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Kothapeta, Vijayawada – 520 001.
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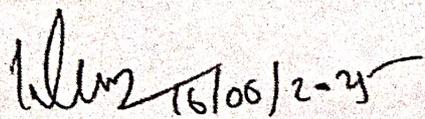
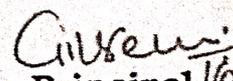ISO 9001-2015 CERTIFIED INSTITUTION   Reaccredited with 'A++' by NAAC

Date: 16/06/2025

STUDENT NOTICE

The PG II **Semester End Examinations** for **I M.Sc(OCH&ACH) & I M.Sc(DS)** are going to be held from the following schedule. Students are advised to follow the same. For More details visit **www.kbncollege.ac.in**

Date	Time	I M.SC(OCH)	I M.SC(ACH)	I.M.SC(DS)
28/06/2025	09:00 AM to 12:00 PM	Organic Spectroscopy R22OCH201A	Organic Spectroscopy R22ACH201A	Data Processing & Visualization Using Tableu R23DS201A
30/06/2025	09:00 AM to 12:00 PM	Physical Chemistry -2 R22OCH202A	Physical Chemistry - 2 R22ACH202A	Data Mining & Data warehousing R23DS202A
02/07/2025	09:00 AM to 12:00 PM	Inorganic Chemistry-2 R22OCH203A	Inorganic chemistry – 2 R22ACH203A	Data Science with R Programming R23DS203A
04/07/2025	09:00 AM to 12:00 PM	Research Methodology & IPR R22OCH204A	Research Methodology & IPR R22ACH204A	Optimization Techniques R23DS204A
07/07/2025	09:00 AM to 12:00 PM	Chemistry of Bio – Organic Compounds R22OCH205A	Chemistry of Bio Organic Compounds R22ACH205A	Design & Analysis Algorithms R23DS205A

Controller of Examinations 16/06/2-25

Principal 16/6/2

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Date	Time	I M.SC(OCH)	I M.SC(ACH)	I.M.SC(DS)
28/06/2025	09:00 AM to 12:00 PM	R20OCH201 Organic Spectroscopy R22OCH201	Organic Spectroscopy R22ACH201	Data Processing & Visualization Using Tableu R23DS201
30/06/2025	09:00 AM to 12:00 PM	R20OCH204 Physical Chemistry R22OCH202 Physical Chemistry -2	R20ACH204 Physical Chemistry R22ACH202 Physical Chemistry -2	Data Mining & Data warehousing R23DS202
02/07/2025	09:00 AM to 12:00 PM	R20OCH203 Inorganic Chemistry-2 R22OCH203	R20OCH203 Inorganic chemistry – 2 R22ACH203	Data Science with R Programming R23DS203
04/07/2025	09:00 AM to 12:00 PM	Organic Chemistry R20OCH202 Research Methodology & IPR R22OCH204	Organic Chemistry R20ACH202 Research Methodology & IPR R22ACH204	Optimization Techniques R23DS204
07/07/2025	09:00 AM to 12:00 PM	Computer Fundmentals & problem solving Techniques R20ECS205 Chemistry of Bio – Organic Compounds R22OCH205	Computer Fundmentals & problem solving Techniques R20ECS205 Chemistry of Bio – Organic Compounds R22ACH205	Design & Analysis Algorithms R23DS205

16/06/25

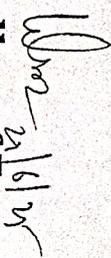**Controller of Examinations**

Principal 16/

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

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PG ONE TIME OPPORTUNITY EXAMINATIONS :: JULY 2025

Date	Time	MBA	M.Sc. OCH
02-07-2025	2 P.M. - 5 P.M.	MBA10318 BUSINESS ANALYTICS FOR MANAGERIAL DECISION MAKING	OCH10217 INORGANIC CHEMISTRY-I
03-07-2025	2 P.M. - 5 P.M.	MBA10618 FINANCIAL STATEMENT ANALYSIS	OCH10317 ORGANIC CHEMISTRY-I
04-07-2025	2 P.M. - 5 P.M.		OCH20317 ORGANIC CHEMISTRY-II
05-07-2025	2 P.M. - 5 P.M.		OCH40117 ADVANCED ORGANIC SPECTROSCOPY
07-07-2025	2 P.M. - 5 P.M.		OCH40217 ORGANIC REACTION MECHANISM AND NANO CHEMISTRY

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Principal

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

PG ONE TIME OPPORTUNITY PRACTICAL EXAMINATIONS :: JUNE 2025

DATE	TIME	M.Sc. CS	M.Sc. OCH
29.07.2025	07:30 AM to 10:30 AM	MCS40417 DATA WARE HOUSING AND MINING	OCH40417 ESTIMATIONS
	02:30 PM to 05:30 PM	MCS40517 PROJECT	OCH40517 PROJECT WORK

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Date: 25/04/2025

STUDENT NOTICE

PG **II Semester End Examinations (Regular)** for **I MBA & I MCA** will be held as per the following schedule. So, all the students are advised to follow the same. For more details, visit **www.kbncollege.ac.in**

DATE	TIME	I MBA	I MCA
07/05/2025	09:00 AM to 12:00 PM	MARKETING MANAGEMENT R22MBA201	SOFTWARE ENGINEERING AND DESIGNPATTERNS R22MCA201A
09/05/2025	09:00 AM to 12:00 PM	HUMAN RESOURCE MANAGEMENT R22MBA202	DATA BASE MANAGEMENT R22MCA202A
12/05/2025	09:00 AM to 12:00 PM	FINANCIAL MANAGEMENT R22MBA203	COMPUTER NETWORKS R22MCA203A
14/05/2025	09:00 AM to 12:00 PM	ENTREPRENEURSHIP& SMALL BUSINESS MANAGEMENT R22MBA204	DATA WARE HOUSING AND DATA MINING R22MCA205A
16/05/2025	09:00 AM to 12:00 PM	RESEARCH METHODOLOGY AND IPR R22MBA205	RESEARCH METHODOLOGY AND IPR R22MCA204A
19/05/2025	09:00 AM to 12:00 PM	OPERATION RESEARCH R22MBA206	****
21/05/2025	09:00 AM to 12:00 PM	CONSUMER BEHAVIOUR R22MBA207	****

Controller of Examinations   25/4/2025

PRINCIPAL 25/4/

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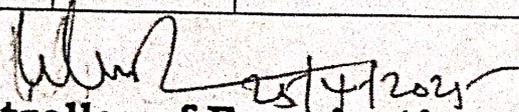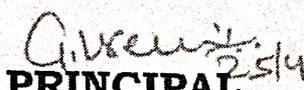**ISO 9001-2015 CERTIFIED INSTITUTION**   **Reaccredited with 'A++' by NAAC**

Date: 02/05/2025

STUDENT NOTICE

PG **II Semester End Examinations (Supple)** for **I MBA & I MCA** will be held as per the following schedule. So, all the students are advised to follow the same. For more details, visit **www.kbncollege.ac.in**

DATE	TIME	I MBA	I MCA
07/05/2025	09:00 AM to 12:00 PM	R20MBA201 MARKETING MANAGEMENT R22MBA201	SOFTWARE ENGINEERING R20MCA202 SOFTWARE ENGINEERING AND DESIGNPATTERNS R22MCA201
09/05/2025	09:00 AM to 12:00 PM	R22MBA202 HUMAN RESOURCE MANAGEMENT R22MBA202	R20MCA203 DATA BASE MANAGEMENT R22MCA202
12/05/2025	09:00 AM to 12:00 PM	R20MBA203 FINANCIAL MANAGEMENT R22MBA203	R20MCA204 COMPUTER NETWORKS R22MCA203
14/05/2025	09:00 AM to 12:00 PM	R20MBA205 ENTREPRENEURSHIP& SMALL BUSINESS MANAGEMENT R22MBA204	DESIGN ANALYSIS OF ALOGRATHIMS R20MCA201 DATA WARE HOUSING AND DATA MINING R22MCA205
16/05/2025	09:00 AM to 12:00 PM	OPERATION MANAGEMENT R20MBA204 RESEARCH METHODOLOGY AND IPR R22MBA205	WEB TECNOLOGIES R20MCA205 RESEARCH METHODOLOGY AND IPR R22MCA204
19/05/2025	09:00 AM to 12:00 PM	MANAGEMENT INFORMATION SYSTEM R20MBA206 OPERATION RESEARCH R22MBA206	BUSINESS FUNDAMENTALS FOR IT MANAGERS R20OEMBA206(FOR 21 BATCH)
21/05/2025	09:00 AM to 12:00 PM	LEADESHIP AND CHANGE MANAGEMENT R22MBA207	****

Controller of Examinations 2/5/25

PRINCIPAL 2/5/25

Room No: _____

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I MBA	Max Marks	: 70
Subject	: Management	Pass Mark	: 28
Title of Paper	: **Marketing Management**	Duration	: 3 Hrs
Paper Code	: R22MBA201	Time	: 9am – 12 noon
W.E.F	: 2024-25	Date	: 07-05-2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. a) Customer value

   b) Next Generation product

   c) Publicity

   d) Channel Design

   e) Consumerism

   f) Emotional Marketing

   g) Labeling

   h) Digital Marketing

SECTION-B

II. Answer any FIVE of the following Questions   5X8=40M

2. Explain Micro factors and their impact on Marketing decisions.

(OR)

3. Describe Marketing Research Process

4. Explain the concept of Marketing -Mix decisions.

(OR)

5. Describe the important Pricing methods and approaches

6. Define Integrated Marketing Communication (IMC) and its process.

(OR)

7. Explain the recent trends in marketing Communications.

8. Describe the concept of Marketing Channel System.

(OR)

9. Explain the Market Logistics Decisions.

10. Describe the types of Marketing Organization Structures.

(OR)

11. Explain the concept of Customer Relationship Marketing.

[P.T.

