

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Room No: _____

Class : I MBA
Subject : Management
Title of Paper : Operation Research
Paper Code : R20MBA207
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Paper Time : 9am to 12pm
Date : 21/09/2022

SECTION - A

I. Answer any FIVE of the following Questions.

5X3=15M

1. (a) Give any three definitions of Operations Research
- (b) Define Linear Programming problem
- (c) Explain Duality in Linear Programming
- (d) Explain Critical Path Method
- (e) Explain North West Corner Rule in Transportation problem
- (f) Explain Unbalanced Assignment Problem
- (g) Explain Two – Person Zero sum Game
- (h) What are the applications of simulation to different management problems.

SECTION - B

II. Answer ALL the following Questions

5X8=40M

2. (a) Explain the various application of Operations Research.

(OR)

- (b) Solve the following L.P.P by using Simplex method.

$$\text{Max } Z = 7x_1 + 5x_2$$

Subject to the constraints

$$x_1 + 2x_2 \leq 6$$

$$4x_1 + 3x_2 \leq 12$$

$$\text{and } x_1, x_2 \geq 0$$

3. (a) Explain the relation between Primal and Dual problems

(OR)

- (b) A project consists of 8 activities with the following relevant information.

Activity	A	B	C	D	E	F	G	H	
Immediate Predecessor	-	-	-	A	B	C	D,E	F,G	
Estimated duration	a	1	1	2	1	2	2	3	1
	b	1	4	2	1	5	5	6	2
	c	7	7	8	1	14	8	15	3

Draw the PERT Network and find out the expected project completion time

(P.T.O)

4. (a) Solve the following Transportation problem.

From	To			Supply
	A	B	C	
I	6	8	4	14
II	4	9	8	12
III	1	2	6	5
Demand	6	10	15	

(OR)

(b) Explain the procedure of Hungarian Assignment method.

5. (a) Solve the following game by using Dominance property.

Player A	Player B			
	I	II	III	IV
I	3	2	4	0
II	3	4	2	4
III	4	2	4	0
IV	0	4	0	8

(OR)

(b) Explain the procedure of Graphical method in Game theory.

6. (a) Explain (M / M / I) : (∞ / FIFO) Queuing model.

(OR)

(b) Explain the important characteristics of Queuing system.

SECTION -C

7. Case Study

1X15=15M

A company is faced with problem of the assigning 4 machines to 6 jobs (1 machine to 1 job). Solve the problem to maximize the total profit

Jobs		Machines			
		A	B	C	D
Jobs	1	3	6	2	6
	2	7	1	4	4
	3	3	8	5	8
	4	6	4	3	7
	5	5	2	4	3
	6	5	7	6	4

Room No: _____

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

Regd No: _____

Class : I MCA
Subject : Management
Title of Paper : Business Fundamentals for IT Professionals
Paper Code : R20EMBA206
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9am to 12pm
Date : 19/09/2021

SECTION-A

I. Answer any FIVE of the following Questions

5X3=15M

1. a) Explain the Significance of Management.
- b) Types of Banks.
- c) Product life cycle.
- d) Functions of HRM.
- e) Business Communication.
- f) Social Responsibility.
- g) Credit card.
- h) Characteristics of Marketing.

SECTION-B

II. Answer the following Questions

5X8=40M

2. a) Explain Role of IT employees in in the development of IT Industry.

(OR)

- b) Define Motivation and explain the Theories of Motivation.

3. a) Explain about National Electronic Fund Transfer (NEFT).

(OR)

- b) What is Primary and Secondary markets in India.

4. a) What are the 7Ps of Marketing Mix used for?

(OR)

- b) Explain the Marketing Environment of IT industry.

5. a) Explain the Characteristic and Qualities of HR Manager.

(OR)

- b) Explain the Training methods of Employee.

6. a) Explain the Principles of Effective Writing.

(OR)

- b) Explain the Principles of Effective Presentation.

[P.T.O]

7. Case Study (Compulsory)

SECTION-C

1X15=15M

Amos Automobile Ltd. is engaged in the business of repairing and overhauling of Automobiles. They have about 150 employees working in the workshop. Current practices have led to an extreme amount of customer dissatisfaction due to very high waiting time, discourteous behaviour of work force with the customers, poor quality of workmanship and high cost of repairing automobiles. As a result of it the customers have started getting their cars servicing elsewhere. The owner is very keen to improve the situation but he finds that his people are not motivated by a spirit of service basically because of located in environmentally alert community and they have also been complaining to the local municipal authority that the nasty way in which operations are handled and waste - water disposed off is causing a lot of inconvenience in that locality. The owner manager wants your help in raising the level of productivity of the employees and effectiveness of the operations.

Questions:

- a) Analyse the Case
- b) You have been asked to look into the operations of the company.
- c) Analyse the situation and make necessary recommendations.

Room No: _____

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

Regd No: _____

Class : I MBA
Subject : Management
Title of Paper : Management Information Systems
Paper Code : R20MBA206
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9am to 12pm
Date : 19/09/2022

SECTION-A

I. Answer any FIVE of the following Questions

5X3=15M

1. a) Computer Software
- b) Network Topologies
- c) System Development
- d) Difference between Data Warehousing and Data Mining
- e) Performance Management
- f) ERP
- g) E-Business
- h) Mobile Computing.

SECTION-B

II. Answer ALL the following Questions

5X8=40M

2. a) Define Information System and Explain the Types of Information Systems used in operational, tactical and strategic levels.

(OR)

b) Describe the Challenges faced by the IT managers in Dispersed Organisations.

3. a) Describe the Contemporary Approaches of Information Systems.

(OR)

b) Describe the Systems Development Life Cycle.

a) What is Database Management and Explain the types of DBMS.

(OR)

b) Narrate the Applications of Decision Support Systems.

5. a) Analyse the role of MIS in the Functional areas.

(OR)

b) How do you Manage International Information Systems.

6. a) Explain the MIS model for a Digital Firm.

(OR)

b) Elaborate the Intellectual Property Rights as Related to IT Services / IT Products.

