UG-CS-101 **BSCSS–43/ BCAS–41C**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

DATABASE MANAGEMENT SYSTEM

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of
Five questions in 100 words.

All questions carry equal marks.

1. Define ER Data model.

2. Write about update operation with example.

3. What is Domain constraint? Give example.

4. List out the NOSQL data types and brief about it.

5. Define Tuple. Give example.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of
Five questions in 200 words.

All questions carry equal marks.

6. Discuss the three tier database architecture with neat diagram.

7. Write the basic rules for converting the ER diagrams into tables.

8. Brief about UNION operation with example.

9. Discuss about different types of attributes

10. Brief about Mongo DB features.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of
Seven questions in 500 words.

All questions carry equal marks.

11. Explain the hierarchical Data Model with neat diagram.

12. Define attribute. Discuss the different types of attributes.

13. Discuss about Database transaction in detail.

14. Define relationship. Discuss the binary relationship and Cardinality in detail.

15. Explain first, Second and third normal form in detail.

16. Discuss the features of Neo4j.

17. Elaborate different types of join operations with example.

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UG-CS-102 **BCAS-42C**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Fourth Semester

WEB DESIGNING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Define the term “HTML” and give an example.

2. How to create a simple met Address?

3. What is styled Text Components?

4. Differentiate between Servlet and CGI.

5. Define JavaBean.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Differentiate between a GET and POST and state the advantages of GET and POST.

7. Write a short note on Web server and an example of web server.

8. Write about GUI and give an example.

9. Write about the working of JDBC and create an application.

10. Write short notes on Customizers.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain and draw the diagram in detail about Servlet and its life cycle.

12. Write in detail about RMI layers and applications with diagram.

13. Write in brief about Shapes and frequently used methods of a graphic class.

14. Explain in detail about types of Metadata. How does metadata work in java?

15. How to build an application using JavaBeans? And write the property of bean types.

16. Explain in detail about Server — Tomcat Server with detailed steps and diagram.

17. Explain about Implementing a Server, Working of a server. Types of servers.

UG-CS-1476 **BCAS–12/ BCAS-12C**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

First Year/First Semester

INFORMATION TECHNOLOGY ESSENTIALS

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. What are the benefits of using computers?
2. What is the role of an operating system?
3. Define application generator.
4. What are the components of a network?
5. List two functions of web browsers.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the classification of computers based on functionality.
7. Explain the functions of an operating system.

8. Explain the role of software engineering in application development.

9. Explain the types of networks with examples.

10. Explain the capabilities of the internet.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Discuss the benefits and limitations of computers in modern society.

12. Discuss the types of operating systems and their applications.

13. Describe the differences and use cases of general-purpose and special-purpose application software.

14. Explain the role of network operating systems in client-server architecture.

15. Discuss the functions and capabilities of the internet in detail.

16. Describe the memory system and its hierarchy in detail.

17. Describe the interrelationship between communication, networking, and network components.

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UG-CS-1477 **BCAS–22/ BCAS-22C**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

First Year/Second Semester

OPEN SOURCE TECHNOLOGY

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define open source software.

2. What are the key principles of open source development?

3. What is the JBoss Community?

4. Define WAMP server.

5. What is shared software?

SECTION B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the role of the Free Software Foundation (FSF) in the open source movement.

7. Explain the methodologies used in open source development.

8. Explain the steps involved in starting an open source project.

9. Explain the features of the Apache HTTP Server.

10. Compare open source and closed source software.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Explain the concept of FOSS and why it is not necessarily free of cost.

12. Discuss the history, principles, and methodologies of open source software development.

13. Explain the process of starting and maintaining an open source project.

14. Explain the role of WAMP server components (Windows, Apache, MySQL, PHP) in web development.

15. Evaluate the role of open source technology in promoting shared software and shared source.

16. Evaluate the importance of JAVA as a development platform for servers.

17. Explain the relationship between free software principles and the goals of open source software.

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UG-CS-1479 **BMSSA-22/ BMSSA-22C**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Second Year / Third Semester

ALLIED MATHEMATICS – 2

(CY-2020 Onwards)

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Write the relationship between Beta function and factorials.

2. State the formula for the Trapezoidal Rule and mention its application.

3. Explain the difference between definite and indefinite multiple integrals.

4. Evaluate L[t].

5. Define Rank Correlation.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Evaluate $\Gamma(5.5)$ using the recurrence relation and properties.