III. Case Study (Compulsory)   **1X10=10 M**

The Launch of a brand is a festive occasion. Usually, a brand is launched by holding a

brand conference. Formerly, brand launches were a laid-back affair. These days, the

launches have become spectacular and memorable occasions. A soap with fresh time

in it is launched with limes all over the venue. There were lime garlands too. Even the

welcome drink was ' **nimboo- paani**'.The approach is to use all these activities in a

synergistic manner. Some launches are called fire cracker launches. Here, the product

is launched by cracking fire crackers to open up the pack with the accompanying

music, lights etc. Yes there is a thin line that divides an innovative launch and

gimmicky. The litmus test is the relevance of the launch time activity. Launches

have become professional with the Event Management companies offering their services

Questions:

1. Analyse the above Case study critically.

2. Suppose a non-cola beverage is to be launched, how would you go about it?

Room No: _____

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I MCA
Subject   : Computers
Title of Paper : **Software Engineering and Design Patterns**
Paper Code   : R22MCA201A
W.E.F   : 2024-25

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time   : 9am – 12noon
Date   : 07-05-2025

SECTION-A

I. Answer any FIVE of the following Questions   **5X4=20M**

1. Explain the scope of Software Engineering

2. Explain open sources life cycle model

3. Compare the requirement Work flow and Analysis work flow

4. Explain about Software Metrics

5. Define CASE and discuss about the scope of CASE

6. Define Cohesion and Coupling

7. Explain about ADT

8. Discuss about Software Reusability and Design Pattern

SECTION-B

II. Answer ALL the following Questions   **5X10=50M**

9. Explain about Waterfall Life Cycle Model

(OR)

10. Explain agile process model with an example

11. Discuss briefly about Design Work flow and Implementation Work flow

(OR)

12. Explain the Phases of Unified Process

13. Explain about Execution based Testing

(OR)

14. Explain about Testing Quality Issues

15. Explain about Object Oriented Paradigm

(OR)

16. Explain i) Polymorphism ii) Dynamic Binding iii) Information Hiding iv) Inheritance

17. Explain about Design Reuse and its Applications

(OR)

18. Explain Reuse concepts Design and Implementation.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I MCA	Max Marks : 70
Subject	: Computers	Pass Mark : 28
Title of Paper	: Software Engineering and Design Patterns	Duration : 3 Hrs
Paper Code	: R22MCA201	Time : 9am – 12noon
W.E.F	: 2022-23	Date : 07-05-2025

SECTION-A

I. Answer any FIVE of the following Questions   **5X14=70M**

1. Explain the scope of software Engineering

(OR)

2. Explain the comparison of life cycle models

3. Define the capability Maturity Models

(OR)

4. Explain the requirements of workflow and analysis of workflow

5. Explain the scope of CASE

(OR)

6. What is Non Execution based Testing

7. Explain about Abstract Data types?

(OR)

8. What is Object oriented paradigm

9. Explain about Software Architecture

(OR)

10. Explain about Design Reuse.

Room No: _____   Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I MCA	Max Marks	: 70
Subject	: Computers	Pass Mark	: 28
Title of Paper	: **Data Base Management System**	Duration	: 3 Hrs
Paper Code	: R22MCA202A	Time	: 9am – 12noon
W.E.F	: 2024-25	Date	: 09.05.2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. Explain Characteristics of Data base Approach
2. Explain Data Models & Schemes of Instances
3. Discuss about Tuple Calculus and Domain Calculus
4. Discuss about 2NF
5. Discuss about functional Dependency
6. Explain about Serializability
7. Discuss about Transaction Processing
8. Discuss about Multi Media Database and Geographic information System

SECTION-B

II. Answer ALL the following Questions   5X10=50M

9. Explain about Three Scheme Architecture of DBMS

(OR)

10. Explain centralized and Client Service Architecture for DBMS

11. Explain about SELECT and PROJECT

(OR)

12. Draw ER diagram for Company Database

13. Define Normal Form & Explain about BCNF

(OR)

14. Discuss about Multi valued dependencies and 4NF

15. Explain about Two Phase locking technique and concurrency control

(OR)

16. Distinguish between Multi version Concurrency control techniques and Validation concurrency control techniques

17. Write about a) VIEWS b) INSERT c) DELETE d) UPDATE explain each with an example

(OR)

18. Explain different Constraints in SQL and Basic Queries in SQL

Room No: _____   Regd No: _____
KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I MBA	Max Marks	: 70
Subject	: Management	Pass Mark	: 28
Title of Paper	: **Human Resources Management**	Duration	: 3 Hrs
Paper Code	: R22MBA202	Time	: 9am – 12noon
W.E.F	: 2024-25	Date	: 09.05.2025

SECTION-A

I. Answer any FIVE of the following Questions   **5X4=20M**

1. Define HRM? Explain its Importance?

2. Factors affecting Recruitment?

3. Benefits of Training?

4. Contents of PAS?

5. Need for sound Salary Administration?

6. Define VRS and Exit Interview?

7. Define Grievances? What are the causes of Grievances?

SECTION-B

II. Answer any FIVE of the following Questions   **5X8=40M**

8. Explain various models of HRM?
   (OR)
9. Is HRM a line function or a staff function? Discuss the Line and Staff responsibilities of HR Manager?

10. Explain briefly the various steps involved in the Human Resource Planning(HRP) Process?
    (OR)
11. What are the sources of Recruitment? Explain the various Techniques of Recruitment?

12. What are the objectives of Training? Explain the various methods of Executive Development Programmes (EDP)?
    (OR)
13. What are the Problems/Errors of Performance Appraisal? What is the need for Post Appraisal Feedback?

14. What is Career Planning? Explain the steps in Career Planning process?
    (OR)
15. Explain the various methods of Job Evaluation?

16. What is QWL? What are the various strategies for improvement of QWL in any organization?
    (OR)
17. Write short notes on – 1) IHRM 2) Employee Leasing 3) HR Audit 4)HRIS

[P.T.O]

<div align="center">SECTION-C</div>

III. CASE STUDY (COMPULSORY)   **1X10=10M**
12. Answer the following Questions:

Ivan Gandoo has been working in I.G. Ferns and Advertisers for about 5 years as a copy man. His job as copy man is to design advertisements for use in newspapers and magazines for the company's clients. He must work closely with the girls in the photography section, with members of the sales and promotion department and with the vice-president who is in-charge of the whole sales & promotion department.

Ivan is an extremely enthusiastic worker with many good ideas. But he has considerable trouble in dealing with people. He is too impatient with the girls in the photography section and is constantly chasing them to finish his own work in time. On one occasion he went into the ladies dressing room where the girls were putting make up and asked them to speed up. The girls were annoyed, but through they expressed their displeasure they did not complain.

He makes it clear to everyone that his ideas are always the best and this is not taken kindly by others in the sales and promotion department. On another occasion, when there was a conference, and the vice-president was making a speech, Ivan cut the speech short by an aggressive answer. It was a good answer and the vice president took it sportingly. He even congratulated Ivan on his innovative ideas.

Through the girls did not complain and the vice president did not mind, some other people in the department thought that Ivan did not behave properly. Ivan always created Unpleasantedness wherever he went.

As a manager you are concerned about the animosity he is creating in your department. As per the performance appraisal policy of the company, each employee has to undergo an performance evaluation interview every year. The rating of the employee is based in terms of achievement and evaluation of behavioural attributes. Based on the rating the employee will be given an increment.

1. As Ivan's manager, what should your strategy be in handling the performance Evaluation interview with Ivan?
2. What remedial measures do you suggest to tackle the situation?
3. As a appraiser do you suggest with holding Ivan's increment or not? Give reasons?

