KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV SEMESTER END EXAMINATIONS

Class   : II Degree (All Groups)   Max Marks   : 50
Subject   : English   Pass Mark   : 20
Title of Paper : Personality Enhancement and Leadership Skill   Duration   : 2 Hrs
Paper Code   : R20ENG401/ R20ENG 401A   Paper Time : 2pm -4pm
W.E.F   : 2021-22   Date   : 01.05.24

I. Write any three of the following questions   3×5=15M

1. What is Self-awareness?

2. What is human personality?

3. Discuss the benefits of personality development?

4. Explain the Sigmund Freud's stages of personality development.

5. Write note on: Psychodynamics explanation

II. Write any three of the following question   3×5=15M

1. What is formative assessment?

2. What is Self Confidence?

3. Discuss the tips for building Self Confidence

4. Discuss the Self-Report Techniques.

5. Explain the process of Enhancing Personality Skills.

III. Write any four of the following questions   4×5=20M

1. Discuss importance of leadership

2. Why leadership is required? Discuss

3. Are leaders born or made? Explain

4. Discuss the key characteristics of an effective leader.

5. Discuss the leadership qualities of Abraham Lincoln.

6. Explain the leadership qualities of Mahatma Gandhi.

7. Discuss the leadership qualities of J RD Tata.

8. Discuss various types leaders

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II Degree (All Groups)   Max Marks : 50
Subject : English   Pass Mark : 20
Title of Paper : Communication And Soft Skills   Duration : 2 Hrs
Paper Code : CBCSS401   Time : 2pm-4pm
W.E.F : 2016-17   Date : 01.05.2024

SECTION-A

I. Answer any TWO out of the three Questions in about 75 words   2X5=10M
A. Discuss how positive attitude can be cultivated.
B. How does emotional intelligence help in life and profession?
C. What is the use of SWOC analysis to individuals and organizations?

II. A. Develop the given hints into a meaningful paragraph   1X5=5M
Lion – sleeping in forest – mouse – playing on it – angry lion – threatened to kill – mouse asked to forgive – promised to save him one day – lion laughed –let him off – another day – lion caught in net - mouse heard the lion roar – mouse cut net lion thanked - escaped.

B. Arrange the jumbled sentences into a meaningful paragraph   5X1=5M
1. But sometimes, the persons of opposite nature also come closer fall in each other's company by accident , vitiating the above statement.
2. If a man moves in the company of noble people, he is adjusted to be a gentleman
3. It is usual for a man to see company of those who possess tastes, and temperaments like his own.
4. On the other side, if he keeps company with evil persons, he is considered to be a bad character.
5. Generally, the character and conduct of a person is gauged by the kinds of people he moves with.

III. A. Paraphrase the paragraph given below.   1X10=10M
Students frequently overuse direct quotation in taking notes, and as a result they overuse quotations in the final research paper. Probably only about 10% of your final manuscript should appear as directly quoted matter. Therefore , you should strive to limit the amount of exact transcribing of source materials while taking notes.

(OR)

B. Summarize the paragraph given below.
There are two ways to become wealthy: to create wealth or to take wealth away from others. The former adds to society. The latter typically subtracts from it, for in the process of taking it away, wealth gets destroyed. La monopolist who overcharges for his product takes away money from those who he is overcharging and at the same time destroys value. To get his monopoly price, he has to restrict production.

IV. Answer both questions
  A. Write a letter to your friend on ONE of the following two topics   1X5=5M
    a. A recent seminar held in your college
    b. A field trip you went on.

[P.T.O]

B. Write an e-mail on ONE of the following two topics.   1X5=5M

   a. Write an e-mail to your employer expressing your inability to join duty on the given date as you have to take part in your sister's marriage on the same date.

   b. As a team leader draft an e-mail to the members of your team requesting them to attend an urgent meeting next Monday with the US client on product specifications.

V. Answer both Questions

A. Write a resume/CV responding to the following advertisement.   1X5=5M

A REPUTED BUSINESS GROUP URGENTLY REQUIRES

SALES ASSISTANTS

The right candidate should have :

- 2-3 years experience as Sales Assistant, Preferably in bookstores
- Graduate or minimum Secondary school
- Experience in sales, merchandising, customer service preferred
- Good written and spoken communication skills in English , Knowledge of Arabic is an added advantage
- Knowledge of basic computer skills
- Ability to work well in a team
- Presentable, proactive and willing to accept shift duties

Please e-mail your CV with photograph to :
hr@jashanmals.com or mail to:
P.O. Box 16, Manama, Kingdom of Bahrain.

B. Write a cover letter for the above resume/CV   1X5=5M

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II Degree (All Groups)   Max Marks : 50
Subject   : Foundation Course   Pass Mark : 20
Title of Paper : Entrepreneurship   Duration   : 2 Hrs
Paper Code   : CBESP401/R20ESP401/R20ESP401A   Time   : 2 pm – 4 pm
W.E.F   : 2016-17   Date   : 02.05.2024

SECTION-A

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

1. Explain the Role of Entrepreneur in Economic Development?

(OR)

2. What are the different types of Entrepreneurs?

3. What are the steps in Tapping Opportunities.

(OR)

4. Why do ideas of Entrepreneurs often fail?

5. What is Project Report? Explain its significance?

(OR)

6. Write about Financial Analysis.

7. Discuss the Institutional Support to Small Enterprises.

(OR)

8. Write about NABARD and state its functions

9. Write about Government Policy for Small Scale Enterprises.

(OR)

10. Write about New Small Enterprises Policy 1991.

Room No: _____   Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 60
Subject   : Computer Science   Pass Mark : 24
Title of Paper : Cyber Laws   Duration : 3 Hrs
Paper Code   : R20BCA401A   Time   : 2pm–5pm
W.E.F   : 2023-24   Date   : 01.05.2024

SECTION-A

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

1. Write a short note on Cyber Law.

2. Explain APEC.

3. Write about OECD.

4. Explain about Expression in Cyberspace.

5. Write about Access to Internet.

6. Write a short note on Hacking.

7. Write about Cyber Crimes.

8. Write about Copyright Law.

SECTION-B

II. Answer the following Questions   5X8=40M

9. Explain about Computer and Web Technology.

(OR)

10. Discuss Cyber Law.

11. Explain Cyber law Perspectives in World Bank.

(OR)

12. Explain Cyber law Perspectives in Commonwealth of Nations.

13. Explain about Right to Data Protection.

(OR)

14. Explain Human Rights issues in Cyberspace.

15. Discuss Cyber Terrorism.

(OR)

16. Discuss Cyber Defamation.

17. Explain about interface with Patent Law.

(OR)

18. Explain different types of Civil Wrong Sunder the IT ACT 2000.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 60
Subject   : Computer Science   Pass Mark : 24
Title of Paper : Design of Object Oriented Applications   Duration : 3 Hrs
Paper Code   : R20BCA404A   Time   : 2pm - 5pm
W.E.F   : 2023-24   Date   : 04-05-2024

SECTION-A

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

1. Explain Micro Process Activity.

2. Explain difference between Agile and Plan-Driven.

3. Explain about Documentation.

4. Explain Dimensions of Testing.

5. Explain about Post-Transition.

6. Explain the Objects of Black Board.

7. Explain the requirements of Crypt Analysis.

8. Explain Small Talk.

SECTION-B

II. Answer the following Questions   5X8=40M

9. Explain about the Macro Process Phases.

(OR)

10. Explain about Micro Process Iterations.

11. Explain about Management and Planning.

(OR)

12. Explain about Quality Assurance and Metrics.

13. Explain about the Initial Operations of Satellite Navigation System.

(OR)

14. Explain about the Architecture of TTMS.

15. Explain about Architecture of the Black Board Frame Work.

(OR)

16. Explain about Architecture of the Weather Monitoring System.

17. Explain about Web Pages and User Interface.

(OR)

18. Explain about Different Object Oriented Programming Languages.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc(Data Science) & B.voc(WT&SD)	Max Marks	: 60
Subject	: Computer Science	Pass Mark	: 24
Title of Paper	: Advanced Java	Duration	: 3Hrs
Paper Code	: R20DSAJ402A/R20WSAJ401A	Time	: 2pm-5Pm
W.E.F	: 2023-24	Date	: 06.05.24

SECTION-A

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

1. Write about advantages of Servlet?

2. Explain about the concept of Servlet Chaining?

3. Write the advantages of Servlets over CGI?

4. Write about advantages of JSP?

5. Explain about Directives of JSP?

6. Explain about the stages in JDBC program?

7. Explain JDBC type-1 Driver?

8. Explain the structure of web.xml file?

SECTION-B

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

9. Explain in detail about Servlet Life Cycle with an example program?

(OR)

10. Explain about HttpServletRequest and HttpServletResponse Interfaces?

11. Explain about handling GET and POST requests with Examples?

(OR)

12. Explain the concept of Session tracking with examples?

13. Explain about JSP sessions with an example program

(OR)

14. Explain in detail about the components of JSP?

15. Explain the procedure for connecting Database to a Web Application?

(OR)

16. Explain in detail about stages in a JDBC Program?

17. Write a program to store and retrieve Data from Database?

(OR)

18. Differentiate between Prepared and Callable statements with Examples?

Room No: _____   Regd No: __8__

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPCS, MECS, MSCS, MCCS)	Max Marks	: 60
Subject	: Computer Science	Pass Mark	: 24
Title of Paper	: Data Structures	Duration	: 3 Hrs
Paper Code	: R20CSC401A	Time	: 2pm – 5pm
W.E.F	: 2023-24	Date	: 06.05.2024

SECTION-A

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

1. Write a short note on Data Structure Operations.

2. Explain Time Complexity.

3. Explain about Linear search.

4. Explain Applications of Trees.

5. Explain about Binary Tress.

6. Explain about Queue Data Structure.

7. Explain Bubble Sort Method.

8. Write a short note on Graphs.

SECTION-B

II. Answer the following Questions   5X8=40M

9. Explain Types of Data Structures.

(OR)

10. Explain the role of Data Structures in Problem Solving.

11. Explain about Selection Sort and Trace with example.

(OR)

12. Explain Binary Search Technique and Trace with example.

13. Explain Stack Data Structure and Trace with Example.

(OR)

14. Explain the procedure to perform Deletion Operation in a Linked List.

15. Explain the Tree Terminology and Trace with example.

(OR)

16. Explain BST with example.

17. Explain BFS (Breath First Search) with example.

(OR)

18. Explain DFS (Depth First Search) with example.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 60
Subject   : Computer Science   Pass Mark : 24
Title of Paper : Object Oriented Software Engineering Duration : 3 Hrs
Paper Code   : R20BCA406A   Time   : 2pm-5pm
W.E.F   : 2023-24   Date   : 07.05.2024

SECTION-A

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

1. Explain OOSE Requirements.

2. Explain Object Oriented Paradigm.

3. Explain S/W Process Analysis Work flow.

4. Explain S/W Process Requirement Work Flow.

5. Explain Cohesion and Coupling.

6. Explain Case tools for Design.

7. Explain Rapid prototyping.

8. Explain Coding Standards.

SECTION-B

II. Answer the following Questions   5X8=40M

9. Explain about Spiral Model.

(OR)

10. Write Risks and Other Aspects of Iteration and Inrementation.

11. Explain Capability Maturity Model.

(OR)

12. Explain Synchronize and Stabilize Teams.

13. Explain about OOSE Models.

(OR)

14. Explain any Technique for Achieving Portability.

15. Discuss Design work flows

(OR)

16. Discuss Challenges of the requirement Work Flow.

17. Explain Black Box Testing Technique.

(OR)

18. Explain Management of Post-delivery Maintenance and issues.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPCS, MECS, MSCS, MCCS)	Max Marks	: 60
Subject	: Computer Science	Pass Mark	: 24
Title of Paper	: Operating Systems	Duration	: 3 Hrs
Paper Code	: R20CSC402A	Time	: 2pm – 5pm
W.E.F	: 2023-24	Date	: 07.05.2024

SECTION-A

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

1. Explain the Operating System.

2. Explain about System Calls.

3. Explain about Kernels.

4. Explain about Semaphores.

5. Explain the concept Synchronization.

6. Explain the concept Demand Paging.

7. Explain about Memory Management.

8. Explain the features of Android.

SECTION-B

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

9. Explain the different types of OS.

(OR)

10. Explain about the Operating System Services.

11. Explain Process State Diagram and Process Control block.

(OR)

12. Explain CPU Scheduling Algorithms.

13. Explain about Dead Lock Prevention Techniques.

(OR)

14. Explain about Peterson's Solution.

15. Explain about Segmentation in Hardware.

(OR)

16. Explain about Contagious Memory Allocation.

17. Explain about different File Access Methods.

(OR)

18. Explain Android application Life Cycle.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc(Data Science)	Max Marks	: 60
Subject	: Computer Science	Pass Mark	: 24
Title of Paper	: Database Management System	Duration	: 3Hrs
Paper Code	: R20DSDBMS404A/R2010TDBMS404	Time	: 2 pm – 5 pm
W.E.F	: 2023-24	Date	: 07.05.2024

SECTION-A

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

1. Write the drawbacks of file-Based Sytem?

2. Explain Relationship Classification?

3. Write a note on Inheritance?

4. Define Key? Explain various types of keys?

5. Explain the Concept of Relational Integrity?

6. Write a note on Data types in SQL?

7. Explain about Sub-Queries?

8. Write the Steps to create a PL/SQL program?

SECTION-B

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

9. Explain the Components of Database Management System?

(OR)

10. Explain in detail about Classification of Database Management System?

11. Define Entity? Explain about building blocks of ER diagram?

(OR)

12. What is EER Model? Discuss about basic concepts of EER Model?

13. Explain about Relational Calculus in DBMS?

(OR)

14. Give a brief account E.F.CODD'S Rules?

15. Explain about DML Commands?

(OR)

16. Explain about Join and Set Operations?

17. Explain about looping control statements in PL/SQL?

(OR)

18. Define Trigger? Explain various types of triggers?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.Sc(DS)
Subject : Computers
Title of Paper : Artificial Intelligence
Paper Code : R20DSA1403A
W.E.F : 2022-23

Max Marks : 60
Pass Mark : 24
Duration : 3Hrs
Time : 2pm – 5pm
Date : 08.05.24

SECTION-A

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

1. What is the AI Problems?

2. Explain about perception Networks.

3. Explain about Associative Memory Networks.

4. Explain about random forest.

5. Explain about radial basis function neural network.

6. Explain about Deep learning.

7. Explain about time series prediction problem.

8. Explain about genetic Algorithms.

SECTION-B

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

9. Explain about Best First search.

(OR)

10. What is state space search representation of water Jug problem.

11. Explain about Historical Trends in deep learning.

(OR)

12. Explain about Back – propagation in Neural Network.

13. Explain about classification and regression tree.

(OR)

14. Explain about probabilistic neural network.

15. Explain about layers of CNN.

(OR)

16. Explain about Application of RNN : Speech – to – text conversion.

17. Explain about capsule Neural Networks.

(OR)

18. Explain about Expectation – Maximization Algorithm.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.VOC(WT & SD)	Max Marks : 60
Subject	: Computers	Pass Mark : 24
Title of Paper	: Programming with R	Duration : 3Hrs
Paper Code	: R20WSPR401A	Time : 2pm – 5pm
W.E.F	: 2022-23	Date : 08.05.24

SECTION-A

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

1. Explain any 5 Bilt functions in 'R'.

2. Explain melt the data and cast the molten Data.

3. How to import CSV file in to 'R'.

4. Explain Analysing the CSV file.

5. Explain how to install packages in 'R'.

6. Explain Line Graps in 'R'.

7. Explain Box plots in 'R'

8. What is NA option and Trim option.

SECTION-B

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

9. Explain about vector and list operations in 'R'.

(OR)

10. Explain about Data Frames and factors in 'R'.

11. Explain Data a Reshaping with example program.

(OR)

12. How to load package to library.

13. Explain working with Binary Files.

(OR)

14. Explain working with excel file.

15. Explain Histograms in 'R'.

(OR)

16. Explain about Bar charts and Pie charts.

17. Explain Linear Regression in 'R'.

(OR)

18. Explain about Median and mode.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.Voc(WT & SD) Max Marks : 60
Subject : Computers Pass Mark : 24
Title of Paper : Software Engineering Duration : 3Hrs
Paper Code : R20WSSE401A Time : 2pm–5pm
W.E.F : 2022-23 Date : 07.05.2024

SECTION-A

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

1. Explain about CMMi levels.

2. Explain about size oriented metrics.

3. Explain about coordination and communication issues.

4. Explain risk identification.

5. Explain briefly about RMMM.

6. What are characteristics of good design?

7. Explain about UML.
8. Write about software testing fundamentals.

SECTION-B

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

9. Define software and explain various types of software.

(OR)

10. Explain about RAD model.

11. Explain software management spectrum.

(OR)

12. Explain about software quality Metrics.

13. Explain about software decomposition techniques.

(OR)

14. Explain in detail about COCOMO model.

15. Explain various software design principles.

(OR)

16. Explain about cohesion and coupling.

17. Define quality software, list and explain software quality assurance activities.

(OR)

18. Explain about Testing Principles and Testability concepts.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BCA	Max Marks	: 60
Subject	: Computers	Pass Mark	: 24
Title of Paper	: Data Analytics using R	Duration	: 3Hrs
Paper Code	: R20BCA405A	Time	: 2pm – 5pm
W.E.F	: 2022-23	Date	: 06.05.24

SECTION-A

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

1. Explain about NA and NULL values in R.

2. Explain about Recursive lists in R.

3. Explain about Application of Data Analytics.

4. Write a short notes on Big data.

5. Explain about Correlation Analysis.

6. Explain about Logistic Regression.

7. Write a short note on Ensemble Model.

8. Explain about Box plot in R.

SECTION-B

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

9. Explain about Matrix operations in R.

(OR)

10. Explain Vector and Lists operations in R.

11. Explain about ggplot2 pakage in R.

(OR)

12. Explain and g graph and dy graphs in R.

13. Explain about Analysis of Variance.

(OR)

14. Explain about Chi – Square Test.

15. Explain about Linear Regression.

(OR)

16. Explain about Clustering Techniques.

17. Explain about Histograms in R.

(OR)

18. Explain about Area Charts in R.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.COM(COMP)	Max Marks	: 60
Subject	: Computers	Pass Mark	: 24
Title of Paper	: OOPS With JAVA	Duration	: 3Hrs
Paper Code	: R20BCOMP402 A	Time	: 2pm - 5pm
W.E.F	: 2022-23	Date	: 06.05.2024

SECTION-A

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

1. Explain about Java Virtual Machine (JVM).

2. What is an Array? Explain types of Arrays.

3. Explain if – else statement with an example.

4. Explain a class and object explain with an example.

5. Explain about access modifiers in Java.

6. Explain Java API packages.

7. How to read data from a file by using file input stream give an example.

8. What is an Error? Explain types of Errors in Java.

SECTION-B

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

9. Explain the features of Object Oriented Programming Language.

(OR)

10. Explain the structure of Java program.

11. Explain string class methods with an example.

(OR)

12. Explain looping statements with an example.

13. What is a constructor in Java? How many types of constructors in Java with an example.

(OR)

14. What is inheritance in Java? Explain multilevel inheritance in Java with an example.

15. Explain procedure to a create user Defined package and Accessing a package in Java.

(OR)

16. Explain reading data from a file using file reader class with an example.

17. Explain user defined exception in Java with an example.

(OR)

18. What is a Thread? Explain creating a thread by using Runnable Interface.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.COM(COMP)	Max Marks	: 60
Subject	: Computers	Pass Mark	: 24
Title of Paper	: Database Management System	Duration	: 3Hrs
Paper Code	: R20BCOMP401A	Time	: 2pm – 5pm
W.E.F	: 2022-23	Date	: 04.05.24

SECTION-A

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

1. What is difference between Data and Information?

2. Explain about file based system.

3. What are the advantages of DBMS.

4. Explain about building blocks of Entity relationship.

5. What is Relational Data Model?

6. Explain about Aggregate function in SQL.

7. Explain about Table Modification.
8. Explain data types in PL/SQL

SECTION-B

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

9. Explain the objectives of Data Base Management System.

(OR)

10. Explain about classification of Data base Management System.

11. Explain about data base model.

(OR)

12. Explain about DBMS architecture.

13. What is attribute? Explain about classification of attribute.

(OR)

14. Explain about E – F CODD's rules.

15. Explain about DDL commands.

(OR)

16. Explain about Data types in SQL.

17. Explain about procedures in PL/SQL.

(OR)

18. Explain about Triggers in PL/SQL.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BCA	Max Marks	: 60
Subject	: Computers	Pass Mark	: 24
Title of Paper	: Web Programming	Duration	: 3Hrs
Paper Code	: R20BCA403A	Time	: 2pm – 5pm
W.E.F	: 2022-23	Date	: 03.05.2024

SECTION-A

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

1. Explain about data types in PHP.

2. Explain about conditional statements in PHP.

3. Explain about recursive function in PHP.

4. How to sending mail on Form submission.

5. Write about working with file uploads.

6. Explain about variables in Java Script.

7. Explain about string, Math and Data functions in Java Script.

8. Explain about Modules in Angular JS.

SECTION-B

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

9. Explain about different types of operators in PHP.

(OR)

10. Explain about strings in detail.

11. Explain about different types of functions in PHP.

(OR)

12. Explain about object oriented concepts in detail.

13. Explain about different operators in Java script.

(OR)

14. Explain about constructors in Java Script.

15. Explain about sessions concept in detail.

(OR)

16. Explain about Cookies concept in detail.

17. Explain about Data binding in Angular JS.

(OR)

18. Explain about Directives in Angular JS.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BCA	Max Marks	: 60
Subject	: Computers	Pass Mark	: 24
Title of Paper	: Data Mining & Data Warehousing	Duration	: 3Hrs
Paper Code	: R20BCA402A	Time	: 2pm – 5pm
W.E.F	: 2022-23	Date	: 02.05.2024

SECTION-A

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

1. Explain about KDD Vs Data Mining.

2. Define Data warehouse and explain Design principles.

3. Compare OLTP and OLAP.

4. Explain about Market Basket Analysis.

5. What are the drawbacks of Apriori Algorithm.

6. Explain about classification and prediction.

7. Write a note attribute selection measures.

8. Explain about hierarchal clustering.

SECTION-B

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

9. Explain about different data functionalities.

(OR)

10. Explain about the different Data Reduction techniques.

11. Explain OLAP operations in the Multi dimensional Data Model.

(OR)

12. Explain about the three-tier data ware house architecture with neat diagram.

13. Explain about the Apriori algorithm for finding frequent item sets with an example.

(OR)

14. Explain about the mining multilevel association rules with example.

15. Explain classification by decision tree induction.

(OR)

16. Explain about Bayesian classification.

17. Explain categorization of Major clustering methods.

(OR)

18. Explain about partitioning methods.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc(DS)	Max Marks	: 60
Subject	: Computers	Pass Mark	: 24
Title of Paper	: Data Processing & Visualization	Duration	: 3Hrs
Paper Code	: R20DSDPV401A	Time	: 2pm–5pm
W.E.F	: 2022-23	Date	: 01.05.2024

SECTION-A

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

1. Explain about Tableau and Tableau Desktop.

2. Explain about aggregation in a tableau.

3. Explain Data hierarchies in tableau.

4. Explain about scatter plot in tableau.

5. Write about spark line's in Tableau.

6. Explain about Box-and – whisker plot.

7. Explain about funnel chart and gnat chart.
8. How to add slices for filters.

SECTION-B

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

9. Explain about dimensions and Measurers in Tableau.

(OR)

10. Explain how to shape your data using tableau.

11. Explain the five ways to create a bar chart.

(OR)

12. Explain how to distributing Dash Boards in tableau in detail.

13. Explain about Heat map in Tableau in detail.

(OR)

14. Explain about Histogram in Tableau.

15. Explain about Dual – axis and sequential path in tableau.

(OR)

16. Explain about Dumbbell chart in Tableau.

17. Explain about Transforming Data in power Bi.

(OR)

18. Explain about how to create interactive Reports in power Bi.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : Cyber Laws   Duration   : 3 Hrs
Paper Code   : R20BCA401   Time   :
W.E.F   : 2021-22   Date   :

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Write a short note on Cyber Law.