7. Derive Simpson's 1/3 Rule for numerical integration.

8. Describe the procedure to evaluate a triple integral in Cartesian coordinates.

9. Derive the Laplace Transform of $f'(t)$ and $f''(t)$.

10. Explain the steps to compute Spearman's rank correlation coefficient with an example.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Prove $\Gamma(n) = (n-1)!$ For positive integers using the recurrence relation. Discuss the errors involved in numerical differentiation and integration methods.

12. Derive Newton's Forward Difference Formula for numerical differentiation. Use this formula to compute the first derivative of $f(x)$ at a given point using a sample dataset.

13. Discuss the method of evaluating double and triple integrals in Cartesian coordinates with examples.

14. Solve the differential equation $Y'' + 2Y' + 5Y = e^{-t}$ using the Laplace Transform method.

15. What is a scatter diagram? Explain its significance in studying correlation with suitable diagrams.

16. Calculate Karl Pearson's coefficient from the following data.

X	32	35	27	28	25	40
Y	28	32	26	35	24	38

17. Explain different methods of measuring correlation and their relative advantages and Disadvantages.

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UG-CS-1480 **BCAS-42**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Second Year/Fourth Semester

WEB DESIGNING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Define an applet.

2. Define the purpose of InetAddress in Java.

3. What is the role of CSS in styled text components on a webpage?

4. What is a JDBC driver? Name the four types of JDBC drivers.

5. Write short notes on JavaBeans.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Describe the differences between GET and POST requests in HTTP.

7. How does parameter passing work in remote methods? Explain with an example.

8. Discuss the role of CSS properties like font-family, font-size, line-height and text-align in styling text for a web page.

9. Explain the difference between the three types of statement objects in JDBC.

10. Explain the role of a customizer in JavaBeans.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words each.

All questions carry equal marks.

11. Elaborate on the lifecycle of an applet with a diagram and explain each phase.

12. Discuss the complete setup for Remote Method Invocation (RMI) in Java, with an example.

13. Explain how CSS transforms (like border-radius, transform, and clip-path) can be used to create custom shapes for web page elements. Provide examples.

14. Briefly explain the design and architecture of JDBC in detail.

15. Discuss the entire process of writing a Java Beans in detail.

16. Explain the concept of a multi-tier architecture in web application development.

17. Describe how to implement a basic server in Java using Server Socket and Socket classes.

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UG-CS-1481 **BCAS–51/ BCASX-51**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Third Year/Fifth Semester

DATA COMMUNICATION AND NETWORKING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Define Internet.

2. How satellites used in communication?

3. Write short note on Bluetooth.

4. Give brief note on IP address.

5. What is called cryptography?

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Write a note on guided transmission media.

7. Define Switching.

8. What do you mean by Medium Access Layer?

9. What are the design issues in network layer?

10. Define Addressing.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain wireless LAN in detail.

12. Write a detailed note on error detection.

13. Explain the functions of Data link layer.

14. Describe the services offered in network layer.

15. Write a detailed note on responsibilities of transport layer.

16. Explain OSI model in detail with diagram.

17. Elucidate routing algorithms.

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UG-CS-1482 **BCAS–52/ BCASX–52/ BSCSS–53**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Third Year/Fifth Semester

PROGRAMMING IN JAVA/JAVA PROGRAMMING

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Define JVM.

2. Explain while loop in Java with example.

3. How do you declare and initialize a one-dimensional array in Java?

4. Define Package in Java.

5. What are the two main types of exceptions in Java?

SECTION B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Explain about Mathematical Functions in Java.

7. Write short notes on Method overloading in Java.

8. Differentiate String and String Buffer in Java.

9. Discuss the naming conventions for packages in Java.

10. Explain about Exceptions handling in Java.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Briefly explain in detail about features of Java.

12. Explain constructors and its types in Java.

13. Explain in detail about Interface in java with suitable example.

14. Discuss creating package and adding a class to a package with example.

15. What is exception and types of exception with example?

16. Explain various operators in java.

17. Discuss inheritance in java.

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UG-CS-1483 **BCAS–53**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Third Year/Fifth Semester

OPERATING SYSTEMS

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. List the types of operating systems.

2. Write short notes on Threads.

3. List the four necessary conditions for a deadlock.

4. Explain contiguous memory allocation.

5. Explain about Free space management.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Explain the structure of an operating system.

