

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION, APRIL 2022

B.C.A.

BCA 4C 08—COMPUTER GRAPHICS

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A*Answer at least **eight** questions.**Each question carries 3 marks.**All questions can be attended.**Overall Ceiling 24.*

1. Write short notes on bitmap and pixmap.
2. Explain CAD and Presentation Graphics as applications of computer graphics.
3. Explain Color Look up table.
4. How stair step appearance occurs in computer graphics.
5. How to remove a window border in GIMP ?
6. How will you retrieve the current frame buffer intensity setting for a specified location ?
7. What is polygon filling ?
8. What is Shear ?
9. Distinguish between window and viewport.
10. Explain the basic principles of line clipping algorithm.
11. Explain how to perform Scaling with respect to a selected fixed position.
12. What is scan conversion ?

(8 × 3 = 24 marks)

Turn over

Section B

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. Explain the sequence of transformations in windowing.
14. Distinguish between active and passive matrix LCD displays.
15. Explain the transformation matrix to perform two successive scaling operations.
16. Explain any *five* applications of computer graphics.
17. Explain the procedure to check the position of a point with respect to the clip window
18. How do we merge an image from a file to the current image in gimp ?
19. Explain different types of LED monitors.

(5 × 5 = 25 marks)

Section C

Answer any one question.

The question carries 11 marks.

20. Briefly explain the working of LCD displays with the help of block diagrams.
21. Explain in detail the various standards primaries and chromaticity diagram used in color models.

(1 × 11 = 11 marks)

**FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2022**

B.C.A.

BCA 4C 07—E-COMMERCE

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A

*Answer at least **eight** questions.*

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 24.

1. What is WWW ?
2. What is Skimming ?
3. Write a note on Software agents.
4. Define Domain name.
5. Define Copyright.
6. Define Internet Protocol with example.
7. Define Hyperlink.
8. Define IP address.
9. What is HTML ? Advantages of using HTML.
10. What is on-line marketing?
11. What is E-Cheque ?
12. Define Web Server.

(8 × 3 = 24 marks)

Turn over

Section B

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. Explain client-server architecture using HTTP.
14. Explain Business model for E-Commerce.
15. Write a note on ISP.
16. Explain different factors influencing the success of E-Commerce.
17. What are the main advantages of Internet Banking ?
18. Write the limitations of Traditional marketing.
19. Explain Internet Advertising in detail.

(5 × 5 = 25 marks)

Section C

Answer any one question.

The question carries 11 marks.

20. Explain different E-transitions challenges for Indian Corporates.
21. Explain about E-cash and properties of E-cash.

(1 × 11 = 11 marks)

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION, APRIL 2022

B.C.A./Computer Science

BCA 4B 05/BCS 4B 04—DATABASE MANAGEMENT SYSTEM AND RDBMS

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answer Type Questions)*Answer at least **eight** questions.**Each question carries 3 marks.**All questions can be attended.**Overall Ceiling 24.*

1. What are the responsibilities of DBA ?
2. What are the different Relationship Sets ? Explain.
3. Explain the use of foreign key constraint ?
4. Define Relationship and Relationship set ?
5. Write short notes on tuple relational calculus.
6. Discuss how can you change the data in the table ?
7. Define correlated nested queries.
8. Discuss about different operators used in algebra.
9. Define transaction management.
10. Advantages and Disadvantages of Stored Procedures.
11. Write a note on DDL, DML.
12. Discuss how can you change the data in the table ?

(8 × 3 = 24 marks)

Turn over

Section B (Short Essay Type Questions)

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. What are the different types of data model ? Discuss about Database users.
14. Draw the ER diagram for a company needs to store information about employees (identified by CEN, with salary and phone as attributes), departments (identified by Dno, with Dname and budget as attributes), and children of employees (with Cname and Cage as attributes). Employees work in departments, each department is managed by an employee, a child must be identified uniquely by name when the parent (who is an employee ; assume that only one parent works for the company) is known. We are not interested in information about a child once the parent leaves the company
15. Write a short note on Relational model and Entity-Relationship model.
16. Define First Normal and fourth Form.
17. What is the use of group by clause ? And Discuss about the how to drop tables ?
18. How to use and working of the cursors - fetch, move, update, delete, close ?
19. Define decomposition and how does it address redundancy ? Discuss the problems that may be caused by the use of decompositions ?

