E–0341

Sub. Code
1BCA4C1

B.C.A. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Computer Application

JAVA PROGRAMMING

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is the need for Object Oriented Programming?
2. What is JVM?
3. Write any four mathematical functions in java.
4. Write the syntax of conditional operator.
5. What is meant by visibility control?
6. How will you define an interface?
7. How will you hide classes in java?
8. How will you block a Thread?
9. Define Applet.
10. What is control loop in Applet?

Part B (5 × 5 = 25)

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

11. (a) Explain the benefits of OOP.

Or

(b) Explain the java data types with example.

12. (a) Explain the nested – if statement with an example.

Or

(b) Write a Java program to find the sum of the four digit integer number.

13. (a) Write a java program to reverse the given string.

Or

(b) Write a java program to find the sum of even numbers in an array.

14. (a) Explain the Thread life cycle.

Or

(b) Explain multiple catch statements in exception handling with an example.

15. (a) Explain the Applet lag with all attributes.

Or

(b) How will you display numerical values in an Applet? Explain with an example.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write a java program to find the simple interest using command line argument.

17. Explain the looping statements in Java with an example.

18. What is method overriding? Explain with a program.

19. Explain with a program, how will you create the package and accessing a package.

20. Explain any Five methods in Graphics class with example.

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E–0342

Sub. Code
1BCAE2A

B.C.A. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Computer Application

***Elective* – COMPUTER GRAPHICS**

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Mention any two applications of Graphics.

2. Write Four Graphical output devices.

3. What do you mean by Transformation?

4. Define differential Scaling.

5. Define Window.

6. Define Clipping.

7. What is 3D transformation?

8. Write down the 3D transformation matrix for 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) How Video display is generated? Explain with diagram.

Or

(b) Explain any two graphical input devices.

12. (a) Explain Composite transformation with example.

Or

(b) Explain the homogeneous Co-ordinate system with example.

13. (a) Explain the viewing transformation.

Or

(b) Explain convex Polygon clipping with an example.

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

Or

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

15. (a) Explain the components of User interface.

Or

(b) Write short notes on Information Display.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write and explain the DDA line drawing algorithm.
17. Explain the basic transformation with example and transformation matrix.
18. Write and explain Line clipping algorithm.
19. Describe the 3D basic transformations with example.
20. Explain the styles of Command language with example.

E–0343

Sub. Code
1BCA6C3

B.C.A. DEGREE EXAMINATION, APRIL 2019

Sixth Semester

SOFTWARE ENGINEERING

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Write the differences between real time software and business software.

2. Write the differences between system engineering and software engineering.

3. What are the major factors that influence the software cost?

4. What is meant by product complexity?

5. Define a “software module”.

6. What is meant by mile stone?

7. What is meant by validation testing?

8. What is meant by configuration management?

9. Define quality and quality control of a software product.

10. What are the formal approaches to SQA?

Part B (5 × 5 = 25)

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

11. (a) Explain about the managerial issues of software engineering.

Or

(b) Explain the issue of planning on organizational structure.

12. (a) Describe about algorithmic cost model.

Or

(b) Describe about Delphi cost estimation.

13. (a) Explain about distributed system design.

Or

(b) Explain about the design guidelines in detail.

14. (a) How will you enhance the maintenance during development?

Or

(b) Describe about source code metrics.

15. (a) Explain about the software reliability.

Or

(b) Explain about the software safety.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Describe about the productivity factors in detail.

17. Describe about the staffing level estimation.

18. Describe the fundamental software design concepts.

19. Describe about the mistake-proofing for software.

20. Explain about white-box testing and basis path testing in detail.

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E–0371

Sub. Code
1BCA2C1

B.C.A. DEGREE EXAMINATION, APRIL 2019

Second Semester

Computer Application

PROGRAMMING IN C++

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Expression. Give an example.

2. Define variable and constant.

3. What is the difference between the static data member and non static data member?

4. What is the purpose of Dynamic Constructor?

5. What is the purpose of virtual base class?

6. What are the advantages of Pointers?

7. What are the two different methods to open a file?

8. Define Binary file.

9. Define Function Template.

10. Write any four exception types.

Part B (5 × 5 = 25)

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

11. (a) Explain the data types used in C++ with example.

Or

(b) Explain the nested — if statement with an example.