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PG II – SEMESTER END EXAMINATIONS

Class	: I MCA	Max Marks : 70
Subject	: Computers	Pass Mark : 28
Title of Paper	: Database Management System	Duration : 3 Hrs
Paper Code	: R22MCA202	Time : 9am – 12 noon
W.E.F	: 2022-23	Date : 09.05.2025

SECTION-A

I. Answer any FIVE of the following Questions.   **5X14=70M**

1. Define characteristics of Database Approach

(OR)

2. Define Database Languages and Interfaces

3. Explain about JOIN and DIVISION

(OR)

4. Explain Relationship types and Relationship sets

5. What is Informal Design

(OR)

6. Explain about Join Dependencies and Fifth Normal Form.

7. Explain Multiversion Concurrency techniques

(OR)

8. Explain about Two phase Locking Techniques for Concurrency control

9. Explain about INSERT, DELETE and UPDATE statements in SQL

(OR)

10. Discuss about Multimedia Databases, Geographic information Systems.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I MCA	Max Marks	: 70
Subject	: Computers	Pass Mark	: 28
Title of Paper	: **Computer Networks**	Duration	: 3 Hrs
Paper Code	: R22MCA203A	Time	: 9am to 12pm
W.E.F	: 2024-25	Date	: 12/05/2025.

SECTION-A

5X4=20M

I. Answer any <u>FIVE</u> of the following Questions

1. Explain CSMA.

2. Explain framing.

3. Explain about types of switches.

4. Explain Bluetooth architecture.

5. Explain IPV6 Features.

6. Explain about broadcast routing.

7. Explain about multiplexing.

8. Difference between TCP and UDP.

SECTION-B

5X10=50M

II. Answer <u>ALL</u> the following Questions

9. Explain about OSI reference model with neat diagram.

(OR)

10. Explain about error detecting codes.

11. Explain about routers and gateways.

(OR)

12. Write about virtual LAN'S

13. Explain about hierarchical routing

(OR)

14. Explain about selecting flooding from flooding.

15. List the steps in TCP connection establishment.

(OR)

16. Explain about flow control and buffering.

17. Explain about name servers.

(OR)

18. Explain about electronic mail its architecture and services.

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PG II – SEMESTER END EXAMINATIONS

Class	: I MBA	Max Marks : 70
Subject	: Management	Pass Mark : 28
Title of Paper	: **Financial Management**	Duration : 3 Hrs
Paper Code	: R22MBA203	Time : 9am to 12pm
W.E.F	: 2024-25	Date : 12|05|2025.

SECTION-A

I. Answer any FIVE of the following Questions   **5X4=20M**

1. a) Types of shares

   b) Cost of capital

   c) Net income approach

   d) Objectives of inventory management

   e) Capital and Capitalization

   f) Payback period

   g) Time value of money

SECTION-B

II. Answer any FIVE of the following Questions   **5X8=40M**

2. What is financial management? Explain the functions of financial management.

(OR)

3. Discuss the objectives and process of financial planning.

4. Explain briefly the concept of EBIT-EPS Approach to establish an appropriate capital structure.

(OR)

5. A company has the following specific cost of capital along with the indicated book value and market value weights.

Sources of capital	Cost	Book value weights	Market value weights
Equity share capital	12%	40,000	46,000
Preference capital	10%	20,000	17,000
Retained earnings	8%	10,000	12,000
Long term debt	5%	30,000	25,000
		100%	100%

Calculate the WACC using book value & market value weights which of them do you consider better and why?

6. What do you mean by capital structure? Discuss the factors influencing the capital structure of a company?

(OR)

7. The firm is considering two mutually exclusive projects X & Y, each costing Rs.70,000. The details of cash inflows for the two projects are as follows:

[P.T.O]

Year	1	2	3	4	5
Cash inflows Project-X	10,000	20,000	30,000	45000	60,000
Cash inflows Project-Y	50,000	40,000	20,000	10,000	10,000

The company's cost of capital is 10%. Suggest which project is better according to Net Present Value Method.

8. What is the significance of dividend decisions? Examine the Walter model of dividend decision.

(OR)

9. Explain the Determinants of working capital.

10. Explain the causes and consequences of over capitalization.

(OR)

11. Discuss the factors that contribute to differences between book value and real value of shares.

SECTION-C
CASE STUDY (COMPULSORY)

12. Answer the following question 1X10=10M

Sharma Jute Mills has outstanding shares of Rs. 2 Lakhs selling at Rs.100 each. The management is thinking of declaring a dividend of Rs.10 per share at the end of the year, which has just started. The company's capitalization rate is 10%. Determine the price of share if a dividend is declared and if a dividend is not declared. Use Modigliani-Miller Method to determine the price.

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PG II – SEMESTER END EXAMINATIONS

Class   : I MCA   Max Marks : 70
Subject   : Computers   Pass Mark : 28
Title of Paper : **Data Warehousing and Data Mining**   Duration : 3 Hrs
Paper Code : R22MCA205A   Time   : 9am – 12noon
W.E.F   : 2024-25   Date   : 14/05/2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. Explain about Data Cube and OLAP

2. Discuss about Data Warehouse Design and usage

3. Explain about Data Cleaning & Data Integration

4. Discuss briefly about Tree Pruning

5. Explain briefly about Frequent Item set generation

6. Explain the difference between operational Database Systems and Data Warehouses

7. Discuss about Star & Snow Flake Scheme

8. Explain briefly about Hierarchical Methods

SECTION-B

II. Answer ALL the following Questions   5X10=50M

9. Explain about Data Warehouse Design and Implementation

(OR)

10. Name the different Kinds of Data Needs to be mined & technologies used. Explain ?

11. Explain about Data Reduction, Data Transformation and Data Discretization

(OR)

12. Explain about Decision Tree Induction with example

13. Explain about FP Growth Algorithm

(OR)

14. Explain the Rule Generation in Apriori Algorithm

15. Explain about Data Warehouse Architecture and its components

(OR)

16. Explain about Data Modeling Scheme Design

17. Explain K- Means Clustering with example

(OR)

18. Explain briefly about Clustering analysis and clustering techniques

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. a) Entrepreneur Vs. Intrapreneur

   b) Myths about Entrepreneurship

   c) Sources of Business Ideas

   d) Building a new venture team

   e) Guidelines for Project Report Preparation

   f) Characteristics of MSMEs

   g) DIC

   h) Seed capital

SECTION-B

II. Answer ALL the following Questions   5X8=40M

2. Who is an Entrepreneur? State the characteristics of successful entrepreneurs.

(OR)

3. Explain the different types of Entrepreneurs.

4. Explain the components of an effective Business Model.

(OR)

5. What is Feasibility Analysis? State it's different types in entrepreneurship.

6. Explain the Contents of a Project Report.

(OR)

7. Explain the different sources of finance for startups.

8. What is Sickness in industries? Explain the Causes and Cures for sickness.

(OR)

9. Explain the role of small enterprises in economic development.

10. Write about NSIC

(OR)

11. Write about SSIDC

[P.T.O]

III. Answer the following Question   **1X10=10M**

12. Doodhwala, founded in 2015 by Aakash Agarwal and Ebrahim Akbari, aimed to revolutionize the grocery delivery industry in India, specifically focusing on daily essentials like milk and groceries. Doodhwala offered doorstep delivery of dairy products but faced challenges in operations and achieving profitability. The company focused on delivering fresh milk, along with other essential items, directly to customers' homes. However, it had problems making enough money and running smoothly. Although many people liked their service, they couldn't do well in the competitive market. It was hard for them to manage their delivery and make a profit. They tried to fix things but still struggled to compete with other companies. Doodhwala faced a downfall in 2019 due to poor management and excessive cash burn with inadequate record-keeping. The startup eventually announced its closure, citing unfavorable circumstances as the reason for shutting down.

The company faced challenges due to inefficiencies and strong competition from Big Basket and Grofers. This caused its market position to drop and made continuing operations hard. As a consequence, the company became one of the startups that failed in India.

Question

What went wrong in the above case? Analyse.