7. Explain the concept of a process with a Process Control Block (PCB).

8. Explain the critical-section problem with an example.

9. Explain in detail about demand paging in OS.

10. Describe common file-system operations, such as create, read, write, and delete.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Describe the concept of distributed systems and their key advantages.

12. Discuss about Process scheduling in OS.

13. Discuss in detail the various CPU scheduling algorithms.

14. Compare and contrast different page replacement algorithms (FIFO, LRU, and Optimal).

15. Discuss the structure and implementation of virtual file systems (VFS).

16. Explain interprocess communication (IPC) mechanisms and their importance.

17. Discuss in detail about deadlock detection and recovery.

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UG-CS-1484 **BCAS-54/ BSCSS–51/ BCASX–54**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Science/Computer Application

Fifth Semester

SOFTWARE ENGINEERING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. What do you mean by Software?

2. Define Agility.

3. Write a short note on modeling.

4. Write briefly about software quality

5. What is called bug?

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Write a note on Software process.

7. Define waterfall model with a diagram.

8. What are the non-functional requirements?

9. Pen down a note on software design process.

10. Write about the performance testing.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain generic process model.

12. Describe incremental process model.

13. What are elements of Analysis model? Explain.

14. Describe software quality guidelines and attributes.

15. What is called Integration testing? Explain in detail.

16. Explain basic design principles.

17. Elucidate about alpha and beta testing.

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UG-CS-1490 **BCASX-61/ BCAS-61**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Third Year / Sixth Semester

VISUAL PROGRAMMING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. What is the purpose of a Dialog Box in Windows programming?

2. Explain the difference between Design-time and Run-time properties in Visual Basic.

3. What are the predefined constants in Visual Basic?

4. What are Boolean functions in Visual Basic?

5. Write short notes on OLE.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Explain Visual Basic IDE and its features.

7. Explain Object-Oriented Programming (OOP) in Visual Basic and its key principles.

8. Explain the difference between variables and constants in Visual Basic.

9. Explain the process of creating EXE files in Visual Basic.

10. How can you create an ActiveX control in Visual Basic?

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain the components of a typical Windows program with examples.

12. Explain the various types of events in Visual Basic.

13. Discuss in detail the different types of loops in Visual Basic (For, Do, While loops).

14. Explain the process of graphics handling in Visual Basic.

15. Discuss the steps to link and embed an Excel worksheet in a VB project using OLE.

16. Explain in detail about Windows Application Program Interface functions (WINAPI).

17. Describe the steps involved in building a project in Visual Basic.

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UG-CS-1491 **BCASEX–01/ BCASE–01**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Sixth Semester

PRINCIPLES OF MANAGEMENT

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define management.
2. What are the steps involved in planning?
3. Define organizing in management.
4. Define the selection process in staffing.
5. What is budgetary control?

SECTION B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the features of management as a science and an art.
7. Discuss the scope and nature of planning.

8. Discuss the relationship between line and staff in organizations.

9. Explain the steps in the recruitment and selection process.

10. Explain the importance of coordination in management.

SECTION C — ($4 \times 10 = 40$ marks)

Answer any FOUR questions.

11. Discuss the features, functions, and importance of management in organizations.

12. Discuss the importance of planning in management and its impact on organizational success.

13. Explain the concept of organizational structure and its types with examples.

14. Discuss the role of staffing in achieving organizational goals.

15. Discuss the challenges in implementing effective control mechanisms in organizations.

16. Compare classical and modern management theories in detail.

17. Discuss the communication process and its impact on directing employees.

UG-CS-1492 BCASEX–02

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Third Year/Sixth Semester

MANAGEMENT INFORMATION SYSTEMS

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define Management Information System (MIS).
2. What are the key functions of an Executive Information System (EIS)?
3. Define a Manufacturing Information System.
4. Define a Human Resource Information System (HRIS).
5. Write short notes on Data Flow Diagram (DFD).

PART B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the impact of MIS on decision-making in organizations.
7. Compare Transaction Processing Systems and Decision Support Systems.

8. Explain the role of Marketing Information Systems in business strategy.

9. Explain the role of Financial Information Systems in decision-making.

10. Explain the preliminary investigation phase in the SDLC.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Discuss the concept, role and importance of MIS in business operations.