[P.T.O]

SECTION-C

III. Case Study (Compulsory)

7. Apple Merging Technology, Business, and Entertainment

This might sound hard to believe, but a bit more than a decade ago, Apple was on the brink of bankruptcy. Apple Computer Inc., now back from near oblivion, is blazing a trail through the digital world with innovation and creativity that has been missing from the company for the past 20 years. The unique feature of Apple's competitive advantages is that they come from customers and users, not Apple employees. That's right; the company welcomes products created by consumers to sell to consumers, a trend new to business.

Capitalizing on the iPod

With millions of iPods in the hands of consumers, many people are finding ways to capitalize on the product. John Lin created a prototype of a remote control for the iPod and took his prototype to Macworld, where he found success. A few months later, Lin's company had Apple's blessing and a commitment for shelf space in its retail stores. "This is how Apple supports the iPod economy," Lin said. In the iPod-dominated market, hundreds of companies have been inspired to develop more than 500 accessories—everything from rechargers for the car to \$1,500 Fendi bags.

Eric Tong, vice president at Belkin, a cable and peripheral manufacturer, believes that 75 percent of all iPod owners purchase at least one accessory—selling over 30 million accessories to date. With most of the products priced between \$10 and \$200, that puts the iPod economy well over \$300 million and perhaps as high as \$6 billion. Popular iPod accessories include:

- Altec Lansing Technologies—iPod speakers and recharger dock (\$150).
- Belkin—TuneCast mobile FM transmitter (\$40).
- Etymotic Research—high-end earphones (\$150).
- Griffin Technology—iTrip FM transmitter (\$35).
- Kate Spade—Geneva faux-croc mini iPod holder (\$55).
- Apple—socks set in six colors: green, purple, blue, orange, pink, and gray (\$29).
- Apple—digital camera connector (\$29).

Capitalizing on the iPhone

Looking at someone using an iPhone is an interesting experience because there is a good chance they are not making a phone call. They could be doing a number of things from playing a game to trading stocks, watching a TV show, or even conducting business with a mobile version of salesforce.com's customer-management software. In a brilliant strategic move, Apple let outsiders offer software for the iPhone and in less than six months, more than 10,000 applications had been created. In fact, more than 15,000 applications are available at its app store section of iTunes, and they have been downloaded a total of 500 million times. Now, many of the iPhone apps are available for the iPad. The iPhone and iPad app store market is getting so huge relative to other smartphone markets that some developers argue there is little point adapting applications for Google's Android or any other iPhone competitor. According to Jeff Holden, CEO of Pelago Inc., when he created his social networking company he fully intended to follow the conventional wisdom for how to build a sizable, fast growing software company: Get your programs on as many platforms and devices as possible. But when he crunched the numbers he came to an interesting business conclusion: The 13 million iPhone owners had already downloaded more applications than the 1.1 billion other cell phone owners! To entrepreneurs, developing a program for the iPhone automatically provides a significantly larger market—almost 94 times larger than its competitors. "Why would I ever build for anything but the iPhone?" Holden asked

Questions:

- 1) Explain how Apple achieved business success through the use of information, information technology, and people.
- 2) Evaluate how Apple can gain business intelligence through the implementation of a customer relationship management system.

Regd No: _____

Room No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Class : I MBA

Subject : Management

Title of Paper : Entrepreneurship & Small Business Management

Paper Code : R20MBA205

W.E.F : 2020-21

Max Marks : 70

Pass Mark : 28

Duration : 3 Hrs

Paper Time : 9am to 12PM

Date : 16/09/2022

SECTION - A

I. Answer any FIVE of the following Questions.

5X3=15M

1. (a) Concept of Entrepreneurship
- (b) Business Plan
- (c) Detailed Project Report(DPR)
- (d) Scope of Small enterprises
- (e) Role of DICs
- (f) Women entrepreneurs
- (g) Venture Capital
- (h) Entrepreneur Vs. Intrapreneur

SECTION - B

II. Answer ALL the following Questions

5X8=40M

2. (a) Discuss the role of entrepreneurs and entrepreneurship in the development of Indian economy.

(OR)

(b) Explain the trends and problems in women entrepreneurship.

3. (a) Explain the feasibility analysis in business Idea?

(OR)

(b) Explain the process of writing a business plan.

4. (a) How do you prepare project report? Explain the guidelines for report preparation?

(OR)

(b) Explain various sources of finance for entrepreneur?

5. (a) What is MSME? Explain about export oriented units?

(OR)

(b) Explain the role of small enterprises in economic development of India.

6. (a) Explain how the financial institutions support entrepreneurs.

(OR)

(b) Explain the role of Federation of Indian Chamber of Commerce Industry (FICCI) in entrepreneurial development?

(P.T.O)

7. Case Study

SECTION -C

1X15=15M

ABC Ltd is a small scale company. It manufactures nuts and bolts in Delhi. This company was started in 2007 and in a span of around seven years, company was able to reap good profits. The investment in plant and machinery was within the definition of small scale enterprise of MSME Act. The company wanted to invest another 4 crore of rupees in plant and machinery and produce articles with latest machinery. But in the process, the company would cross the prescribed investment limit in plant and machinery for small scale enterprises. The investment limit in plant and machinery is already defined in the MSME Act 2006. The owners of the company thought of a novel idea. They floated another small scale company with the name XYZ Ltd. The place of the work for XYZ was absolute adjoining ABC Ltd. The owners of ABC Ltd thought that this way they would continue getting benefits from the government of India which are prescribed for small scale enterprises. The owners of ABC Ltd started with XYZ Ltd only on papers and used the new machinery for ABC Ltd only.

Questions:

1. Are the owners of ABC Ltd justified in starting another small scale company XYZ Ltd?
2. Will ABC Ltd and XYZ Ltd both get benefits from government (which are entitled for small scale enterprises) within the definition of small scale enterprises? Explain.
3. Could ABC Ltd maintain competitive advantage without opening XYZ Ltd? Explain.