(5 × 5 = 25 marks)

Section C (Essay Type Questions)

Answer any one question.

The question carries 11 marks.

20. (a) Compare and Contrast, file Systems with DBMS ?
(b) What is the use of groupby and having clauses ? Explain with examples.
21. (a) How Passing and Returning data to and from Stored Procedures. Explain with example.
(b) What is an Attribute ? Explain types of attributes used in ER how it represented in ER diagram ?

[1 × 11 = 11 marks]

FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, APRIL 2022

B.C.A.

BCA4C08—COMPUTER GRAPHICS

(2017—2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Write short answer on all questions.**Each question carries 1 mark.*

1. What is aspect ratio ?
2. What is a bitmap ?
3. What is random scan ?
4. What is a pixel ?
5. What do you mean by horizontal retrace ?
6. What is world co-ordinate system ?
7. What is a frame buffer ?
8. Name two types of beam refreshing in raster scan.
9. Mention 2 popular algorithms for generating circles.
10. Name the 2D transformation in which the object is rotated 180°.

(10 × 1 = 10 marks)

Part B*Write a paragraph on all questions.**Each question carries 2 marks.*

11. Distinguish between uniform scaling and differential scaling.
12. What are output primitives ?
13. Explain the concept of point clipping.

· **Turn over**

14. What is YIQ ?
15. Mention any two advantages of shadow mask CRT.
16. Differentiate between window port and view port.
17. What do you mean by scan converting a straight line ?
18. Draw the representation of 9 regions using 4 bits in Cohen Sutherland line clipping.
(8 × 2 = 16 marks)

Part C

Write short essay on any six questions.

Each question carries 4 marks.

19. Explain 2D composite transformations.
20. Explain the working of liquid crystal display.
21. Explain raster scan displays.
22. Explain the concept of boundary fill algorithm.
23. Write the matrices for all two-dimensional transformation in homogeneous co-ordinate.
24. How CMY color model differ from RGB color model ?
25. Explain the use of GIMP crop for images.
26. Explain different types of shearing.
27. How composition of 2 scaling can be represented ?

(6 × 4 = 24 marks)

Part D

Write essays on any three questions.

Each question carries 10 marks.

28. Explain Bresenham's line drawing algorithm.
29. Explain the working of CRT with a diagram.

30. Briefly explain Sutherland Hodgeman polygon clipping algorithm.
31. Explain the following 2D transformations :—
- Translation.
 - Rotation.
 - Scaling.
 - Reflection.
32. Explain the features of GIMP.

(3 × 10 = 30 marks)

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**FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
APRIL 2022**

B.C.A.

BCA 4C 07—E-COMMERCE

(2017—2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Write short answer on all questions.

Each question carries 1 mark.

1. What is EDI ?
2. What is C2C ?
3. Mention any *two* types of aggregators.
4. What is ISP ?
5. Name 2 foundation protocols in Internet protocol suite.
6. What is the need for Web presence in E-commerce ?
7. What is spiral branding ?
8. What do you mean by Copyright ?
9. What is E-cash ?
10. What do you mean by mobile payments ?

(10 × 1 = 10 marks)

Part B

Write a paragraph on all questions.

Each question carries 2 marks.

11. What are Metamediaries ?
12. What is a value chain business model ?
13. Explain a network switch.

Turn over

14. What is SMTP ? How does it work ?
15. What is a software agent ?
16. What is online marketing ?
17. Mention any *four* methods of E-advertising.
18. What is an E-wallet ?

(8 × 2 = 16 marks)

Part C

*Write short essay on any six questions.
Each question carries 4 marks.*

19. Explain B2B and B2C E-business models.
20. Write notes on Infomediary business model.
21. Explain affiliate E-business model.
22. Write notes on IPv6.
23. What are the factors to be considered for maintaining a Website ?
24. Explain the benefits of E-branding.
25. Write notes on Internet gambling.
26. Explain the concept of Bitcoin.
27. Explain the benefits of E-payment system to buyers.

(6 × 4 = 24 marks)

Part D

*Write essays on any three questions.
Each question carries 10 marks.*

28. Explain the brokerage model and aggregator model of E-business.
29. Explain the advantages and disadvantages of E-marketing.
30. Explain different types of E-payment systems.
31. Explain symmetric key and asymmetric key cryptography with diagrams.
32. Explain the classification of new payment systems.

(3 × 10 = 30 marks)

FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, APRIL 2022

B.C.A.