12. (a) Explain Parameterized Constructor with an example.

Or

(b) Explain the Copy Constructor with an example.

13. (a) Explain formatted console I/O operations.

Or

(b) Explain Pointer to objects concept with an example.

14. (a) Explain File pointers and their manipulators with example.

Or

(b) Explain the various file opening modes with example.

15. (a) Explain class template with an example.

Or

(b) Explain the uses defined template.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain the operators in C++ with example.

17. Explain friend function with a program.

18. Explain Multiple Inheritance with a program.

19. Write a C++ program to store the employee details in a binary file.

20. How will you handle uncaught exceptions? Explain with an example.

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E–0372

Sub. Code
1BCA5C1

B.C.A. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Computer Application

VISUAL PROGRAMMING

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is event driven programming?
2. Define Array.
3. What is the use of combo box?
4. Give any two events related to Listbox.
5. Write any two properties of Image control.
6. Write the currentX and currentY property.
7. What is the use of ActiveX controls?
8. What is the use of Rich Text box control?
9. What is a Recordset?
10. Define SQL.

Part B (5 × 5 = 25)

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

11. (a) Explain about the 'Select case' statement.

Or

(b) Explain function with an example.

12. (a) Explain about the file controls.

Or

(b) Discuss the scrollbar and slider controls property.

13. (a) Explain about the shape control.

Or

(b) How to draw a curve in Visual basic?

14. (a) Explain about the Treeview control.

Or

(b) Write short notes on MDI.

15. (a) Explain ADO Data control in detail.

Or

(b) Explain Data bound controls.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain forms of visual basic in detail.

17. Explain different types of looping statements using suitable examples.

18. Explain about Graphics controls.

19. Explain common dialog controls.

20. How to create, insert and update records in database from visual basic?

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E–0373

Sub. Code
1BCA5C2

B.C.A. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Computer Applications

COMPUTER SYSTEM ARCHITECTURE AND DESIGN

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Do the following substraction using 2's complement.

   X = 1010100, Y = 10000011 Find X–Y.

2. What is meant by three state gate? Write the states.

3. Write the symbolic descriptions for LDA, STA Instructions.

4. Draw the block diagram for Input – Output configuration.

5. What is meant by Implied Mode of Addressing?

6. Write any two Data Transfer Instructions.

7. Define stack.

8. Write the purpose of the Communication link between central computer and each peripheral.

9. What is meant by Multi programming?

10. What is the use of Bootstrap loader?

Part B (5 × 5 = 25)

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

11. (a) Write the list of logic micro operations with boolean function, micro operations, name of operation.

Or

(b) List the Register–Reference Instructions with its function.

12. (a) Explain the flow chart for first pass of assembler.

Or

(b) Explain the program interrupt in detail.

13. (a) Explain the Reverse polish notation and evaluation of arithmetic expressions using stack arrangement of registers.

Or

(b) Write the characteristics of RISC computer.

14. (a) Explain with flow chart of Booth's Multiplication Algorithm.

Or

(b) Explain the I/O commands types in detail.

15. (a) Explain the Direct Mapping in cache memory.

Or

(b) Explain about the memory table for mapping a virtual address in virtual memory.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Describe the 4–bit binary Adder and 4–bit adder–substractor.

17. Explain the following Instructions with example.

    AND to AC, ADD to AC, BSA, ISZ.

18. Explain the Instruction formats in Central Processing Unit.

19. Explain about the Daisy chain priority interrupt.

20. Explain the characteristics of Multiprocessors in detail.

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E–0374

Sub. Code
1BCAE1B

B.C.A. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Computer Application

Elective : MOBILE COMMUNICATIONS

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is the need for Modulation?
2. What is meant by Fast Hopping systems?
3. What is the use of SDMA?
4. What is a Bursts?
5. What is an Infrastructure Networks?
6. What is meant by Handover?
7. What is a Correspondent Node?
8. Define Snooping.
9. What is WWW?
10. Define Posting.

Part B (5 × 5 = 25)

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

11. (a) Explain the advantages of Cellular system.

Or

(b) Explain the Direct Sequences Spread spectrum.

12. (a) Explain Digital Video Broadcasting system.

Or

(b) Explain the GSM architecture.

13. (a) Compare Infrared and Radio transmissions.

Or

(b) Explain the Infrastructure based IEEE 802.11 architecture.

