F–9130

Sub. Code
7BCA2C1

B.C.A. DEGREE EXAMINATION, APRIL 2023

Second Semester

Computer Applications

PROGRAMMING IN C++

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is the difference between C and C ++?
2. What are the basic concepts of OOP?
3. Define Class.
4. What is the purpose of Constructor?
5. What is an Abstract class?
6. What is the use of ***this*** pointer?
7. How will you open a file?
8. What is a Random access file?
9. What is a Template?
10. Define Exception.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain various types of expressions with example.

Or

(b) Explain any two branching statements in C++ with example.

12. (a) Explain multiple constructors in a Class with example.

Or

(b) Explain Copy constructor with an example.

13. (a) Explain pointer to derived class an example.

Or

(b) Explain pure virtual function with an example.

14. (a) Explain the various file opening modes.

Or

(b) Explain the Classes for File stream operations with a diagram.

15. (a) Explain the Exceptions handling Constructs with example.

Or

(b) Explain the rules for handling exceptions successfully.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write a C++ program to print the first 20 prime numbers.

17. Explain arrays within a class with a program.

18. Explain Multi level inheritance with a program.

19. Write a C++ program to find the smallest of three numbers using command line argument.

20. Explain function template with a C++ program.

———————

F–9131	Sub. Code
	7BCA3C1

B.C.A. DEGREE EXAMINATION, APRIL 2023.

Third Semester

Computer Applications

DATABASE MANAGEMENT SYSTEMS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is relational database? Give example.

2. What is mean by query in DBMS?

3. What is atomic value in DBMS?

4. What is multivalued dependency in DBMS?

5. What is the role of server?

6. What is parallel database?

7. What are the uses of synonyms?

8. Define Unique Constraint.

9. Differentiate Procedure and Function.

10. Which query is used to drop the table?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain about E-R model.

Or

(b) List out the applications of database management system.

12. (a) Explain 2NF with example.

Or

(b) Describe about BCNF with example.

13. (a) Explain about server system architecture.

Or

(b) Describe about Intraquery parallelism.

14. (a) Explain about sequences with example.

Or

(b) Describe about unique and composite index with example.

15. (a) Write a procedure to find the smallest number of given three numbers.

Or

(b) Write a PL / SQL to retrieve the records from student table using cursor.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain the applications of database system.

17. Explain decomposition using multivalued dependencies.

18. Describe about Distributed data storage.

19. Explain about private and public synonyms.

20. Explain about transaction with example.

———————

F–9132

Sub. Code
7BCA4C1

B.C.A. DEGREE EXAMINATION, APRIL 2023.

Fourth Semester

Computer Applications

JAVA PROGRAMMING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What are the benefits of OOP?

2. What is JVM?

3. What is meant by Type Conversion?

4. What is a labeled loop?

5. Define class and object.

6. What are the advantages of interface in java?

7. What is an exception?

8. What is the use of package?

9. How will you add an Applet to a HTML file?

10. Write the syntax of the method which is used to draw an Arc.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the java data types.

Or

(b) Explain the applications of OOP.

12. (a) Write a java program to print the first 10 even numbers.

Or

(b) Explain the switch statement with an example.

13. (a) Explain Method Overriding with an example.

Or

(b) Write a java program to find the smallest number in an array.

14. (a) How will you create a package? Explain with an example.

Or

(b) Explain various types of exceptions with an example.

15. (a) Explain the Applet life cycle.

Or

(b) Explain the APPLET tag with all attributes with example.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write a java program to find the sum of four numbers using command line argument.

17. Explain the operators in java with example.

18. How will you implement multiple inheritance in java? Explain with a java program.

19. Write a java program to demonstrate thread.

20. How will you pass parameters to an Applet? Explain with a program.

———————

F–9133

Sub. Code
7BCAE1A

B.C.A. DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Computer Applications

Elective : WEB DESIGN TECHNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is the use of header section in HTML?
2. How to insert image in HTML?
3. What is the need for scripting language?
4. List some features of JavaScript.
5. Define function.
6. What are the logical operators in JavaScript?
7. What is an identifier? Give an example.
8. What is string object in JavaScript?
9. What is the use of VBScript?
10. Write the syntax for inputbox in VBScript.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain general structure of HTML program.

Or

(b) Explain table feature in HTML.

12. (a) Explain internet and WWW resources in JavaScript.

Or

(b) Explain multi subscripted array in JavaScript.

13. (a) Write JavaScript program for sum of 10 natural numbers using do- while loop.

Or

(b) Explain 'for' loop with suitable JavaScript program.

14. (a) Explain Math object.

Or

(b) Explain Boolean and Date objects.

15. (a) Explain string manipulations in VBScript.

Or

(b) Explain Msgbox and Inputbox in VBScript with suitable program.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain in detail about List with suitable examples.