2. Explain APEC.

3. Write about OECD.

4. Explain about Freedom of Speech and Expression in Cyberspace.

5. Write about Right to Access Cyberspace.

6. Write a short note on Hacking.

7. Write about Cyber crimes.

8. Write about property issues in Cyber Space.

SECTION-B

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

9. Explain about Computer and Web Technology.

(OR)

10. Explain Cyber Jurisprudence at International and Indian Level.

11. Explain Cyber law Perspectives in World Bank.

(OR)

12. Explain Cyber law Perspectives in Commonwealth of Nations.

13. Explain about Right to Privacy.

(OR)

14. Explain Human Rights issues in Cyberspace.

15. Write about Cyber Terrorism.

(OR)

16. Explain Cyber Defamation.

17. Explain about interface with Patent Law.

(OR)

18. Explain Trademarks and Domain Names related issues.

Room No: _____   Regd No: 22

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (DS)   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : Data Processing And Visualization Duration : 3 Hrs
Paper Code   : R20DSDPV401   Time   : 2pm – 5pm
W.E.F   : 2021-22   Date   : 01-05-2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. How to do shaping data using tableau?

2. Write a short note on the Line-Charts?

3. Briefly explain about aggregation in tableau?

4. Write a short note on set in tableau?

5. Explain about Dashboards in tableau?

6. Write a short note on scatter plots in tableau?

7. Explain about Dual-Axes combination charts in tableau?

8. Write a short note on Gnat Chart in tableau?

SECTION-B

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

9. Explain about Dimensions and Measures in Tableau.

(OR)

10. Explain Tableau Reader, Tableau online and Tableau Server

11. Explain Data Hierarchies in Tableau.

(OR)

12. Explain five ways to create a Bar Chart in Tableau.

13. Explain distributing Tableau in Dashboards in Tableau

(OR)

14. Explain the process of creating sets in Tableau.

15. Explain Bullet charts and Histograms in Tableau.

(OR)

16. Explain about Tree maps in Tableau.

17. Explain Donut charts and Funnel chart in Tableau.

(OR)

18. Explain about Dual-axis and Sequential path in Tableau.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : Data Mining And Ware Housing   Duration   : 3 Hrs
Paper Code   : R20BCA402   Time   : 2pm – 5pm
W.E.F   : 2021-22   Date   : 02.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Explain about KDD.

2. Define Data Warehouse and write its principles.

3. Compare and Contrast OLTP AND OLAP.

4. Explain about Market Basket Analysis.

5. Explain the concept Association Rule Mining.

6. Explain the concept Classification.

7. Explain Bayesian Belief Network.

8. Explain about hierarchal Cluster.

SECTION-B

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

9. Explain the KDD Process with neat Diagram.

(OR)

10. Explain about Data pre-processing.

11. Explain the Three-Tier Data Warehouse Architecture with neat diagram.

(OR)

12. Explain OLAP Operations in the Multidimensional Data Model.

13. Explain about the Apriori algorithm for finding frequent item sets with an example.

(OR)

14. Explain about the Mining Multilevel Association Rules with example.

15. Explain about Bayesian Classification.

(OR)

16. Explain Classification by decision tree induction.

17. Explain about BIRCH Clustering.

(OR)

18. Explain Partitioning methods.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BCA	Max Marks : 75
Subject	: Computer Science	Pass Mark : 30
Title of Paper	: Web Programming	Duration : 3 Hrs
Paper Code	: R20BCA403	Time : 2pm-5pm
W.E.F	: 2021-22	Date : 03.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Explain about Data types in PHP.
2. Explain about Objects in PHP.
3. Explain about File truncate, file uploading and EOF in PHP.
4. How to Sending Mail on Form Submission.
5. Explain how to pass session IDs in the Query String
6. Explain about variables in Java Script.
7. Explain about String, Math and Date functions in Java Script.
8. Explain about Constants in Angular JS.

SECTION-B

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

9.   Explain about different types of Operators in PHP.

[OR]

10.   Explain about String in detail.

11.   Explain about different types of Functions in PHP.

[OR]

12.   Explain about Files concepts in detail.

13.   Explain about Forms concept in PHP.

[OR]

14.   Explain about cookies concept in detail.

15.   Explain about different operators in JavaScript

[OR]

16.   Explain about Constructors in JavaScript.

17.   Explain about Data Binding in Angular JS.

[OR]

18.   Explain about Directives in Angular JS.

Room No: _____   Regd No: __25__

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Com (Comp)   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : DataBase Management System   Duration   : 3 Hrs
Paper Code   : R20BCOMP401   Time   : 2pm – 5pm
W.E.F   : 2021-22   Date   : 04-05-2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. What is difference between Data and Information.

2. Write about advantages of DBMS.

3. Explain about Generalization and Specialization

4. Explain about aggregate functions.

5. Write short notes on relational set operators.

6. Explain about basic structure of PL/SQL program.

7. Explain DDL commands.

8. Write about table modification.

SECTION-B

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

9. Explain about classification of Data Base Management System.

(OR)

10. Explain about Evolution of Data Base Management System

11. Explain about DBMS architecture

(OR)

12. What is file Based System? Explain drawbacks of file based system

13. Explain basic build blocks of ER-Daigram

(OR)

14. Explain EF-Codd's rules.

15. Explain about DML commands with examples.

(OR)

16. Define constraint? Explain different types of constraints.

17. Write about control structures in PL/SQL.

(OR)

18. Define Procedures? How to create procedures in PL/SQL.

Regd No:_____   Room No: 26

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks   : 75
Subject   : Computer Science   Pass Mark   : 30
Title of Paper: Design of Object Oriented Applications   Duration   : 3 Hrs
Paper Code   : R20BCA404   Paper Time : 2pm-5pm
W.E.F   : 2021-22   Date   : 04.05.24

SECTION – A

I. Answer any FIVE Of the following questions.   5X5=25M

1. What are the Micro Process Activities?
2. What are the Advantages of an Iterative development approach?
3. Explain about Documentation?
4. What are the Dimensions of Testing?
5. Explain about Post-Transition for SNS?
6. What are the uses cases of Weather Monitoring System?
7. What are the Objects of Black Board?
8. What is Smalltalk?

SECTION –B

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

9. (a) Explain about the Macro Development process Disciplines?

(OR)

(b) Explain about the Macro Process Phases?

10. (a) Explain about Management and Planning?

(OR)

(b) Explain about Quality assurance and Metrics?

11. (a) Explain about the initial operations of Satellite Navigation System?

(OR)

(b) Explain about the architecture of TTMS?

12. (a) Explain about the architecture of Blackboard Framework.

(OR)

(b) Explain about the architecture of Weather Monitoring System?

13. (a) Explain about the Web pages and the User Interface?

(OR)

(b) Explain about different Object Oriented programming languages?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Com (Comp)   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : OOps With Java   Duration : 3 Hrs
Paper Code   : R20BCOMP402   Time   : 2pm-5pm
W.E.F   : 2021-22   Date   : 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Explain about data types in Java.

2. Explain if-else statement with example.

3. What is String? Explain how many ways to create a String with an example.

4. Explain about access modifiers in Java.

5. Explain about Abstract Method with an example.

6. Write is Stream and writes Input and Output Stream classes.

7. What is an Error? Explain types of errors in Java.

8. What is Package? How many types of packages in Java?

SECTION-B

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

9. Explain the features of Java Programming Language.

(OR)

10. Explain the Structure of Java Program.

11. Explain about looping statements in Java.

(OR)

12. Define String? Write a Program to compare strings.

13. What is Inheritance? Explain Hierarchical Inheritance in java with an example.

(OR)

14. What is Constructor? How many types of Constructors in Java explain with an example

15. Explain about the procedure to create Package and Accessing a Package in Java.

(OR)

16. Explain about Creating a File using File-Writer class with an example.

17. Explain different types of handling exceptions in Java.

(OR)

18. What is Exception? Explain Checked Exception in Java with an example.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : Data Analytics Using R   Duration   : 3 Hrs
Paper Code   : R20BCA405   Time   : 2pm – 5pm
W.E.F   : 2021-22   Date   : 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Explain about Recursive List in R?

2. Explain about functions used in Factors?

3. Explain the terms Mean, Median and Standard Deviation?

4. Write short notes on Bigdata?

5. Write short notes on t-Test?

6. Explain about Logistic Regression?

7. Write a short note on Ensemble model?

8. Explain about Scatter plot in R?

SECTION-B

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

9. Explain about Vector and List operations in R?

(OR)

10. Explain about Data frames and Factors in R?

11. Explain about dplyr package in R?

(OR)

12. Explain about ggraph and dygraphs in R?

13. Explain about Chi-Square Test?

(OR)

14. Explain about Analysis of Variance?

15. Explain about Linear Regression?

(OR)

16. Explain about Clustering Techniques?

17. Explain about Bar charts in R?

(OR)

18. Explain about Area chart?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPCS, MECS, MSCS, MCCS)	Max Marks	: 75
Subject	: Computer Science	Pass Mark	: 30
Title of Paper	: Data Structures	Duration	: 3 Hrs
Paper Code	: R20CSC401	Time	: 2pm–5pm
W.E.F	: 2021-22	Date	: 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. What are advantages of Algorithm.

2. Write about Linked List versus Array.

3. Explain about Stack applications

4. Explain different types of queues.

5. Write short notes on Tree representation.

6. Explain about all Tree-Terminologies.

7. Write about bubble sort technique.

8. Write about Linear search technique.

SECTION-B

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

9. Explain different types of data structures.

(OR)

10. Explain tips and techniques for writing programs in 'C'.

11. What is array? Explain different types of array.

(OR)

12. What is linked list? How to implement circular linked list

13. What is Stack? Explain stack operations with examples

(OR)

14. What is Double Ended Queue? How to implement double ended queue

15. What is Binary Tree? Explain tree traversal techniques with examples.

(OR)

16. What is Tree? Explain different types of trees in Data structure

17. Explain Binary Search technique

(OR)

18. Explain about BFS and DFS.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPCS, MECS, MSCS, MCCS)	Max Marks : 75
Subject	: Computer Science	Pass Mark : 30
Title of Paper	: Data Structures	Duration : 3 Hrs
Paper Code	: R20CSC401	Time : 2pm–5pm
W.E.F	: 2021-22	Date : 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. What are advantages of Algorithm.

2. Write about Linked List versus Array.

3. Explain about Stack applications

4. Explain different types of queues.

5. Write short notes on Tree representation.

6. Explain about all Tree-Terminologies.

7. Write about bubble sort technique.

8. Write about Linear search technique.

SECTION-B

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

9. Explain different types of data structures.

(OR)

10. Explain tips and techniques for writing programs in 'C'.

11. What is array? Explain different types of array.

(OR)

12. What is linked list? How to implement circular linked list

13. What is Stack? Explain stack operations with examples

(OR)

14. What is Double Ended Queue? How to implement double ended queue

15. What is Binary Tree? Explain tree traversal techniques with examples.

(OR)

16. What is Tree? Explain different types of trees in Data structure

17. Explain Binary Search technique

(OR)

18. Explain about BFS and DFS.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BCA	Max Marks	: 75
Subject	: Computer Science	Pass Mark	: 30
Title of Paper	: Object Oriented Software Engineering	Duration	: 3 Hrs
Paper Code	: R20BCA406	Time	: 2pm–5pm
W.E.F	: 2021-22	Date	: 07.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Discuss about analysis and design aspects?

2. Explain about object oriented paradigm?

3. Explain S/W process Iteration and incrementation?

4. Write about S/W process analysis workflow?

5. Explain abstract date types?

6. Explain challenges of analysis workflow?

7. Explain case tools for design?

8. Explain coding standards?

SECTION-B

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

9. Briefly explain waterfall model.

(OR)

10. Discuss about rapid prototyping?

11. Explain costs and benefits of S/W process

(OR)

12. Explain Democratic Team Approach

13. Discuss about reuse during design and Implementation, reuse and post delivery maintenance?

(OR)

14. Explain estimating during and cost components of S/W project management plain?

15. Explain the analysis work flow?

(OR)

16. Discuss about Design work flow? Forma techniques for detail design

17. Comparison of unit testing techniques and Integration testing

(OR)

18. Explain management of post-delivery maintenance& issues

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPCS, MSCS,MECS,MCCS)	Max Marks	: 75
Subject	: Computer Science	Pass Mark	: 30
Title of Paper	: Operating System	Duration	: 3 Hrs
Paper Code	: R20CSC402	Time	: 2pm-5pm
W.E.F	: 2021-22	Date	: 07.05.2024

SECTION-A

I. Answer any __FIVE__ of the following Questions   5X5=25M

1. Explain the evaluation of operating system?

2. Explain about system calls?

3. Explain about kernels?

4. What is Synchronization?

5. Explain about critical section problem?

6. Explain about segmentation?

7. Explain the function of memory management?

8. Explain about Directory structure?

SECTION-B

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

9. Explain different Types of an Operating System?

(OR)

10. Explain about the operating system services?

11. What is process? Explain process state diagram and process control block?

(OR)

12. Explain the Preemptive Scheduling Algorithm?

13. Explain methods for handling deadlocks?

(OR)

14. Explain about Peterson's solution?

15. Explain about various page replacement algorithms with examples.

(OR)

16. What is fragmentation? Explain internal and external fragmentation?

17. Explain different File Access Methods?

(OR)

18. How to create sample android application?

SECTION-A

I. Answer any <u>FIVE</u> of the following Questions   5X5=25M

1. Explain about Software characteristics.
2. Explain about Defect Removal Efficiency.
3. Explain about Size Oriented matrics.
4. Explain types of software project risks.
5. Explain about RMMM.
6. Describe about UML.
7. Write about SQA.
8. What are the characteristics of good design.

SECTION-B

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

9. Explain about Waterfall model.

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

10. Write about spiral model.

11. Explain Software Management Spectrum.

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

12. Explain Software quality metrics.

13. Explain Software Decomposition Techniques.

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

14. Explain COCOMO model.

15. Explain various Software design principles.

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

16. Explain about cohesion and coupling.

17. Define quality of Software and list and explain Software quality assurance activities.

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

18. What is Software listing? Explain about software testing.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (DS)   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : Artificial Intelligence   Duration : 3 Hrs
Paper Code   : R20DSAI403   Time   : 2 pm – 5 pm
W.E.F   : 2021-22   Date   : 08.05.2024

SECTION-A

I. Answer any <u>FIVE</u> of the following Questions   5X5=25M

1. Explain the uses of AI in real World?

2. Explain about Basic models of ANN?

3. Explain about Associative Memory Networks?

4. Explain about Perceptron?

5. Explain about random forest?

6. Explain about Deep Learning?

7. Explain about time series prediction problem?

8. Explain about PCA?

SECTION-B

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

9. What is means End analysis?

(OR)

10. What is Best First Search?

11. Explain about Historical Trends in deep leering?

(OR)

12. Explain about Deep Feed-forward networks?

13. Explain about Support vector machine?

(OR)

14. Explain about classification and regression tree?

15. Explain about RNN and differentiate with CNN?

(OR)

16. Explain about Applications of RNN: Speech-to-text conversion?

17. Explain about K-means clustering?

(OR)

18. Explain about Expectation –maximization algorithm?

Room No: _____

Regd No: 35

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (DS)

Subject   : Computer Science

Title of Paper : DSCSC401

Paper Code   : Data Processing And Visualization

W.E.F   : 2020-21

Max Marks : 75

Pass Mark : 30

Duration : 3 Hrs

Time   : 2pm–5pm

Date   : 08.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. How to shaping data for use in Tableau?

2. Explain about Linecharts?

3. Explain about aggregation in Tableau?

4. Explain about set in Tableau?

5. Explain about dashboard in Tableau?

6. Explain about scatterplot in Tableau?

7. Explain about Pacechart?

8. Explain about Funnel Chart and Gnat Chart?

SECTION-B

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

9. Explain about tools of Tableau?

[OR]

10. Explain about dimensions and measures in Tableau?

11. Explain five ways to create a bar chart?

[OR]

12. Explain about data hierarchies in Tableau?

13. Explain how to create sets in Tableau?

[OR]

14. Explain how to distributing dashboards in Tableau in detail?

15. Explain histogram in Tableau?

[OR]

16. Explain about Treemap in Tableau?

17. Explain about Donut chart in Tableau?

[OR]

18. Explain about Dumbbell chart in Tableau?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.SC(IOT) & B.VOC (WT)   Max Marks : 75
Subject   : Computer Science & Applications   Pass Mark : 30
Title of Paper : Programming With R   Duration   : 3 Hrs
Paper Code   : R20IOTPR401/IOTPR401/R20WSPR401/WSPR401   Time : 2pm-5pm
W.E.F   : 2019-20   Date : 08.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Explain about Lazy Evalution of Function?

2. Explain String Manipulation?

3. What is Melting and Casting?

4. Explain joining rows and columns and merging the data frames?

5. Explain Analysing the CSV?

6. Explain Pie Charts in R?

7. Explain Bar Charts in R?

8. Explain Mean, Median, and Mode?

SECTION-B

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

9. Explain about Matrix Operations R?

(OR)

10. Explain about Vector and List Operations in R?

11. Explain Melt the Data and Cast the Molten Data?

(OR)

12. How to install directly from CRAN?

13. Explain working with Binary Files?

(OR)

14. Explain working with Excel file?

15. Explain Box plots in R?

(OR)

16. Explain Histograms in R?

17. Explain Linear Regression in R?

(OR)

18. How to create a Regression Model?

Room No: _____   Regd No: __37__

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA   Max Marks : 75
Subject   : Computer Science   Pass Mark : 30
Title of Paper : Python   Duration   : 3 Hrs
Paper Code   : CBBCA401A   Time   : 2pm – 5pm
W.E.F   : 2017-18   Date   : 08.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Explain about Comparison between Java and Python?

2. Write our first Python Program?

3. Explain about Relational operators?

4. Explain about logical Operators?

5. Write about if-else statement with program?

6. Explain about advantages of Array?

7. Explain Recursive Function in Python?

8. Write a Python program for swap of two numbers?

SECTION-B

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

9. Explain Comparison between C and Python

(OR)

10. Explain Python Virtual Machine (PVM)

11. Explain about mathematical Function?

(OR)

12. Explain about User-Defind Data types?

13. Explain about Control Statements?

(OR)

14. Explain Command Line arguments in Python?

15. Write about a program to read and print array in Python?

(OR)

16. Explain Features of Python?

17. Explain Function calling, Returning, Results from functions?

(OR)

18. Explain procedure to create list with example?

SECTION-A

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

1. Need for Training.

2. Objectives of Training.

3. Training Policy.

4. Training Courses.

5. Lecture method.

6. Objectives of Development Program.

7. Counseling.

8. Committee Assignment.

SECTION-B

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

9. Explain the importance of Training?

(OR)

10. Explain the duties and responsibilities of Corporate Trainer?

11. Explain the Various Steps in Training Program?

(OR)

12. Explain in detail about Training Program?

13. Explain the various On-the Job Training Methods?

(OR)

14. Write the difference between On-the Job and Off-the Job Training Methods?

15. Explain the various stages of Development Program?

(OR)

16. Explain the purpose and importance of Development Program?

17. Explain in detail about Incident Process?

(OR)

18. Explain in brief about In-Basket Training?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Com (Gen,TP,Comp & Log)	Max Marks	: 60
Subject	: Commerce	Pass Mark	: 24
Title of Paper	: Corporate Accounting	Duration	: 3Hrs
Paper Code	: R20COM401A	Time	: 2pm – 5pm
W.E.F	: 2023-24	Date	: 01.05.2024

SECTION-A

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

1. Call in advance

2. Forfeiture of shares.

3. What do you mean by bonus shares.

4. Write about buy back of shares.

5. Define goodwill.

6. Write about net asset method.

7. What is corporate dividend tax.

8. Define valuation of shares.

SECTION-B

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

9. Explain different types of preference shares.

(OR)

10. Shakthi Co.Ltd. Was formed with a share capital of 5,00,000 in shares of 100 each ; issued public 4,000 shares payable as follows:

        20 on application

        40 on allotment (including 10 premium)

        25 on I call

        25 on II and final call.