Class   : I MCA   Max Marks : 70
Subject   : Computer Science   Pass Mark : 28
Title of Paper : **Data Warehousing and Data Mining**   Duration   : 3 Hrs
Paper Code   : R22MCA205E2A   Time   : 9am to 12pm
W.E.F   : 2023-24   Date   : 14/05/2025

SECTION-A

I. Answer <u>ALL</u> of the Following Questions   5X14=70M

1. Explain about Data Warehouse Modelling and Data Cube.

(OR)

2. Explain about Data Warehouse Architecture and Implementation.

3. Explain about Data Cleaning, Data Integration, Data Reduction. `

(OR)

4. Explain about Attribute Selection Measures.

5. Explain about FP-Growth Algorithms.

(OR)

6. Explain about Apriori Algorithm.

7. Explain about Star and Snow Flake Schema.

(OR)

8. Explain about Data warehouse Architecture.

9. Explain about K Means Clustering method and outlier analysis.

(OR)

10. Explain about Partitioning methods.

Class : I MBA
Subject : Management
Title of Paper : **Research Methodology and IPR**
Paper Code : R22MBA205
W.E.F : 2024-25

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9am – 12 noon
Date : 16-05-2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. a) Define Research

   b) State the errors in sampling

   c) Testing of hypothesis

   d) Nature of Intellectual property rights

   e) Intellectual patent protection

   f) Right of patent

   g) Conflict of interest

SECTION-B

II. Answer any FIVE of the following Questions   5X8=40M

2. Explain the types of research

(OR)

3. Describe the steps in research process.

4. Explain the types of probability sampling

(OR)

5. Explain the techniques for collecting primary data

6. Describe the different types of research report

(OR)

7. Explain the procedure of Testing of hypothesis

8. Explain the procedure for Grants of Patents

(OR)

9. Explain the different types of Intellectual Property Rights

10. Describe the Significance of protection of Intellectual Property Rights.

(OR)

11. Explain the Development of IPR Laws in India

SECTION-C
CASE STUDY (COMPULSORY)

12. Answer the following Question   1X10=10M

Develop a questionnaire to assess customer satisfaction with Dmart products in Ramvarapadu, Vijayawada.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I MCA   Max Marks : 70
Subject   : Computers   Pass Mark : 28
Title of Paper : **Research Methodology and IPR**   Duration : 3 Hrs
Paper Code   : R22MCA204A   Time   : 9am – 12 noon
W.E.F   : 2024-25   Date   : 16-05-2025

SECTION-A

I. Answer any FIVE of the following Questions   **5X4=20M**

1. What is the Criteria of Good Research?

2. Explain Types of Data

3. What are the Types of Hypothesis?

4. Explain Infringement of IPR

5. Write about New Development of IPR

6. Write a Short Note about Development of Working Hypothesis

7. Write about Reliability & Validity

8. Explain the Rights of Patent

SECTION-B

II. Answer ALL the following Questions   **5X10=50M**

9. What is meant by Research? Explain Different Types of Research.

(OR)

10. What are the Problems we to Face during the Time of Research.

11. Explain About Types of Research Design.

(OR)

12. What are the Methods and Techniques of Primary and Secondary Data Collection.

13. What do you know about Different Types of Reports?

(OR)

14. How to Write a Research Proposal

15. Explain the Features of Intellectual Property Rights (IPR)

(OR)

16. Why Protection of Intellectual Property is Important?

17. Explain the Developments of Intellectual Property Rights (IPR) in India?

(OR)

18. Explain International Patent Protection?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I MBA   Max Marks : 70
Subject   : Management   Pass Mark : 28
Title of Paper : **Operations Research** Duration   : 3 Hrs
Paper Code   : R22MBA206   Time   : 9am to 12pm
W.E.F   : 2024-25   Date   : 19|05|2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. a) Define OR

   b) Explain technical issues in simplex method

   c) Explain least cost method

   d) Define game

   e) Define Queuing theory

   f) Explain unbalanced transportation problem

   g) Explain uses of OR

SECTION-B

II. Answer any FIVE of the following Questions   5X8=40M

2. Explain the procedure of simplex method in LPP

(OR)

3. Explain various applications of OR.

4. Explain the procedure of duality in LPP

(OR)

5. Find the critical path and project duration of the following data

Activity	1-2	1-3	2-4	3-4	4-5
Duration	1	3	5	7	5

6. Find the transportation cost by using North West Corner rule method

	E	F	G	H	Supply
A	1	3	5	7	20
B	2	1	3	4	30
C	3	1	2	4	40
Demand	10	20	40	20	

(OR)

7. Explain the procedure of assignment problem in Hungarian method

8. Explain the applications of decision theory

(OR)

9. Solve the following game by using dominance method.

$$\text{Player A} \begin{array}{c} \text{Player B} \\ \begin{vmatrix} 1 & 3 & 5 \\ 2 & 4 & 6 \\ 1 & 7 & 3 \end{vmatrix} \end{array}$$

10. Explain the applications of simulation to different management problems

(OR)

11. Customers arrive at a service station with mean 5 per hour and completes the service at 10 per hour. Find the average queue length and average number of customers in the system.

SECTION-C
CASE STUDY (COMPULSORY)

12. Answer the following question   1X10=10M

Solve the following assignment problem

$$\text{Jobs} \begin{array}{c} \text{Candidates} \\ \begin{bmatrix} 0 & 1 & 1 \\ 2 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix} \end{array}$$

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I MBA   Max Marks : 70
Subject   : Management   Pass Mark : 28
Title of Paper : **Consumer Behaviour**   Duration   : 3 Hrs
Paper Code   : R22MBA207   Time   : 9am to 12pm
W.E.F   : 2024-25   Date   : 21/05/2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. a) Interdisciplinary dimensions of Consumer Behaviour.

   b) Subliminal perception

   c) Cross cultural understanding

   d) Adoption categories and process

   e) Consumer Behaviour and product strategy

   f) Quantitative research and Qualitative research

   g) Attitude formation and change.

SECTION-B

II. Answer any FIVE of the following Questions   5X8=40M

2. Discuss the scope and importance of Consumer Behaviour.

(OR)

3. Explain Determinants of Consumer Behaviour.

4. What is personality? Explain theories of personality in detailed.

(OR)

5. Explain various learning theories and their applications

6. Describe various types of Consumer Relevant Groups

(OR)

7. Explain about Environmental influences on consumer Behaviour

8. Explain consumer decision making process with suitable examples.

(OR)

9. Explain about Engel-kollat Model of consumer Behaviour

10. Explain the Consumer Behaviour and Pricing Strategy

(OR)

11. Describe about Consumer Behaviour and Promotion Strategy

[P.T.O]

SECTION-C
Case study (Compulsory)

12. Answer the following Question   1X10=10M

Godrej India Ltd. A well known hardware manufacturer and vendor wanted to conduct a marketing research survey in North India and South India separately. The prime reason for the survey is to identify the fall in sales in North India when compared with South India(office appliances and house hold furniture) the previous three quarters .The company hired large force of interns, trained them to how to collect data, where to collect data and other methods of the research.

The interns went on collecting the data for a period of three months; they collected the data in three phases, approached lakhs of consumers across India and used different items for data collection. The management collected the data, collated and analysed the data and it revealed surprising facts about the consumer behaviour in North and Southern parts of India.

North Indians showed that they are not brand conscious: they are price conscious, they are willing to trade quality, longevity for price .Thus sales dipped in North India because Godrej prices are more when compared with other company's products. In South India, people are brand conscious and are willing to pay more money for brand quality, durability and strength.

Questions:

a) What is the problem you find in the case, why it is important to address the issue?

b) Discuss influence of profile of Indian consumers on purchase decisions.

c) What are the findings of the study?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I MBA   Max Marks : 70
Subject   : Management   Pass Mark : 28
Title of Paper : Leadership And Change Management   Duration : 3Hrs
Paper Code   : R22MBA207   Time   : 9am to 12pm
W.E.F   : 2022-23   Date   : 21/05/2025

SECTION-A

I. Answer Any FIVE of the following Questions: 5X4=20M

1. Leadership

2. Learning

3. Self Esteem

4. Organizational Change

5. Sustainable Process

6. Creative Thinking

7. Diagnosing

SECTION-B

II. Answer Any FIVE of the following Questions: 5X8=40M

8. Define Leadership. What are the factors of Leadership?

(OR)

9. Explain Hersey and Balanchard Situational Leadership Model.

10. What are the Challenges faced by managers in Motivating Employees

(OR)

11. What are the Principles of learning to develop Effective leadership?

12. What is the importance of Balancing Emotions in leadership?

(OR)

13. What do you mean by Team Building? What are the Principles of Team Building

14. Discuss the impact & Benefits of Organizational Change

(OR)

15. What is Resistance to Change? What are the ways to overcome it?

16. Explain the process of Managing Change

(OR)

17. How to use Coaching in Organizational Change Management.

[P.T.O]

CASE STUDY: 1X10=10M

Laura is the associate director of a nonprofit agency that provides assistance to children and families. She is the head of a department that focuses on evaluating the skill-building programs the agency provides to families. She reports directly to the agency leadership. As a whole, the agency has been cautious in hiring this year because of increased competition for federal grant funding. However, they have also suffered high staff turnover. Two directors, three key research staff, and one staff person from the finance department have left.

Laura has a demanding schedule that requires frequent travel; however, she supervises two managers who in turn are responsible for five staff members each. Both managers have been appointed within the last six months.

