Role of Content Provider with an example.	12M	4	3
Q.5(A)	Describe the Live Wallpapers and Handlers in Android application with an example program.	12M	5	4
	OR			
Q.5(B)	Explain the different types of Sensor Class with an example	12M	5	4

***** END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 22MCAP112

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

FUNDAMENTALS OF DATA SCIENCE

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	(i) Discuss the importance of data acquisition and preprocessing in the data science process.	6M	1	2
	(ii) What are the common challenges faced during data cleaning and preprocessing and how they can be mitigated?	6M	1	2
	OR			
Q.1(B)	Explain the handling missing data and outliers using python code.	12M	1	2
Q.2(A)	Describe various methods for integrating data from different sources and discuss challenges related to data consistency and conflicts.	12M	2	3
	OR			
Q.2(B)	How simple and multiple linear regression model used to predict a continuous target variable.	12M	2	3
Q.3(A)	How to perform Data cleaning and preprocessing in noisy data using python libraries.	12M	3	2
	OR			
Q.3(B)	(i) Demonstrate how to merge multiple datasets using Pandas	6M	3	3
	(ii) Define entity resolution and its significance in data integration.	6M	3	3
Q.4(A)	What are the key principles of effective data visualization?	12M	4	2
	OR			
Q.4(B)	Discuss the differences between static and interactive visualizations. Provide examples for data visualization.	12M	4	2
Q.5(A)	Describe the process of text preprocessing for NLP. Elaborate the techniques like tokenization, stop-word removal and lemmatization.	12M	5	4
	OR			
Q.5(B)	Analyze the importance of sentimental analysis in various real time applications.	12M	5	4

***** END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 22MCAP113

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

JAVA PROGRAMMING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain in detail about Classes and Objects with real-time examples.	12M	1	2
	OR			
Q.1(B)	Analyse Constructor Overloading with example program.	12M	1	4
Q.2(A)	Classify exception hierarchy in java and explain how to handle runtime errors using Try, Catch blocks.	12M	2	2
	OR			
Q.2(B)	Develop a program to create Interface Sample in this interface we have two method Test1 and Test2. Implements this interface in another class named SampleClass.	12M	2	3
Q.3(A)	Explain about Multi-Thread concepts with an example program.	12M	3	2
	OR			
Q.3(B)	Develop a java program that implements a Multi-Thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.	12M	3	3
Q.4(A)	Explain all Java FileReader and Java FileWriter classes with example.	12M	4	2
	OR			
Q.4(B)	Construct a Java program to iterate through all elements in a linked list starting at the specified position.	12M	4	3
Q.5(A)	Discuss javax.Swing package and develop a java program to create a frame layout with Jlabel and JButton UI components.	12M	5	3
	OR			
Q.5(B)	Examine Event Handling mechanisms in java, and analyze Event Delegation Model with Source and ActionListener.	12M	5	4

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MCAP408

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

DEEP LEARNING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain how, Deep learning models have shown to outperform traditional machine learning models in many tasks like image and speech recognition.	12M	1	3
	OR			
Q.1(B)	The role of feature engineering in building machine learning models. Provide examples of feature engineering techniques that can improve model performance.	12M	1	3
Q.2(A)	How do you decide which activation function to use in the hidden layers and output layer of a neural network for a specific task?	12M	2	3
	OR			
Q.2(B)	Building a deep learning model to classify images captured by cameras in human face detection. How would you design the architecture of the neural network?	12M	2	3
Q.3(A)	As the field of deep learning advances, what future improvements or research directions would you consider for improving plant disease detection models?	12M	3	5
	OR			
Q.3(B)	You are developing a deep learning model to detect fraudulent transactions in credit card data. The dataset includes transaction features such as transaction amount, location, and time of day, and a label indicating whether the transaction is fraudulent or not.	12M	3	4
Q.4(A)	Designing an RNN model to transcribe voice into text, similar to voice assistants. What preprocessing steps are necessary to convert raw audio into a format suitable for the RNN?	12M	4	3
	OR			
Q.4(B)	Building an LSTM model to classify the sentiment of social media posts as positive, negative, or neutral. How would you use sentiment analysis for your business? And give suitable examples	12M	4	4
Q.5(A)	You are tasked with building a movie recommendation system using a Restricted Boltzmann Machine (RBM). How would you prepare the user-movie interaction data for training the RBM?	12M	5	3
	OR			
Q.5(B)	Over-fitting is a common issue when training deep architectures like DBMs. How would you address over-fitting in a Deep Boltzmann Machine?	12M	5	5

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MCAP410

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

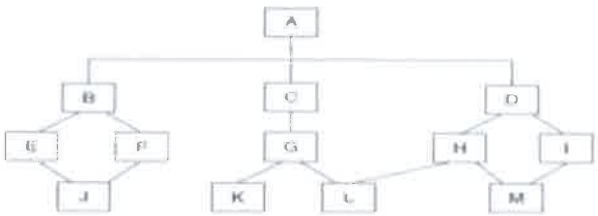
(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