Company received applications for 6,000 shares and directors rejected and refunded excess application money. Direction did not make II and final call. When the I call was made,one shareholder holding 500 shares failed to pay the I call money and another shareholder holding 600 shares also failed to pay the I call money. These shares were forfeited and re-issued at 60 per share.

        Pass journal entries and prepare balance sheet.

11. Distinguish between debenture and share.

(OR)

12. On January 1, 2014, G. Ltd. Issued 1,000, 6% debentures of 100 each repayable at the end of four years at a premium of 10%. It has been decided to institute a sinking Fund for the purpose, the investments being expected to realise 5% net. Sinking Fund tables show that 0.232012 invested annually amounts to 1 at 5% in four years. Investment were made in multiples of hundreds only.

        On December 31, 2017 the balance at the Bank was 40,000 and the investment realised 82,000. The debentures were paid off. Give journal entries and show Ledger accounts except for debentures interest.

13. What are the factors influencing Goodwill.

(OR)

[P.T.O]

14. X Limited agreed to purchase the business of a sole trader and for that purpose goodwill is to be valued at three years purchase of the average of previous 4 years adjusted profit. The profits for the years ending 31st March 2019; 2020; 2021 and 2022 were as follows:
40,000; 48,000; 50,000 and 60,000.
Following additional information is available.

On 1st January 2021 a major repair expenditure to Plant and machinery for 12,000 were changed to Profit and Loss Account. This was agreed to be capitalized for goodwill subject to 10% per annum depreciation on reducing balance method.

The closing stock for the year ending 2020 was overvalued by 4,800.

In order to recover cost of management, an annual charge of 9,600 should be made for valuation of goodwill. Compute the value of goodwill.

15. Explain the need for valuation of shares.

(OR)

16. Following is the balance sheet of Bhanu co. Ltd. As on 31-3-2022.

Liabilities	Amount	Assets	
Share capital :		Fixed assets	4,00,000
1000,8% preference share of Rs.100 each	1,00,000	Current assets	2,50,000
30000 Equity share of Rs.10 each	3,00,000	Preliminary expenses	20,000
Debenture redemption fund	50,000	Discount issue of debenture	5,000
6% debenture	1,00,000	Profit and loss A/c	45,000
Depreciation fund	1,00,000		
Sundry creditors	70,000		
	7,20,000		7,20,000

Calculate the value of equity shares under net assets method after considering the following information:
a) Debenture interest is due for 1 year.
b) Current assets include book debts of which 12,000 which were doubtful for which no provision has been made.

17. Show the proforma of company's profit and loss account.

(OR)

18. Prepare the Balance sheet of Thimmegowda Company as at 31st March 2021, from the following information:

Particulars	
Share Capital	40,000
Reserves and Surplus	37,110
Long-term borrowings	10,000
Trade payables	19,630
Short-term provisions	26,000
Tangible assets	30,000
Investments	2,000
Inventories	89,000
Trade receivables	7,400
Cash and bank balances	3,140
Short-term loans and advances	1,200

Room No: _____   Regd No 41_____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Com(Gen,TP,Comp & Log)   Max Marks : 60
Subject   : Commerce   Pass Mark : 24
Title of Paper : Cost & Management Accounting   Duration   : 3Hrs
Paper Code   : R20COM402A   Time   : 2pm–5pm
W.E.F   : 2023-24   Date   : 02.05.2024

SECTION-A

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

1. What is cost accounting?

2. Write the advantages of ABC analysis.

3. What is Economic Batch Quantity?

4. Write the features of management accounting.

5. Write the features of marginal costing.

6. What is Break Even Point?

7. Write the disadvantages of marginal costing.

8. Define Job Costing.

SECTION-B

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

9. Discuss the scope of cost accounting.

(OR)

10. From the following details prepare cost sheet.

Particulars	Amount
Opening stock of Raw Material	30,000
Purchase of Raw Material	1,00,000
Factory overheads	25,000
Office and Administrative overheads	50,000
Selling and Distribution overheads	40,000
Closing stock of Raw Material	10,000
Direct Wages	20,000
Direct expenses	15,000
Sales	12,00,000

11. Write about various methods of material issues.

(OR)

12. A worker takes 9 hours to complete a job on daily wages and 6 hours on a scheme of payment by results. His day rate is 0.75 paise an hour. Calculate earnings under Halsey plan and Rowan Plans.

13. What are the advantages and dis-advantages of job costing?

[P.T.O]

(OR)

14. From the following information prepare a cost sheet for Job XYZ.

Material consumed	2,00,000
Direct wages	1,00,000
Works overheads incurred	60,000 (60% fixed)
Office overheads	18,000 (100% fixed)
Selling and Distribution expenses	11,400 (Rs.5,400 variable)

Sales 90,000 units at a profit of 7.5% on selling price

Closing stock of finished goods	10,000	Units
Normal output of the factory	1,50,000	Units

15. What are the objectives and functions of Management Accounting?

(OR)

16. From the following particulars prepare comparative income statement.

Particulars	2002	2003	Particulars	2002	2003
To Cost of Goods Sold	1,00,000	1,00,000	By Sales	2,50,000	3,00,000
To Operating expenses	75,000	1,10,000			
To Interest	25,000	20,000			
To Tax	25,000	30,000			
To Net Profit	25,000	40,000			
	2,50,000	3,00,000		2,50,000	3,00,000

17. What are the advantages and dis-advantages of Break-Even Point?

(OR)

18. The data related to a company is as follows:

Year ending	Total Sales (Rs.)	Total Cost (Rs.)
31.12.2005	24,45,300	21,81,960
31.12.2006	26,96,100	23,57,520

Calculate P/V Ratio and Fixed Cost.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS
IV – SEMESTER END EXAMINATIONS

Class : II BBA
Subject : Commerce
Title of Paper : Micro, Small and Medium Enterprises Management
Paper Code : R20BBA403A
W.E.F : 2023-24

Max Marks : 60
Pass Mark : 24
Duration : 3 Hrs
Time : 2pm - 5pm
Date : 03.05.2024

SECTION-A

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

1. Incentives provided to Backward Area Development.

2. Significance of SME.

3. Project Formulation.

4. Subsidies in SMEs.

5. Incentives in SMEs.

6. Sickness in Small and Medium enterprises.

7. BIFR

8. Ancillary Industries.

SECTION-B

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

9. Discuss the problem and steps taken up by the government to tackle the problems in SME.

(OR)

10. Explain the Strengths and Weaknesses of Small and Medium Enterprises in our country

11. Discuss the role of Industrial Estates in Promoting small and Medium Enterprises.

(OR)

12. Define Project report and explain its contents.

13. Write about the finance function in Small and Medium Enterprises.

(OR)

14. Write about the Human resource function in Small & Medium Enterprises.

15. Discuss the Role of Board for Industrial & Financial Reconstruction.

(OR)

16. Discuss the Remedial measures for sickness in SMEs.

17. Write about Rural industries and Artisans.

(OR)

18. Explain the functions of SIDC.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Com (Gen,TP,Comp & Log)	Max Marks	: 60
Subject	: Commerce	Pass Mark	: 24
Title of Paper	: Business Laws	Duration	: 3Hrs
Paper Code	: R20COM403A	Time	: 2pm – 5pm
W.E.F	: 2023-24	Date	: 08.05.2024

SECTION-A

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

1. Contract.

2. Consideration.

3. Breach of contract.

4. Contract of sale.

5. Concept of cyber law.

6. Voidable contracts.

7. Tender.

8. Warranties.

SECTION-B

II. Answer <u>ALL</u> the following Questions   5X8=40M

9. Explain various types of contracts.

(OR)

10. Define contract. Explain the essential elements of a valid contract.

11. Define offer. Explain various types of offer.

(OR)

12. What is consideration. Explain the essential elements of a valid consideration.

13. Discuss various modes of discharge of contract.

(OR)

14. Explain the rules regarding contingent contracts.

15. Explain the rights of an unpaid vendor under the sale of goods Act.

(OR)

16. Discuss about the consumer redressal machinery.

17. Explain about IT ACT 2000.

(OR)

18. What are the legal aspects regarding Digital signature.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.COM(GEN, TP & LOG) Max Marks : 60
Subject : Commerce Pass Mark : 24
Title of Paper : Auditing Duration : 3 Hrs
Paper Code : R20COM404A Time : 2pm–5pm
W.E.F : 2023-24 Date : 04.05.24

SECTION-A

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

1. Difference between Accounting and Auditing.
2. Explain about internal audit.
3. Write about audit program.
4. Define vouching.
5. Qualifications of company Auditor.
6. Government Audit.
7. Write about audit evidence.
8. What is investigation.

SECTION-B

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

9. Define Auditing and explain its importance.

(OR)

10. What are the objectives of auditing?

11. What is Internal audit? Discuss its objectives.

(OR)

12. Discuss about different types of Audit.

13. Write about audit note book.

(OR)

14. Distinguish between internal check and internal control

15. Distinguish between Auditing and Investigation

(OR)

16. Explain the procedure for vouching of cash transactions

17. Discuss the provisions relating to appointment and removal of an auditor

(OR)

18. Explain the Rights and Duties of Auditor.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BBA	Max Marks	: 60
Subject	: Commerce	Pass Mark	: 24
Title of Paper	: International Business	Duration	: 3 Hrs
Paper Code	: R20BBA404A	Time	: 2 pm – 5 pm
W.E.F	: 2023-24	Date	: 04-05.2024

SECTION-A

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

1. Export Policy.

2. Foreign exchange rate and its main objectives

3. Spot Market

4. Disequilibrium in BOP

5. Exchange control reasons

6. Most Favored Nation (MFN)

7. List out Incentive schemes for Exports in India

8. Bill of Lading & Letter of Credit

SECTION-B

II. Answer the following Questions   5X8=40M

9. Differentiate between Domestic trade and International trade.

(OR)

10. Define International Business. Discuss in brief the main objectives of International business.

11. Briefly explain various factors influencing foreign exchange rate fluctuations.

(OR)

12. Write about in detail foreign market operation participants.

13. Discuss various components of BOP (Balance of Payment) in detail.

(OR)

14. Briefly discuss Current Account and Capital Account convertibility.

15. Give various reasons for Trade Block Formation.

(OR)

16. Give main objectives of WTO. Briefly discuss various advantages and disadvantages of WTO to member Nations.

17. Briefly discuss EXIM policy of India.

(OR)

18. Briefly write about Export documentation procedure in International Business.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Com (Gen , TP & Log)	Max Marks	: 60
Subject	: Commerce	Pass Mark	: 24
Title of Paper	: Goods and Services Tax	Duration	: 3 Hrs
Paper Code	: R20COM405A	Time	: 2pm-5pm
W.E.F	: 2023-24	Date	: 06.05.2024

SECTION-A

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

1. What is Goods and Service Tax?

2. What is GST council?

3. Comprehensive Model of GST.

4. Levy of Tax.

5. What is Invoice?

6. Input Tax Credit?

7. What is Annual Return?

8. Filling return Monthly?

SECTION-B

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

9. Discuss about Subsuming of Taxes?

(OR)

10. What is the Significance of Registration?

11. Write a Short note on GST Rates?

(OR)

12. Explain the features of proposed India dual GST?

13. What is the importance of Tax Invoice under GST?

(OR)

14. Explain the Composite Supplies and Mixed Supplies?

15. What are the conditions for taking Input Tax Credit?

(OR)

16. Write about Cross Utilization of ITC between CGST and SGST?

17. Write about different GST Returns?

(OR)

18. Explain Furnishing of Annual Return?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BBA	Max Marks	: 60
Subject	: Commerce	Pass Mark	: 24
Title of Paper	: Financial Services	Duration	: 3Hrs
Paper Code	: R20BBA406A	Time	: 2pm-5pm
W.E.F	: 2023-24	Date	: 07.05.2024

SECTION-A

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

1. Financial Services

2. Sale Ledgering

3. Lease Evaluation

4. Venture Capital Financing

5. Anomalous mortgage

6. Credit Cards

7. Leasing

8. Housing Finance

SECTION-B

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

9. Write in brief about SEBI guidelines?

(OR)

10. Explain various functions of Merchant bankers?

11. Briefly explain Factoring services in India?

(OR)

12. Discuss in brief features and importance of Factoring?

13. Explain various types of Leases?

(OR)

14. Describe the legal framework of Hire -purchase Act,1972?

15. Explain the benefits and limitations of Consumer Finance?

(OR)

16. Describe various types of Credit Cards?

17. What are the Problems and issues with the Housing finance industry in India?

(OR)

18. Write about the various types of Mortgage?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BBA   Max Marks : 60
Subject   : Commerce   Pass Mark : 24
Title of Paper : Business Laws   Duration   : 3Hrs
Paper Code   : R20BBA402A   Time   : 2pm-5pm
W.E.F   : 2022-23   Date   : 02.05.24

SECTION-A

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

1. Explain types of offer.

2. Rules relating to minor contract.

3. Articles of Association.

4. Define Factory.

5. Write about sale of goods act.

6. Write about consumer council.

7. Explain about consumer protection Act.

8. Explain about prospectus.

SECTION-B

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

9. Define contract and explain essential elements of a valid contract.

(OR)

10. Explain different modes of discharge of contract.

11. Define company and explain different types of companies.

(OR)

12. Explain about Memorandum of Association.

13. Explain the provisions of health measures of factories act 1948.

(OR)

14. Explain the provisions of safety measures of factories act 1948.

15. Who is unpaid seller? Explain about his rights according to sale of goods Act.

(OR)

16. What are conditions and warranties? Explain about implied conditions and warranties.

17. Describe the provisions regarding the goods confiscation of under the essential commodities act.

(OR)

18. Discuss about the consumer disputes and redressal mechanism.

Room No: _____   Regd No 50

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II BBA   Max Marks : 60
Subject : Commerce   Pass Mark : 24
Title of Paper : Cost & Management Accounting   Duration : 3Hrs
Paper Code : R20BBA405A   Time : 2pm - 5pm
W.E.F : 2022-23   Date : 06.05.2024

SECTION-A

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

1. Explain the Cost unit.

2. What is Time Keeping and Time Booking?

3. What Trend Analysis?

4. What is Ratio analysis?

5. What is Margin of Safety?

6. Explain the ABC technique.

7. What is Capital employed?

8. What is Break Even point?

SECTION-B

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

9. Explain the differences between Management Accounting and Cost Accounting.

(OR)

10. Explain the classification of Cost.

11. Explain the various Labour Incentive Schemes.

(OR)

12. Prepare 'Stores Ledger' and enter the following transaction adopting the 'Weighted average method' of pricing out Issues.
    Sep 1st Opening balance: 50 Units at Rs.30 per unit
    Sep 5th Issued 2 Units
    Sep 7th Purchased 48 Units at Rs 40 Per unit
    Sep 9th Issued 20 Units
    Sep 19th Purchased : 76 Units at Rs 30 per unit
    Sep 24th Received back 19 Units out of the Units issued on 9th Sep
    Sep 27th Issued 10 Units.

13. Explain the meaning of Financial Statements and write its objectives.

(OR)

14. The income statements of Nalanda Ltd. for 2018 and 2019 are given below. Convert them into common size income statements and comment on the changes in profitability.

[P.T.O]

Particulars	2018 Rs.	2019 Rs.
Gross Sales	7,25,000	8,15,000
Less: Returns	25,000	15,000
Net Sales	7,00,000	8,00,000
Less: Cost of goods sold	5,95,000	6,15,000
Gross Profit	1,05,000	1,85,000
Operating Expenses:		
Administrative expenses	23,000	24,000
Selling and Distribution expenses	12,700	12,500
	35,700	36,500
Operating income	69,300	1,48,500
Add: Other incomes	1,200	8,050
	70,500	1,56,550
Non – Operating Expenses	1,750	1,940
Net profit for the year	68,750	1,54,610

15. Explain the classification of Ratios.

(OR)

16. From the following information calculate 1) Current Ratio 2) Quick Ratio 3) Fixed assets ratio

Balance Sheet of Pallavi Limited as on 31st Dec,2011

Liabilities	Rs.	Assets	Rs.
Equity share capital	1,00,000	Cash in hand	2,000
6 % preference share capital	1,00,000	Cash at bank	10,000
7% Debentures	40,000	Bills Receivable	30,000
8% Govt. Loan	20,000	Investments	20,000
Bank overdraft	40,000	Debtors	70,000
Creditors	67,000	Stock	40,000
Proposed Dividends	10,000	Furniture	30,000
Reserves	1,50,000	Land, Buildings	2,20,000
Provision for Tax	20,000	Machinery	1,00,000
Profit and Loss A/c	20,000	Good Will	35,000
		Preliminary Expenses	10,000
	5,67,000		5,67,000

17. Distinguish between Marginal Cost and Absorption Costing.

(OR)

18. From the following information pertaining to the two years calculate
  A) P / V Ratio
  B) Amount of sales to earn profit of Rs.40,000
  C) Profit on Sales Rs.1,20,000

Years	Sales	Profit
2016	1,40,000	15,000
2017	1,60,000	20,000

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.COM(GEN & COMP)   Max Marks : 60
Subject   : Commerce   Pass Mark : 24
Title of Paper : Income Tax   Duration   : 3Hrs
Paper Code   : R20COM406A/R20COM405A   Time   : 2pm – 5pm
W.E.F   : 2022-23   Date   : 07.05.2024

SECTION-A

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

1. Define Person.

2. Previous year & Assessment year.

3. Types of Provident fund.

4. Deductions U/S16.

5. Define Business and Profession.

6. Pre – construction interest.

7. Explain about casual incomes.

8. Deductions U/S 80C.

SECTION-B

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

9. What is Agriculture income? Explain its types.

(OR)

10. Mr Avinash furnishes the following information of income for the A.Y. 2023– 24. Find out his total income if his residential status is

a) Ordinary Resident   b) Not – ordinary resident   c) Non – Resident Indian.

   i)   Income from business from Mumbai – Rs.1,00,000

   ii)   Profit from business in USA controlled from India – Rs.50,000

   iii) Income from house property in Japan received there Rs.50,000.

   iv) Income from business in India, but received in London Rs.30,000

   v)   Salary (computed) received in India for services rendered in USA Rs.70,000.

   vi) Profits from business in Malaysia controlled form India (1/3 received in India) Rs.30,000.

   vii) Past untaxed income brought into India Rs.8,000.

   viii)Dividend received from a domestic company Rs.5,000.

   ix) Agricultural income earned in Nepal Rs.25,000.

   x)   Interest earned on Post office Savings Bank A/c Rs.5,500.

   xi) Interest received on Private Company Securities Rs.30,000.

   xii) Gift in cash from father Rs.30,000.

11. What is Allowances? Explain its types.

(OR)

12. Mr. Mallanna a production manager of an industrial unit of a company in Chennai. The particulars of his salary income are as under:

Basic salary	15,000 p.m.
Dearness allowance	5,000 p.m.
(Given under terms of employment)	
Entertainment allowance	1,000 p.m.
Medical allowance	500 p.m.
HRA	4,000 p.m.
Rent paid for the house	5,000 p.m.

Car of 1.2 Litre capacity provided by employer for private and official use. Employer meets expenses of car. He and his employer (each) contributes 15% of salary to RPF. Compute income under the head salary.

13. Allowable and Dis – Allowable expenses of Business.

(OR)

14. Mr Paveen is the owner of three houses. The particulars are as follows:

Particulars	House A	House B	House C
Annual fair rent	40,000	35,000	50,000
Municipal valuation	50,000	40,000	50,000
Standard rent	45,000	42,000	55,000
Let out (per month)	3,000	2,500	---
Purpose of use	Let out Residential	Let out business	Self occupied
Repairs	2,000	-----	5,000
Collection charges	3,000	1,000	----
Interest on loan	15,000	5,000	2,000

Municipal tax is 10% taken for repairs of MV. Municipal tax of House A was paid by tenant, but Municipal tax of House B was not paid till 31.03.2023, municipal tax of House C was paid by owner. House A remained vacant for 4 months. Compute income from House property for A.Y. 2023 – 24.

15. List out 8 incomes which are taxable under the head income from other sources.

(OR)

16. Mr. Prasanna sold his residential house on 1.1.2023 for Rs.35,06,000 which he had purchased in 2001 – 2002 for RS.2,00,000. He spent Rs.6,000 for sale of the house. He also spent RS.1,50,000 on the construction of new house and deposited

Rs. 1,00,000 under capital gains account scheme on 28.3.2022. the CII for 2001 – 02 and 2022 – 23 are 100 and 331, respectively. Compute taxable capital gains for the Assessment Year 2023 – 24.