Room No: _____

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

Regd No: _____

Class : I MBA
Subject : Management
Title of Paper : Financial Management
Paper Code : R20MBA203
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9am to 12PM
Date : 12/09/2022

SECTION-A

I. Answer any FIVE of the following Questions

5X3=15M

1. a) Cost of capital
b) Operating Leverage
c) Profitability Index
d) Working Capital Cycle
e) Liquidity Ratio
f) Inventory Management
g) EPS
h) Cash Budget

SECTION-B

II. Answer ALL the following Questions

5X8=40M

2. a) Define Financial Management? Explain the objectives of Financial Management.
(OR)
b) What is the role of Financial Manager in the Modern Organization.
3. a) What is meant by Leverage explain different types of Leverages.
(OR)
b) X Ltd is considering three different plans to finance its total project cost Rs.100 Lakh : A,B and C.

	Plan A	Plan B	Plan C
Equity capital (Rs. 100 per share)	50	34	25
10% Debentures	50	66	75
	100	100	100

Sales for the first 3 years of operations are estimated at Rs. 100 lakh, Rs. 125 lakh and Rs. 150 lakh respectively and a 10 per cent profit before interest and taxes is forecast. The tax is to be taken at 35 cent.

Compute EPS in each of the 3 alternative financing plans.

4. a) What is Capital Structure? Explain the factors determine the Optimum Capital Structure.

(OR)

- b) ABC Ltd is considering investing in a project that costs Rs.5,00,000. The estimated salvage value is zero: tax rate is 35 per cent. The company uses straight line depreciation for tax purposes and the proposed project has cash flows before tax (CFBT) as follows:

[P.T.O]

Year	CFBT
1	Rs 1,00,000
2	1,00,000
3	1,50,000
4	1,50,000
5	2,50,000

Determine the following: (i) Pay back period and (ii) Average rate of return

5. a) What is Working Capital and explain the determinants of Working Capital

b) What is Dividend policy explain the theories of Dividend.

(OR)

6. a) Explain the objectives, need and importance of Financial Analysis.

b) Define Ratio Analysis and explain different types of Ratios.

(OR)

SECTION-C

III. Case Study (Compulsory)

1X15=15M

7. The Adarsh Ltd is considering methods to finance its investment proposal. It is estimated that initially Rs.4,00,000 will be needed. Two alternative methods of raising funds are available to the firm: (a) issue of 15% loan amounting to Rs. 2,00,000 and issue of 2,000 equity shares of Rs.100 each; and (b) Issue of 4,000 equity shares of Rs.100 each. The appropriate tax rate is 35 per cent.

(i) Assuming operating profits (EBIT) of : (a) Rs. 70,000 and (b) 80,000, which financing proposal would you recommend, and why?

(ii) Compute the indifference point of the two financial plans.

Room No: _____

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

Regd No: _____

Class : I MBA
Subject : Management
Title of Paper : Marketing Management
Paper Code : R20MBA201
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9am to 12pm
Date : 08/09/2022

SECTION-A

I. Answer any FIVE of the following Questions

5X3=15M

1. a) Product concept
- b) Marketing Mix
- c) Advertising
- d) Marketing Channels
- e) CRM
- f) Societal Marketing
- g) Consumer Goods
- h) Consumerism

SECTION-B

II. Answer ALL the following Questions

5X8=40M

2. a) Explain the impact of the Marketing Environmental factors on the business.
(OR)
b) Elaborate the Process of Marketing Research.
3. a) Analyse the phases of Product Life Cycle.
(OR)
b) What are the Pricing Objectives? Explain the Pricing methods of New Products.
4. a) Describe the steps in the Integrated Marketing Communications.
(OR)
b) Outline the recent Trends in the Marketing Communications.
5. a) Discuss the functions of Marketing Channels.
(OR)
b) Discuss the issues in the Channel Management.
6. a) Explain the types of Marketing Organisation Structures.
(OR)
b) Give a description of the Consumer Rights.

[P.T.O]

SECTION-C**III. Case Study (Compulsory)**

7. In mid-March, 1998, Mr. Alex Jones, Vice-President of Marketing at the Lockhurst Paper Company in British Columbia, faced the following decision. His Director of Marketing, John Shipley, had received an offer of employment with another Paper Company, at an increase in salary of \$20,000 per year. Mr. Jones wondered what action, if any, he should take.

General Company Background

The Lockhurst Paper Company was one of Canada's largest producers of pulp and paper. Its operations were fully integrated. Over 70% of all sales were exports. The United States, the Far East and Europe formed the most significant international markets. The total number of employees exceeded 20,000.

The Marketing Area

Mr. Jones was responsible for the marketing area and was a member of the Board of Directors. He also handled relations with the Company's three largest customers. John Shipley reported directly to Mr. Jones and the managers of sales, distribution, promotion and marketing research reported to John.

Candidates for John Shipley's Position

John Shipley was well liked by all employees, but was not quite as efficient as Mr. Jones would like him to be. Mr. Jones was, therefore, considering hiring Jim Martin, formerly a marketing manager in the European paper industry, Jim was well known for his technical ability and Mr. Jones expected he could make improvements which might result in substantial savings. On the other hand, Jim had an abrasive personality and he might antagonize supervisors and employees to such an extent that operations could deteriorate so that severe losses might occur. Should this happen, Mr. Jones would have no choice but to fire Jim and try to find someone else. Jim Martin would have to be paid \$30,000 more than Shipley's current salary.

The last alternative was to let John go and replace him by his current subordinate Don Mix. Don would require some further training and experience, but Mr. Jones thought that in a year or so Don could be just as effective as John Shipley. Don Mix would undoubtedly be happy to accept this promotion and would start at a salary of \$10,000 below John Shipley's present level.

Mr. Jones understood that John Shipley had until April 1, 1988 to consider the new job offer. Mr. Jones was, therefore, anxious to make his own decision quickly.

Qn: Analyse the case and suggest the right person for the marketing department.