SOFTWARE QUALITY ASSURANCE AND TESTING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Illustrate the measurements available in defect management process.	12M	1	3
	OR			
Q.1(B)	Examine how software quality assurance is ensured in a software development system.	12M	1	3
Q.2(A)	Discuss in detail about top-down and bottom-up approaches to integration testing.	12M	2	2
	OR			
Q.2(B)	Using the module hierarchy given in Figure, show the orders of module integration for the top-down and bottom-up integration approaches. Estimate the number of stubs and drivers needed for each approach. Specify the integration testing activities that can be done in parallel, assuming you have three SIT engineers. Based on the resource needs and the ability to carry out concurrent SIT activities, which approach would you select for this system and why? 	12M	2	4
Q.3(A)	Elaborate various Types of Functional Testing.	12M	3	2
	OR			
Q.3(B)	How does handle changes in the requirements during regression testing? Illustrate	12M	3	3
Q.4(A)	Discuss ISO 9000:2000 Fundamental document for quality assurance.	12M	4	2
	OR			
Q.4(B)	How does work Test Process Improvement? Explain in detail about Testing Maturity Model	12M	4	3
Q.5(A)	Illustrate Quality Assurance Techniques and Activities in detail.	12M	5	3
	OR			
Q.5(B)	Compare both the entry and exit levels of quality for individual QA alternatives. That is, what is the defect level before and after applying these specific QA alternatives.	12M	5	3

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MCAP415

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

REINFORCEMENT LEARNING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Discuss about Markov Reward Process in detail.	12M	1	2
	OR			
Q.1(B)	Differentiate Value Iteration and Policy Iteration	12M	1	2
Q.2(A)	Compare and contrast On-policy and Off-policy in reinforcement learning.	12M	2	4
	OR			
Q.2(B)	Explain the concept of Monte-Carlo learning and its application in reinforcement learning.	12M	2	2
Q.3(A)	Describe the Incremental Methods and Batch Methods.	12M	3	2
	OR			
Q.3(B)	Discuss about Experience-Replay method in detail.	12M	3	2
Q.4(A)	Explain the importance of semi-Markov decision process.	12M	4	2
	OR			
Q.4(B)	Interpret the concept of abstract machines.	12M	4	3
Q.5(A)	Discuss about PPO algorithm in detail.	12M	5	2
	OR			
Q.5(B)	Explain the concept of MARL in detail.	12M	5	2

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MCAP417

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

SOFTWARE PROJECT MANAGEMENT

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain in detail the various activities involved in software project management, including their key aspects and significance.	12M	1	2
	OR			
Q.1(B)	Explain in detail the outline of stepwise project planning.	12M	1	2
Q.2(A)	Explain the nature of risk in project management. Discuss the categories of risk and present a framework for managing risk in projects.	12M	2	2
	OR			
Q.2(B)	Discuss the typical product lifecycle cash flows in project development.	12M	2	2
Q.3(A)	Explain the steps involved in activity planning and describe the activity-based approach to managing project activities.	12M	3	2
	OR			
Q.3(B)	Explain the concept of the critical path in precedence networks. Illustrate the process of identifying the critical path with an example.	12M	3	2
Q.4(A)	Explain the concept of Software Configuration Management (SCM) and its key objectives.	12M	4	2
	OR			
Q.4(B)	Describe in detail the process of managing and controlling changes to project requirements. Explain the steps involved and the importance of maintaining project scope.	12M	4	2
Q.5(A)	Discuss the background and significance of organizational behaviour in team management.	12M	5	2
	OR			
Q.5(B)	Discuss the key factors in becoming a successful team and achieving collective goals.	12M	5	2

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 22MBAP303

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

MANAGEMENT INFORMATION SYSTEMS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain the components of management information systems.	12M	1	2
	OR			
Q.1(B)	Explain the fundamental roles of IS applications in business with relevant examples.	12M	1	2
Q.2(A)	Examine the different types of database models and their applications.	12M	2	4
	OR			
Q.2(B)	Analyze the role of information systems in improving business efficiency and competitiveness.	12M	2	4
Q.3(A)	How can organizations use IT strategies to achieve a competitive advantage? Provide examples.	12M	3	2
	OR			
Q.3(B)	Discuss the prototyping method of systems development.	12M	3	2
Q.4(A)	Assess the role of firewalls, encryption, and intrusion detection system information security.	12M	4	5
	OR			
Q.4(B)	Explain Decision Support System (DSS) key components and functions.	12M	4	2
Q.5(A)	Assess the major security and ethical challenges faced in information systems today.	12M	5	4
	OR			
Q.5(B)	Analyze the challenges of managing IT across different cultural and economic environments.	12M	5	4

***** END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 22MBAP304

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R22) Regular & Supplementary End Semester Examinations, February - 2025

E-COMMERCE & DIGITAL MARKETS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Explain in detail about the role of Information Technology in E-Commerce.	12M	1	2
	OR			
Q.1(B)	Upon which criteria will you choose the E-Commerce Business Model? List out its advantages and disadvantages.	12M	1	3
Q.2(A)	Discuss in detail about E-Commerce Infrastructure with suitable examples.	12M	2	2
	OR			
Q.2(B)	Describe the impact of the internet on business strategy during the pre- and post-COVID-19 pandemic era.	12M	2	2
Q.3(A)	Explain in detail about the steps involved in building a Powerhouse Ecommerce Presence.	12M	3	2
	OR			
Q.3(B)	Analyze how collaborative commerce influences supply chain efficiency.	12M	3	2
Q.4(A)	Examine the ethical challenges posed by online auctions and media platforms.	12M	4	4
	OR			
Q.4(B)	Critique the impact of E-Commerce on political systems and Social societal norms.	12M	4	4
Q.5(A)	Discuss in detail about the success factors of E-Markets.	12M	5	2
	OR			
Q.5(B)	Analyze the success factors of e-markets in a specific industry.	12M	5	4

***** END*****