14. (a) Explain the Dynamic Host configuration protocol.

Or

(b) Explain the Mobile TCP.

15. (a) Explain the functions of HTTP.

Or

(b) Write short notes on HTML.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about Signal propagation.

17. Describe the Time Division Multiple Access schemes.

18. Explain the Mobile Quality of Services.

19. Describe the Routing methods used in Mobile Ad-Hoc networks.

20. Explain the architecture and protocols of WAP.

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E–0375

Sub. Code
IBCAE2B

BCA. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Computer Application

Elective: LINUX PROGRAMMING

(CBCS 2011 onwards)

Time : Three Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What do you mean by Open source software?

2. Define inode.

3. Define Linux Shell.

4. What is the difference between absolute path and relative path?

5. What is hello?

6. Define process.

7. How will you assign value to a shell variable?

8. What is the purpose of vi editor?

9. What is the purpose of continue command?

10. What do you mean by Quoting?

Part B (5 × 5 = 25)

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

11. (a) Explain the Linux Files.

Or

(b) Explain the various Linux system calls.

12. (a) Explain the Environment variable with an example.

Or

(b) Explain the various file permissions.

13. (a) Explain the background process.

Or

(b) Explain any Five internal commands with example.

14. (a) Explain the arithmetic in shell scripts with example.

Or

(b) Explain the find and replace command in shell programming with example.

15. (a) Write a shell program to demonstrate nested - if statement.

Or

(b) Explain for loop with an example.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain the Linux architecture.

17. Explain any Ten shell commands with example.

18. Explain the process scheduling.

19. Write a shell program to convert temperature in Celsius to Fahrenheit.

20. Write a shell program to print the Armstrong numbers between 100 and 2000.

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E–0376

Sub. Code
1BCA6C2

B.C.A. DEGREE EXAMINATION, APRIL 2019

Sixth Semester

Computer Application

COMPUTER NETWORKS

(CBCS 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What are the uses of Computer Networks?

2. Write the difference between Broadband and Narrowband.

3. What are the design issues of Data Link Layer?

4. What do you mean by Protocol?

5. What do you mean by Tunneling?

6. What is meant by Multicasting?

7. What are the services provided by Transport layer?

8. What do you mean by Upward Multiplexing?

9. What are the elements of Multimedia?

10. Define Cipher text.

Part B (5 × 5 = 25)

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

11. (a) Explain the Communication Satellite.

Or

(b) Explain the working of Telephone system with a diagram.

12. (a) Explain the Error correction code and Error detection code with an example.

Or

(b) Explain the Finite state model with a diagram.

13. (a) Explain any one congestion control algorithm.

Or

(b) Discuss the working of ICMP.

14. (a) Explain how connections are released by Transport layer protocols?

Or

(b) Explain the protocol for Gigabit networks

15. (a) Write short note on DNS.

Or

(b) Explain the Video compression process.

Part C (3 × 10 = 30)

Answer any THREE questions.

16. Explain the functions of Reference model.

17. Explain the Sliding window Protocol.

18. Explain any Two Routing algorithms.

19. Explain the Internet Transport protocols.

20. Explain the Public key algorithms.

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E–0398

Sub. Code
1BCA3C1

B.C.A. DEGREE EXAMINATION, APRIL 2019

Third Semester

Computer Application

DATABASE MANAGEMENT SYSTEMS

(CBCS 2011 onwards)

Time : Three Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is a semi structured Database?

2. What is a constraint?

3. What is a Domain? Give an example.

4. What is a Data Dictionary?

5. What is a centralized systems?

6. What is meant by Homogeneous Database?

7. What is a View?

8. Define Synonym.

9. What is a package?

10. Define Transaction.

Part B (5 × 5 = 25)

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

11. (a) Explain the extended E-R features.

Or

(b) Explain the functions of Database administrator.

12. (a) Explain the BCNF.

Or

(b) What is temporal data? Explain the modeling of Temporal data.

13. (a) Explain the Server system architecture

Or

(b) Explain the Distributed data storage.

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

Or

(b) How will you create and delete a Role? Explain with an example.

15. (a) Explain any five DML commands with example.

Or

(b) Explain Trigger with an example.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain the purpose of Database Management system.