Room No: _____

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

Regd No: _____

Class : I MBA
Subject : Management
Title of Paper : Human Resource Management
Paper Code : R20MBA202
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9am to 12pm
Date : 10/09/2022

SECTION-A

I. Answer any FIVE of the following Questions

5X3=15M

1. Write short notes on:

- a) Define the term Human Resource
- b) Role of HR Manager
- c) Induction
- d) Placement
- e) Post Appraisal Feedback
- f) Evaluation of Training
- g) Promotion
- h) Exit Interview

SECTION-B

II. Answer ALL the following Questions

5X8=40M

2. a) Explain briefly the objectives and functions of Human Resource Management?

(OR)

b) Briefly explain the HRM in a Changing Environment?

3. a) What is the importance and role of Human Resource Planning in an organization?

(OR)

b) Briefly write on various sources of Recruitment?

4. a) What is the role of training in the organization. Write various methods of training?

(OR)

b) Explain the procedure for evaluating Employee Performance? Analyze the various methods of Performance Appraisal?

5. a) Describe Compensation Management? What are the methods of payments?

(OR)

b) What are the Employee Welfare Measures?

6. a) Describe the changing role of HR in Knowledge Era.

(OR)

b) What are the strategies for improvement of "Quality of Work Life"? Explain

[P.T.O]

SECTION-C**III. Case Study (Compulsory)**

The foundry has always been regarded as one of the worst places work in Bhim Steel Manufacturing Co. The work in foundry was not, dirty and heavy. Brawn rather than brain is considered the chief requirement to get the job done. Yet according to the job evaluation plan physical ability and working conditions are weighted relatively lower than responsibility, training and skill. As a consequence, most of the foundry jobs are rated at the bottom of the wage scale. In recent years it has been increasingly difficult to get men for working in the foundry. Management has had to take men who could not get jobs elsewhere – thus further lowering the already low social status of the foundry in the eyes of other men in the plant. The whole matter has now reached a crisis. There are now sixteen vacancies in the foundry and it is impossible to hire new men at the evaluated rate.

Questions:

How should this problem be – handled?

Room No: _____

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

Regd No: _____

Class : I MCA

Subject : Computer Science

Title of Paper : Software Engineering & Design Patterns

Paper Code : R22MCA201/1

W.E.F : 2022-23

MaxMarks : 70

Pass Mark : 30

Duration : 3 Hrs

Time : 9am to 12pm

Date : 17/07/2023

SECTION-A

I. Answer ALL of the following Questions

5X14=70M

1. Explain about Different life cycle models

(OR)

2. Explain the scope and design aspects of Software Engineering

3. Explain the different phases of unified model

(OR)

4. Explain about CMM(CAPABILITY MATURITY MODELS)

5. Define CASE and explain the scope of CASE

(OR)

6. Explain about Non Execution based testing

7. Explain about Object Oriented Paradigm

(OR)

8. Discuss about Cohesion and coupling

9. Explain about Software Architecture

(OR)

10. Explain Design Pattern and Implementation during Design phase

Room No: _____

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

Regd No: _____

Class : I MCA
Subject : Computer Science
Title of Paper : Database Management System
Paper Code : R22MCA202
W.E.F : 2022-23

MaxMarks : 70
Pass Mark : 30
Duration : 3 Hrs
Time : 9am to 12pm
Date : 19/07/2023

SECTION-A

I. Answer ALL of the following Questions

5X14=70M

1. Explain the centralized and client server architecture of DBMS

(OR)

2. Discuss about Data models, Schemes and Instances

3. Explain ER Design for the company database

(OR)

4. Explain the relational operations of Tuple calculus and domain calculus

5. What is Normal form and Explain the ^{all} 5 normal forms in detail

(OR)

6. Explain about Join Dependencies and 5th Normal form

7. Explain in detail about transaction processing

(OR)

8. What is Concurrency control and Explain concurrency control techniques

9. Discuss INSERT, DELETE and UPDATE schemes in SQL

(OR)

10. Discuss different constrains in SQL

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Room No: _____

Class : I MCA
Subject : Computer Science
Title of Paper : Web technologies
Paper Code : R20MCA205
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Paper Time : 9am to 12pm
Date : 05/07/2022

SECTION - A

any five of
I. Answer the following Questions.

5X14=70M

1. Define HTML. Discuss about Anchor Tag, Marquee Tag and Tables in HTML.
2. Explain about the Basic Structure of HTML Page and Image Tag in HTML with examples.
3. What is CSS? Discuss about various Style Sheets and give an example.
4. What is JavaScript? Discuss about variables and functions in JavaScript.
5. Define Servlet. Explain about Life Cycle of Servlet with an example.
6. What is JSP? Explain about Anatomy of a JSP Page in detail.
7. Define PHP. Explain about Creating and Running a PHP Script with an example.
8. Discuss about Control Statements in PHP.
9. Define AngularJS. Explain the need of AngularJS in real websites and given an example.
10. Explain about AngularJS Directives and give an example.

Regd No: _____

Room No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Class : I MCA
Subject : Computer Science
Title of Paper : Database Management System
Paper Code : R20MCA203
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Paper Time : 9am to 12pm
Date : 02/07/2022

SECTION - A

Any Five of
I. Answer the following Questions.

5X14=70M

1. (a) Explain the Centralized and Client / Server architecture of DBMS?
(b) Write a brief note on advantages and applications of DBMS?
2. (a) Define Schema and Instance? Explain about the three levels of abstraction in DBMS in detail.
(b) Explain Entity, types of attributes and Keys relationship with an ER- diagram.
3. (a) What are the different types of Constrains? Create an Employee department database and exercise all constraints.
(b) Explain JOIN Operations
4. (a) Explain the Significance of relation algebra and its contribution for SQL.
(b) Explain about INSERT, DELETE and UPDATE queries in SQL with examples.
5. (a) Explain about informal design guide line 1 for relation Schema and Functional dependence with examples
(b) Explain about Boyce-codd Normal form
6. (a) What is Normalization? Briefly explain the types of normal forms with an example.
(b) Write properties of Relational Decompositions
7. (a) Explain Hashing techniques in file Organization.
(b) Explain about RAID technology
8. (a) What is file organization? Explain about organization techniques.
(b) Explain about B+ Trees
9. (a) What is Transaction and Scheduling? Explain about the Characteristics of Scheduling?
(b) Explain about Serializability
10. (a) Write Two phase locking techniques for Concurrency Control.
(b) Explain Validation Concurrency control techniques.