17. Write about Deductions U/S 80G.

(OR)

18. Kishore gives the following information of his income for the P.Y. 2022 – 23 Compute total taxable income for the A.Y. 2023 – 24.

(i)	Rent received p.m.	9,000
(ii)	Income from business (computed)	2,00,000
(iii)	Income from salary (computed)	4,10,000
(iv)	Income from other sources	1,02,000

He makes payments towards:

(a)	Life insurance premium	25,000
(b)	Donation to P.M. Relief fund	15,000
(C)	Interest on education loan on his son	8,500
(D)	Medical insurance premium on his health	12,000

SECTION-A

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

1. Define Distribution Management.

2. Functions of Distribution Manager.

3. Meaning of Marketing.

4. Channel Cost.

5. Chanel Flow.

6. Vertical Marketing.

7. Conflict Magnitude.

8. Multi – Channel conflict.

SECTION-B

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

9. Explain about Nature and scope of distribution management.

(OR)

10. What are the physical components of distribution management.

11. Explain the process of Designing Marketing channels.

(OR)

12. Explain the functions of Intermediaries.

13. Explain the process of Recruit channel Member.

(OR)

14. Explain functions of channel member.

15. Explain importance of channel integration.

(OR)

16. Explain types of Designing channel system.

17. Explain various types of conflict in detail.

(OR)

18. Explain Remedies / Techniques to minimize cannel conflicts.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.COM(TP)	Max Marks	: 60
Subject	: Commerce	Pass Mark	: 24
Title of Paper	: Assessment Of Individual, HUF and Partnership	Duration	: 3Hrs
Paper Code	: R20COMT406A	Time	: 2pm – 5pm
W.E.F	: 2022-23	Date	: 07.05.2024

SECTION-A

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

1. Rates of tax applicable to an individual for the A.Y.

2. Residential status of HUF.

3. Mention incomes which are not treated as Family income.

4. What is Gross total income?

5. Computation of AOP's total income.

6. Remuneration U/S 40B

7. Tax rates applicable to firm A.Y. 2023 – 24 .

8. Write about TCS.

SECTION-B

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

9. Tax treatment of income received from different institutions.

(OR)

10. From the following information compute Taxable Income Tax for Assessment year 2022 – 23 of Mrs. Fatima.

(i)	Gross salary	3,40,000
(ii)	Interest earned on NSC	8,000
(iii)	Interest on Bank fixed deposit	77,000
(iv)	Expenses on rehabilitation of handicapped son	10,000
(v)	Deposited in RPF	15,000
(vi)	LIC premium paid	5,000
(vii)	Employer's contribution to National Pension Scheme	10,000

11. How to compute Total income of HUF.

(OR)

12. The following details have been supplied by Mr. Ramesh, Karta of HUF. Compute the total income and net tax liability of the HUF for the assessment year 2019 – 20.

[P.T.O]

(i)		Short term capital gains	9,500
(ii)		Long – term capital gains	9,400
(iii)		Profit from business	3,15,000
(iv)		Profit from a firm	25,000
(v)		Rental income from the property let out	28,000
(vi)		Municipal tax on the above property	5,000
(vii)		Interest on securities of a listed company	10,000
(viii)		Contribution for Dhan Raksha polic of LIC in the name of a number of the family.	15,000

13. What are the rates prescribed for assessment of AOP or BOI.

(OR)

14. A,B and C are members of an AOP sharing profits and losses equally. The following is the P& L Account of AOP for the year ended 31st March 2020.

Manufacturing expenses	9000	Gross profit		50000
Establishment expenses	6000	interest on securities(Gross)		3000
Depreciation	3000			
Sundry expenses	4000			
Salary to A	6000.			
Commission to B	4000			
Interest on Capital:				
A	1000			
B	2000			
C	3000			
Net profit				
A	5000			
B	5000			
C	5000			
	53,000			53,000

Compute the income of AOP and allocate it amongst its members.

15. How to compute the assessment of firms U/S 185?

(OR)

16. The total income of a firm XYZ in which X,Y and Z the partners share profits and losses in the ratio of 1 : 2 : 3 was as per P and L Ac Rs.1,31,800 for the PY 2017 – 18. In computing the total income of Rs.1,31,800, the following have been debited to the P & L A/c.

Salaries of Rs.1,30,000 and Rs.1,20,000 to X and Y respectively. Interest on capital calculated @ 20% of Rs.3,500, Rs.14,000 and Rs.10,500 to X,Y and Z respectively. Bonus to Z Rs.15,000. Commission of Rs.5,000 Rs.12,500 and Rs.17,500 to X, Y and Z respectively. Z had borrowed capital for his investment in the firm and had paid interest of Rs.7,500 separately to the lender.

Compute the total income of the firm and taxable of the three partners in the firm. All are working partners. The firm fulfils the conditions of Sec.184

17. Who need to file TDS returns?

(OR)

18. What do you mean by TDS? What are the advantages of TDS?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Com (Gen, TP, Comp & Log)	Max Marks	: 75
Subject	: Commerce	Pass Mark	: 30
Title of Paper	: Corporate Accounting	Duration	: 3 Hrs
Paper Code	: R20COM401	Time	: 2pm – 5pm
W.E.F	: 2021-22	Date	: 01.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Kinds of shares

2. Calls in arrears.

3. Buy back of shares.

4. Need for valuations of Goodwill

5. Super profit methods

6. What is need for valuation of shares

7. Corporate dividend tax

8. Bonus shares.

SECTION-B

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

9. Write about kinds of preference shares?

(OR)

10. X Ltd. Company offered 10,000 equity shares of Rs.10 each of Rs.12 per share. Payable as Rs.3 on application and Rs.4 on allotment (including premium), Rs.3 on first call and Rs.2 on final call. All the money was duly received. Pass necessary journal entries for the above transactions.

11. What are the differences between shares and debenture?

(OR)

12. A limited company issued 1,000 debentures of Rs.100 each, repayable at par at the end 10ᵗʰ year. The debentures were payable as follows.

> Rs. 20 on application
> Rs.30 on allotment
> Rs.40 on first call
> Rs.10 on final call

All the money was received by the company in due course. You are asked to journalise the above transactions in the books of the company.

13. What are the factors affecting while valuation of Goodwill?

(OR)

14. From the following information calculate value of Goodwill. On the basis of three year's purchase of super profit the business.
i) Average capital Employed in the business is Rs.15,00,000
ii) Rate of interest expected from capital having regard to the risk involved is 10%
iii) Net trading profits of the firm for the past three years were Rs.2,50,000; Rs.2,80,000; Rs.1,60,000
iv) Fair remuneration to the partners for their services is Rs 30,000 p.a.

[P.T.O]

15. Explain different methods of valuation of shares.

(OR)

16. The following is the Balance sheet of Ramesh company Ltd. as on 31-12-2022

Liabilities	Rs.	Assets	Rs.
5,000 Equity shares of Rs.100 each	5,00,000	Goodwill	70,000
		Land and building	1,90,000
1,000 8% preference shares of Rs.100 each	1,00,000	Machinery	1,50,000
	45,000	Furniture	30,000
General Reserve	15,000	Stock	1,20,000
Profit and loss Account	40,000	Sundry Debtors	90,000
Bank loan	1,20,000	Cash at bank	1 60,000
Sundry Creditors		Preliminary Expenses	10,000
	8,20,000		**8,20,000**

The value of assets is assessed as follows:

Goodwill Rs.85,000, Machinery Rs.1,76,000, Land and building Rs.2,10,000, Stock Rs. 1,30,000, Furniture to be depreciated at 10% and debtors are expected to realise 80% of book value.

Find out the value of each Equity share under Net assets method.

17. Write the format of balance sheet of Company final Accounts?

(OR)

18. Praneetha Ltd. has given the following information. You are required to prepare statements of profit & loss and balance sheet as on 31-03-2022.

Debit balance	Rs.	Credit balance	Rs.
Purchases	75,000	Sales	1,35,000
Salaries	9,800	General Reserve	6,350
Plant and machinery	1,30,000	Creditors	10,250
Debtors	22,750	Balance of profit	40,000
Stock on 1-4-2021	10,500	Equity share capital	
Income tax	12,000	capital	1,00,000
Dividend	21,000		
Cash in hand	3,050		
Cash at bank	7,500		
	2,91,600		**2,91,600**

Additional information:

1. Depreciate plant and machinery at 7 1/2%

2. Stock on 31-3-2022 was Rs.18,000

3. Outstanding salaries Rs.2,200.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Com (Gen, TP, Comp & Log)	Max Marks	: 75
Subject	: Commerce	Pass Mark	: 30
Title of Paper	: Cost And Management Accounting	Duration	: 3 Hrs
Paper Code	: R20COM402	Time	: 2pm-5pm
W.E.F	: 2021-22	Date	: 02.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. State the Objectives of Cost Accounting?

2. What is Cost Accounting?

3. Explain the methods of ABC analysis?

4. What do you know about EOQ?

5. What are the Objectives of Job Costing?

6. Explain the need of Financial Statements?

7. Explain the advantages of Marginal Costing?

8. Explain the features of Marginal Costing?

SECTION-B

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

9. What are the Advantages and Disadvantages of Cost Accounting?

(OR)

10. From the following particulars prepare a cost sheet showing.
1. The cost of material consumed
2. Prime cost
3. Production cost
4. Total cost
5. Profit

Particulars	Rs
Stock of material on 01.01.2016	30,850
Work in progress 01.01.2016	60,900
Stock of finished goods 01.01.2016	6,450
Purchase of raw materials	1,43,250
Direct wages	1,78,500
Production overheads expenses	1,42,800
General overhead expenses	1,12,700
Stock of raw materials 31.12.2016	37,700
Work in progress 31.12.2016	67,750
Stock of finished goods 31.12.2016	10,000
Sales	8,60,000

11. Discuss various methods of Wage Payments?

(OR)

[P.T.O]

12. Prepare a stores ledger statement from the following particulars using FIFO method

2022 Jan , 1 Opening stock 1,000 units @ ₹.5 each
Receipts:
January 3, 900 units @ ₹.6 each
January 11, 800 units @ ₹.6.20 each
January 13, 300 units @ ₹.6.40 each
January 19, 200 units @ ₹.6.50 each
Issues:
January 7, 1,200 units
January 15, 400 units
January 17, 600 units
January 25, 600 units

13. Explain the features of Job costing?

(OR)

14. The following Direct Costs were incurred on Job No.415 standard Radio Company.

Materials   Rs.4,010.

Wages :

Dept. A   -   60 Hours @ Rs. 3 per Hr.

Dept. B   -   40 Hours @ Rs. 2 per Hr.

Dept. C   -   20 Hours @ Rs. 5 per Hr.

Variable Overheads :

Dept. A   -   Rs. 5,000 for 5,000 Labour Hours.

Dept. B   -   Rs. 3,000 for 1,500 Labour Hours.

Dept. C   -   Rs. 2,000 for 500 Labour Hours.

Fixed Overheads :

Estimated at Rs. 20,000 for 10,000 normal Working Hours, you are required to calculate the Cost of Job 415 and Calculate the price to give Profit of 25% on Selling Price

15. What are the Objectives of Financial Statements?

(OR)

16. From the following particulars Prepare a comparative Income statement

Particulars	2021	2022	Particulars	2021	2022
To Cost of goods sold	4,00,000	4,00,000	By sales	10,00,000	12,00,000
To Administrative Expenses	3,00,000	4,40,000			
To Interest	1,00,000	80,000			
To Tax	1,00,000	1,20,000			
To Net Profit	1,00,000	1,60,000			
	10,00,000	12,00,000		10,00,000	12,00,000

17. What are the Advantages and disadvantages of Marginal Costing?

(OR)

18. Calculate the Break-Even Point.

Sales   -   3,00,000

Fixed Expenses   -   75,000

Direct Materials   -   1,00,000

Direct Labour   -   60,000

Direct Expenses   -   40,000

Regd No:_____   Room No: 63

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
I SEMESTER END EXAMINATIONS

Class	: II BBA	Max Marks	: 75
Subject	: Commerce	Pass Mark	: 30
Title of Paper	: Business Laws	Duration	: 3 Hrs
Paper Code	: R20BBA402	Paper Time	: 2pm–5pm
W.E.F	: 2021-22	Date	: 02.05.24

SECTION – A

I. Answer any FIVE Of the following questions.   5X5=25M

1. Explain about Offer.

2. Explain about Free consent.

3. Articles of Association.

4. Explain about prospectus.

5. Health provisions according to the 1948 Factories act.

6. Conditions and warranties.

7. Distinguish between sale and agreement to sale.

8. District Forum.

SECTION –B

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

9. Define 'Contract' and explain essential elements for a valid contract.

(OR)

10. Explain in detail about discharge of contract.

11. Explain the clauses of Memorandum of Association.

(OR)

12. Define company and explain different types of companies.

13. What are the Health provisions according to the factories act 1948.

(OR)

14. What are the welfare provisions according to the factories act 1948.

15. Define sale and explain essential of sale contract.

(OR)

16. Who is unpaid seller? Explain about the rights of unpaid seller.

17. Describe the provisions regarding confiscation of Goods under the Essential commodities act.

(OR)

18. Explain in detail about consumer's protection act 1986.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.Com (Gen, TP, Comp & Log) Max Marks : 75
Subject : Commerce Pass Mark : 30
Title of Paper : Business Laws Duration : 3 Hrs
Paper Code : R20COM403 Time : 2pm–5pm
W.E.F : 2021-22 Date : 03.05.2024

SECTION-A

I. Answer any FIVE of the following Questions 5X5=25M

1. Contract

2. Write about consideration

3. Tender

4. Damages

5. Voidable Contract

6. Contract of sale

7. Digital Signature

8. Safety Mechanism

SECTION-B

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

9. Explain the essentials of valid contract

(OR)

10. Explain about classification of contracts

11. Define offer and explain about the essentials of a valid offer.

(OR)

12. Define consideration and explain the essential elements of a valid consideration.

13. Write the rules regarding contingent contracts.

(OR)

14. What are the various modes of discharge of contract.

15. Distinguish between Sale and Agreement to sell

(OR)

16. Write an essay on consumer protection councils.

17. Explain the need and objectives of the information technology Act.

(OR)

18. Write the legal aspects regarding Digital Signature.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II BBA
Subject : Commerce
Title of Paper : Micro, Small And Medium Enterprise Management
Paper Code : R20BBA403
W.E.F : 2021-22

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2pm – 5pm
Date : 03.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. SME
2. Incentives provided to Backward Area Development.
3. Location of units.
4. Industrial Estates.
5. Venture Capital.
6. Remedial measures for sickness.
7. Sickness in small and medium enterprises.
8. SSIDC

SECTION-B

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

9. Explain the role of government in promoting small and medium enterprises.

[OR]

10. Discuss problems and steps taken by government to tackle problems in MSME.

11. Explain Project Identification and Formulation.

[OR]

12. What are the factors to be considered in location of units?

13. Explain the Marketing and HRM functions in SME.

[OR]

14. Explain management functions in small and medium enterprises.

15. Discuss the role of Board for Industrial and Financial Reconstruction (BIFR).

[OR]

16. Discuss the causes of sickness, prevention of sickness in SME.

17. Discuss role of SIDO & SIDC.

[OR]

18. Write about Rural Industries and Artisans.

Regd No:_____   Room No:__16__

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV SEMESTER END EXAMINATIONS

Class   : II B.Com (GEN,TP, COMP, LOG)   Max Marks : 75
Subject   : Commerce   Pass Mark : 30
Title of Paper : Auditing   Duration   : 3 Hrs
Paper Code   : R20COM404   Paper Time : 2pm - 5pm
W.E.F   : 2021-22   Date   : 04.05.24

SECTION – A

I. Answer any FIVE Of the following questions.   5X5=25M

1. Principals of Auditing.

2. Features of Independent Audit.

3. Explain audit note book.

4. Features of Investigation.

5. Explain Qualified report.

6. Internal check Vs Internal control.

7. Vouching of credit purchases.

8. Auditor duties.

SECTION –B

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

9. (a) What is meant by Auditing? What are the objectives of Auditing?

(OR)

(b) Write the differences between Accounting and Auditing?

10. (a) Explain various types of Audit.

(OR)

(b) What is Cost Audit? State the objectives of Cost Audit.

11. (a) What is an Audit Programme? What are its advantages?

(OR)

(b) What do you mean by Internal Control? What are its essential features?

12. (a) What is Vouching? Explain its objectives and importance.

(OR)

(b) Write about Vouching of Cash transactions.

13. (a) Discuss briefly the qualifications and disqualifications of a company auditor.

(OR)

(b) Explain the rights of an auditor according to companies Act.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II BBA	Max Marks	: 75
Subject	: Commerce	Pass Mark	: 30
Title of Paper	: Cost And Management Accounting	Duration	: 3 Hrs
Paper Code	: R20BBA405	Time	: 2pm–5pm
W.E.F	: 2021-22	Date	: 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Classification of cost

2. Define cost Unit?

3. What do you understand by ABC Techniques?

4. What is idle time?

5. What are Common Size Statements?

6. What is Ratio Analysis?

7. What is Marginal Costing?

8. What is Contribution?

SECTION-B

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

9. Explain the difference between Management Accounting and Cost Accounting?

(OR)

10. Discuss the functions of Management Accounting?

11. Explain various Labour Incentive Schemes?

(OR)

12. Prepare a stores ledger statement from the following particulars using FIFO method
2022 Jan, 1 Opening stock 1,000 units @ ₹.5 each.

Receipts:

January 3,	900 units	@	₹.6 each
January 11,	800 units	@	₹.6.20 each
January 13,	300 units	@	₹.6.40 each
January 19,	200 units	@	₹.6.50 each

Issues:

January 7,	1,200 units
January 15,	400 units
January 17,	600 units
January 25,	600 units

[P.T.O]

13. Discuss the utility and significance of Financial Statements to Various parties in the Business Concern?

(OR)

14. From the following particulars Prepare a Comparative Income Statement

Particulars	2021	2022	Particulars	2021	2022
To Cost of goods sold	4,00,000	4,00,000	By sales	10,00,000	12,00,000
To Administrative Expenses	3,00,000	4,40,000			
To Interest	1,00,000	80,000			
To Tax	1,00,000	1,20,000			
To Net Profit	1,00,000	1,60,000			
	10,00,000	12,00,000		10,00,000	12,00,000

15. State the Advantages and Limitations of Ratio Analysis?

(OR)

16. The following is the balance sheet of Kalyani Electric Co as on 30th June 2021.

Liabilities	Amount	Assets	Amount
Equity Capital	3,00,000	Land & buildings	1,50,000
Sundry Creditors	48,000	Plant & Machinery	85,000
Bills Payable	10,000	Short Term Investments	16,000
Bank Overdraft	5,000	Stock in Trade	50,000
Outstanding Expenses	2,000	Debtors	59,000
		Prepaid Expenses	1,000
		Cash in Hand	4,000
	3,65,000		3,65,000

Calculate the following Ratios:

    1) Current Ratio   2) Quick Ratio

What conclusions do you draw about the company on the basis of these Ratios

17. Distinguish Between Marginal Costing and Absorption Costing?

(OR)

18. Calculate the Break-Even Point.

Sales	-	3,00,000
Fixed Expenses	-	75,000
Direct Materials	-	1,00,000
Direct Labour	-	60,000
Direct Expenses	-	40,000

Room No: _____ Regd No: 69

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Com (Gen, TP, & Log)	Max Marks	: 75
Subject	: Commerce	Pass Mark	: 30
Title of Paper	: Goods and Services Tax	Duration	: 3 Hrs
Paper Code	: R20COM405	Time	: 2pm-5pm
W.E.F	: 2021-22	Date	: 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions 5X5=25M

1. What are the components of GST?

2. GST Council

3. GST rates on goods

4. Bill of Supply

5. What is reverse charge mechanism?

6. How to determine Value of supply?

7. Input tax credit.

8. Quarterly filling returns

SECTION-B

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

9. Discuss about the taxes that are subsumed under GST Act.

(OR)

10. GST registration. What is the significance of Registration?

11. Explain features of proposed Indian Dual GST

(OR)

12. Discuss in detail the taxes and duties outside the Purview of GST

13. What are specified GST rates under composition scheme?

(OR)

14. What is importance of Tax Invoice under GST?

15. What are conditions for taking input tax credit?

(OR)

16. Write about cross utilization of ITC between CGST & SGST?

17. Write about furnishing of Annual filling returns?

(OR)

18. Write about different GST returns?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV SEMESTER END EXAMINATIONS

Class : II B.Com (GEN, COMP)   Max Marks : 75
Subject : Commerce   Pass Mark : 30
Title of Paper : Income Tax   Duration : 3 Hrs
Paper Code : R20COM406   Paper Time : 2pm–5pm
W.E.F : 2021-22   Date : 07.05.2024

SECTION – A

I. Answer any **FIVE** Of the following questions.   5X5=25M

1. Define Assessee.
2. Explain about Agricultural Income.
3. House Rent Allowance.
4. Public Provident Fund.
5. Deduction U/S 24.
6. Capital Assets.
7. Types of Securities.
8. Deductions of U/S 80G.

SECTION –B

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

9. (a) Define the terms 'Previous year' and 'Assessment Year'.

(OR)

(b) How would you determine the residential status of a person.

10. (a) Define Salary. Give the main characteristics of Salary.

(OR)

(b) Mrs. Kalpana Chawla (resident) an employee of Central Govt. in Bangalore submits the following information. Compute her net salary for the A.Y. 2023-24.

Basic Salary Rs. 40,000 per month.