BCA4B05—DATABASE MANAGEMENT SYSTEM AND RDBMS

(2017—2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Write short answer on all questions.**Each question carries 1 mark.*

1. What do you mean by single valued attribute ? Give an example.
2. Give the expansions for DDL and DML.
3. What is the use of GROUP BY and HAVING clause in SQL ?
4. Define entity in DBMS.
5. Define the term database integrity .
6. What is the purpose of the keyword DESC in an SQL statement ?
7. Give an example for INSERT statement in SQL.
8. What is the use of NOT NULL ?
9. What do you mean by partial participation ?
10. What is a candidate key ?

(10 × 1 = 10 marks)

Part B*Write a paragraph on all questions.**Each question carries 2 marks.*

11. Differentiate attribute and metadata.
12. What do you mean by referential integrity ?
13. Explain deletion anomaly with an example.

Turn over

14. Give an SQL query to illustrate the usage of : a) BETWEEN ; and b) LIKE.
15. What is the purpose of FETCH in a cursor ?
16. What happens when EXIT is used inside a loop in PL/SQL ?
17. Differentiate the DELETE and DROP commands in SQL.
18. What do you mean by row-level locking ?

(8 × 2 = 16 marks)

Part C

Write short essay on any six questions.

Each question carries 4 marks.

19. Explain functional dependency with an example.
20. Explain projection operation in relational algebra.
21. Explain set difference in SQL with an example.
22. What is a weak entity ? Explain with an example.
23. Explain specialization in ER model.
24. Explain binary locks in concurrency control.
25. Explain the three-schema architecture with a diagram.
26. Explain implicit cursor with an example.
27. Consider a table named emp_table. Write a procedure to update the salary of employee with 1000.

(6 × 4 = 24 marks)

Part D

Write essays on any three questions.

Each question carries 10 marks.

28. Explain the first, second and third normal forms in detail with examples.
29. Discuss different types of JOIN operations in SQL.
30. Explain in detail, the components of DBMS.
31. Explain with example, loseless decomposition in DBMS.

32. Create DEPT table with the following structure (DEPTNO, DNAME, LOC) and EMP table with the following fields (EMPNO, ENAME, JOB, DEPTNO, SAL) Allow NULL for all columns except ENAME and JOB :

- a) Update the emp table to set the salary of all employees to Rs. 15000/ who are working as Manager.
- b) Delete only those who are working as Clerk.
- c) List the records in the emp table order by salary in descending order.
- d) Display deptno from the table employee avoiding the duplicated values.
- e) List the empno, empname, deptnames in which all employees are working.

(3 × 10 = 30 marks)

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**FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
APRIL 2022**

B.C.A.

BCA 4C 08—MANAGEMENT INFORMATION SYSTEM

(2014—2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. Prototype is a _____.
 - a) Working model of existing system.
 - b) Mini model of existing system.
 - c) Mini model of processed system.
 - d) None of these.
2. _____ refers to the holism of the system in real time.
 - a) Organisation.
 - b) Integration.
 - c) Interaction.
 - d) Central objective.
3. _____ is an integrated user machine system for providing information.
 - a) EDP.
 - b) EDI.
 - c) TPS.
 - d) MIS.
4. Top level managers use :
 - a) Tactical information.
 - b) Strategic information.
 - c) Operational information.
 - d) None of the above.
5. A system is called _____ when the inputs, process and the outputs are known with certainty.
 - a) Probabilistic.
 - b) Deterministic.
 - c) Adaptive.
 - d) Social.

Turn over

6. Office automation system include the application of computer based office oriented technologies such as :
- a) Word processor.
 - b) DTP.
 - c) Email.
 - d) All of these.
7. Data integrity refers to the :
- a) Simplicity of data.
 - b) The validity of data.
 - c) The privacy of data.
 - d) The security of data.
8. Information is :
- a) Data.
 - b) Manipulated input.
 - c) Processed Data.
 - d) Computer output.
9. _____ level system keep a track on the daily regular business transaction of the organisation.
- a) Management level.
 - b) Operational level.
 - c) Strategic level.
 - d) Executive level.
10. _____ is a time related attributes of information which influence its quality
- a) Currency.
 - b) Accuracy.
 - c) Clarity.
 - d) Completeness.

(10 × 1 = 10 marks)

Part B

Answer all questions.

Each question carries 2 marks.