Manager 1: Kelly has a specific background in research. She manages staff who provide research support to another department that delivers behavioral health services to youth. Kelly supports her staff and is very organized; however, she often takes a very black and white view of issues. Upper level leadership values Kelly's latest research on the therapeutic division's services. Kelly is very motivated and driven and expects the same from her staff.

Manager 2: Linda has a strong background in social science research and evaluation. She manages staff that work on different projects within the agency. She is known as a problem solver and is extremely supportive of her staff. She is very organized and has a wealth of experience in evaluation of family service. Linda is very capable and can sometimes take on too much.

The managers are sensing that staff are becoming overworked as everyone takes on increased responsibilities due to high staff turnover. Staff have also mentioned that Laura's "glass half-empty" conversation style leaves them feeling dejected. In addition, Laura has not shared budgets with her managers, so they are having difficulty appropriately allocating work to staff. Laura said she has not received sufficient information from the finance department to complete the budgets. The finance department said they have sent her all the information they have available.

As staff become distressed, the managers are becoming frustrated. They feel like they are unable to advocate for their staff or solve problems without key information like the departmental budget.

Questions;

1. What advice would you give Laura on improving her leadership skills and to the managers on improving their management skills?

2. **Which leadership** style do you think a leader would need to be effective in this situation?

SECTION-A

I Answer any FIVE of the following Questions   5X4=20M

1. What is Tableau ?and explain its applications.

2. Write the steps to connect data in Tableau.

3. Explain about Dual axis.

4. Give a note on measure names and measure values with examples.

5. Explain about Histogram view ?

6. Explain about data blending in Tableau.

7. Write the steps to create Heat map in Tableau.

8. What is Gantt chart?

SECTION-B

II Answer any ALL of the following Questions   5X10=50M

9. Explain about installing Tableau desktop data preparation.

(OR)

10. Discuss the steps to open a existing workbook and creation of new workbook in tableau.

11. Give a brief note on Show Me, colour ,size and label options in Tableau.

(OR)

12. Explain about Text Tables and formatting options in Tableau.

13. Define chart. Explain about different types of chart in Tableau.

(OR)

14. Create a hierarchy for India - region-state beneficiaries vaccinated using in built data source.

15. Explain about word cloud in Tableau.

(OR)

16. Explain about the bullet graph chart and water fall chart in Tableau.

17. Describe the steps to create a simple dashboard in Tableau.

(OR)

18. Give a brief note on calculated field and explain about creating parameters in Tableau.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I M.Sc [ACH,OCH]   Max Marks   : 70
Subject   : Chemistry   Pass Mark   : 28
Title of Paper : **Organic Spectroscopy**   Duration   : 3 Hrs
Paper Code   : R22ACH201A/R22OCH201A   Time   : 9am to 12PM
W.E.F   : 2024-25   Date   : 28/06/2025

SECTION-A

I Answer any FIVE of the following Questions   5X4=20M

1. Explain types of Electronic transitions.

2. Write a note on Beer Lamberts Law.

3. Write a note on Finger Print Region.

4. Applications of IR in structural determinations.

5. Explain the shielding & Deshielding.

6. Write a note on nuclear overhauser effect.

7. Explain solvent effects.

8. Write note on Mc Lafferty rearrangement.

SECTION-B

II Answer any ALL of the following Questions   5X10=50M

9. Explain the Factors effecting UV absorption.

(OR)

10. Write a note on types of absorption shifts in UV

11. Write a note on fundamental modes of vibration.

(OR)

12. Write about factors effecting on IR Spectroscopy.

13. Define coupling constant and explain factors effecting the coupling constants.

(OR)

14. Write a note on a Basic principle and Instrumentation of NMR.

15. Explain the complex PMR Spectra of ABX and AMX systems.

(OR)

16. Write a note on FT NMR.

17. Explain about the ionization techniques MALDI and FAB in mass spectroscopy.

(OR)

18. Write about the Ionization techniques of EI and CI in Mass Spectroscopy.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I M.Sc [DS]   Max Marks   : 70 M
Subject   : Computers   Pass Mark   : 28
Title of Paper : **Data Mining and Data Warehousing** Duration : 3 Hrs
Paper Code   : R23DS202A   Time   : 9am to 12pm
W.E.F   : 2024-25   Date   : 30|06|2025

SECTION-A

I Answer any <u>FIVE</u> of the following Questions   5X4=20M

1. Write a short note on What is Data Warehouse ?

2. What is a Data Cube ?

3. What is Data Discretization ?

4. Write a short note on tree pruning in decision trees?

5. What is rule generation?

6. What is a frequent item set generation?

7. What is data modelling?

8. What is an outlier, give an example ?

SECTION-B

II Answer any <u>ALL</u> of the following Questions   5X10=50M

9. Explain about the applications of Data mining in detail.

(OR)

10. What is an OLAP ? Explain in detail.

11. What is Data Pre-processing ? Describe its techniques.

(OR)

12. Explain about Decision Trees with a simple diagram.

13. Explain in detail about Apriori algorithm.

(OR)

14. Explain in detail about FP Growth Algorithm

15. Describe in detail about Data Warehouse architecture.

(OR)

16. What is Schema ?Explain in detail about different type of schemas.

17. Discuss in detail about K - Means algorithm .

(OR)

18. Explain about Partitioning Methods

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I M.Sc [ACH,OCH]	Max Marks	: 70 M
Subject	: Chemistry	Pass Mark	: 28
Title of Paper	: **Physical Chemistry-II**	Duration	: 3 Hrs
Paper Code	: R22ACH202A/R22OCH202A	Time	: 9am to 12pm
W.E.F	: 2024-25	Date	: 30/06/2025

SECTION-A

I Answer any <u>FIVE</u> of the following Questions   5X4=20M

1. Explain third law of Thermodynamics in determining the absolute entropy of solids.

2. Derive Boltzmann-Plank equation.

3. Describe Michelis-Menten Kinetics.

4. Write the group multiplication table for C_{2v} point group.

5. Derive the relation between order of a finite group and its subgroup.

6. Write the selection rules for microwave spectroscopy and vibrational spectroscopy.

7. Describe Born-Oppen Heimer approximation.

8. Explain the construction and working of Standard Hydrogen Electrode.

SECTION-B

II Answer any <u>ALL</u> of the following Questions   5X10=50M

9. How do you derive Fermi-Dirac Statistics.

(OR)

10. Derive Sacker-Tetrode equation.

11. Derive Stern Volmer Equation.

(OR)

12. Briefly elaborate the kinetics of hydrogen and oxygen reaction.

13. Explain Great Orthogonality theorem. Write its significance.

(OR)

14. How do you explain the matrix representation of C_{2v} point group.

15. Describe the rotational spectra of a diatomic molecule as rigid rotor.

(OR)

16. Explain the vibrational spectra of anharmonic oscillator.

17. Explain various types of potentiometric titrations.

(OR)

18. Derive Butler Volmer equation for one electron transfer.

SECTION-A

I. Answer ALL the following Questions   **5X14=70M**

1. a) Describe the procedure of absolute entropy of solids by using third law of thermodynamics.

   b) Discus about exceptions of third law of thermodynamics.

(OR)

2. a) Define partition function write about translational and rotational partition function.

   b) Derive Boltzmann plank equation.

3. a) Explain Glass transition temperature factors influence the glass transition temperature.

   b) Kinetics of free radical polymerization.

(OR)

4. a) Explain quantum theory of Raman Effect.

   b) Selection rules for Raman spectroscopy.

5. a) Explain membrane electrode and glass electrode.

   b) Explain about decomposition electrode.

(OR)

6. a) Explain reference electrode and standard hydrogen electrode.

   b) Explain about potentiometric titrations write its one application.

7. a) Explain principle involved in actionometry and write about uranyloxalate actionometrty.

   b) What is acid base catalysis and write about protropic mechanism.

(OR)

8. a) Explain about low quantum yield and high quantum yield with suitable examples.

   b) Stern volmer equation.

9. Explain great orthogonality theorem and its importance.

(OR)

10. a) Write the group multiplication table for matrices C2 point group.

   b) Explain Anatomy of character tables.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I M.Sc [DS]
Subject   : Computers
Title of Paper : **Data Science with R Programming**
Paper Code : R23DS203A
W.E.F   : 2024-25

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time   : 9am to 12pm
Date   : 02/07/2025

SECTION-A

I Answer any FIVE of the following Questions   5X4=20M

1. Explain Need for Business Analytics?
2. Explain about pre-requisites of Data Science?
3. Explain Data Collection and APIs?
4. Explain central tendencies and distributions?
5. Explain Time Series Analysis?
6. Explain Decision Tree?
7. Explain Mean and Median?
8. Explain Box plots with Example?

SECTION-B

II Answer any ALL of the following Questions   5X10=50M

9. Explain about Data Science Life Cycle and different tools available for Data Science?

(OR)

10. Explain Concepts of Statistics in Solving problems arising in data science?
11. Explain Data storage and Management and using Multiple data sources?