17. Explain in detail about arithmetic and decision making statements in JavaScript.

18. Explain functions in JavaScript with suitable program.

19. Discuss String and Number objects.

20. Explain arrays in VBScript with suitable program.

———————

F–9134

Sub. Code
7BCAE2A

B.C.A. DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Computer Applications

Elective - COMPUTER GRAPHICS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What are the applications of Computer Graphics?

2. Write four Graphical Input devices.

3. What is translation?

4. Define pivot point.

5. Define Window.

6. Write the conditions for point clipping.

7. What is 3D transformation?

8. Write down the 3D transformation matrix for mirror reflection.

9. Why do we need the user interface?

10. What is the role of Feedback in User Interface design?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the various Graphics system software.

Or

(b) Explain any two graphical output devices.

12. (a) Explain 2D scaling with example.

Or

(b) Explain the 2D rotation with example.

13. (a) Explain Window – to – Viewport co-ordinate transformation.

Or

(b) Explain Convex polygon clipping with example.

14. (a) Explain the 3D composite transformation with an example.

Or

(b) Explain 3D translation transformation with an example.

15. (a) Explain the styles of command language.

Or

(b) Write short notes on Information Display.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write and explain the Bresenham's line drawing algorithm.

17. Explain the composite transformation with example.

18. Explain Sutherland Hodgman Polygon clipping algorithm.

19. Describe the 3D rotation transformation with example.

20. Explain
    (a) Components of User interface
    (b) Feedback.

———————

F–9135

Sub. Code
7BCA6C1

B.C.A. DEGREE EXAMINATION, APRIL 2023.

Sixth Semester

Computer Applications

DATA MINING AND WAREHOUSING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Name any four data mining software.

2. What is Association Rules?

3. What is classification?

4. List out the classification software.

5. What is cluster?

6. Write a formula for finding the Manhattan distance between two points.

7. What is Web?

8. Define Web structure mining.

9. What is data warehousing?

10. What is OLTP?

Part B (5 × 5 = 25)

Answer all the questions.

11. (a) List out applications of data mining.

Or

(b) Explain Naïve Algorithm.

12. (a) Explain over fitting and pruning.

Or

(b) Explain evaluation criteria for classification method.

13. (a) Explain the basics of Cluster analysis.

Or

(b) Explain density based methods of Cluster analysis.

14. (a) Explain Web terminology.

Or

(b) Explain the architecture of Search Engine.

15. (a) Explain operational stores of data warehousing.

Or

(b) Explain Data cube operations.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain Apriori Algorithm.

17. Explain Decision Tree in classification.

18. Explain hierarchical methods of Cluster analysis.

19. Discuss Web usage mining.

20. Explain Data warehousing design.

———————

F–9136

Sub. Code
7BCA6C2

B.C.A. DEGREE EXAMINATION, APRIL 2023

Sixth Semester

Computer Applications

COMPUTER NETWORKS

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Network.
2. What is the drawback of ring topology?
3. Define flow control.
4. What is meant by bit stuffing?
5. What is firewall?
6. What are the functions of Network Layer?
7. What is meant by Segment?
8. Define Congestion.
9. Write a short note on SNMP.
10. How is a secret key different from public key?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain about Broadband ISDN.

Or

(b) Explain about various types of Network Topology.

12. (a) Describe any one carrier sense multiple access protocols.

Or

(b) Explain the functions of Data Link Layer.

13. (a) Explain about Fragmentation.

Or

(b) Describe about Switching.

14. (a) Write a brief note on Multiplexing.

Or

(b) Explain about UDP.

15. (a) Write a brief note on Cryptography.

Or

(b) Explain about DNS.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain about OSI reference models.

17. Describe about Collision free protocols.

18. Explain about Routing Algorithms.

19. Explain the functions of Transport Layer.

20. Describe about Data Compression.

———————

F–9137

Sub. Code
7BCA6C3

B.C.A. DEGREE EXAMINATION, APRIL 2023

Sixth Semester

Computer Applications

SOFTWARE ENGINEERING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define software engineering.
2. Write any two characteristics of software.
3. What are the factors that influence software cost?
4. What is software requirement?
5. Why need modularization?
6. What is DFD?
7. Define integration testing.
8. Define validation testing.
9. What is Quality Assurance?
10. What are the rules should follow for conduct Review Meeting?

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Explain some size factors in software engineering.

Or

(b) Explain the steps in Software Project Plan.

12. (a) Write short notes on COCOMO model.

Or

(b) Write short notes on software requirement specification.

13. (a) Write short notes on Cohesion.

Or

(b) Explain coding style.

14. (a) Explain Unit Testing.

Or

(b) What are the needs for software maintenance?

15. (a) Explain the need for Quality Assurance.

Or

(b) Explain formal technical reviews.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Describe about planning an organizational structure.

17. Explain in detail about software cost factors.

18. Explain in detail about software design techniques.

19. Describe White box testing.

20. Explain statistical quality assurance.

———————