DA 30% of Basic (60% enters into all retirement benefits)

HRA Rs. 3,500 per month

Annual Bonus Rs.15,000

Entertainment allowance Rs.15,000

Rent paid by the Kalpana is Rs. 72,000 p.a.

11. (a) How to determine the professional income of a Lawyer?

(OR)

(P.T.O)

(b) Mr X is the owner of property. It is given on rent of Rs.11,000 p.m. Municipal value of the property is Rs. 1,35,000. Fair rent is Rs.1,43,000 and standard rent is Rs.1,30,000. Municipal tax paid by Mr. X is Rs. 26,000. On 1.4.2020 rent is increased from Rs.11,000 p.m. to Rs 14,000 p.m. with retrospective effect from 1.4.19. Arrears of rent is paid on 1.4.18. Find out taxable income from house property for the A.Y. 2023-24

12. (a) What are the general incomes under the head income from other sources.

<center>(OR)</center>

(b) From the particulars given by Sriramanath (resident) compute the taxable capital gain for the assessment year 2023-24

	Name of Asset	Date of Purchase	Cost Rs.	Date of sale	Sale price	Expenses on Sale
1	Government securities	1-10-2015	10,000	30-6-2022	15,000	200
2	Furniture (w. d. v on 1-4-2016 Rs. 4000)	15-2-1992	5,000	20-2-2023	3,000	-

Index for the previous year 2022-23 is 331, 2015-16 is 254

13. (a) Explain the deductions allowed to an individual under IT Act.

<center>(OR)</center>

(b) From the following particulars of Mr. Gopal (resident) calculate his tax liability for the assessment year 2023-24

	Rs.
Salary	1,29,000
Business Income	70,000
Royalty on books for colleges	30,000
Rent from house property	20,000
Dividend income	15,200
Bank Interest	8,800
Income of a Minor Son	50,000
Long – term Capital Gains	30,000
Contribution to P.P.F	3,000
Life Insurance Premium Paid	1,000
Health Insurance Premium Paid	800
Donation to National Defence Fund	5,000.

<center>*****</center>

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Com (TP)   Max Marks : 75
Subject   : Commerce   Pass Mark : 30
Title of Paper : Assessment of Individual , HUF & Partnership   Duration : 3 Hrs
Paper Code   : R20COMT406   Time : 2pm-5pm
W.E.F   : 2021-22   Date : 07.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Tax rates of individual.

2. Rabate U/s 87A.

3. What do you mean by HUF.

4. What is Cooperative Society.

5. AOP and BOI.

6. Define LLP its features.

7. Remuneration U/s 40 (B).

8. What is TDS?

SECTION-B

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

9. How to as certain tax liability of an individual?

(OR)

10. Compute tax liability of Mr.Anand from the below given particulars.

Particulars	Rs.
Income from salary	2,40,000
Rent from House property	1,80,000
Business Profits	3,40,000
Long – term capital losses	60,000
Short – term capital gains	1,40,000
Lottery winnings	1,00,000 (gross)
Agency commission	40,000
Underwriting commission	60,000
Life Insurace premium paid	18,000
Mediclaim paid	15,000
Donation to Jawahar Lal Nehru Memorial Trust	16,000

11. What is HUF? How to determine residential status of HUF?

(OR)

[P.T.O]

12. The following details have been supplied by the Mr.Ravi Karta of a H.U.F. you are to compute the Gross total Income and the total income of the family for the A.Y 2021-2022

Particulars	Rs.
Profit from business	6,52,000
Salary received by a member of the family from his service elsewhere	3,30,000
Director's fees received by the Karta by his personal exertion	76,000
Annual rental value of the property let	12,000
Municipal Taxes paid	1,000
Dividends	500
Long – term capital gains	30,000
Donations to an approved charitable Institution by cheque	70,000
Share of profit from firm	80,000

13. How to compute total income of Societies?

(OR)

14. X, Y and Z are partners in a firm which fulfills the condition of sec. 184 Z in non-working partner. They share profits and losses in the ratio of 3:2:1. The following is the profit and loss account for the ended 31.03.2022.

Dr   Cr

Particulars	Rs		Particulars	Rs
Establishment Expenses		51,000	Gross Profit	1,30,000
Rent to Partner		10,000	Interest from Bank	4,000
Salary to Partner			Interest on Government securities	6,000
Rs			Net Loss	60,000
X	35,000			
Y	25,000	60,000		
Interest on Capital (14%):-				
X	7,000			
Y	5,600			
Z	1,400	14,000		
Bonus to Partners				
X	15,000			
Y	10,000			
Z	5,000	30,000		
Profession Tax		2,000		
Income Tax		12,000		
Income Tax Provisions		8,000		
Loss on sale of Machinery		8,000		
Depreciation		5,000		
		2,00,000		2,00,000

Other information :

1. Establishment expenses include commission paid to Z Rs.1,000 and for furniture purchased Rs.2,000.
2. Machinery which is sold during the p.y for Rs.10,000 is of the W.D.V Rs.18,000 as on 01.04.2020.
3. Depreciation allowable as per rules is Rs.2,000.

Compute the total income of the firm for the A.Y. 2022-2023

[Continued to Next Page]

15. How to compute total income of firm under 185?

(OR)

16. Profit and loss account of Divan & Company (partnership firm) for the year ending 31.03.2021 is as follows.

Particulars	Rs	Particulars	Rs
Expenses	1,60,000	Audit Fees	1,40,000
Depreciation	70,000	Receipts from clients for tax advice	1,24,000
Int. capital to Partner	16,000	Net loss	1,16,000
Remuneration to Partners	1,34,000		
	3,80,000		**3,80,000**

Other information :

1. Out of expenses Rs.1,60,000 , Rs.32,000 is not deductiable

2. Depreciation allowable under section 32 is Rs.74,000

3. Interest to the extent of 1,600 is not deductible under section 40 (b).

You are required to compute the deductible remuneration in relation to partner's remuneration and Book profit under section 40 (b).

17. What do you mean by TDS? What are the advantages of Tax deducted at sources?

(OR)

18. What are the provisions laid down in Income Tax Act in regard to tax deducted at sources?

SECTION-A

I. Answer any <u>FIVE</u> of the following Questions   5X5=25M

1. Features of logistics.

2. Warehouse management.

3. Participants in SCM

4. Aggregate planning in supply chain

5. Role of network design in the supply chain.

6. Inventory management.

7. Capacity allocation

8. Objectives of logistics management.

SECTION-B

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

9. What is logistics? Explain the functions of Logistics

(OR)

10. Explain the importance of logistics management.

11. Explain the various types of logistics.

(OR)

12. Explain the difference between Logistics and SCM

13. What is supply chain management? Explain its importance.

(OR)

14. Write various decision phases in supply chain management.

15. Explain the characteristics of demand forecasting.

(OR)

16. Write the relation of SCM with other managements.

17. What are the factors influencing network design decisions in SCM

(OR)

18. What are the models for the facility location?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II BCA
Subject   : Commerce
Title of Paper : Accounting And Financial Management
Paper Code   : CBAFM401
W.E.F   : 2019-20

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2pm - 5pm
Date : 07.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Profit Maximization Vs Wealth Maximization.

2. Significance of Financial Analysis.

3. Objectives of Capital Budgeting

4. Stock turnover ratio is 3 times. Cost of goods sold is 1,20,000. Stock in the beginning is Rs.10,000 more than the stock at the end. Calculate stock in the beginning and at the end.

5. A company uses 50,000 units per year of an item costing Rs.10 each. The cost of processing a purchase order is Rs. 20 and the stockholding cost amounted to 10% per year of the money value of the inventory. How much should the company buy at a time (in a single order) in order to minimize inventory costs?

6. Calculate funds from operations from the following Profit and loss account.

Particulars	Amount	Particulars	Amount
To expenses paid and outstanding	6,000	By Gross Profit	9,000
To Depreciation	1,400	By Gain on Sale of Land	1,200
To Loss on Sale of Machine	80		
To Discount	4		
To Goodwill	400		
To Net Profit	2,316		
	10,200		**10,200**

7. Calculate trend Percentages from the following information of Ramu Ltd., taking 2000 as base and interpret them.

Year	Sales	Stock	Profit Before Tax
2000	1,500	700	300
2001	2,140	780	450
2002	2,365	820	480
2003	3,020	930	530
2004	3,500	1,160	660
2005	4,000	1,200	700

8. From the following information, Calculate Operating Profit.

Net profit	1,00,000
Rent Received	10,000
Gain on sale of Machine	15,000
Interest on Loan	20,000
Donation	2,000

[P.T.O]

SECTION-B

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

9. Explain the nature and scope of finance function?

(OR)

10. What factors should the Financial Manager take into consideration while estimating Working Capital needs of a firm?

11. The following is the income statement of Karthikeya company for the years 2020-2021. Prepare Common Size Income Statement.

Particulars	2019	2020	Particulars	2019	2020
To Cost of Goods Sold	1,85000	2,00,000	By Sales	3,05,000	3,42,000
To office Expenses	17,650	18,300	By Dividends	4,200	3,900
To Selling Expenses	37, 500	40,000			
To Interest Paid	2,100	1,700			
To Income Tax	20,085	25,770			
To Net Profit	46,865	60,130			
	3,09,200	**3,45,900**		**3,09,200**	**3,45,900**

(OR)

12. From the following information prepare a comparative balance sheet

LIABILITIES	2018	2019	ASSETS	2018	2019
Equity Share Capital	4,00,000	6,00,000	Plant & Machinery	1,00,000	2,00,000
	2,00,000	3,25,000	Land & Buildings	3,60,000	5,40,000
Debentures	2,55,000	1,17,000	Investments	2,70,000	1,70,000
Sundry Creditors	7,000	10,000	Sundry Debtors	1,00,000	88,000
Bank Overdraft			Cash in Hand	32,000	54,000
	8,62,000	**10,52,000**		**8,62,000**	**10,52,000**

13. The balance sheet Prepare the Funds Flow Statement

LIABILITIES	2019	2020	ASSETS	2019	2020
Equity Share Capital	3,00,000	4,00,000	Buildings	3,00,000	3,10,000
Preference Share Capital	2,00,000	1,00,000	Machinery	2,50,000	2,00,000
	1,40,000	1,70,000	Stock	90,000	1,30,000
General reserve	53,000	90,000	Debtors	60,000	1,10,000
Creditors	24,000	46,000	Cash	18,000	11,000
Bills payable	1,000	5,000	Short-term Investments	-	50,000
Outstanding Expenses					
	7,18,000	**8,11,000**		**7,18,000**	**8,11,000**

(OR)

14. From the particulars given below Prepare Cash flow Statement.

LIABILITIES	2019	2020	ASSETS	2019	2020
Share Capital	4,00,000	5,32,000	Plant & Machinery	5,70,000	6,00,000
Reserves	2,82,000	1,00,000	Stock	1,96,000	2,26,000
Depreciation reserve	20,000	1,70,000	Debtors	79,000	57,000
Loans	40,000	90,000	Cash at Bank	43,000	60,000
Creditors	1,29,000	46,000			
Outstanding expenses	17,000	5,000			
	8,88,000	**9,43,000**		**8,88,000**	**9,43,000**

15. Explain the Advantages and Disadvantages of Ratios?

(OR)

16. The following is the balance sheet of Kalyani Electric Co as on 30th June 2021.

[Continued to Next Page]

Liabilities	Amount	Assets	Amount
Equity Capital	3,00,,000	Land & buildings	1,50,000
Sundry Creditors	48,000	Plant &	85,000
Bills Payable	10,000	Machinery	16,000
Bank Overdraft	5,000	Short Term	50,000
Outstanding Expenses	2,000	Investments	59,000
		Stock in Trade	1,000
		Debtors	4,000
		Prepaid Expenses	
		Cash in Hand	
	3,65,000		**3,65,000**

Calculate the following Ratios:
1) Current Ratio   2) Quick Ratio
What conclusions do you draw about the company on the basis of these Ratios

17. Examine the following project proposals evaluate them based on Pay Back Period
    Method and Net present value at 10%for both Projects:
    Initial investment is Rs.10,00,000/- each of the proposals

Years	Project -A	Project-B	Present Values @10%
1	6,00,000	2,00,000	0.909
2	2,00,000	2,00,000	0.826
3	2,00,000	7,00,000	0.751
4	3,00,000	4,00,000	0.683

(OR)

18. Examine three projects and evaluate them based on ARR

Investment	10,00,000	10,00,000	10,00,000
Years	Project -A	Project-B	Project-C
Cash inflows			
1	5,00,000	6,00,000	2,00,000
2	5,00,000	6,00,000	2,00,000
3	2,00,000	2,00,000	6,00,000
4	-	-	4,00,000

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Com (Gen , TP, Comp & Log)   Max Marks : 75
Subject   : Commerce   Pass Mark : 30
Title of Paper : Advanced Accounting   Duration   : 3 Hrs
Paper Code   : CBAA401   Time   : 2pm-5pm
W.E.F   : 2016-17   Date   : 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Explain the features of Partnership.

2. Explain about Fixed Capital method.

3. Explain about Goodwill.

4. What is Share Premium?

5. What is meant by Reissue of forfeited shares?

6. Write about Profit and Loss Appropriation account

7. What is meant by Dissolution.

8. Write about Preference Shares.

SECTION-B

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

9. What is Partnership deed and write the contents in partnership deed.

(OR)

10. A and B starts business with capital of Rs.80,000 and Rs.40,000 on 1st Jan 2014. B is entitled to a salary of Rs.500 per month. Interest is allowed on capitals and is charged on drawings at 6% p.a. Profits are to be distributed equally after making above adjustments. During the year A withdrawn Rs.8,000 and B Rs.10,000. Profits before adjustments amounted to Rs.50,000. Assuming capital to be fixed prepare the Profit and Loss Appropriation Account relating to partners.

11. Explain the methods of valuation of Goodwill.

(OR)

12. The following was the Balance sheet of A,B and C on 1st June 2016.

Liabilities	Rs.	Assets	Rs.
Bills Payable	3,300	Cash	600
Creditors	6,000	Debtors	10,800
Capitals:		Stock	11,400
A 16,800		Furniture	2,400
B 12,600		Buildings	19,500
C 6,000	35,400		
	44,700		44,700

[P.T.O]

They agreed to take X into partnership on the following terms.
1) The X should bring Rs. 15,000 as capital and Rs.9,000 for goodwill.
2) That goodwill amount should not be left in the business.
3) That stock and furniture be depreciated by 10%.
4) That a reserve of 5% on debtors be created for doubtful debts.
5) That the value of buildings should be raised to Rs.27,000.
   Prepare necessary accounts and show the opening balance sheet of the firm as newly constituted.

13. What is the mode of payment to a retired partner?

(OR)

14. P, Q and R partners sharing profits and losses equally. The balance sheet at 31st Dec. 2018 is as follows.

Liabilities		Rs.	Assets		Rs.
Sundry Creditors		5,000	Cash at bank		3,000
Current Accounts:			R's current account		2,500
	P	2,000	Bills Receivable		5,000
	Q	3,000	Sundry Debtors	20,000	
Reserve		6,000	Less: Bad Debts		
Capitals:	P	10,000	Provision	1,000	19,000
	Q	15,000	Stock		18,000
	R	10,000	Fixtures		3,500
		51,000			**51,000**

R retires on the date and the following adjustments are to be made for the purpose
1. Good will is valued at Rs.12,000.
2. Fixtures to be depreciated by 5%.
3. Stock to be appreciated by 10%
4. Bad debts provision to be increased by Rs.500.
Find out the amount due to R and transfer it to his loan account. Prepare partners current accounts and revaluation account, and prepare the opening balance sheet of the continuing partners.

15. What is the rule in Garner Vs Murray Case.

(OR)

16. Phani, Mani and Krishna are partners in a firm sharing profits and losses in the ratio 3 : 2 : 1. They decided to dissolve the partnership business as on 31.12.2018. Following is the balance sheet on the date of dissolution.

Liabilities	Rs.	Assets	Rs.
Phani Capital	20,000	Goodwill	6,000
Mani Capital	10,000	Machinery	25,000
Krishna Capital	2,000	Furniture	3,000
Bank overdraft	6,000	Stock	10,000
Sundry Creditors	12,000	Debtors	6,000
	50,000		**50,000**

Following assets were realized in cash. Machinery at Rs.22,000, 50% of stock at Rs.3,500 and debtors are collecteal at 15% less than their book values. Goodwill could not realise any value. Remaining 50% stock was taken over by Phani at Rs.3,200. Furniture was taken over by Mani at Rs.2,400. Realisation expenses were Rs.300. Show the necessary ledger accounts.

17. Explain various methods of Share capitals.

<div align="center">

(OR)

</div>

18. Lakshmi Company Ltd. Issued 25,000 equity shares of Rs.10 each, payable Rs.2 on application, Rs. 4 on allotment, Rs.3 on first call and Rs.1 on final call. All the shares were subscribed and the amount duly received. Pass necessary journal entries in the books of the company.

SECTION-A

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

1. Express the vector $\alpha = (1,-2,5)$ as a linear combination of the vector $e_1 = (1,1,1)$, $e_2 = (1,2,3)$ & $e_3 = (2,-1,1)$.

2. Prove that the intersection of two subspaces of a svector space V(F) is also a subspace of V.

3. Show that the vectors $(1,2,1),(2,1,0),(1,-1,2)$ form a basis of R^3 .

4. If $T : U(F) \to V(F)$ is a linear transformation then prove that the Null space N(T) is a subspace of U.

5. The mapping $T : V_3(R) \to V_2(R)$ defined by T(a,b,c)=(a-b,a+c) Show that T is a Linear Transformation.

6. Solve the system of equations x+2y-z=3, 3x-y+2z=1,2 2x-2y+3z=2,x-y+z=-1

7. State and prove Triangle inequality.

8. Prove that every orthonormal set of vectors in an inner product space V(F) is linearly independent.

SECTION-B

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

9. If S, T are the subsets of a vector space V(F) then prove that $L(S \cup T) = L(S) + L(T)$

(OR)

10. Prove that the necessary and sufficient condition for a non empty subset W of a vector space V(F) to be a subspace of V is $a,b \in F$ and $\alpha, \beta \in W \Rightarrow a\alpha + b\beta \in W$

11. Let W be the subspace of a finite dimensional vector space V(F) then prove that
$$\dim \frac{V}{W} = \dim V - \dim W$$

(OR)

12. If W_1,W_2 are two subspaces of a finite dimensional vector space V(F) then prove that
$$\dim(W_1 + W_2) = \dim W_1 + \dim W_2 - \dim(W_1 \cap W_2)$$

[P.T.O]

13. State and prove Rank-Nullity Theorem.

(OR)

14. Verify Rank Nullity theorem for the linear transformation $T:V_3(R) \to V_3(R)$ defined by $T(a,b,c)=(a+b,a-b,b)$.

15. State and prove Cayley-Hamilton theorem.

(OR)

16. Determine the characteristic roots and the corresponding characteristic vectors of the

matrix $A = \begin{bmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & -4 & 3 \end{bmatrix}$

17. If α, β are two vectors in an Unitary space then prove that

$$4\langle \alpha, \beta \rangle = \|\alpha + \beta\|^2 - \|\alpha - \beta\|^2 + i\|\alpha + i\beta\|^2 - i\|\alpha - i\beta\|^2$$

(OR)

18. State and prove Bessel's inequality.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Voc(WT&SD)	Max Marks	: 60
Subject	: Mathematics	Pass Mark	: 24
Title of Paper	: Numerical & Statistical Methods	Duration	: 3Hrs
Paper Code	: R20WSMAT401A	Time	: 2pm–5pm
W.E.F	: 2023-24	Date	: 03.05.2024

SECTION-A

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

1. Using Newt n Raphson method establish the iteration formula $x_{n+1} = \dfrac{1}{3}\left[2x_n + \dfrac{N}{x_n^2} \right]$ to

calculate the cube root.

2. Find a root of the equation $x^2-4x-10=0$ using bisection method which lies between 5 and 6 up to 3 approximations.

3. Find the Eigen values of $\begin{pmatrix} 1 & 2 & 3 \\ 0 & 2 & 3 \\ 0 & 0 & 2 \end{pmatrix}$

4. Solve the equations $3x+2y+4z=7, 2x+y+z=7, x+3y+5z=2$ by Gauss Jordan Method.

5. Evaluate $\int_0^1 x^3 dx$ with 5 subintervals by trapezoidal rule.

6. Find f(4) by using Lagrange's interpolation formula from the following table.

x	0	1	2	5
f(x)	2	5	7	8

7. Find the probability that a non-leap year containing i) 53 Sundays   ii) 52 Sundays.

8. Explain the Kurtosis.

SECTION-B

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

9. Find areal root of the equation $f(x)=x^3-2x-5=0$ by Regula falsi position which lies between 2 and 3 upto 4 approximations.