(OR)

12. Explain Variance and Distribution Properties and arithmetic?
13. Explain Normal and Binomial distributions and difference between Normal and Binomial?

(OR)

14. Explain Linear and Multiple Regression and Logistic Regression?
15. Explain Estimated Standard deviation and Standard Scores?

(OR)

16. Explain about different Debugging Tools in R?
17. Explain setting random number seed and simulating linear model?

(OR)

18. Explain about density plots and dot plots and bar charts?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I M.Sc [ACH,OCH]	Max Marks	: 70
Subject	: Chemistry	Pass Mark	: 28
Title of Paper	: **Inorganic Chemistry-II**	Duration	: 3 Hrs
Paper Code	: R22ACH203A/R22OCH203A	Time	: 9am to 12pm
W.E.F	: 2024-25	Date	: 02/07/2025

SECTION-A

I Answer any FIVE of the following Questions   5X4=20M

1. Write a note on Carboranes.
2. What are wades and Lauher rule? How they are helpful in counting electrons in metal clusters.
3. Define Heptacity with suitable Examples.
4. Write a note on Catalytic hydrogenation.
5. Explain Marcus-Hush equation.
6. Explain the factors effecting the substitution reactions in octahedral complexes.
7. Write a note on Orgal diagrams.
8. Write the difference between Hemoglobin and Myoglobin.

SECTION-B

II Answer any ALL of the following Questions   5X10=50M

9. Discuss the preparation, structure, bonding and magnetic property of $[Re_2Cl_8]^{-2}$ ion.

(OR)

10. Discuss the preparation and structure $[Mo_6cl_8]^{+4}$ and $[Nb_6Cl_{12}]^{2-}$.

11. What are Organometallic compounds? Explain the classification Organometallic Compounds.

(OR)

12. Write a note on Hydrogenation and hydroformylation.

13. Write the mechanism of inner sphere reactions

(OR)

14. Discuss the direct and indirect evidences for CB mechanism.

15. Explain Charge transfer Spectra of transition metal complexes.

(OR)

16. Discuss microstates and discuss how hunds rules to predict ground terms and ground states.

17. Explain the Structural features and functions of Haemoglobin.

(OR)

18. Discuss the spin orbital coupling on paramagnetic moments of transition metal complexes.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Class   : I M.Sc (OCH/ACH)   Max Marks   : 70
Subject   : Chemistry   Pass Mark   : 28
Title of Paper : Inorganic Chemistry   Duration   : 3 Hrs
Paper Code   : R20OCH203/R20ACH203 /R22OCH203/   Paper Time   : 9am to 12pm
W.E.F   : 2020-21   R22ACH 203   Date   : 02/07/2025

SECTION – A

I. Answer ALL the following Questions.   5X14=70M

1. (a) Discuss the preparation, structure, bonding and magnetic property of $Re_2Cl_8^{-2}$ ion.   8M
   (b) Discuss the preparation and structure of trinuclear metal clusters   6M

<div align="center">(OR)</div>

2. (a) Explain the preparation of carboranes and discuss wade's rules to explain the structures of higher
       boranes.   8M
   (b) Discuss the preparation and structure of metalloboranes   6M

3. (a) Explain the synthesis, structure and bonding of ferrocene.   8M
   (b) Define heptacity and write the classification of organometallic compounds   6M

<div align="center">(OR)</div>

4. (a) Discuss the synthesis, structure and bonding of olefinic complexes   8M

   (b) Write a note on catalytic hydrogenation and hydroformylation   6M

5. (a) Discuss acid hydrolysis and base hydrolysis.   8M

   (b) Explain anation reactions   6M

<div align="center">(OR)</div>

6. (a) Discuss the factors affecting the substitution reactions in octahedral complexes.   8M

   (b) Explain the mechanism of inner sphere reactions.   6M

7. (a) How do Tanabe-Sugano diagrams differ from Orgel diagrams? Draw Tanabe-Sugano diagram
       for $[cr(H_2O)_6]^{+3}$.   8M

   (b) Write a note on Term symbols   6M

<div align="center">(OR)</div>

8. (a) Explain Charge transfer spectra.   8M

   (b) Explain Slator -condon parameters   6M

9. (a) Discuss different types of paramagnetic behaviour of transition metal complexes   8M

   (b) Explain anomalous magnetic moments   6M

<div align="center">(OR)</div>

10. (a) write a note on Myoglobin   8M

    (b) Discuss the mechanism of oxygen transport by Hemoglobin.   6M

<div align="center">*****</div>

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I M.Sc [DS]   Max Marks   : 70
Subject   : Computers   Pass Mark   : 28
Title of Paper : **Optimization Techniques**   Duration   : 3 Hrs
Paper Code   : R23DS204A   Time   : 9am to 12pm
W.E.F   : 2024-25   Date   : 04/07/2025

SECTION-A

I Answer any FIVE of the following Questions   5X4=20M

1. Write various applications of Operation Research?
2. Explain about Characteristics of Operation Research?
3. What are the properties of Linear Programming?
4. What are the various methods used for solution of LP problem?
5. What are the basics of simplex method.
6. What is MODI method?
7. Explain Hungarian Method?
8. Discuss about Graphical method?

SECTION-B

II Answer any ALL of the following Questions   5X10=50M

9. Explain about Scope and Limitations of Operations Research?

(OR)

10. What are the phases of Operation Research?
11. What are the types of LPP? Explain their Characteristics?

(OR)

12. Explain Graphical LP minimization problem?
13. Solve the following LPP by simplex method.

   Minimize $Z=X_1+2X_2$

   Subject to: $-X_1+2X_2<=8$,

   $X_1+2X_2<=12$,

   $X_1-X_2<=3$,

   $X_1>0$ and $X_2>=0$

(OR)

14. Explain simplex method with more than two variables?
15. Solve the following assignment problem. Cell values represent the cost of
    assigning job A,B,C and D to the machines, I, II, III and IV

		Machines			
		I	II	III	IV
	A	10	12	19	11
Jobs	B	5	10	7	8
	C	12	14	13	11
	D	8	15	11	9

(OR)

16. What are the methods of basic feasible solution?
17. Write the procedure for dominance principle?

(OR)

18. Differentiate mX2 and 2Xn games? Which one is efficient?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I M.Sc (ACH/OCH)   Max Marks : 70
Subject   : Chemistry   Pass Mark : 28
Title of Paper : Research Methodology And IPR   Duration   : 3 Hrs
Paper Code : R22ACH204/R22OCH204   Time   : 9am to 12PM
W.E.F   : 2022-23   Date   : 04/07/2025

SECTION-A

I. Answer ALL the following Questions   **5X14=70M**

1. Explain the types of Research and Research Process

(OR)

2. Define Approaches to Critical Literature Review

3. Write about Sampling Theory

(OR)

4. Define Data Collection and what are its data collection methods

5. a) What is Hypothesis Formulation and Testing Procedure
   b) Define and Explain the types of hypothesis

(OR)

6. Write about Conflict of Interest and Plagiarism

7. What are the features of Intellectual property Rights

(OR)

8. Define the scope of a Patent Rights

9. Write a note on i) IPR Development in India for the past five years
                  ii) Development of IPR Laws in India

(OR)

10. What is Administration of Patent System.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I MCA / I M.Sc (OCH & ACH)   Max Marks : 70
Subject   : Computers   Pass Mark : 28
Title of Paper : Research Methodology and Intellectual Property Rights   Duration : 3 Hrs
Paper Code   : R22MCA204A / R22OCH204A / R22ACH204A   Time : 9am to 12pm
W.E.F   : 2024-25   Date : 04/07/2025

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M

1. Criteria of good research

2. Sampling errors

3. Types of Research reports

4. Patents

5. International Patent Protection

6. Research gaps

7. Research Design

8. Hypothesis

SECTION-B

II. Answer ALL the following Questions   5X10=50M

9. Explain different types of Research

(OR)

10. Explain about defining and formulating a research Problem .How do review of literature help in this?

11. Explain about Various Sampling methods

(OR)

12. What is data collection? Explain various data collection techniques.

13. Explain about different measurement scales applied in research.

(OR)

14. Explain about Plagiarism

15. What Are intellectual property Rights? Explain about several types of IPR

(OR)

16. Explain about Significance of IPR. Discuss about enforcement and infringement of IPR.

17. Explain about the development of IPR laws in India.

(OR)

18. Explain about new developments in IPR in the international scenario.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class	: I M.Sc [DS]	Max Marks	: 70
Subject	: Computers	Pass Mark	: 28
Title of Paper	: **Design and Analysis Algorithms**	Duration	: 3 Hrs
Paper Code	: R23DS205A	Time	: 9am to 12pm
W.E.F	: 2024-25	Date	: 07/07/2025