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Room No: _____

Class : I MCA
Subject : Computer Science
Title of Paper : Software Engineering
Paper Code : R20MCA202
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Paper Time : 9am to 12pm
Date : 01/07/2022

SECTION - A

I. Answer ^{any five} the following Questions.

5X14=70M

1. What is Software? Explain about Software myths.
2. What is Process Model? Explain about Evolutionary Process Models.
3. Explain about Functional and Non-Functional requirements for development of Software.
4. Define System Modeling. Explain about Object Models in detail.
5. What is Design Process? Explain about Architectural Design in detail.
6. Briefly explain Object Oriented Design.
7. Define Testing? Explain about Black-Box, White Box and Validation testing in detail.
8. Discuss about various Metrics for Process and Product.
9. What is Risk Management? Explain about Software Risks and Risk Identification in detail.
10. Define Software Quality. Explain about ISO 9000 Quality Standards.

Room. No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
II SEMESTER END EXAMINATION

Regd. No: _____

Class : II MCA
Subject : Computer Science
Title of paper : Oops through Java
Subject Code : MCA 20219
W.E.F : 2019-20

Max Marks : 70
Pass Marks : 28
Duration : 3 Hrs
Time : 9am to 12pm
Date : 01/07/2022

Answer any five

Questions carry equal marks

5X 14 = 70 M

1. a) Explain features of Object oriented programming language. (7M)
b) Explain various operators in java. (7M)
- 2 (a) Define String? Explain various string handling functions in java. (7M)
(b) Explain control statements in java. (7M)
- 3 (a) Explain classes and Objects with example. (7M)
(b) What is instance method? Explain instance method with an example. (7M)
- 4 Define Inheritance? Explain types of inheritance with examples (14M)
- 5 Define interface? Explain Multiple Inheritance using interfaces. (14M)
- 6 (a) Explain various types of packages in java (7M)
(b) Define abstract class? Explain abstract classes with an example. (7M)
- 7 Explain the importance of Exception Handling with an example (14M)
- 8 Explain Thread Life Cycle with an example. (14M)
- 9 (a) Explain serialization of objects in java (7M)
(b) Explain life cycle of Applet. (7M)
10. What is JDBC? Explain how to configure and JDBC with neat example. (14M)

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Room No: _____

Class : I M.Sc (CS) / *I MCA*
Subject : Computer Science
Title of Paper : Design & Analysis of Algorithms
Paper Code : R20MCS201 / *R20MCA201*
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Paper Time : 9am to 12pm
Date : 30/06/2022

SECTION - A

I. Answer ALL the following Questions.

5X14=70M

1. (a) Define an Algorithm. Explain the properties of an Algorithm.
(b) Explain the pseudo code for Quicksort Technique.
2. (a) Explain in detail about Time complexity and space complexity.
(b) Write in detail about Asymptotic Notations.
3. (a) Define Greedy method. Explain single source shortest path problem.
4. Explain in detail about DFS and BFS algorithms.
5. (a) Write the general method of dynamic programming.
(b) Explain All pairs shortest path problem.
6. Explain about Optimal Binary search trees (OBST). Write about 0/1 Knapsack problem.
7. Define Backtracking. Write about the Algorithm for N-Queens problem.
8. Explain the Sum of subsets problem with backtracking.
9. (a) Explain about Branch and Bound.
(b) Describe Travelling salesperson problem.
10. (a) Explain about NP-hard and NP-complete problems.
(b) Write about Cooks theorem.

Room. No: _____

Regd. No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
II SEMESTER END EXAMINATION

Class : I MCA
Subject : Statistics
Title of paper : Probability & Statistics
Subject Code : MCA 20418
W.E.F : 2018-19

Max Marks : 70
Pass Marks : 28
Duration : 3 Hrs
Time : 9am to 12pm
Date : 04/07/2022

Answer ^{any five} of the following

All Questions carry equal marks

5X 14 = 70 M

1. a) What is the Primary and Secondary data collection? Explain their methods.

2 b) Write the merits and Demerits of Mean, Median and Mode.

3. a) i) Write the Criteria of Good measure of Dispersion.

ii) Calculate the Coefficient of Variation for the following data.

X	2	9	29	54	11	5
Y	9	11	18	32	27	13

4 i) Explain merits and Demerits of Mean Deviation.

ii) Calculate Karl Pearson coefficient of Skewness to the following data.

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	4	0	3	7	11	8	5	0	2

5 a) i) Explain Correlation Coefficient. Write its Properties.

ii) Calculate the Correlation coefficient to the following data.

X	5	10	5	11	12	4	3	2	6	1
Y	1	6	2	8	5	1	4	6	5	2

6 The following table gives information on ages and cholesterol levels for a random sample of 10 men.

Age	58	69	43	39	63	52	47	31	74	36
Cholesterol Level	189	235	193	177	154	191	213	165	198	191

i) Calculate the regression lines.

ii) Predict the cholesterol level of a 60 year old man.

P.T.O

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
PG II SEMESTER END EXAMINATIONS

Room No: _____

Class : I MCA
Subject : Computer Science
Title of Paper : Computer Networks
Paper Code : R20MCA204
W.E.F : 2020-21

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Paper Time : 9am to 12pm
Date : 04/07/2022

SECTION - A

any five of
I. Answer the following Questions.

5X14=70M

1. (a) What do you mean by Computer Network? Classify Computer Networks and explain them in brief
(b) Explain the differences between Connection Oriented and Connectionless Services.

2. (a) Discuss about Guided Transmission Media.

(b) Explain various Services provided by Data Link Layer to Network Layer.

3. (a) Explain Switched Ethernet.

(b) Explain the following.

i) 802.11 Protocol Stack ii) 802.11 Physical Layer

4. (a) Explain about Bluetooth Architecture.