(OR)

10. Find a real root of $\cos x = 3x-1$ correct to 3 decimal places using iteration method upto 5 approximations.

11. Solve the system of linear equations $3x+2y+4z=7, 2x+y+z=7, x+3y+5z=2$ by using LU Decomposition method.

(OR)

12. Solve the Equations $10x-y-z=13, x+10y+z=36, -x-y+10z=35$ by using Gauss Seidal method.

[P.T.O]

13. Use Simpson's 3/8 rule, evaluate $\int_0^1 \dfrac{1}{1+x}\,dx$ with h=1/6.

(OR)

14. Find f(7.5) by Newton's backward formula from the table

x	1	2	3	4	5	6	7	8
f(x)	1	8	27	64	125	216	343	512

15. Calculate the skewness of the following data.

CI	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	10	15	18	24	23	19	12	9

(OR)

16. Find the Correlation coefficient to the following data.

X	1	3	4	5	7	8	10
F	2	6	8	10	14	16	20

17. State and prove Addition theorem on probability.

(OR)

18. A,B,C are three horses in a race. The probability of A to win the race is twice that of B and probability of B is twice that of C. What are the probability of A,B,C to win the race.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc(MSCS & DATA SCIENCE)	Max Marks	: 60
Subject	: Statistics	Pass Mark	: 24
Title of Paper	: Sampling Techniques & Design Of Experiments	Duration	: 3Hrs
Paper Code	: R20STAT401A/R20DSSTAT401A	Time	:2pm-5pm
W.E.F	: 2023-24	Date	:03.05.24

SECTION-A

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

1. Explain Sample mean is an unbiased estimator of Population mean SRSWR

2. Explain Advantages of Stratified random sampling.

3. Explain Systematic random sample.

4. Explain Cochran's Theorem.

5. Explain Experimental unit and Experimental error.

6. Explain RBD With Their Layout.

7. Advantages of Factorial Experiments.

8. Explain main effects and interaction effects of factorial experiments.

SECTION-B

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

9. Explain The comparison between srswr and srswor.

(OR)

10. In SRSWR the sample mean square is an unbiased estimator of the population mean square.

11. If the population consists of a linear trend, then P.T Var $(\bar{y}_{st})_{opt} \leq$ Var $(\bar{y}_{st})_{prop} \leq$ Var $(\bar{y}_n)_{ran}$

(OR)

12. With usual notations prove that $V_{opt} < V_{prop} < V_{ran}$

13. Calculate Anova one way classification for the following data. (T,v= 3.63)

A	10	12	13	11	10	14	15	13
B	9	11	10	12	13			
C	11	10	15	14	12	13		

(OR)

[P.T.O]

14. Explain Anova Two-way classification.

15. Calculate LSD Missing plot technique to the following data (T.V = Fr= 4.76, Fc= 1.37, Ft= 15.01)

A	C	B	D
12	19	10	8
C	B	D	A
18	12	6	-----
B	D	A	C
22	10	5	21
D	A	C	B
12	7	27	17

(OR)

16. Explain one missing observation in RBD.

17. Write the statistical analysis of 2^3 factorial experimental design.

(OR)

18. Explain main effects and interactions of 2^n Factorial design.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MSCS , DS)	Max Marks	: 60
Subject	: Statistics	Pass Mark	: 24
Title of Paper	: Applied Statistics	Duration	: 3 Hrs
Paper Code	: R20STAT402A/R20DSSTAT402A	Time	: 2pm – 5pm
W.E.F	: 2023-24	Date	: 04-05-2024

SECTION-A

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

1. Explain Mathematical model in a time series.

2. Define the seasonal components.

3. Explain method of simple average method.

4. Explain Yule's method

5. Explain the fitting of logistic curve

6. Explain the simple index numbers

7. Define Rates and Ratio's

8. Explain Abridged life table.

SECTION-B

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

9. Define time series and explain various components of time series.

(OR)

10. Fit a straight line to the following data by using least squares.

Year	1991	1992	1993	1994	1995	1996	1997	1998
Sales	23	28	21	33	38	41	44	45

11. Explain link relative method

(OR)

12. Calculate the seasonal Index for the following data by simple average method.

Year	Q1	Q2	Q3	Q4
2001	14	16	17	19
2002	17	21	22	23
2003	24	26	28	21
2004	32	31	33	29

13. Explain the method of three selected points for fitting of modified exponential curve.

(OR)

14. Fitting of Gompertz curve to the following data and obtain the trend values

Time Periods	1	2	3	4	5	6	7	8	9
Values of Variables	2	4	8	12	20	30	38	40	45

[P.T.O]

15. Explain construction of Index number

(OR)

16. Calculate fishers price index for the following data and verify time reversal and factor reversal test

Item	Base price	Base quantity	Current price	Current quantity
A	14	4	17	5
B	17	3	19	4
C	24	5	27	6
D	32	7	31	8

17. Explain sources of vital statistics

(OR)

18. Explain the measures of population growth.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc(MPCS,MSCS,MECS & MCCS)	Max Marks	: 60
Subject	: Mathematics	Pass Mark	: 24
Title of Paper	: Real Analysis	Duration	: 3Hrs
Paper Code	: R20MAT401A	Time	: 2pm-5pm
W.E.F	: 2022-23	Date	: 01.05.2024

SECTION-A

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

1. State and prove Sandwich theorem.

2. State and prove Cauchy's second theorem on limits.

3. Test for convergence $\sum_{n=1}^{\infty} \left(\sqrt{n^4+1} - \sqrt{n^4-1} \right)$

4. If f: R→R defined by $f(x) = \dfrac{|x-2|}{x-2}$ if $x \neq 2$, $= 0$ if $x = 2$ then prove that $\underset{x \to 2}{Lt} f(x)$ does not exist.

5. Verify Rolle's theorem on [a,b] for the function $f(x) = (x-a)^m (x-b)^n$.

6. If f: [a,b]→R derivable at $c \in [a,b]$ then prove that f is continuous at c.

7. If f: [a,b]→R is monotonic on [a,b] then prove that f is integrable on [a,b].

8. Prove that $\dfrac{1}{\pi} \leq \int_0^1 \dfrac{\sin \pi x}{1+x^2} dx \leq \dfrac{2}{\pi}$

SECTION-B

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

9. Prove that a monotone sequence is convergent if and only if it is bounded.

(OR)

10. State and prove Cauchy's first theorem on limits.

11. State and prove Cauchy's n^{th} root test.

(OR)

12. State and prove Leibnitz test.

13. Examine the continuity of $f(x) = |x| + |x-1|$ at x=0,1.

(OR)

14. If f: [a,b]→R is continuous on [a,b] then prove that f is bounded on [a,b] and attains its bounds.

[P.T.O]

15. Show that $\dfrac{v-u}{1+v^2} < Tan^{-1}v - Tan^{-1}u < \dfrac{v-u}{1+v^2}$ for $0<u<v$. Hence deduce that

$$\frac{\pi}{24} + \frac{3}{25} < Tan^{-1}\left(\frac{4}{3}\right) < \frac{\pi}{4} + \frac{1}{6}.$$

(OR)

16. State and prove Cauchy's mean value theorem.

17. Show that f(x)=3x+1 is integrable on [1,2] and $\displaystyle\int_1^2 (3x+1)dx = \frac{11}{2}$.

(OR)

18. State and prove Fundamental theorem of integral calculus.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
I SEMESTER END EXAMINATIONS

Class	: II BSC (MPC,MPCS,MECS,MSCS,MCCS)	Max Marks	: 75
Subject	: MATHEMATICS	Pass Mark	: 30
Title of Paper	: REAL ANALYSIS	Duration	: 3 Hrs
Paper Code	: R20MAT401	Paper Time	: 2pm – 5pm
W.E.F	: 2021-2022	Date	: 01.05.24

SECTION – A

I. Answer any FIVE Of the following questions.   **5X5=25M**

1. Prove that a convergent sequence has unique limit.

2. State and prove Sandwitch theorem.

3. Test for convergence $\sum_{n=1}^{\infty} \frac{1}{2^n+3^n}$.

4. If f : S → R is uniformly continuous then Prove that f is continuous in S.

5. Verify Rolle's theorem in [a,b] for the function $f(x) = (x-a)^m(x-b)^n$.

6. Find 'c' of Cauchy's – Mean Value theorem for $f(x) = \sqrt{x}$, $g(x) = \frac{1}{\sqrt{x}}$ on [a,b].

7. If f is continuous on [a,b] then prove that f is integrable on [a,b].

8. If f : [a,b] → R is monotonic on [a,b] then prove that f is integrable on [a,b].

SECTION –B

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

9.   Prove that a monotone sequence is convergent if and only if it is bounded.
                              (Or)
10·   Show that Cauchy – General Principle of convergence

11·   State and Prove Cauchy's n^{th} root test.
                              (Or)
12·   State and Prove Leibnitz test.

13·   Examine the continuity of the function f(x) = |x| + |x-1| at x = 0,1.
                              (Or)
14·   If f is continuous on [a,b] then it is uniformly continuous on [a,b].

15·   State and prove Lagrange's mean value theorem.
                              (Or)

16·   State and prove Rolle's theorem

17·   Necessary and sufficient condition for R-Integrable.
                              (Or)

18·   State and prove First mean value theorem.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

IV – SEMESTER END EXAMINATIONS

Class   : II B.SC (MPC,MPCS,MSCS,MECS,MCCS)   Max Marks : 75

Subject   : MATHEMATICS   Pass Mark : 30

Title of Paper : LINEAR ALGEBRA   Duration : 3 Hrs

Paper Code : R20MAT402   Time   : 2 pm – 5pm

W.E.F   : 2021-22   Date   : 02.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X5=25M

1. Express vector $\alpha = (1,-2,5)$ as a linear combination of vectors
$$\alpha_1 = (1,1,1), \alpha_2 = (1,2,3), \alpha_3 = (2,-1,1)$$

2. If W_1 and W_2 are two subspaces of a vector space V(F) then prove that $W_1 \cap W_2$ is also a subspace of V(F).

3. Find a Basis for the subspace spanned by the vectors $(1,2,0), (-1,0,1), (0,2,1)$ in $V_3(R)$.

4. Show that the function T: $V_2(R) \to V_2(R)$ is defined by T(x,y)=(0,y) is a linear Transformation.

5. Let U(F) and V(F) be two vector spaces. Let T: $U(F) \to V(F)$ be a linear Transformation. Then prove that range set R(T) is a subspace of V(F).

6. Find the rank of $A = \begin{bmatrix} 2 & -1 & 3 & 4 \\ 0 & 3 & 4 & 1 \\ 2 & 3 & 7 & 5 \\ 2 & 5 & 11 & 6 \end{bmatrix}$.

7. State and prove Parallelogram law in an inner product space V(F)

8. Prove that every orthonormal set of nonzero vectors in an inner product space V(F) is linearly independent.

SECTION-B

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

9. Show that a necessary and sufficient condition for a non-empty subset W of a vector space V(F) to be a subspace of v is $a, b \in F$ and $\alpha, \beta \in W \Rightarrow a\alpha + b\beta \in W$.

(OR)

10. If S and T are two subsets of a vector space V(F) then show that

(i) $S \subseteq T \Rightarrow L(S) \subseteq L(T)$ (ii) $L(S \cup T) = L(S) + L(T)$

11. Prove that every linearly independent subset of a finite dimensional vector space V(F) i either a basis of V or can be extended to form a basis of V.

(OR)

12. Let W is a subspace of finite dimensional vector space V(F) then prove that
$$dim\left(\frac{V}{W}\right) = \dim V - \dim W.$$

13. Let U(F) and V(F) be two vector spaces and T: U→V be a linear transformation. Let U be finite dimensional then prove that rank(T) + nullity(T) = dim U.

[P.T.O]

(OR)

14. Verify rank and nullity theorem for the linear transformation T: $V_2(R) \to V_3(R)$ defined by
    T(a,b,c) =(a+b,a-b,b).

15. Find the eigen values and eigen vectors of $A = \begin{bmatrix} 6 & -2 & 2 \\ -2 & 3 & -1 \\ 2 & -1 & 3 \end{bmatrix}$.

(OR)

16. State and prove Cayley-Hamilton theorem.
17. State and prove Cauchy-Schwartz inequality.

(OR)

18. Using Gram-Schmidt orthogonalization process, construct an orthonormal basis for a
    inner product space R^3 from the basis B = {(1,2,0), (3,1,-1), (-2,1,4)}.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
I SEMESTER END EXAMINATIONS

Class	: II BSC (MSCS & DS)	Max Marks	: 75
Subject	: STATISTICS	Pass Mark	: 30
Title of Paper	: Sampling techniques& design of experiments	Duration	: 3 Hrs
Paper Code	: R20STAT401/R20DSSTAT401	Paper Time	: 2pm – 5pm
W.E.F	: 2021-2022	Date	: 03.05.2024

SECTION – A

I. Answer any FIVE Of the following questions.   **5X5=25M**

1. Explain merits of simple random sampling.

2. Explain advantages of stratified random sampling.

3. Explain systematic sampling.

4. Define ANOVA and explain its assumptions.

5. Explain experimental unit and experimental error

6. Explain merits and demerits of LSD.

7. Define the factorial experiments.

8. Explain the main effects and interaction effects of factorial experiment.

SECTION –B

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

9. (a) Prove that in SRSWOR, the sample mean square is an unbiased estimator of the

population mean square.

(Or)

(b)   Explain the comparison between SRSWR and SRSWOR.

10. (a) Prove that $V(\bar{y}_{st}) = \frac{N-n}{nN} \sum p_i s_i^2$..

(Or)

(b)   With usual notation prove that $V_{opt} < V_{prop} < V_{ran}$

11. (a) Explain ANOVA one-way classification.

(Or)

(b) Three fertilizer treatments A,B,C each applied to seven plots of strawberry plants, resulted in the following weights of crops

A	24	18	18	29	22	17	15
B	46	39	37	50	44	45	30
C	32	30	26	41	36	28	27

Perform the analysis of variance to test the hypothesis of no difference in the treatment

effects. Use a 0.01 level of significance.

(P.T.O)

12. (a) Describe Latin square design.

<p align="center">(Or)</p>

(b) Three varieties of a crop are tested in a RBD with 4 replications, the layout being given in the table. The plot yields are also given. Analyse the experimental yield & state your conclusions .

A 6	C 5	A 8	B 9
B 8	A 4	B 6	C 9
C 7	B 6	C 10	A 6

13. (a) Explain main effects and interactions of 2^n factorial design.

<p align="center">(Or)</p>

(b) Write the statistical analysis of 2^3 factorial experiments design.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (IOT)   Max Marks : 75
Subject   : Statistics   Pass Mark : 30
Title of Paper : Statistical Inference   Duration   : 3 Hrs
Paper Code   : R20IOTSTAT401   Time   : 2pm–5pm
W.E.F   : 2021-22   Date   : 03.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Explain merits and demerits of systematic sampling.

2. Define t-distribution and write their applications.

3. Distinguish between point and interval estimation.

4. Define type-I and type-II errors.

5. Explain one tailed and two tailed test.

6. Explain the large sample test procedure for single standard deviation.

7. Explain paired t-test.

8. Explain χ^2- test for goodness of fit.

SECTION-B

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

9. If population consists of a linear trend then prove that Var($\bar{y}_{st}$) $\leq$ Var($\bar{y}_{sys}$) $\leq$ Var($\bar{y}_n$)$_{ran}$.

(OR)

10. Prove that in SRSWOR, The Variance of the sample mean Var ($\bar{y}_n$) = $\dfrac{N-n}{N} \cdot \dfrac{S^2}{n}$

11. Explain criteria of a good estimator.

(OR)

12. Define F-distribution. Write its applications and properties.

13. State and prove Neymann-Pearson Lemma.

(OR)

14. Obtain the best critical region for H$_0$: $\mu = \mu_0$ against H$_1$: $\mu = \mu_1$ in Normal population.

15. Explain large sample test for two standard deviations.

(OR)

16. Random samples of 400 men and 600 women were asked whether they would like to have a flyover near their residence. 200 men and 325 were in favour of the proposal. Test the hypothesis that proportions of men and women in favour of the proposal, are same against that they are not, at 5% level.

17. Explain χ^2- test for independence of attributes.

(OR)

18. Define F-statistic. Explain F-test for equality of variances.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Voc (WT, IT)	Max Marks	: 75
Subject	: Mathematics	Pass Mark	: 30
Title of Paper	: Numerical And Statistical Methods	Duration	: 3 Hrs
Paper Code	: R20WSMAT401/WSMAT401/ITMAT401	Time	: 2pm - 5pm
W.E.F	: 2021-22	Date	: 03.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Find the real root of the equation $x^2-5x+2=0$ by Newton-Raphson's method.

2. Find the root of $x^3-x-1=0$ by iteration method, given that root lies near 1.

3. Solve the equations $2x-y+4z=12$; $8x-3y+2z=23$; $4x+11y-z=33$ by Gauss-Elimination method.

4. Solve the following equations by Gauss-Jordan method $10x-y+z=12$; $x-10y+z=12$; $x+y-10z=12$ correct to 3 decimals.

5. By Lagrange's Interpolation formula, find the value of y at x=5, given that

X	1	3	4	8	10
Y	8	15	19	32	40

6. Evaluate $\int_0^1 \frac{1}{1+x} dx$ by Trapezoidal rule with h=0.25.

7. Find the probability of draw an Ace or a Spade from a pack of 52 cards.

8. A speaks truth in 75% of the cases and B in 80% cases. What is the probability that their statements about an incident do not match.

SECTION-B

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

9. Find the root of the equation $x^2-x-2=0$ in the range $1< x< 3$ by using False-Position method.

(OR)

10. Find a real root of the equation $x^3-3x-5=0$ by Newton-Raphson method.

11. Solve the equations $3x+2y+4z=7$; $2x+y+z=7$; $x+3y+5z=2$ by Factorization method.

(OR)

12. Find the solution of the system by Gauss-Seidel method: $83x+11y-4z=95$; $7x+52y+13z=104$; $3x+8y+29z=71$.

13. Using following table

X:	1.0	1.1	1.2	1.3	1.4	1.5	1.6
Y:	7.989	8.403	8.781	9.129	9.451	9.750	10.031

Find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at x= 1.1

[P.T.O]

(OR)

14. Find the values of $\int_0^1 \frac{1}{1+x^2}dx$ by Simpson's 1/3 and 3/8 rule and hence obtain the approximate value of $\prod$ in each case.

15. Calculate mean and median to the following data.

C.I	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
F	8	14	17	22	23	19	18	11

(OR)

16. Calculate skewness of the following data.

C.I	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	10	15	18	24	23	19	12	9

17. State and prove Addition theorem on probability.

(OR)

18. State and prove Bayes theorem.

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Fit a Straight line Y = a+bx by method of least squares.

X	0	1	2	3
Y	1	.5	8	11

2. Using the following table of values of x and y obtain $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at x=1.

X	1	2	3	4	5	6
Y	1	8	27	64	125	216

3. Evaluate $I = \int_0^1 \frac{dx}{1+x}$ correct to three decimal places by Trapezoidal rule with h= 0.5.

4. Evaluate $\int_0^4 e^x dx$ by using Boole's rule.

5. Solve the equations $x + y + z = 3$, $x + 2y + 3z = 4$, $x + 4y + 9z = 6$ by matrix inversion method.

6. Solve the equations $2x - y + 4z = 12$, $8x - 3y + 2z = 23$, $4x + 11y - z = 33$ by Gauss elimination method.

7. Solve the differential equation $\frac{dy}{dx} = x + y$ with y (0) =1 , x∈ [0,1] by Taylor's series expansion.

8. Solve $\frac{dy}{dx} = \frac{y-x}{y+x}$ with y (0) =1 then find y (0.1) by using Picard's method.

SECTION-B

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

9. Fit a second-degree parabola to the following data.

X	0	1	2	3	4
Y	1	1.8	1.3	2.5	6.3

(OR)

10. Fit a curve $y = ax^b$ by the method of Least curves using the following data.

X	61	26	7	2.6
Y	350	400	500	600

[P.T.O]

11. From the following table of values of x and y obtain $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at x=1.2

X	1.0	1.2	1.4	1.6	1.8	2.0	3.2
Y	2.7183	3.3201	4.0552	4.9530	6.0496	7.3891	9.0250

(OR)

12. Find the maximum value of y from the data.

X	0	1	2	3	4
Y	0	0.25	0	2.25	16

13. Find the value of the integral $\int_0^1 \frac{1}{1+x^2} dx$ by using Simpson's $1/3$ rule and Simpson's $3/8$ rule. Hence obtain the approximate value of π in each case.

(OR)

14. Evaluate $\int_4^{5.2} logx\, dx$ by using Weddle's rule.

15. Solve the equations $3x + 2y + 4z = 7$, $2x + y + z = 7$, $x + 3y + 5z = 2$ by factorization method.

(OR)

16. Solve the equations

$10x_1 + x_2 + x_3 = 12$, $2x_1 + 10x_2 + x_3 = 13$, $\qquad 2x_1 + 2x_2 + 10x_3 = 14$ by

Gauss seidel method.

17. Determine the value of y when x = 0.1 given that y (0) = 1 and $y^1 = x^2 + y$ by using modified Euler's method.

(OR)

18. Given $\frac{dy}{dx} = xy + y^2$ with y (0) = 1, find y (0.1) and y (0.2) correct to 4 decimal places by Runge-Kutta method.

C8

11. **(a)** Explain the method of three selected points for fitting of modified Exponential curve.

(Or)

(b) Fitting Gompertz curve to the following data and obtain the trend values

Time periods	1	2	3	4	5	6	7	8	9
Values	2	4	8	12	20	30	38	40	45

12. **(a)** Explain construction of index numbers.

(Or)

(b) Calculate fishers Ideal Index from the data given below and show that it satisfies the Time Reversal and Factor reversal tests.

Commodity	Base Quantity	Year Price Base	Quantity Current Year	Price Current Year
A	12	10	15	12
B	15	7	20	5
C	24	5	20	9
D	5	16	5	14

13. **(a)** Explain various rates of mortality.