SECTION-A

I Answer any FIVE of the following.   **5X4=20M**

1. Explain about Stack?

2. What is Set? Explain about Disjoint sets?

3. Explain about Prim's Algorithm?

4. Write about Kruskal's Algorithm?

5. Explain about Single source shortest path problem using Dynamic Programming?

6. Explain about Backtracking?

7. Write about Hamiltonian cycles?

8. Explain about Branch and Bound Techniques?

SECTION-B

II Answer any ALL of the following Questions   **5X10=50M**

9. Explain about time complexity & space complexity, asymptotic notation.

(OR)

10. Explain about Binary search tree with example.

11. Briefly explain about Job Sequencing with Deadlines.

(OR)

12. Write about Optimal Storage on tapes?

13. Write about All Pairs Shortest Path using Dynamic Programming.

(OR)

14. Explain about 0/1 Knapsack problem using Dynamic Programming.

15. Explain about N-Queens problem using Backtracking.

(OR)

16. Write about Graph Colouring with example.

17. Explain about LC Using Branch and Bound Solution.

(OR)

18. Explain about Travelling Sales Person Using Branch and Bound.

SECTION-A

I Answer any FIVE of the following Questions   5X4=20M

1. Write a note on anomeric effects in carbohydrates.

2. Explain Mutarotation.

3. Write a note on Isoelectric point and Zwitter Ion.

4. Write any four general properties of aminoacids.

5. Write the synthesis of Vitamin - A.

6. Write a note on classification of Vitamins.

7. Write the differences between nucleotides and nucleosides.

8. Write a note on bile acids.

SECTION-B

II Answer any ALL of the following Questions   5X10=50M

9. Discuss the structural elucidation of Glucose.

(OR)

10. Write the stereochemistry and ring structure of glucose.

11. Write any five general methods for the synthesis of Aminoacids.

(OR)

12. What are proteins and write the classification.

13. Discuss the structural elucidation of Vitamin- C and synthesis.

(OR)

14. Discuss the structural elucidation of Vitamin-B_1

15. Discuss the structure of DNA

(OR)

16. Write a note on Mutations.

17. Describe the structure and functions of Cholesterol.

(OR)

18. Discuss the addition and oxidation of lipids.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II – SEMESTER END EXAMINATIONS

Class   : I M.Sc (ACH/OCH)   Max Marks : 70
Subject   : Chemistry   Pass Mark : 28
Title of Paper : Chemistry of Bio-Organic Compounds   Duration : 3 Hrs
Paper Code   : R22ACH205/R22OCH205   Time : 9am to 12pm
W.E.F   : 2022-23   Date : 07/07/2025

SECTION-A

I. Answer ALL the following Questions   5X14=70M

1. Write a note on the following
   i) Classification of carbohydrates ii) Mutarotation iii) Anomeric Effects

(OR)

2. Define Chemistry of Glucose, Fructose and Sucrose

3. Write about synthesis of alpha-amino acids

(OR)

4. Define Determination of C-Terminal and N-Terminal Amino acid.

5. Discuss the structural elucidation of vitamin C.

(OR)

6. Write about Vitamin – A1, B1, C, D and B_{12} and its importance

7. Explain about the basic concepts of RNA, DNA

(OR)

8. What are the reactions of nucleic acid bases, mutations and Heterocyclic bases.

9. Write about the role of lipids in human biochemistry.

(OR)

10. Explain the structure and functioning of cholesterol.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
ఈ PG I – SEMESTER END EXAMINATIONS

Class	: I MBA	Max Marks	: 70
Subject	: Management	Pass Mark	: 28
Title of Paper	: Business Analytics for Managerial Decision Making	Duration	: 3 Hrs
Paper Code	: MBA10318	Time	: 2pm – 5pm
W.E.F	: 2018-19	Date	: 02.07.2025

SECTION-A

I. Answer any <u>FIVE</u> of the following Questions   5X3=15M

1. Define Statistics
2. Explain merits and demerits of arithmetic mean
3. Explain importance of business analytics
4. Explain merits and demerits of standard deviation
5. Explain about scatter diagram method
6. Define probable error
7. Define time series
8. Explain uses of time series

SECTION-B

II. Answer the following Questions   5X8=40M

9. Explain various methods of collecting primary data

(OR)

10. Calculate median and mode for the following data

MARKS	0-10	10-20	20-30	30-40	40-50	50-60	60-70
NO. OF STUDENTS	8	13	22	28	21	17	15

11. Define the analytical approaches for decision making with suitable examples.

(OR)

12. Explain the applications of analytics. Describe the business analytics as a competitive strategy.

13. Explain standard deviation and mean deviation and also write their merits and demerits

(OR)

14. Calculate Q.D for the following data

MARKS	0-10	10-20	20-30	30-40	40-50	50-60	60-70
NO. OF STUDENTS	8	14	20	18	15	10	12

15. Define Correlation and explain various types of correlation

(OR)

16. Calculate KPCC for the following data

X	65	68	71	75	78	81
Y	82	91	94	86	88	93

[P.T.O

17. Explain various components of Time-series

(OR)

18. Explain uses of Time series analysis

SECTION-C

III. Compulsory   **1X15=15M**

A. Estimate Trend line for the following data by using the method of least squares method

Year	2010	2011	2012	2013	2014	2015	2016
Sales	125	128	133	135	140	141	143

Room No:_____   Regd. No:_____

Answer ALL questions.   **5X14=70M**

UNIT – I

1. **A)** Explain Eigen Values and Eigen functions. (6M)
    B) Discuss the perturbation Theory. (8M)
                              (OR)
2. **A)** Write the application of variation Method to the Hydrogen atom. (6M)
    B) Discuss the solution of schrodinger equation to a particle in one dimensional box. (8M)

UNIT – II

3. **A)** Give the analytical applications of Lanthanides and Actinides. (6M)
    B) Explain the structure and bonding in Nitrosyl complexes. (8M)
                              (OR)
4. **A)** Explain the noble gas compounds with special reference to clathrates. (6M)
    B) Describe the spectral and magnetic properties of Lanthanides and Actinides. (8M)

UNIT – III

5. **A)** Explain the concept of Hybridization and Resonance. (6M)
    B) Discuss the molecular orbital energy level diagram for NO_2^- ion. (8M)
                              (OR)
6. **A)** Write the salient features of VSEPR Theory. (6M)
    B) What are walsh diagrams? Draw the walsh diagram for H_2O molecule. (8M)

UNIT – IV

7. **A)** Write the applications and limitations of CFT. (6M)
    B) Explain the Molecular orbital Theory of bonding in octahedral complexes. (8M)
                              (OR)
8. **A)** Discuss the splitting of d – orbitals in tetrahedral and square planar complexes. (6M)
    B) Explain Jahn – Teller effect. (8M)

UNIT – V

9. **A)** Write a note on stepwise and overall formation constants. (6M)
    B) Explain the determination of formation constants by SpectroPhotometric Method. (8M)
                              (OR)
10. **A)** Give account on crown ethers. (6M)
    B) Explain HSAB. (8M)

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Class   : I M.Sc (Organic Chemistry)   Max Marks : 70
Subject   : Chemistry   Pass Mark : 28
Title of the Paper : Organic Chemistry   Duration   : 3Hrs
Paper Code   : OCH 10317   Time   : 2pm–5pm
W.E.F   : 2019-20   Date   : 03.07.2025

Answer All Questions. All questions carry equal Marks.   **5X14=70M**

1. a) Write a note on hyper conjugation and tautomerism. (8M)
   b) Write about localized and de localized bonds.(6M)

(OR)

2. a) What is aromaticity and anti aromticity with 2 examples? (8M)

   b) What is homo aromaticity with examples? (6M)

3. a) Write a brief note on generation,structure, staility of carbanions. (8M)

   b) Write a note on arynes and its reactions. (6M)

(OR)

4. a) Describe carbine. Explain its generation, structure, stability and reactivity. (8M)

   b) What are electrophiles and nucleophiles? (6M)

5. a) What is neibhouring group participation? Explain with its mechanism with both π and σ example (14M).