17. Explain the decomposition using Functional dependencies.

18. Explain the distributed transaction with example.

19. How will you create an Index? Explain with an example.

20. Write a stored procedure to print ba multiplication table.

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E–0399

Sub. Code
1BCAE1A

B.C.A. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Computer Application

Elective : WEB DESIGN TECHNOLOGY

(CBCS 2011 onwards)

Time : Three Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What are the sections of a HTML document?

2. What is hyper link?

3. What is the difference between break and continue statement in java script?

4. What are the logical operators available in java script?

5. What is the difference between recursion and iteration?

6. What is string object? Give an example.

7. What is meant by object referencing ?

8. Define Data rendering.

9. What is Multimedia?

10. Write the syntax of the bgsound element.

Part B (5 × 5 = 25)

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

11. (a) Write a HTML program to create an Ordered list.

Or

(b) Explain the text formatting features available in HTML with example.

12. (a) Explain the while structure with an example.

Or

(b) Explain the Increment and decrement operators with an example.

13. (a) Explain any five methods in Math object with example.

Or

(b) Write a java script to find the square of a given number using function.

14. (a) Explain the features of Dynamic HTML.

Or

(b) Explain image mask with example.

15. (a) Explain binding to an img element with an example.

Or

(b) Explain time markers for path control.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write a HTML program to display your class time table.

17. Write a Java script to find the sum of the numbers that are divisible by 3 and not divisible by 5 between 100 and 200.

18. How will you pass an array to a function? Explain with a program.

19. Explain the following filters with example.

    (a) Flip filters (b) Advanced filters

20. How will you move the shapes? Explain with an example.

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E–0400

Sub. Code
1BCA6C1

B.C.A. DEGREE EXAMINATION, APRIL 2019

Sixth Semester

Computer Application

DATA MINING AND DATA WAREHOUSING

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What are the areas in which are data warehouses used?
2. What do you mean by data extraction?
3. What is the main role of data warehouse manager?
4. What is the difference between database and data warehouse?
5. Mention some of the application areas of data mining.
6. Give some data mining tools.
7. Where are decision trees mainly used?
8. What is OLTP?
9. What is Association rule?
10. Define Item set.

Part B (5 × 5 = 25)

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

11. (a) Explain the features of Data warehouse.

Or

(b) Write a short notes on Query manager.

12. (a) Write a short notes on Tuning queries.

Or

(b) Why do you need tools to manage a data warehouse?

13. (a) Give details on data mining versus knowledge discovery in databases.

Or

(b) Explain the Social implications of data mining.

14. (a) Explain decision tree-based algorithm.

Or

(b) Write a short notes on web search Engines.

15. (a) Write a short notes on Incremental rules.

Or

(b) How do you measure the quality of rule techniques?

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain the Data warehousing system processes.

17. Explain the Date warehousing query Manager.

18. Explain the different stages of Data mining.

19. Explain the operations in Genetic Algorithms.

20. Explain any one of the advanced association rule techniques.

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E–0401

Sub. Code
1BCASA1/ 1BCA1A1

UG DEGREE EXAMINATION, APRIL 2019

Computer Application

Allied — DISCRETE MATHEMATICS

(CBCS – 2011 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Disjunction. Draw the truth table.
2. Define tautology.
3. Define conjunctive Normal form.
4. Define quantifiers.
5. What is sub graph?
6. Define path and cycles.
7. What is culvertices?
8. Define Hamiltonian graph.
9. Define Lattices.
10. What is an Equivalence relation?

Part B (5 × 5 = 25)

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

11. (a) Explain if statements with examples.

Or

(b) Show that $[p \wedge (p \vee q)] \vee \sim p$ is a tautology.

12. (a) Obtain the principal disjunctive normal form of $\neg P \vee Q$.

Or

(b) Discuss in detail on open statements.

13. (a) Explain complete graph with examples.

Or

(b) Explain Isomorphic graph with examples.

14. (a) Explain prim's Algorithm to construct a minimum spanning tree.

Or

(b) Explain Eulerian graph with an example.

15. (a) Discuss the binary relation in a set.

Or

(b) Describe about special Lattices.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Discuss about Tautological implication formulae with distinct Truth Table.

17. Explain the theory of Interence for predicate calculus.

18. Explain the basic terminology of graph.

19. Explain the basic concept of spanning tree.

20. Discuss about Boolean functions.

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