(b) Explain about Spanning Tree Bridges and Remote Bridges.

5. (a) What are the Network Layer Services provided to the Transport Layer and Explain them in detail

(b) Write about Internet Gateway Routing Protocol.

6. (a) Explain in detail about the following Routing Algorithms.

i) Distance Vector Routing ii) Hierarchical Routing iii) Broadcast Routing

(b) Briefly explain Internet Working

7. (a) What are the Transport Services Primitives? Explain about Flow Control and Buff.

8. Explain in detail about TCP

9. (a) Briefly explain about Domain Name System.

(b) Briefly explain about World Wide Web

10. Explain about Multimedia in detail.

Room No: _____

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

PG II - SEMESTER END EXAMINATIONS

Class : I M.Sc (OCH/ACH)
Subject : Chemistry
Title of Paper : Organic Spectroscopy
Paper Code : R22OCH201/R22ACH201
W.E.F : 2022-23

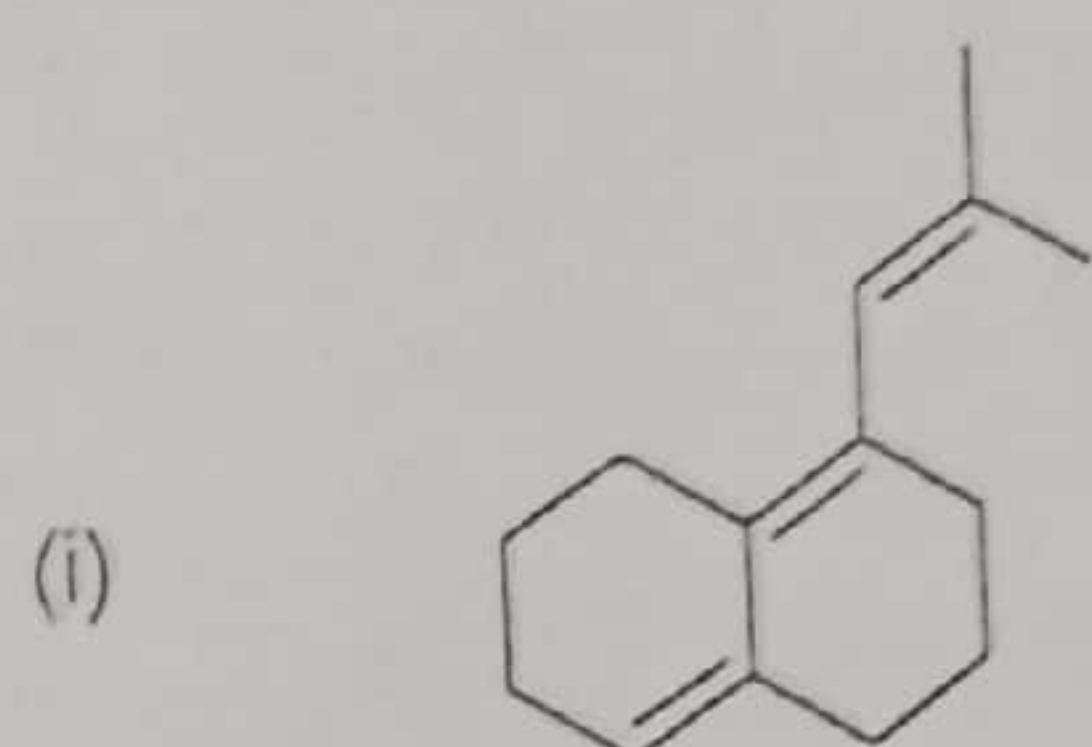
Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9 am to 12 pm
Date : 24/08/2023.

SECTION-A

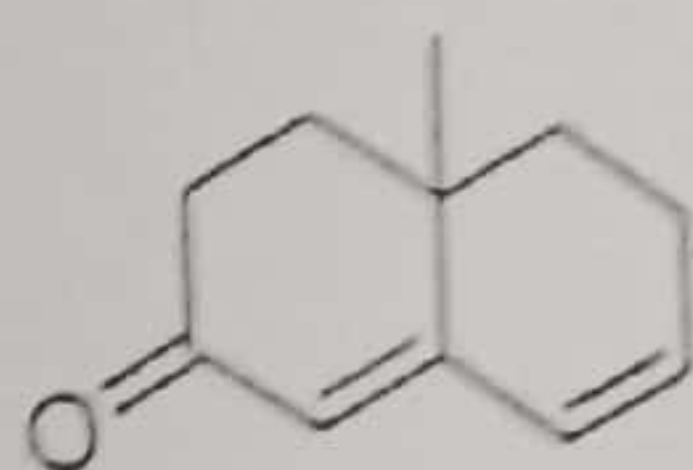
I. Answer **ALL** the following Questions

5X14=70M

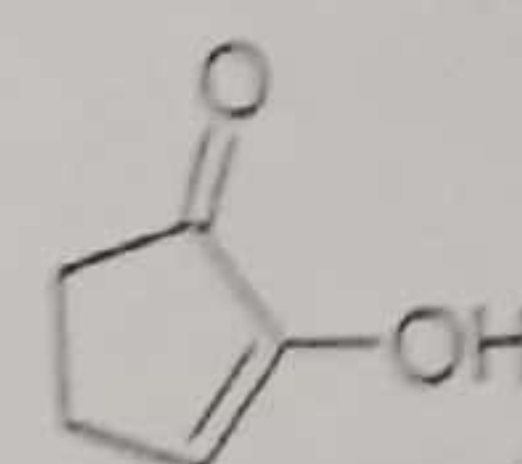
1. a) Calculate the λ_{max} of the following compounds using Woodward-Fieser rules (9M)



(ii)