(OR)

6. a) Write a brief note on benzyne mechanism with example.(6M)
   b) Explain the following rearrangements (8M)
      i) Von-Richter
      ii) Smiles

7. a) Describe different catalytic hydrogenation processes? (8M)
   b) What is crams rule and explain it with C-N and C-O bonds? (6M)

(OR)

8. a) Write a brief note on the following
      i) Formation of epoxides   (6M)
      ii) Hydroxylation process (8M)

9. a) What is pyrolytic syn elimination give some examples?
   b) What is Hoffmann's rule and Saytzeffs rule? (6M)

(OR)

10.a) Write the differences between syn and anti elimination reactions? (8M)
   b) Write a note on decarboxilative elimination reaction? (6M)

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
CTO PG I – SEMESTER END EXAMINATIONS

Class	: I MBA	Max Marks	: 70
Subject	: Management	Pass Mark	: 28
Title of Paper	: Financial Statements Analysis and Reporting	Duration	: 3 Hrs
Paper Code	: MBA10618	Time	: 2pm – 5 pm
W.E.F	: 2018-19	Date	: 03.07.2025

SECTION-A

I. Answer any FIVE of the following Questions   5X3=15M

1. What are the Branches of Accounting?

2. What is Marginal Costing?

3. What is Window Dressing?

4. What is a Trial Balance?

5. Forfeiture of Share

6. P/V Ratio

7. What is Internal Control?

8. What is Forensic Accounting?

SECTION-B

II. Answer the following Questions   5X8=40M

9. Explain the Generally Accepted Accounting Principles.

(OR)

10. Journalise the following transactions

March 1	Started Business with cash Rs.50,000
March 4	Bought Computer for cash Rs.58,000
March 19	Withdraw cash for personal use Rs.3,500
March 20	Sold good for cash Rs.12,000
March 21	Cash paid to Malhotra Rs.2,000
March 25	Paid salaries to employees Rs.4,000
March 31	Rent received Rs.1,200

11. What are the various techniques of financial statement Analysis?

(OR)

12. From the following Balance sheet of Vijay Ltd. prepare funds flow statement for the year ended 31 December 2017.

Liabilities	31.12.2016 Rs.	31.12.2017 Rs.	Assets	31.12.2016 Rs.	31.12.2017 Rs.
Share capital	70,000	74,000	Cash	9,000	7,800
Debentures	12,000	6,000	Debtors	14,900	17,700
Provision for Bad Debts	700	800	Stock	49,200	42,700
Creditors	10,360	11,840	Land	20,000	30,000
Profit & Loss A/c	10,040	10,560	Goodwill	10,000	5,000
	1,03,100	1,03,200		1,03,100	1,03,200

Additional Information:
a) Dividends paid Rs.3,500
b) Land is purchased during the year Rs.10,000

13. Explain the Accounting Procedures for Declaring and Distributing Dividends

(OR)

14. A company invited the public to subscribe for 10,000 Equity shares of Rs.100 each at a premium of Rs.20 per share payable on allotment. Payments were to be made as follows:

On application Rs.20; on allotment Rs.40; on forts call Rs.30 and on final callRs.20 Application were received for 13,000 shares; applications for 2,000 shares were rejected and allotment was made proportionately to the remaining applicants. Both the calls were mad and all the moneys were received except the final call on 300 shares which are forfeited after due notice. Later al these share were issued as fully paid at Rs.85 per share . pass the Journal entries.

15. Explain the legal requirements relating to Auditing

(OR)

16. Explain the legal requirements relating to Accounting Disclosures.

17. The Sales and profits during two periods are as under

	Period I	Period II
Sales	4,00,000	6,00,000
Profit	40,000	80,000

Calculate : a) P/V Ratio, b) Break even Point c) Sales required to earn a profit of Rs.50,000 d) Profit when sales are Rs.8,00,00 e) Margin of Safety at a point of Rs.1,00,000

SECTION-C

III. Compulsory Question

1X15=15M

18. From the following prepare the Income statement and Balance sheet of M/s Shine Ltd.

Debit Balances	Amount	Credit Balances	Amount
Sundry debtors	1,00,000	Bills payable	85,550
Bad debts	3,000	Sundry payable	25,000
Cartage	2,500	Provision for bad debts	1,500
Printing and stationary	5,000	Return outwards	4,500
Rent, Rates and Taxes	3,450	Capital	2,50,000
Freight	2,250	Discount received	3,500
Sales return	6,000	Interest received	11,260
Motor car	25,000	Sales	1,00,000
Opening stock	75,550		
Furniture and Fixture	15,500		
Purchases	75,000		
Drawings	13,560		
Investments	65,500		
Cash in hand	36,000		
Cash in bank	53,000		
	4,81,310		4,81,310

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
OTD PG IV – SEMESTER END EXAMINATIONS

Class : II M.Sc (OCH)
Subject : Chemistry
Title of Paper : Advanced Organic Spectroscopy
Paper Code : OCH40117
W.E.F : 2017-18

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 2PM - 5PM
Date : 05·07·2025

I. Answer the following Questions

5X14=70M

UNIT-I

1. (A) Write a detailed note on Nuclear Overhauser effect. (6M)
   (B) Explain AB_2 and ABC spectra with examples. (8M)

2. (A) What is a spin system. Write about nomenclature of spin system. (6M)
   (B) Discuss about nuclear magnetic double resonance. (8M)

UNIT-II

3. (A) Mention the similarities and differences between PMR and CMR. (6M)
   (B) Write a note on BBD and SFORD techniques (8M)

4. (A) Write about C^{13} NMR chemical shift values of allenes and aromatic compounds. (6M)
   (B) Explain how 3 isomeric ethers of MF:$C_4H_{10}O$ can be distinguished using $^{13}CNMR$ spectra. (8M)

UNIT-III

5. (A) Write a note on cotton effect. (6M)
   (B) Explain about α –halo keto rule (8M)

6. (A) Write about ORD and CD curves. (6M)
   (B) Discuss about Octant rules and mention the applications. (8M)

UNIT-IV

7. (A) Define DEPT spectrum. Explain its importance (6M)
   (B) Write a detailed note on COSY spectra. (8M)

8. (A) Write about NOESY spectrum. (6M)
   (B) Discuss about HOM2DJ and HET2DJ (8M)

9. (A) A compound with MF:$C_9H_{10}O$ gave the following spectral data. Deduce its structure. (14M)

   IR:1720, 1100 , 750cm^{-1}
   1HNMR:2.2 (S,3H), 3.6(S, 2H) , 7.3(M,5H)
   $^{13}CPMR$ 29 (q), 50(t), 126 (d), 136 (S), 127 (d), 128 (d) and 206 (s)

10. When acetone is treated with a base, a product. A is formed. It showed the following (14M)

    Spectral properties UV: λmax 238 nm (ϵ max 11,700)
    IR : 1620cm^{-1} , 1695cm^{-1}
    PMR : s-1.90 (S, 3H) ; 2.10 (S,6H) ; 6.0δ (S,1H)
MS: (m/2, RA) 98(49) ; 83 (90) ; 55(100) ; 53(13) ; 43(78) ,41(13) ; 39(43) ; 29(46) ; 28(8); 27(42)
Deduce the structure of compound A and interpret the above spectral data. Suggest a mechanism for the formation of A.

Class : II M.Sc(Organic Chemistry)   Max Marks : 70
Title of paper : Organic Reaction Mechanisms and Nano Chemistry   Pass Marks : 28
Paper Code : OCH40217   Time : 2 pm ;5pm
Duration : 3 Hrs   Date : 07.07.25

Answer the following questions.   **5 X 14 = 70M**

UNIT-I

1. (a). Explain stereochemistry in Tiffenev –Demjanov Rearrangement?   (6M)

   (b). Discuss about Baeyer – villiger Rearrangement with regio – chemistry   (8M)

(OR)

2. (a). Explain following Rearrangements.   (14M)

    (i). Favorski rearrangement

    (ii). Losen rearrangement

    (iii). Stevens rearrangement

    (iv). Neber rearrangement.

UNIT-II

3. (a). Write the molecular orbitals of allyl system and 2.4 pentadienyl system. (6M)

   (b). Write the analysis of 4n electro cyclic reactions by using FMO method.   (8M)

(OR)

4. (a). Explain Stereo chemical modes for cyclo-addition reactions.   (6M)

   (b). Write analysis of (4n +2) cyclo – addition reactions by using perturation

   Molecular orbital approach (PMO).   (8M)

UNIT-III

5. (a). Explain claisen rearrangement.   (6M)

   (b). What is sigmatropic rearrangements? Analyse 1,3 – Hydrogen shift by using

   Perturabation Molecular orbital method.   (8M)

(OR)

6. (a). Explain cope rearrangement   (6M)

   (b). Write analysis of 1.5 – Hydrogen shifts by using FMO method.   (8M)

UNIT-IV

7. (a). Explain the terms singlet and triplet states in photo chemistry. (6M)

   (b). Explain photochemistry of carbonyl compounds. (8M)

(OR)

8. (a). Discuss about photo Fries rearrangement. (6M)

   (b). Explain Norrish type I and II reactions. (8M)

UNIT-V

9. (a). Explain the structure of single and mutiwalled carbon nanotubes? (6M)

   (b). Write about catalyst activated growth Mechanism (8M)

(OR)

10. (a). Write applications of carbon nanotubes. (6M)

    (b). Write about Synthesis of single and multi walled carbon nanotubes. (8M)