- 11. Define management information system.
- 12. What do you mean by boundary of a system ?
- 13. What do you mean by unstructured decisions ?
- 14. What is Cognition ?
- 15. What is TPS ?

(5 × 2 = 10 marks)

Part C

Answer any five questions.

Each question carries 4 marks.

16. What is system analysis ? What are the steps in it ?
17. Discuss the major phases involved in decision making process ?
18. Explain the Newell - Simon Model of Human Information Processing System.
19. Explain the general model of the Human as an information processor.
20. Discuss the characteristics of MIS.
21. What is a System ? Differentiate between deterministic and probabilistic system.
22. Explain any *two* behavioural models of decision maker.
23. Briefly explain the information system for strategic planning of an organization.

(5 × 4 = 20 marks)

Part D

Answer any five questions.

Each question carries 8 marks.

24. Discuss on the tentative limits on Human Information Processing.
25. What are the major modifications of basic organizational structure ? Explain in detail.
26. Describe the basic models of organizational structure.
27. Describe the role of Management Information System in a business Organization.
28. What do you mean by quality of information ? Explain the various attributes.
29. Explain the structure of management information system based on levels management activity.
30. Explain SDLC approach to the system development.
31. Explain organisation as socio-technical system.

(5 × 8 = 40 marks)

FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
APRIL 2022

B.C.A.

BCA 4C 07—E-COMMERCE

(2014—2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

I. Answer *all* questions from the following. Each question carries 1 mark :

- 1 Creating illegitimate sites that appear to be published by established organisations are known by _____.
- 2 SET means _____.
- 3 A product that has a strong _____ identity is easier to sell over the Web than an unbranded item.
- 4 The _____ is a kind of e-commerce, which refers to a company selling or buying from other companies.
- 5 _____ are used for signing and endorsing electronic cheques.
- 6 Electronic exchange of business documents in a standard format is known as :
 - (a) E-Commerce.
 - (b) E-Business.
 - (c) EDI.
 - (d) None of these.
- 7 This acts like a gatekeeper that examines each user's identification before allowing them to enter to the organizations internal networks :
 - (a) Antivirus program.
 - (b) Firewall.
 - (c) Biometrics.
 - (d) None of these.
- 8 This type of network does not allow an external user to access the company data :
 - (a) Internet.
 - (b) Intranet.
 - (c) Extranet.
 - (d) None of these.

9 These are mega portals dealing in wide range of topics :

- (a) Horizontal. (b) Vertical.
(c) Enterprise. (d) None of these.

10 The attacker monitors the data between the shopper's computer and the server :

- (a) Sniffing. (b) Spoofing.
(c) Snooping. (d) None of these.

(10 × 1 = 10 marks)

II. Answer any *eight* questions from the following. Each question carries 2 marks :

- 11 What types of product are suitable for e-commerce ?
12 What is B2C e-commerce ?
13 Give a note on Virtual reality.
14 What is micro payment system ?
15 What do you mean by encryption ?
16 Explain advertorials and e-zines.
17 What is E-branding ?
18 Define WAN
19 What is Copyright ?
20 Discuss television retailing ?

(8 × 2 = 16 marks)

III. Answer any *six* questions from the following. Each question carries 4 marks :

- 21 What are the problems and challenges of e-commerce ?
22 State the important security tools used to protect information pertaining to e-commerce.
23 Who are the participants of internet payment processing system ?
24 Discuss the E-transition challenges for Corporates.
25 Explain the information security environment in India.
26 Give an account on Internet standards.
27 What are the factors to be considered for making e-commerce successful ?
28 Explain the important traffic generating methods for web site.

(6 × 4 = 24 marks)

IV. Answer any *two* questions from the following. Each question carries 15 marks :

29 Explain different models of internet advertising.

30 What is e-commerce ? Explain the importance and benefits of e-commerce.

31 Discuss various methods generally used to manage risk in e-commerce.

(2 × 15 = 30 marks)

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FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, APRIL 2022

B.C.A.

BCA4B05—VISUAL PROGRAMMING USING C#.NET

(2014—2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

1. Expand CLR.
2. _____ describes set of data types that can be used in different .Net languages in common.
3. When a class is declared _____, it cannot be inherited.
4. _____ methods enable us to add methods to existing types without creating a new derived type, recompiling, or otherwise modifying the original type.
5. MDI stands for _____.
6. The _____ keyword is used to explicitly check overflow and conversion of integral type values at compile time.
7. Function overloading is an example of _____ time polymorphism.
8. A _____ is designed for providing a way to keep one set of names separate from another.
9. The operation of converting a Value Type to a Reference Type is called _____.
10. C# provides the ability to have a single class implementation in multiple .cs files using the _____ modifier keyword.