12. Explain the concepts, methods and functions of DSS in decision-making.

13. Explain the role of Marketing, Manufacturing, and Quality Information Systems in business.

14. Explain the role of Accounting Information Systems in financial decision-making.

15. Discuss the role of DFD, Data Dictionaries, and Decision Trees in system analysis.

16. Evaluate the impact of MIS on organizational decision-making and efficiency.

17. Discuss the application of Marketing Information Systems in decision-making.

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UG-CS-1493 BCASEX–03

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Applications

Third Year/Sixth Semester

PROFESSIONAL ETHICS

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define morals, values, and ethics.

2. Write short notes on moral autonomy.

3. What is an ethical dilemma?

4. What is safety risk assessment?

5. What are professional experts as witnesses?

SECTION B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Discuss the importance of self-confidence in achieving success.

7. Explain Kohlberg's theory of moral development.

8. Explain the sources of ethical behavior in professional settings.

9. Explain the concept of safety and risk in professional practices.

10. Explain the significance of environmental ethics in professional practices.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Explain the interrelationship between integrity, character, and self-confidence.

12. Explain the types of inquiries and moral dilemmas in professional ethics.

13. Analyze the importance of a personal code of ethics in maintaining professional integrity.

14. Explain the challenges in implementing safety measures and ethical considerations.

15. Evaluate the role of moral leadership in addressing global and professional issues.

16. Analyze the role of empathy and work ethics in professional success.

17. Explain how organizations can promote ethical behavior among employees.

UG-CS-1494 **BCASE–04/ BCASEX-04**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Third Year / Sixth Semester

CONSTITUTION OF INDIA

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define the Preamble of the Indian Constitution.

2. What are Fundamental Rights?

3. Define the powers of the President of India.

4. Define the role of the Mayor in a Municipal Corporation.

5. What is the function of election observers?

SECTION B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the composition and working of the Drafting Committee.

7. Explain the significance of the Right to Freedom.

8. Explain the composition and functions of the Indian Parliament.

9. Explain the role and importance of grassroots democracy in governance.

10. Explain the powers and functions of the Election Commission of India.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Explain the salient features of the Indian Constitution with examples.

12. Explain the Right to Freedom of Religion and its significance in a secular state.

13. Discuss the composition, powers, and functions of the Indian Parliament.

14. Discuss the organizational hierarchy and roles at the block and village levels.

15. Discuss the role and functioning of the Election Commission in ensuring democratic elections.

16. Explain the Right to Constitutional Remedies as the cornerstone of Fundamental Rights.

17. Explain the contributions of key members of the Drafting Committee.

UG-CS-1495 **BCASEX–05/ BCASE-05**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Third Year / Sixth Semester

E-LEARNING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. What is the E-Learning cycle?

2. Define Blended E-Learning.

3. Define the philosophy of E-Learning.

4. What are online E-Learning technologies?

5. What is collaborative E-Learning?

PART B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the role of E-Learning tools in the E-Learning process.

7. Explain the concept of problem-based learning in E-Learning.

8. Explain the theory of learning in the context of E-Learning.

9. Explain the characteristics of interactive online learning media.

10. Explain the role of collaborative E-Learning in improving learner engagement.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Discuss the E-Learning framework and its components.

12. Discuss the different E-Learning strategies, including blended and mobile learning.

13. Explain the theory of learning and its application to E-Learning strategies.

14. Explain the characteristics and applications of interactive online learning media.

15. Explain the challenges and solutions for implementing collaborative E-Learning systems.

16. Discuss the tools used in E-Learning and their impact on learner engagement.

17. Evaluate the role of web-based communication in promoting knowledge sharing.

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UG-CS-1496 **BCASEX–06/ BCASE–06**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Third Year

BIG DATA ANALYTICS

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. What is the purpose of filtering in R programming?

2. What are the key features of the R language?

3. Define real-time analytical processing.

4. What is PIG Latin?

5. Define a view in Hive.

SECTION B — ($3 \times 7 = 21$ marks)

Answer any THREE questions.

6. Explain the process of creating and using matrices in R.

7. Explain the features and architecture of Hadoop.

8. Explain the architecture and features of the Netezza appliance.

9. Describe the implementation of joins in PIG scripts.

10. Explain the process of creating a database in Hive.

SECTION C — ($4 \times 10 = 40$ marks)

Answer any FOUR questions.