(Or)

(b) Explain measures of population Growth.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
I SEMESTER END EXAMINATIONS

Class	: II BSC (MSCS & DS)	Max Marks	: 75
Subject	: STATISTICS	Pass Mark	: 30
Title of Paper	: Applied Statistics	Duration	: 3 Hrs
Paper Code	: R20STAT402/R20DSSTAT402	Paper Time	: 2pm-5pm
W.E.F	: 2021-2022	Date	: 04.05.24

SECTION – A

I. Answer any FIVE Of the following questions.   5X5=25M

1. Explain Mathematical Model in a time series.

2. Explain method of Simple averages method.

3. Define Seasonal components.

4. Explain the Yule's method.

5. Explaining the fitting of logistic curve

6. Explain Uses of index numbers.

7. Define rates and ratios.

8. Explain Abridged life table.

SECTION –B

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

9. (a) Explain Least squares method of measuring trend.

(Or)

(b) Calculate the values by method of least squares from the date given below and estimate the sale for the year 1985.

Year	1976	1977	1978	1979	1980
Sales of T.V. sales (in 000)	12	18	20	23	27

10. (a) Explain the ratio to Trend method

(Or)

(b) Calculate the seasonal index for the following data by using the ~~average~~ Simple method

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1974	72	68	80	70
1975	76	70	82	74
1976	74	66	84	80
1977	76	74	84	78
1978	78	74	86	82

(P.T.O)

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPC, MPCS , MSCS , MECS, MCCS)	Max Marks	: 50
Subject	: Mathematics	Pass Mark	: 20
Title of Paper	: Analytical Skills	Duration	: 2 Hrs
Paper Code	: CBAS401A	Time	: 2pm-4pm
W.E.F	: 2019-20	Date	: 04-05-2024

SECTION-A

I. Answer any TEN of the following Questions   **10X2=20M**

1. Find the odd man out of the series 3, 5,9,11,14,17,21.

2. Simplify 108÷36 of ¼+2/5×3(1/4).

3. Find the wrong number in the series?

    196, 169, 144, 121, 100, 80, 64.

4. A 250 meters long train crosses a pole in 15 sec. What is the speed of the train in km/hr.

5. If 15% of x=20% of y. What is X:Y?

6. A chair is bought for Rs.460/- and sold at a gain of 15%. Find the selling price?

7. Find the L.C.M of 28,35,56 and 84?

8. If x:y = 3:4. Find 4x+5y : 5x-2y?

9. Which of the following numbers are divisible by 3?

    i) 541326   ii) 5967013

10. Find the HCF of 3/16, 5/12, 7/8?

11. Rajeev's age after 15 years will be 5 times his age 5years back. What is the present age of Rajeev?

12. A man buys an article for Rs.27.50 and sells it for Rs.28.60. Find his gain %?

13. Find the simple interest on Rs.68,000 at $16\frac{2}{3}$% per annum for 9 months?

14. What will come in the place of question mark in the following series

    BF, CH, ?, HO, LT .

15. If a:b =5:9 and b:c = 4:7 find a:b:c ?

SECTION-B

II. Answer any FIVE of the following Questions   **5X6=30M**

16. Find the angle between hours hand and minute's hand of the clock when the time is 03:25?

17. Explain any 5 divisibility Rules?

18. Subject (maximum marks recorded out of100)

[P.T.O]

Students	Hindi	English	Maths	Social	Science	Sanskrit	PES
Anupama	85	95	87	87	65	35	71
Bhaskar	72	97	77	77	62	41	64
Charu	64	78	63	63	55	25	33
Deepak	65	62	81	81	70	40	50
Garima	92	82	79	79	49	30	61
Vishal	55	70	69	69	44	28	30

1. How many students have scored lowest marks in two or more subjects?

2. Who has scored the highest marks in all the subjects together?

3. What is the Deepak percentage of marks in all the subjects together?

19. What was the day of the week on 15th August, 1947?

20. In a bag, there are coins of 25p, 10p and 5p in the ratio of 1:2:3, if there are Rs. 30 in all, how may 5p coins are there?

21. Two friends P & Q started a business investing in the ratio of 5:6, R' joined them after 6 months investing an amount equal to that of Q's. At the end of the year, 20% profit was earned which was equal to Rs. 98,000. What was the amount invested by 'R'?

22. A book was sold for Rs. 27.50 with a profit of 10%. If it were sold for Rs.25.75, then what would have been the percentage of profit or Loss?

23. The average weight of 21 boys was recorded as 64 kg. If he weight of the teacher was added the average weight increased by one kg. What was the teacher's weight?

24. A,B,C started a business by investing Rs.1,20,000, Rs.1,35,000 and Rs.1,50,000/ respectively. Find the share of each, out of an annual profit of Rs.56,700/-

25. Rs.800 becomes Rs.956 in 3 years at a certain rate of simple interest. If the rate of interest is increase by 4%. What amount will Rs.800 become in 3 years?

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (MPC, MPCS, MECS, MSCS, MCCS)   Max Marks : 75

Subject   : Mathematics   Pass Mark   : 30

Title of Paper : Real Analysis   Duration   : 3 Hrs

Paper Code   : CBMAT401A   Time   : 2pm – 5pm

W.E.F   : 2019-20   Date   : 06.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Show that every convergent sequence is bounded and give an example to show the converse is not true.

2. Prove that the sequence $\{S_n\}$ where $S_n = \frac{1}{n+1} + \frac{1}{n+2} + \cdots + \frac{1}{n+n}$ is convergent.

3. Test for convergence $\sum \frac{x^n}{n^{3/2}}$ $(x > 0)$

4. Test for convergence $\sum_{n=1}^{\infty}(\sqrt{n^3 + 1} - \sqrt{n^3})$

5. Prove that $\lim_{x \to 0} \frac{3x+|x|}{7x-5|x|}$ does not exist.

6. Examine for continuity the function f defined by $f(x) = |x| + |x-1|$ at x = 0, 1

7. Show that $f(x) = x^2 \cos\left(\frac{1}{x}\right)$; $x \neq 0$; $f(x) = 0$, $x = 0$ is derivable everywhere but the derivative is not continuous at 0.

8. If $f: [a, b] \to R$ is continuous on [a, b] then f is integrable on [a, b].

SECTION-B

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

9. State and prove Cauchy's first theorem on limits.

(OR)

10. State and prove Cauchy's general principle of convergence.

11. State and prove limit comparison test.

(OR)

12. State and prove D. Alembert's ratio test.

13. If $f: [a, b] \to R$ is continuous on [a, b] then f is bounded on [a, b].

(OR)

14. If a function f is continuous on [a, b], then it is uniformly continuous on [a, b]

15. State and prove Lagrange's Mean-value theorem.

(OR)

16. Find C of Cauchy's mean-value theorem for $f(x) = \sqrt{x}$ and $g(x) = \frac{1}{\sqrt{x}}$ in [a, b]; Where $0 < a < b$

17. If $f \in R[a, b]$ and $\emptyset$ is a primitive of f, then $\int_a^b f(x)dx = \emptyset(b) - \emptyset(a)$

(OR)

18. Prove that $\frac{1}{\pi} \leq \int_0^1 \frac{\sin \pi x}{1+x^2}dx \leq \frac{2}{\pi}$

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (MSCS, DS)   Max Marks : 75
Subject   : Statistics   Pass Mark : 30
Title of Paper : Statistical Inference   Duration : 3 Hrs
Paper Code   : CBSTT401A/DSSI401   Time   : 2 Pm – 5 Pm
W.E.F   : 2019-20   Date   : 07.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Explain the concept of Consistency.

2. Explain the method of moments in estimation.

3. Explain one tailed and tow tailed tests.

4. Explain Null & Alternative hypothesis.

5. Explain the procedure for testing of hypothesis.

6. Explain F – test.

7. Explain Two – Sample Run test.

8. What are the advantages of Non – parametric tests.

SECTION-B

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

9. Explain the criteria of a good estimator.

(OR)

10. If a X is a poisson variate with parameter λ. Find the maximum likelihood estimate of λ on the basis of a size n.

11. State and prove Neyman – Pearson's Lemma.

(OR)

12. Given the frequency function

$$f(x, \theta) = \begin{cases} \dfrac{1}{\theta}, & 0 \leq x \leq \theta \\ o, & \text{otherwise} \end{cases}$$

and that you are testing the null hypothesis $H_0 : \theta = 1$ against $H_1 : \theta = 2$, by means of a single observed value of x. What would be the sizes of type I and type II errors, if you choose the interval $0.5 \leq x$. Also obtain the power function of the test.

13. Explain the test of significance for difference of means in large sample tests.

(OR)

14. In a sample of 1000 people in Rajasthan, 540 are rice eaters and rest are wheat eaters. Can we assume that both rice and wheat are equally popular in this state at 5% level of significance?

15. A random sample weights of 10 boys is as follows.
63, 63, 66, 67, 68, 69, 70, 70, 71, 71. On the basis of the sample, can you say that the average height of the boys in the population is 66kgs.?

(OR)

16. Explain (Chi – square) χ^2 – test for independence of attributes.

17. Explain Two Sample Sign Test.

(OR)

18. Explain Two Sample Median Test.

IV SEMESTER END EXAMINATIONS

Class	:II BCA	Max Marks	:75
Subject	:Mathematics	Pass Mark	:30
Title of paper	:Application of Derivatives, Algebra	Duration	:3Hrs
	Differential Equations	Time	:2pm-5pm
Paper code	:CBCMAT401A	Date	:06 05 24
W.E.F	:2016-2017		

SECTION-A

Answer any FIVE of the following questions   5X5=25M

1. Find the derivative of Cosax using first Principle.

2. Find the derivative of $(ax+b)^n (cx+d)^n$.

3. Evaluate $\int sec^2 x \ cosec^2 x \ dx$.

4. Evaluate $\int_0^{\pi/2} \frac{asinx+bcosx}{sinx+cosx} dx$.

5. If $f=\log (x^2 + y^2)$ then show that $f_{xx} + f_{yy}=0$.

6. Solve the differential equation $(x^2 + y^2)dx = 2xydy$.

7. Find the equation of the tangent and normal to the curve $y^4=ax^3$ at the point (a,a).

8. Find the Probability that a leap year contain 1) 52 Sundays 2) 53 Sundays.

SECTION-B

Answer All of the following questions   5X10=50M

9.   If $Siny = x. Sin(a+y)$ then show that $\frac{dy}{dx} = \frac{Sin^2 (a+y)}{Sina}$.

                    (OR)

10.   If $x= a(cost +t \ sint)$; $y =a(sint-tcost)$ then find $\frac{dy}{dx}$.

11.   Evaluate $\int e^x cosx \ dx$.

                    (OR)

12.   Evaluate $\int_0^{\pi/2} \frac{1}{4+5cosx} dx$.

13.   If $u= tan^{-1} \left(\frac{x^3+y^3}{x+y}\right)$ then show that $x. u_x + yu_y=sin2u$.

                    (OR)

14.   Solve $\frac{dy}{dx} + y \ secx = tanx$.

15.   If the tangent at a point on the curve $x^{2/3} + y^{2/3} = a^{2/3}$ intersects the candidate ones at A & B then show that the length of AB is Constant.

                    (OR)

16.   Show that the Condition for the Orthogonality of the curves $ax^2+by^2 =1$ & $a_1x^2+b_1y^2 =1$ is $\frac{1}{a} - \frac{1}{b} = \frac{1}{a_1} - \frac{1}{b_1}$.

17.   State and prove Addition theorem on Probability.

                    (OR)

18.   State and prove Multiplication theorem on Probability.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MECS)	Max Marks	: 60
Subject	: Electronics	Pass Mark	: 24
Title of Paper	: Microprocessor Systems	Duration	: 3 Hrs
Paper Code	: R20ELE401A	Time	: 2pm – 5pm
W.E.F	: 2023-24	Date	: 03.05.2024

SECTION-A

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

1. Discuss the CPU and ALU unit's functions of 8085

2. Explain briefly about PSW in 8085 MP.

3. Explain the instruction formats in 8086 Microprocessor.

4. Give a brief note on flag register.

5. Write an assembly language program for addition of two -8 bit numbers

6. Write an assembly language program for Multiplication of two-8 bit numbers

7. Draw and explain the PIN configuration of DMA 8237

8. Explain the features of ARM Processor.

SECTION-B

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

9. Draw the architecture of 8085 micro Processor? Explain the function of each block.

(OR)

10. Explain briefly about interrupts in 8085 microprocessors

11. Draw the architecture of 8086 micro Processor? Explain the function of each block

(OR)

12. Explain the Interrupts of 8086 Microprocessor system.

13. What is addressing mode? Explain different types of Addressing modes in 8085 microprocessors with one example.

(OR)

14. Write an assembly language program for smallest number in a given array.

15. Draw and explain 8255 PPI? Explain different modes of 8255 PPI

(OR)

16. Draw the architecture of Intel 8279 Programmable keyboard /display controller.

17. Draw and explain the Architecture of ARM Processor.

(OR)

18. Discuss in brief the instruction set of ARM processor.

SECTION-A

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

1. Explain equipotential surfaces.

2. Write the differences between Polar and Non-Polar dielectrics.

3. State and explain Faraday's Law and Lenz's Law.

4. Write a short note on Q- factor.

5. Explain the laws of Boolean algebra

6. Convert $(110111)_2$ to decimal ·

7. A solenoid of length 20 cm and radius 2 cm is closely wound with 200 turns. Calculate the magnetic field intensity at either end of solenoid when the current in the windings is 5 amp.

8. When the emitter current of a transistor is changed by 1 mA, its collector current changes by 0.995 mA. Calculate its common base short circuit gain and common emitter short circuit current gain

SECTION-B

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

9. State and prove Gauss Law in electrostatics.

(OR)

10. Define D, P and E and deduce relation between them. Hence derive the relationship between dielectric constant and susceptibility.

11. State and explain Biot-Savart's Law. Derive an expression for magnetic induction at a point due to a long solenoid.

(OR)

12. What is self induction? Define coefficient of self induction and obtain an expression for self inductance of a long solenoid

13. Give the theory of LCR parallel AC resonant circuit and obtain an expression for the resonant frequency.

(OR)

14. State and prove pointing theorem.

15. Define alpha, Beta and Gamma. Derive the expressions for the relations between them.

(OR)

16. What is a transistor? Explain the input and output characteristics of a transistor in CE mode.

17. Explain about AND, OR, NOT, NAND, NOR and XOR logic gates with their truth tables.

(OR)

18. Discuss the working of Half adder & Full adder with their diagrams and truth Tables.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (MECS)   Max Marks : 60
Subject   : Electronics   Pass Mark : 24
Title of Paper : MicroController And Interfacing   Duration : 3 Hrs
Paper Code   : R20ELE402A   Time   : 2pm – 5pm
W.E.F   : 2023-24   Date   : 04-05-2024

SECTION-A

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

1. Difference between Microprocessor and Microcontroller.

2. Write a short note on evaluation of microcontrollers.

3. Write a short note on program counter.

4. Discuss in detail about PSW register in 8051 MC.

5. Explain in detail about Rotate instructions in 8051 MC

6. Explain the function of the following Instructions. (a) DJNZ   (b) CJNE

7. Write an assembly language program for division of Two -8 bit numbers

8. Explain the pin configuration of 8255 PPI

SECTION-B

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

9. Draw the architecture of 8051 and explain each block

(OR)

10. Explain briefly about Development tools in 8051 micro controllers

11. Draw the pin configuration of 8051 and explain each pin

(OR)

12. Explain briefly about data types and directives of 8051 MC

13. Explain briefly about Instruction set of 8051 MC and explain with one example.

(OR)

14. Explain the classification of instructions and formats in 8051 MC.

15. Explain briefly about time delay generation and calculation of 8051 MC

(OR)

16. Write an assembly language program for smallest number in a given array.

17. Explain functional block diagram of 8255 PPI? Explain how 8255 is interfaced to 8051 with suitable example.

(OR)

18. Discuss in detail interfacing of 7-segment display with 8051 MC.

Room No: _____   Regd No _111_

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc(MPCS)	Max Marks	: 60
Subject	: Physics	Pass Mark	: 24
Title of Paper	: Modern Physics	Duration	: 3Hrs
Paper Code	: R20PHY402A	Time	: 2pm – 5pm
W.E.F	: 2022-23	Date	: 04.05.24

SECTION-A

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

1. Write the applications of Raman Effect.
2. Write about properties of matter waves?
3. Explain Heisenberg's uncertainty principle for energy and time.
4. Explain magic numbers?
5. Write the applications of Superconductors.
6. A Sample is excited with a light of wavelength 4358 A⁰. Raman lines are observed at 4447 A⁰. Calculate the Raman shift in cm^{-1}
7. Calculate de-Broglie wavelength associate with a proton moving with a velocity equal to 1/20th of the velocity of light (mass of the proton is 1.67 x 10⁻²⁷ Kg).
8. What is the mass number of a nucleus whose radius is 2.71 Fermi (Ro=1.3 Fermi)

SECTION-B

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

9. Describe stern and Gerlach experiment. What is its importance?

(OR)

10. What is Raman Effect? Describe the experimental arrangement to study the Raman Effect.

11. Explain Devisson and Germer experiment for detection of matter waves.

(OR)

12. State Heisenberg's uncertainty principle. Explain the construction and working of Gamma ray microscope.

13. Derive Schrodinger's time-independent wave equation?

(OR)

14. Apply Schrodinger's wave equation to particle in one dimensional infinite box.

15. Explain Liquid drop model of the nucleus. What are the drawbacks in this model.

(OR)

16. Describe the construction and working of G M counter?

17. Explain Classification of Nano materials in detailed with examples(0D, 1D, 2D).

(OR)

18. Explain Meissner effect. Write about on Type I and Type II superconductors.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
I SEMESTER END EXAMINATIONS

Class	: II BSC (IOT)	Max Marks	: 75
Subject	: Electronics	Pass Mark	: 30
Title of Paper	: Arm microcontroller & embedded system	Duration	: 3 Hrs
Paper Code	: R20IOTELE402	Paper Time	: 2pm – 5pm
W.E.F	: 2021-2022	Date	: 02.05.24

SECTION – A

I. Answer any ALL Of the following questions.   **5X10=50M**

1.   Draw and explain the architecture of LPC2148

(or)

2.   Explain memory originations of LPC2148.

3.   Explain GPIO concept in LPC2148

(or)

4.   Explain memory mapping concept in LPC2148

5.   What is the serial communication? Explain RS 232 in LPC2148.

(or)

6.   What is the TIMER & COUNTER explain them?

7.   Explain LPC 2148 interfacing with SD Memory Card.

(or)

8.   Inter facing with RTC using LPC2148

9.   Interfacing DAC with LPC2148

(or)

10.   Interfacing LED with LPC2148.

SECTION –B

II. Answer any FIVE the following Questions   **5X5=25M**

11.   Explain ROM and RAM in LPC2148

12.   Explain ISP Commands

13.   What is the Interrupt in LPC2148?

14.   Explain the Applications of ARAM Processor.

15.   Explain Phased Lock Loop

16.   What is the serial communication and applications?

17.   What is the RLC? Explain with briefly.

18.   Write a short note on DAC.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.Sc (IOT)   Max Marks : 75
Subject : Electronics   Pass Mark : 30
Title of Paper : Introduction to MicroProcessor And Micro Controller   Duration : 3 Hrs
Paper Code : R20IOTELE401   Time : 2 Pm – 5 Pm
W.E.F : 2021-22   Date : 01.05.2024

SECTION-A

I. Answer the following Questions   **5X10=50M**

1. With the help of neat diagram explain the architecture of 8085 microprocessor in detail

(OR)

2. What are the addressing modes of 8085 microprocessor?

3. Draw the architecture of 8051 microcontroller? Explain the function of each block?

(OR)

4. Explain the memory organization of 8051 with circuit diagram.

5. Explain data transfer, arithmetic, logical , branch and bit level instructions.

(OR)

6. Explain the concept stack, subroutine

7. Explain different modes of timer for 8051 microprocessor.

(OR)

8. Explain different modes for serial communication microcontroller.

9. Draw and Explain interfacing diagram of ADC with 8051 microcontroller.

(OR)

10. Draw and Explain Interfacing diagram of stepper motor with 8051 microcontroller.

SECTION-B

II. Answer any FIVE of the following Questions   **5X5=25M**

11. Difference between Van Neumann and Harvard Architecture

12. Write a program on subtraction of two 8 bit numbers

13. What are the applications of 8051 microcontroller?

14. Difference between Microprocessor and Microcontroller.

15. Explain concept of IDE.

16. What are the control statements in 8051 microcontroller?

17. Write a program on DC motor using 8051.

18. Explain about the seven segment display device.

SECTION-A

I. Answer the following Questions   5X10=50M

1. Draw the architecture of 8085 micro processor ? Explain the function of each block.

(OR)

2. Explain briefly about interrupts in 8085 microprocessor.

3. Draw the architecture of 8086 micro processor ? Explain the function of each block.

(OR)

4. Explain the interrupts of 8086 Microprocessor system.

5. What is addressing mode? Explain different types of Addressing modes in 8085 microprocessor with one example.

(OR)

6. Write an assembly language program for Addition & subtraction of two 16-bit numbers.

7. Draw and explain the Serial Communication interface of USART Intel 8251.

(OR)

8. Draw the architecture of Intel 8279 programmable keyboard / display controller.

9. Draw and Explain the Architecture of ARM Processor.

(OR)

10. Discuss in brief the instruction set of ARM Processor.

SECTION-B

II. Answer any FIVE of the following Questions   5X5=25M

11. Discuss the register organization of 8085.

12. Write a short note on program counter.

13. Explain the instruction formats in 8086 microprocessor .

14. Write the features of 8086 Microprocessor .

15. Write an assembly language program for Addition of two -8 bit numbers.

16. Write an assembly language program for BCD to ASCII conversion.

17. Draw and explain the PIN configuration of DMA 8237.

18. Explain ARM based MPU, ARM 16 bit processor.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (MPC & MPCS)   Max Marks : 75
Subject   : Physics   Pass Mark : 30
Title of Paper : Electricity , Magnetism And Electronics   Duration : 3 Hrs
Paper Code   : R20PHY401   Time : 2pm-5pm
W.E.F   : 2021-22   Date : 03.05.2024

SECTION-A

I. Answer the following Questions   **5X10=50M**

1. a) State and explain Gauss's law. Derive an expression for the potential due to Uniformly charged spherical shell?