(10 × 1 = 10 marks)

Part B*Answer all questions.**Each question carries 2 marks.*

11. What is ADO.NET ?
12. What is Windows Communication Foundation ?

Turn over

13. What is a parameterized constructor ?
14. What is an interface ?
15. What do you mean by abstract methods ?

(5 × 2 = 10 marks)

Part C

*Answer any five questions.
Each question carries 4 marks.*

16. Explain the #define pre-processor with an example.
17. Explain single inheritance with an example.
18. Explain with an example the use of *this* keyword.
19. What is operator overloading ?
20. Explain mutators in C#.
21. Explain nested classes with an example.
22. Write the connection string to connect C#.net to a database.
23. Explain C# button control.

(5 × 4 = 20 marks)

Part D

*Answer any five questions.
Each question carries 8 marks.*

24. Explain the components of .NET framework.
25. Explain the operators used in C#.
26. Explain jump statements with examples.
27. Discuss various data types used in C#.
28. Explain how you will handle exceptions in C #.
29. Explain abstract classes and methods with example.
30. Explain Treeview control in C#.
31. Explain the architecture of ADO.NET.

(5 × 8 = 40 marks)

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2022

(CBCSS—UG)

B.C.A.

BCA 6B 16. (E)—FUNDAMENTALS OF LIFE SKILL EDUCATION

(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answer Type Questions)*Answer at least eight questions.**Each question carries 3 marks.**All questions can be attended.**Overall Ceiling 24.*

1. Define soft skill.
2. What is Feedback ?
3. Define Conflict.
4. Define Noise.
5. Define Guidance.
6. What is social intelligence ?
7. Discuss the different types of communication.
8. Write a note on self awareness.
9. What is critical thinking ?
10. What are the types of stress ?
11. What are the benefits of self-management ?
12. What are the objectives of coaching ?

(8 × 3 = 24 marks)

Turn over

Section B (Short Essay Type Questions)

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. The goal of the life skills approach is to promote healthy, sociable behaviour. Comment.
14. Write a note on positive and negative self talk.
15. What is the process of communication ?
16. What are five things that should be included on a resume ?
17. What is the purpose of self management ?
18. What does Research say about the Outcomes of Life Skills-Based Education ?
19. What are the principles of good communication ?

(5 × 5 = 25 marks)

Section C (Essay Type Questions)

Answer any one question.

The question carries 11 marks.

20. Write an essay on 'Need of technology in communication'.
21. Discuss the role of life skills in education.

(1 × 11 = 11 marks)

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2022

(CBCSS-UG)

B.C.A.

BCA 6B 16 (D)—TECHNICAL WRITING

(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A

Answer atleast eight questions.

Each question carries 3 marks.

All questions can be attended.

Overall ceiling 24.

1. What is encoding ?
2. What role does feedback play in the process of communication ?
3. What is a technical proposal ?
4. What is the importance of a conference ?
5. Write two barriers to effective communication.
6. What do you mean by voice dynamics ?
7. What is group discussion ?
8. What is a Memo ?
9. What do you understand from the term Kinesics ?
10. What do you mean Tender Notice ?
11. What are the essentials of a good business letter ?
12. What are the advantages of written communication over oral communication ?

(8 × 3 = 24 marks)

Turn over

Section B

Answer atleast five questions.

Each question carries 5 marks.

All questions can be attended.

Overall ceiling 25.

13. Write a technical letter to the newspaper editor regarding printing mistakes in the newspaper
14. "Communication means the process of passing information and understanding from one person to another". Explain.
15. What do you mean by basic technical writing ? How important is technical communication ?
16. Explain the main barriers of communication.
17. Discuss the role of Fax, email and video conferencing in communication.
18. What are the Uses of internet ?
19. What are the various steps involved in conducting an interview ? Explain.

(5 × 5 = 25 marks)

Section C

Answer any one questions.

The question carries 11 marks.

20. Define Communication. Write Essentials of Good Communication.
21. Draft a job application for the post of an Accounts Officer in a leading MNC, as advertised in a leading national daily.

(1 × 11 = 11 marks)