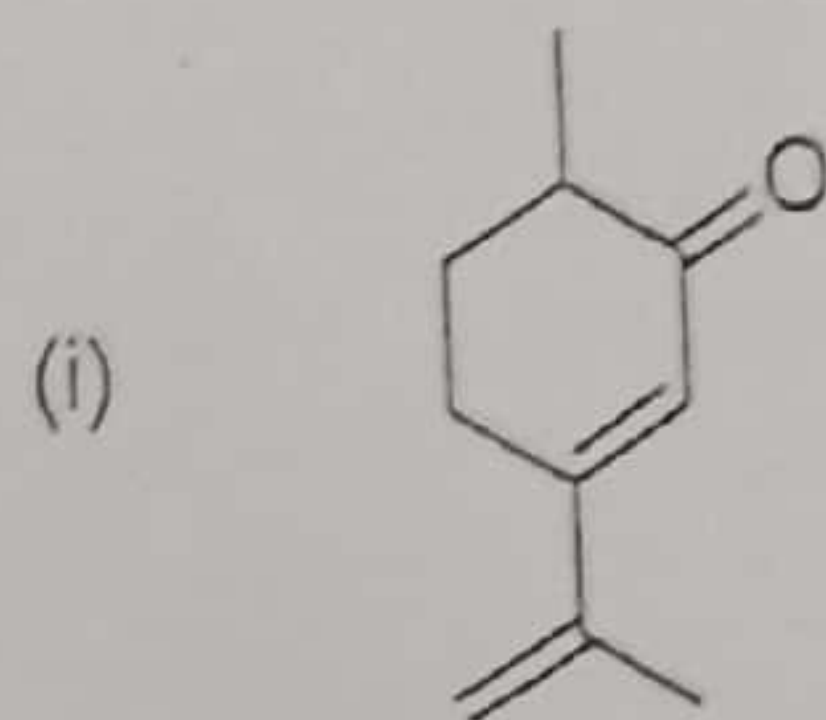
(iii)



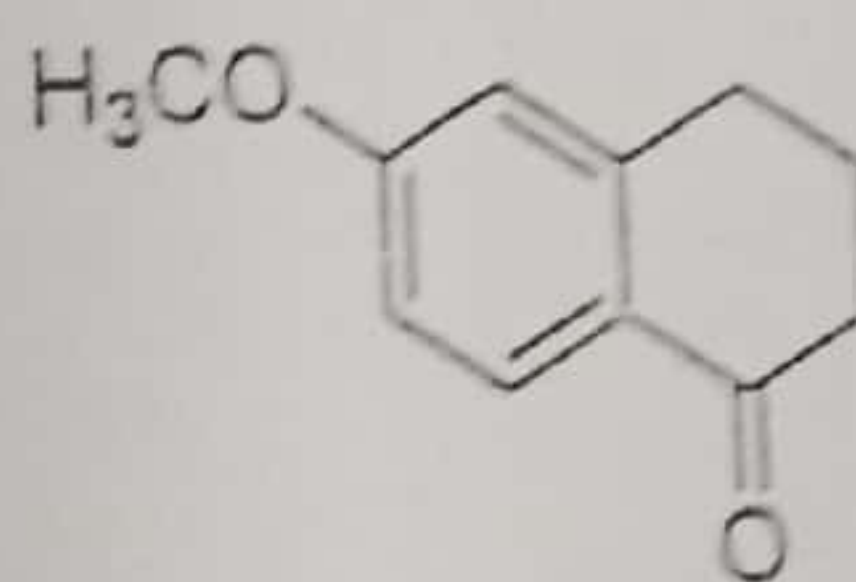
b) Explain why a polar solvent usually shifts the $n \rightarrow \pi^*$ transition to longer wavelength and $\pi \rightarrow \pi^*$ transition to shorter wavelength (5M)

OR

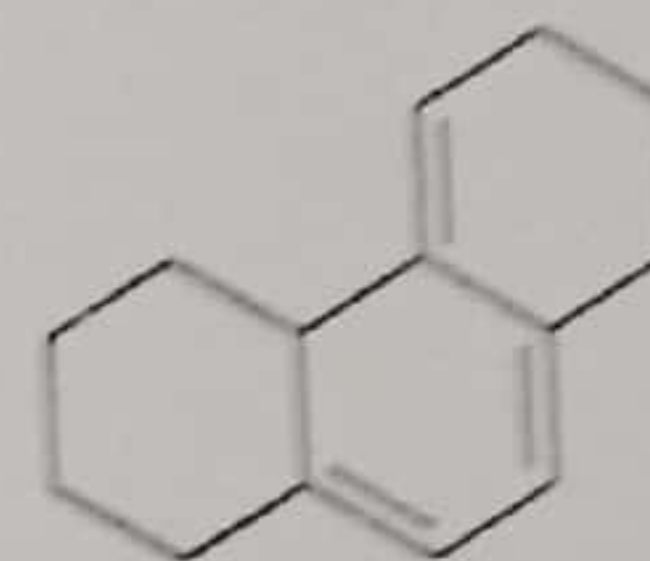
2. a) Calculate the λ_{max} of the following compounds using Woodward-Fieser rules (9M)



(ii)



(iii)



b) Explain the terms Chromophores and Auxochromes (5M)

3. a) How do you distinguish the following pairs by IR spectroscopy (9M)

- (i) Benzoic acid and benzophenone
- (ii) Cyclopentanone and Cyclohexanone
- (iii) 1-hexyne and 1-hexene

b) Write a note on Finger-print region in IR. (5M)

4. a) Write the factors influencing vibrational frequencies in the IR spectra (8M)

b) Explain the frequencies for new functional groups. (6M)

5. a) Write the principle of NMR Spectroscopy (6M)

b) Explain i) Shielding and deshielding (8M)

ii) Spin-spin splitting.

OR

[P.T.O]

Room No: _____

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

PG II – SEMESTER END EXAMINATIONS

Class : I M.Sc (OCH/ACH)
Subject : Chemistry
Title of Paper : Chemistry Of Bio-Organic Compounds
Paper Code : R22OCH206/R22ACH206
W.E.F : 2022-23

Max Marks : 70
Pass Mark : 28
Duration : 3Hrs
Time : 9am-12noon
Date : 01.09.2023

SECTION-A

I. Answer ALL the following Questions

5X14=70M

1. Write the occurrence of Hexoses and describe the chemistry of glucose.

(14M)

(OR)

2. Explain the stereo chemistry and ring structure of fructose.

(14M)

3. Write about isoelectric point. Explain the C-terminal and N-terminal of Amino acids with examples.

(14M)

(OR)

4. Write the general properties of Amino acids. Write any two synthesis methods of alpha-amino acids (Glycine, Alanine, Valine, Leucine).