[OR]

b) Define Dielectrics and also explain Polar and Non-Polar Dielectrics?

2. a) Explain Hall effect and deduce an expression for Hall coefficient?

[OR]

b) Define self induction? Obtain an expression for the self inductance of a long solenoid?

3. a) Discuss LCR parallel resonant circuit with necessary theory and obtain an expression for Q- Value?

[OR]

b) Write Maxwell's equation in differential and integral form.Derive Maxwell's wave equation?

4. a) Explain briefly the three possible transistors CB, CE & CC transistor connections?

[OR]

b) Describe with suitable diagram for the construction and working of Zener diode?

5. a) State and prove De-morgans theorem?

[OR]

b) Discuss the working of a half adder and a full adder with their circuits with truth tables?

SECTION-B

II. Answer any THREE of the following Questions   **3X5=15M**

6. Derive an expression for the potential due to a point charge?
7. State and explain Biot-Savart's Law?
8. Explain Principal of Transformer?
9. State and explain pointing theorem?
10. What is P-N Junction diode?
11. Draw the Full and Half Adder circutes?

SECTION-C

II. Answer any TWO of the following Questions   **2X5=10M**

12. A Point charge is placed at a point A. The charge is 1.5×10^{-8}C. What is the radius of euipotential Surface having a potential of 30V?
13. A Long solenoid has 20 turns per cm. Calculate the magnetic induction at the interior point O the axis for a current of 20 mA?
14. Calculate the resonant frequency of LCR series circuit. Given that L=100 mH,C=0.01µF And R= 100 Ohm?
15. In a transistor, base current and emitter current are 0.08mA and 9.6mA respectively. Calculate collector curren,α and β?

SECTION-A

I. Answer the following Questions   5X10=50M

1. a) Describe Stern-Gerlach experiment with neat diagram and necessary theory.

[OR]

   b) Write about Quantum theory of Raman effect and its applications.

2. a) Describe Davisson-Germer experiment for evidence of diffraction of electron.

[OR]

   b) Explain Heisenberg's uncertainty principle for position and momentum and extend it for energy and time.

3. a) Write the basic postulates of Quantum mechanics and derive Schrodinger time independent wave equation.

[OR]

   b) Deduce Schrodinger wave equation for a particle in one dimensional infinite box.

4. a) Explain the liquid drop model for nucleus. What are the drawbacks in this model.

[OR]

   b) Explain construction and working of GM counter with neat diagram.

5. a) Explain the properties of Nano materials in detail.

[OR]

   b) Write about type-I and type-II superconductors and write their applications.

SECTION-B

II. Answer any THREE of the following Questions   3X5=15M

6. Write a short note on coupling schemes.

7. What are the applications of Raman effect.

8. What are the properties of matter waves.

9. Explain Heisenberg uncertainty principle for position and momentum.

10. Explain about magic numbers.

11. Explain briefly about BCS theory.

SECTION-C

III. Answer any TWO of the following Questions   2X5=10M

12. Determine the normal Zeeman shift of the cadmium red line of $6438 A^0$. When the atoms are placed in a magnetic field of 0.009T.

13. Compute the debroglie wave length of a proton whose kinetic energy is equal to the rest energy of an electron. Mass of a photon is 1836 times that of the electron.

14. If the uncertainty in the momentum of an electron is 1.65×10^{-24} kg m/s, calculate the uncertainty in the position.

15. A nucleus of mass number 125 has radius 6 Fermi. Find the radius of a nucleus having mass number 64.

Room No: _____   Regd No: ___117___

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MECS)	Max Marks	: 75
Subject	: Electronics	Pass Mark	: 30
Title of Paper	: MicroController And Interfacing	Duration	: 3 Hrs
Paper Code	: R20ELE402	Time	: 2pm-5pm
W.E.F	: 2021-22	Date	: 04-05-2024

SECTION-A

I. Answer the following Questions   5X10=50M

1. Draw the architecture of 8051 and explain each block.

(OR)

2. Explain briefly about development tools in 8051 micro controller

3. Draw the pin configuration of 8051 and explain each pin.

(OR)

4. Explain briefly about interrupts in 8051 MC.

5. What are the addressing modes of 8051 MC and explain each with one example.

(OR)

6. Explain the classification of instruction and formats in 8051 MC

7. Explain briefly about time delay generation and calculation of 8051 MC.

(OR)

8. Write an assembly language program for largest number in an given array.

9. Explain how it is interfacing of stepper motor with microcontroller and explain its operation and write a programe for anti-clock wise direction.

(OR)

10. Discuss in detail interfacing of DAC (0804) with 8051 MC.

SECTION-B

II. Answer any FIVE of the following Questions   5X5=25M

11. Difference between Microprocessor and Microconroller.

12. Write a short note on evolution of Microconrollers

13. Explain internal RAM allocation of 8051 MC.

14. Explain various types Register banks in 8051 MC.

15. Mention any two examples of Direct addressing mode.

16. Explain briefly about CALL instructions in 8051 MC.

17. Write an assembly language program for addition of two -8 bit numbers.

18. Explain the pin configuration of 8255 PPI.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class	: II B.Sc (MPC, MPCS)	Max Marks : 75
Subject	: Physics	Pass Mark : 30
Title of Paper	: Thermodynamics And Radiation Physics	Duration : 3 Hrs
Paper Code	: CBPHY401A	Time : 2pm–5pm
W.E.F	: 2019-20	Date : 07.05.2024

SECTION-A

I. Answer the following Questions   5X10=50M

1. Derive an expression for Maxwell 's law of distribution of moleculer speeds in a gas.

(OR)

2. Derive an expression for the coefficient of thermal conductivity on the basis of kinetic theory of gases.

3. Describe the working of carnot's engine and derive an expression for it's effieciency.

(OR)

4. Define entropy. What is the physical concept of entropy ? Write a note on entropy change in reversible and irreversible processes.

5. Explain Thermodynamic potentials. Derive maxwell's Thermodynamic equations from Thermodynamic potentials?

(OR)

6. Derive $C_p/C_v = \gamma$ Equation
   Derive $C_p - C_v = R$ Equation

7. What is joule Kelvin effect? Describe porous plug experiment and indicate the results.

(OR)

8. Explain adiabatic demagnetization method for producing very low temperatures with necessary theory.

9. Derive an expression for planck's radiation law. Deduce wien's displace ment law from it.

(OR)

10. What is pyrometer? Explain the construction and working of disappearing filament optical pyrometer.

SECTION-B

II. Answer any THREE of the following Questions   3X5=15M

11. Explain the transport phenomena on the basis of kinetic theory of gases.

12. State and explain second law of thermodynamics.

13. Derive the the clausius –clayperon's equation.

14. Explain the principle and working of a refrigerator.

15. Define solar constant. How is it determined.

[P.T.O]

SECTION-C

III. Answer any TWO of the following Questions   **2X5=10M**

16. The average speed of nitrogen molecule at N.T.P is 450 m/s. if density is 1.25kg/m³ Coefficient of viscosity is 1.66x10⁻⁵mks unit calculate the mean free path of nitrogen molecules.

17. Calculate the efficiency of a reversible heat engine working between327º c and 127º c

18. A carnot's engine operates between hot reservoir at 350 k and cold reservoir at 275 k it absorbs 500J of heat at the hot reservoir. Estimate the work delivered by the engine.

19. Determine the temperature of the sun with the help of wien's law given b=2.92x10³m.k. maximum wavelength 4900Aº.

Room No: _____   Regd No: 120

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (MCCS , CBZ)   Max Marks : 60
Subject   : Chemistry   Pass Mark : 24
Title of Paper : Inorganic And Physical Chemistry   Duration : 3 Hrs
Paper Code : R20CHE402A   Time   : 2pm - 5pm
W.E.F   : 2023-24   Date   : 09-05-2024

SECTION-A

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

1. What are inner and outer orbital complexes.

2. Write the postulates of valance bond theory.

3. Define labile and inert complexes with examples.

4. Describe job's method for determination of composition of complex.

5. Write a note on freezing mixtures.

6. Derive Nernst equation.

7. What are strong and week electrolytes and give any two examples for each.

8. Derive rate expression for zero order reaction.

SECTION-B

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

9. Explain the splitting of d- orbitals in tetrahedral complexes.

(OR)

10. Explain the geometrical Isomerism in coordination compounds.

11. Define trans effect and explain the theories of trans effect.

(OR)

12. Write the biological functions of Hemoglobin and Myoglobin.

13. Explain phase diagram of Pb – Ag system.

(OR)

14. Explain phase diagram for water system.

15. Give the elementary treatment of Debye Huckel Onsagar's Equation for strong electrolytes?

(OR)

16. Define transport number? Write experimental methods for the determination of transport number by Hittorf's method.

17. Derive the rate expression for first order reaction?

(OR)

18. Derive the rate expression for second order reaction involving same reactants?

Room No: _____

Regd No __121__

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.Sc(MCCS,CBZ)
Subject : Chemistry
Title of Paper : Inorganic, Organic And Physical Chemistry
Paper Code : R20CHE401A
W.E.F : 2022-23

Max Marks : 60
Pass Mark : 24
Duration : 3Hrs
Time : 2 pm - 5pm
Date : 08.04.24

SECTION-A

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

1. Describe the 18 electron rule of mononuclear metal carbonyls and with suitable examples.

2. Explain about Mutarotation?

3. Define Iso electric point and zwitter ion.

4. Write any two general reactions of aminoacids due to amino group.

5. Discuss the basic nature of amines.

6. Describe Hofmann bromamide reaction for the preparation of primary amines.

7. Write a note on Grothus-Draper's law.

8. Derive $C_p - C_v = R$

SECTION-B

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

9. What are Organometallic compounds? Discuss their classification based on the type of Bonds with example?

(OR)

10. Explain molecular orbital diagram of CO?

11. How do you prepare carbohydrates from
   (i) Kiliani-Fischer synthesis (ii) Ruff's degradation

(OR)

12. What are Epimers amnd anomers? How do you convert aldohexose to ketohexose?

13. What are amino acids? Write any three general methods of preparation of amino acids

(OR)

14. Explain Halogenation, nitration and sulphonation of Furan and thiophene.

15. Describe the following reactions in Nitro Alkane
   (i) Nef reaction   (ii) Reaction with HONO

(OR)

16. Write a note on (i) Hinsberg Separation of amines
                       (ii) Mannich reaction

17. What is quantum yield? Explain the mechanism for photochemical combination of Hydrogen and Bromine.

(OR)

18. Derive an expression to calculate the efficiency of Carnot Cycle.

Regd No:_____   Room No: 122

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV SEMESTER END EXAMINATIONS

Class   : II B.Sc (MPC, MCCS, CBZ)   Max Marks   : 75
Subject   : Chemistry   Pass Mark   : 30
Title of Paper: Inorganic & Physical Chemistry   Duration   : 3 Hrs
Paper Code   : R20CHE402   Paper Time : 2pm –5pm
W.E.F   : 2021-22   Date   : 09.05.24

SECTION – A

I. Answer any FIVE Of the following questions.   **5X5=25M**

1. Describe the structural isomerism in coordination compounds.
2. Write the postulates of valance bond theory.
3. Define labile and Inert complexes with examples.
4. Describe Job's method for determination of composition of complex.
5. Write a note on freezing mixtures.
6. Derive Nernest equation.
7. What are strong and week electrolytes and give any two examples for each.
8. Derive rate expression for zero order reaction.

SECTION –B

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

9.   Explain crystal filed splitting in square planar and octahedral complexes.
                                    (OR)
10.   Explain the geometrical Isomerism in coordination compounds.

11.   Define trans effect and explain the theories of trans effect.
                                    (OR)
12.   Write the biological functions of Hemoglobin and Myoglobin.

13.   Explain phase diagram for NaCl water.
                                    (OR)
14.   Explain phase diagram of water system.

15.   Write a note on Kohlrausch's law and Its applications.
                                    (OR)
16.   Give the elementary treatment of Debye Huckel Onsagar's equation for strong
        electrolytes.

17.   Derive the rate expression for 2nd order reaction involving same reactions.
                                    (OR)
18.   Describe general methods for determination of order of reaction.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc(MPC,MCCS,CBZ)   Max Marks : 75
Subject   : Chemistry   Pass Mark : 30
Title of Paper : Inorganic, Organic & Physical Chemistry Duration   : 3Hrs
Paper Code : R20CHE401   Time   : 2pm–5pm
W.E.F   : 2020-21   Date   : 08.05.24

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Write a note on heptacity?

2. Explain about Matarotation?

3. Write any two general reactions of amino acids due to amino group.

4. Give Paul Knorr synthesis for the preparation of Furan and Pyrrole.

5. Describe any two methods for the preparation of Nitro Alkanes.

6. Discuss the basic nature of amines.

7. Write a note on Jablonski diagrams.

8. Write a note on Kirchhoff's equation.

SECTION-B

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

9. Discuss the general methods of preparation of mono and bi nuclear carbonyls of 3d series?

(OR)

10. Explain molecular orbital diagram of CO?

11. How do you prepare carbohydrates from Kiliani-Fisher synthesis and Ruff' degradation.

(OR)

12. Discuss the configuration and ring size of Glucose?

13. What are amino acids? Write the classification of amino acids?

(OR)

14. Write two preparation and three chemical properties of Furan.

15. Describe the following reactions in Nitro alkanes
    I) Nef reaction   II) Mannich reaction   III) Micheal addition reaction.

(OR)

16. Write a note on I) Hoffmann – Bromide reaction II) Carbyl amine reaction

17. What is quantum yield? Explain the mechanism for photochemical Combination of Hydrogen and Bromine.

(OR)

18. Derive an expression to calculate the efficiency of Carnot Cycle.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class : II B.Sc (MCCS , CBZ)   Max Marks : 75
Subject : Chemistry   Pass Mark : 30
Title of Paper : Spectroscopy And Physical Chemistry   Duration : 3 Hrs
Paper Code : CBCHE401A   Time : 2pm–5pm
W.E.F : 2019-20   Date : 09.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   **5X5=25M**

1. Define Chromophore and Auxochrome.

2. Explain effect of Conjugation on UV absorption

3. Define Chemical Shift in NMR

4. Write the characteristic IR absorption bands in alkanes.

5. What are colligative properties.

6. Define reference Electrode and give one example.

7. What are freezing mixtures?

8. Define phase rule? Explain the terms involved in it.

SECTION-B

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

9. State and Explain Beer-lambert's law and write the application of beer- lambert law for Quantitative analyses of Manganese Sulphate?

(OR)

10. What are single beam and double beam Spectrophotometers? Explain briefly.

11. Explain the normal modes of vibrations of atoms in poly atomic molecules.

(OR)

12. Explain the following terms i) Chemical Shift ii) Equivalent and non-Equivalent Protons

13. Explain Elevation in Boiling Point and derive the Expression to determine the molecular weight of a non-volatile solute by using Elevation in Boiling Point.

(OR)

14. Derive the relation between molecular weight and depression in freezing point.

15. What is transport number? How do You determine transport number by Hittorff's Method.

(OR)

16. What are the conductometric titrations? Explain conductometric titrations of strong acid Vs strong base and weak acid Vs strong base.

17. Explain the phase diagram of water system.

(OR)

18. Explain the phase diagram of Nacl-H_2O System.

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M
Draw labeled diagrams wherever necessary.

1. Basic concepts of Immunology

2. Types of Vaccines

3. Factors influencing Immunogenicity

4. Haptens

5. Different types of Natural and Synthetic media

6. Various types of Stem cell applications

7. Super Ovulation

8. Different types of Fermentation

SECTION-B

II. Answer ALL the following Questions   5X8=40M
Draw labeled diagrams wherever necessary.

9. Discuss about the Innate Immunity and Adaptive or acquired Immunity.

(OR)

10. Explain about the cells of Immune system.

11. Define Antibodies? Explain the structure and functions of Antibody?

(OR)

12. Describe about Immediate Hypersensitivity and its mechanisms.

13. Explain briefly about Primary and Secondary cell culture? Explain about various types of cell lines with suitable examples.

(OR)

14. Define Hybridoma Technology? Elo berate the process of production and application of monoclonal antibodies by hybridoma technology.

15. Explain different types of Vectors in Biotechnology.

(OR)

16. Discuss about the Transgenic Sheep and Transgenic Fish along with applications.

17. Write an essay on Southern and western Blotting.

(OR)

18. What are procedure and applications of DNA finger printing.

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IV – SEMESTER END EXAMINATIONS

Class : II B.Sc(CBZ)   Max Marks : 60
Subject : Zoology   Pass Mark : 24
Title of Paper : Animal Physiology, Cellular Metabolism & Embryology   Duration : 3Hrs
Paper Code : R20ZOO401A   Time : 2pm - 5pm
W.E.F : 2023-24   Date : 03.05.24

SECTION-A

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

Draw labeled diagrams wherever necessary.

1. Structure of Kidney

2. Pulmonary Ventilation

3. Pituitary gland

4. Ultra structure of Muscle

5. General Properties of Amino acids

6. Gluconeogenesis

7. β-Oxidation of Palmitic Acid

8. Types of Eggs

SECTION-B

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

Draw labeled diagrams wherever necessary.

9. Describe the Physiology of digestion and assimilation of various types of food in the digestive system.

(OR)

10. Write an essay on structure of Heart with a neat labeled diagram.

11. Explain resting membrane potential and conduction of nerve impulse transmission through myelinated nerve fiber.

(OR)

12. Write an essay on hormonal control of reproduction in Mammals.

13. Write an essay on classification of Carbohydrates.

(OR)

14. Write an essay on classification of Enzymes and mechanism of action.

15. Explain about glycolysis pathway.

(OR)

16. Write about urea cycle with following steps and functions of Urea cycle.

17. Describe the process of gametogenesis.

(OR)

18. Write an essay on different types of cleavages.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc(CBZ)   Max Marks : 60
Subject   : Botany   Pass Mark : 24
Title of Paper : Cell Biology, Genetics and Plant Bleeding   Duration : 3Hrs
Paper Code   : R20BOT402A   Time   : 2pm – 5pm
W.E.F   : 2022-23   Date   : 02.05.2024

SECTION-A

I. Answer any FIVE of the following Questions   5X4=20M
1. Differences between Prokaryotic and Eukaryotic cells.
2. Differences between Euchromatin and Hetero chromatin.
3. Incomplete dominance
4. Translation
5. Emasculation
6. Test cross and back cross
7. m – RNA
8. Aneuploidy

SECTION-B

II. Answer ALL the following Questions   5X8=40M
9. Discuss about ultra structure of plant Cell wall.

(OR)

10. Give a brief account on ultra structure of Chlonoplast.
11. Discuss about the morphology of Eukaryotic chromosome.

(OR)

12. Write an essay on chromosomal aberrations (structural and numerical changes).
13. Explain the Mendal's laws of inheritance.

(OR)

14. Discuss about maternal inheritance (Corren's experiment on Mirabilis Jalapa).
15. Discuss about the Genetic code.

(OR)

16. Write about types and functions of RNA.
17. Discuss about the scheme of plant hybridization.

(OR)

18. Explain briefly about pureline and clonal selection.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
IV – SEMESTER END EXAMINATIONS

Class   : II B.Sc (CBZ)   Max Marks : 60
Subject   : Botany   Pass Mark : 24
Title of Paper : Plant Physiology And Metabolism Duration   : 3 Hrs
Paper Code   : R20BOT401A   Time   : 2pm – 5pm
W.E.F   : 2021-22   Date   : 01.05.2024

SECTION-A

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

1. Importance of water to plant life.

2. Enzyme kinetics.

3. CAM.

4. What are lipids? Mention their classification.

5. Photoperiodism.

6. Active absorption.

7. Emerson enhancement effect (Red drop).

8. Nif - genes.

SECTION-B

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

9. Write an essay on Ascent of sap and various theories.

(OR)

10. Discuss about the mechanism of the stomatal movement (k+ ion flux).

11. Describe the role of macronutrients in plant nutrition.

(OR)

12. Describe the Glycolysis pathway.

13. Explain C3 cycle.

(OR)

14. Give an account on photo phosphorylation.

15. Describe Biological Nitrogen fixation.

(OR)

16. Write an essay on β-oxidation.

17. Describe the physiological effects of ethylene and ABA.

(OR)

18. Write an essay on seed germination.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

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IV SEMESTER END EXAMINATIONS (R/S) :: MAY 2024

DATE: 01/05/2024 TO 10/05/2024

DATE	TIME	NPC	M.P.CS	M.S.CS	M.E.CS	B.Sc MCCS	CBZ	DATA SCIENCE	B.Com DT	ELYOC	GEN	T.P	COMP	LDC	BBA	BCA
01-05-2024	02.00 PM to 05.00 PM															
02-05-2024	02.00 PM to 05.00 PM															
03-05-2024	02.00 PM to 05.00 PM															
04-05-2024	02.00 PM to 05.00 PM															
06-05-2024	02.00 PM to 05.00 PM															
07-05-2024	02.00 PM to 05.00 PM															
08-05-2024	02.00 PM to 05.00 PM															
09-05-2024	02.00 PM to 05.00 PM															
10-05-2024	02.00 PM to 05.00 PM															

Controller of Examinations

Principal