11. Explain the process of applying functions to matrix rows and columns with examples.

12. Discuss the architecture of HDFS and MapReduce and their significance in data analysis.

13. Explain the working of lnfoSphere Streams and its enterprise-class features.

14. Explain the process of developing and testing PIG Latin scripts.

15. Explain the process of creating and managing queries in HiveQL.

16. Describe the process of creating and customizing three-dimensional plots in R.

17. Discuss SQL on Hadoop and its role in managing large datasets.

UG-CS-1497 **BCASEX-07/ BCASE-07**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Sixth Semester

FINANCIAL ACCOUNTING

Time : 3 hours Maximum marks : 70

SECTION A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define the principle of accounting.

2. List two limitations of financial statements.

3. Define ratio analysis.

4. What is break-even analysis?

5. What is the importance of budgeting?

SECTION B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain in detail about the different types of accounting with its advantages.

7. Discuss the limitations of financial statements.

8. Explain the process of cash flow analysis.

9. Explain the process of break-even analysis with examples.

10. Explain the process of preparing a budget.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Prepare Trading and Profit and Loss Account for the year ended 31 March 2020 and a Balance sheet as on the date from the following Balance of Mr. Adhithyan.

Particulars	Rs.
Drawings	45,000
Building	60,000
Bill Receivable	6,000

Particulars	Rs.
Purchases	51,000
Carriage Inwards	10,000
Salaries	35,000
Discount (Dr)	1,100
Bank	25,000
Debtors	45,000
Sales return	2,000
Bill Payable	35,000
Sales	2,18,000
Capital	1,60,000
Goodwill	90,000
Machinery	40,000
Opening Stock	40,000
Wages	26,000
Carriage Outwards	500
Rent	3,000
Repairs	2,300
Cash	1,600
Bad debts	1,200

Particulars	Rs.
Furniture	6,000
Advertisements	3,950
Creditors	70,000
Purchase return	2,650

Adjustment:

(a) Closing Stock Rs 35,000.

(b) Depreciate machinery and Furniture by 10%.

(c) Outstanding wages Rs. 1,500.

(d) Prepaid Advertisements Rs. 500.

(e) Create 5% on Debtors for bad debts and 2% as provision.

12. Discuss the nature and importance of financial statements in decision-making.

13. From the following data calculate:

(a) P/V Ratio

(b) Variable Cost

(c) Profit

Sales Rs. 80,000; Fixed expenses Rs. 15,000;

Break Even Point Rs. 50,000.

14. From the following Information, Prepare a Summarized Balance Sheet as on 31.3.2020.

(a) Working Capital - Rs. 1,20,000

(b) Reserves and Surplus - Rs. 80,000

(c) Bank Overdraft - Rs. 20,000

(d) Fixed Asset to proprietary Ratio - 0.75 : 1

(e) Current Ratio - 2.5 : 1

(f) Liquid Ratio - 1.5 : 1

15. Discuss briefly about the applications of marginal costing.

16. XY Ltd, a multi product furnishes you the following data relating to year.

Assuming that the cost structure and selling prices remains the same. Find out

(a) P/V ratio

(b) Break even sales

(c) Profit when sales are Rs. 1,00,000

(d) Sales required to earn a profit of Rs. 20,000

Period	Sales	Profits
I	1,20,000	9,000
II	1,40,000	13,000

17. Discuss the different types of ratios and their significance in financial analysis.

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UG-CS-1498 **BCASEX–08/ BCASE-08**

U.G. DEGREE EXAMINATION – FEBRUARY 2025.

Computer Application

Third Year / Sixth Semester

DATA MINING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. Define data mining and its significance.

2. Define OLAP operations in data analysis.

3. List the different types of schemas in data warehousing.

4. What is Naïve Bayesian classification?

5. What is the k-means clustering method?

PART B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Explain the kinds of data and patterns that can be mined in data mining.

7. Explain the architecture of a data warehouse.

8. Explain the differences between closed and max patterns in pattern mining.

9. Explain the role of support vector machines in classification.

10. Explain the requirements for cluster analysis in data mining.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Discuss the technologies used in data mining and their applications.

12. Discuss the data cube technology and its application in data analysis.

13. Explain the methods for improving the efficiency of the Apriori algorithm.

14. Explain the process of rule-based classification and its advantages.

15. Explain the differences between agglomerative and divisive hierarchical clustering.

16. Explain the statistical description of data and its importance in data mining.

17. Discuss the differences between ROLAP, MOLAP, and HOLAP.

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