(14M)

5. Discuss the occurrence, structural elucidation and Biogenesis of Vitamin B₁.

(14M)

(OR)

6. Write the structural elucidation and synthesis of Vitamin D.

(14M)

7. Write the basic concepts of the structure of DNA and write their hydrolysis products.

(14M)

(OR)

8. Explain Nucleotides and Nucleosides with example and write the reaction of nucleic acid bases.

(14M)

9. Write the classification of lipids and write the chemical properties of simple lipids (fats)

(14M)

(OR)

10. Define the non-hydrolysable lipids and write the structure and functioning of bile acids.

(14M)

Room No: _____

Regd No: _____

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

Class : I M.Sc (OCH/ACH)
Subject : Chemistry
Title of Paper : Research Methodology & IPR
Paper Code : R22OCH204/R22ACH204
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3Hrs
Time : 9am to 12pm
Date : 30/08/2023

SECTION-A

I. Answer ALL the following Questions

5X14=70M

1. What is research? Explain the process of Research and its type.

(14M)

(OR)

2. What is review of literature and explain different approaches to review of literature. What is its importance in the process of research.

(14M)

3. What is research Design? Explain different types of research design.

(14M)

(OR)

4. What is Data Collection? Explain the techniques to collect primary and secondary data?

(14M)

5. What is Hypothesis? Explain the formulation of hypothesis and the types of Hypothesis.

(14M)

(OR)

6. What is report writing? Explain the different steps in report writing and significance of plagiarism in it.

(14M)

7. What is IPR? Explain its features and different types of Intellectual Property Rights

(14M)

(OR)

8. Describe what is patent and procedure for granting patents and rights of patent.

(14M)

9. a) Discuss the development of IPR laws in India.

(7M)

b) Elucidate the development in IPR in the last five years.

(7M)

(OR)

10. a) Discuss various examples about the patent protection in India.

(7M)

b) Describe the international patent protection and its significance.

(7M)

Room No: _____

Regd No: _____

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-II

Duration : 3Hrs

Paper Code : R22OCH203/R22ACH203/R20OCH203/R20ACH203

Time : 9am to 12pm

W.E.F : 2022-23

Date : 28/08/2023

SECTION-A

I. Answer ALL the following Questions

5X14=70M

1. a) Explain the structure, preparation and bonding in $[\text{Re}_2\text{Cl}_8]^{2-}$ (8M)
b) Explain Wades rules (6M)
- (OR)**
2. a) Discuss the structure and bonding in higher boranes. (8M)
b) Explain carboranes, metalloboranes (6M)
3. a) Explain oxidative addition and reductive elimination in organometallic compounds. (8M)
b) Discuss the classification, hapticity of organometallic compounds (6M)
- (OR)**
4. a) Explain catalytic hydrogenation and hydroformylation reaction in organometallic compounds (8M)
b) Write about insertion reactions in organometallic compounds (6M)
5. a) Explain Acid hydrolysis and Base hydrolysis. (8M)
b) Write the mechanism for inner sphere reactions (6M)
- (OR)**
6. a) Discuss the reaction without metal ligand based cleavage in organometallic compounds. (8M)
b) Explain Marcus-Hush equation and cross reaction. (6M)
7. a) Explain term symbol, *Draw* the term symbol for d^2 , d^3 , d^4 configuration (8M)
b) Explain Charge transfer spectra (6M)
- (OR)**
8. a) Draw the Tanabe-Sugano diagrams for d^6 configuration (8M)
b) Give an account on Hund's rules to predict ground terms and Racah parameter (6M)
9. a) Explain types of magnetism. Write the factors affecting paramagnetism (8M)
b) Explain Spin orbit Coupling and anomalous magnetic moments (6M)
- (OR)**
10. a) Write a note on Haemoglobin (8M)
b) Write about Vitamin B₁₂ and its importance (6M)

Room No: _____

Regd No: _____

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

Class : I M.Sc (OCH/ACH)
Subject : Chemistry
Title of Paper : Physical Chemistry-II
Paper Code : R22OCH202/R22ACH202
W.E.F : 2022-23

Max Marks : 70
Pass Mark : 28
Duration : 3 Hrs
Time : 9 am to 12 pm
Date : 26/08/2023

SECTION-A

I. Answer ALL the following Questions

5X14=70M

1. a) Explain Bose Einstein statistics. (8M)
b) State and explain Nernst Heat theorem. (6M)
(OR)
2. a) Derive an expression for molecular translational partition function of an ideal gas (8M)
b) Derive Sackur-Tetrode equation (6M)
(OR)
3. a) Describe the flow methods for determination of rates of fast reactions. (8M)
b) What is quantum yield. Give examples of reaction with low and high quantum yields. (6M)
(OR)
4. a) Discuss the Kinetics of Hydrogen-oxygen reaction. (8M)
b) Derive Stern-Volmer equation. (6M)
5. a) Explain Great Orthogonality theorem. (8M)
b) Write the anatomy of character table. (6M)
(OR)
6. a) Write about symmetry elements and symmetry operation (8M)
b) Explain abelian group with an example. (6M)
7. a) Explain rigid rotator model of a diatomic molecule. (8M)
b) Explain zero point energy and overtones (6M)
(OR)
8. a) Explain PQR branches in rotational vibrational spectroscopy. (8M)
b) Write the differences between harmonic and anharmonic oscillator. (6M)
9. Explain Tafel plots. Derive Butler-Volmer equation. (14M)
(OR)
10. a) Discuss the principle and advantages of potentiometric titrations (8M)
b) Describe the working of Calomel electrode. (6M)