UG–A-1233 **BCA–07X**

B.C.A. DEGREE EXAMINATION — JULY, 2022.

Computer Applications

[CY 2020 & AY 2020 batches onwards]

Second Year

WINDOWS PROGRAMMING

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. What is project?

2. What is mean by properties window?

3. Write a note on variant data type.

4. What is meant by OLE drag and drop?

5. Explain about “GOTO” statement.

PART B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. How to create, run and save a simple project in VB?

7. Explain the Keyboard Events with example.

8. Write a VB program to find maximum of given n integer.

9. How to use data control to access an external database?

10. List and explain any six string functions in VB.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Briefly explain what are steps involves to create a drop down menu in VB.

12. Explain various form properties with example.

13. Discuss the various data types in Visual Basic.

14. How do you create ActiveX control project? Discuss with example.

15. What are control arrays? Explain the two ways of creating control arrays with examples.

16. Describe in detail, function procedures with examples.

17. Write a VB program to implement binary search.

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UG–A-1234 **BCA–08X**

B.C.A. DEGREE EXAMINATION — JULY, 2022.

Computer Applications

Second Year

(CY 2020 & AY 2020 Batches Onwards)

MULTIMEDIA

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions.

1. What is meant by multimedia?
2. Give the applications of Multimedia.
3. What is Hypertext?
4. What is the role of Interface designer?
5. List the uses of animation

PART B — (3 × 7 = 21 marks)

Answer any THREE questions.

6. Briefly explain Multimedia Software.
7. Discuss how the multimedia is used in business and education field.

8. Explain in detail about authoring in multimedia.

9. Distinguish between a story, a script and a storyboard, stating their purposes.

10. Explain various types of audio file formats.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Explain how text and sound are used in multimedia development.

12. Describe how multimedia can be used in distributed learning environment.

13. Write short notes on:

(a) Icon Author

(b) ImageQ

14. Explain how to apply the psychology of learning to interface design.

15. What Audio? Discuss Audio applications and Audio capture.

16. Explain how text and sound are used in multimedia development.

17. Explain in detail about various animation and special effects.

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UG-A-1235 **BCA-09X**

U.G. DEGREE EXAMINATION — JULY 2022.

Computer Applications

(From CY – 2020 onwards)

Second Year

RELATIONAL DATABASE MANAGEMENT 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. What is DBMS?
2. Definition: Normalization.
3. What mean by Queries?
4. What is creating a form?
5. Give the example ER diagram.

PART B — $(3 \times 7 = 21$ marks)

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

All questions carry equal marks.

6. What is RDBMS? Write its objectives.

7. Explain Single-valued dependencies in detail.

8. What are the types of forms? Explain any one in detail.

9. Write the steps for Opening a Database and Creating Database.

10. What are the objectives of normalization?

PART C — $(4 \times 10 = 40$ marks)

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

11. Explain Relational Data Integrity and Data Dictionary in detail.

12. With suitable example, Explain Fourth and Fifth Normal Form in detail.

13. Construct ER diagram for Banking system.

14. Explain the following SQL Statements (a) DROP (b) UPDATE (c) DELETE (d) GRANT (e) TRUNCATE

15. Write steps for sorting records and Creating a Query

16. What are the types of Reports? Explain any two in detail?

17. Explain views and security using SQL in detail.

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UG–A–1236 **BCA–10X**

U.G. DEGREE EXAMINATION —
JULY, 2022.

Computer Applications

(From CY – 2020 Onwards)

Second Year

COMPUTER NETWORK

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 *TCP/I*P?

2. Definition Data link layer.

3. What is repeaters?

4. What is a *Switches*?

5. What is a *Infrared*?

PART B — (3 × 7 = 21 marks)

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

All questions carry equal marks

6. Difference between LAN and WAN?

7. Explain about IEEE 802.5 Token Ring.

8. Explain about Transport Layer Services.

9. Discuss ATM networking details.

10. Write in detail about modems.

PART C — (4 × 10 = 40 marks)

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

All questions carry equal marks.

11. Explain in detail the structure and functions of OSI reference model?

12. Describe the Broadband ISDN?

13. Discuss in detail the pure ALOHA and slotted ALOHA systems.

14. Explain the WWW in detail.

15. How the shortest path routing technique used in routing algorithm? Explain.

16. Explain in detail about Congestion Control Algorithms.

17. Explain in detail about gateway.

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UG-A-1237 BCA-11X

U.G. DEGREE EXAMINATION –
JULY, 2022.

Computer Applications

(From CY – 2020 onwards)

Second Year

INTRODUCTION TO SOFTWARE ENGINEERING

Time : 3 hours Maximum marks : 70

PART A — ($3 \times 3 = 9$ marks)

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

All questions carry equal marks.

1. What is Software Engineering?

2. What mean by the role of system analyst.

3. Definition: Scheduling plan.

4. What is software Analysis?

5. What is Unit testing?

PART B — ($3 \times 7 = 21$ marks)

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

All questions carry equal marks.

6. Describe about the fourth generation techniques.

7. Explain the need for software project planning.

8. Discuss the Software quality assurance.

9. Write a brief note on integration testing.

10. Write in detail about Risk Identification.

PART C — ($4 \times 10 = 40$ marks)

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

All questions carry equal marks.

11. Explain the cost estimation procedure using COCOMO model.

12. Explain about planning the development process in detail.

13. Discuss typical software risks.

14. Explain about the RAD model.

15. Explain various project size categories.

16. Discuss about project planning and control.

17. Explain Boehm Software Quality Model.

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UG–A-1238 **BCA–12X**

U.G. DEGREE EXAMINATION — JULY 2022.

Computer Applications

(From CY – 2020 Onwards)

Second Year

COMPUTER ORIENTED NUMERICAL METHODS

Time : 3 hours Maximum marks : 70

PART A — ($3 \times 3 = 9$ marks)

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

All questions carry equal marks.

1. What is Errors?
2. Explain Cramer's rule.
3. What is Interpolation?
4. What is mean by quadratic formula?
5. Give the example polynomial regression.

PART B — (3 × 7 = 21 marks)

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

6. The standard weight of a special purpose brick is 5 kg and it contains two basic ingredients B_1 and B_2. B_1 costs Rs. 5 per kg and B_2 costs Rs. 8 per kg. Strength considerations dictate that the brick should contain not more than 4 kg of B_1 and a minimum of 2 kg of B_2. Since the demand for the product is likely to be related to the price of the brick, formulate this as an LPP to find out the minimum cost of the brick satisfying the above conditions.

7. Solve the equation $\frac{dy}{dx}=1-y$ with the initial condition $x=0, y=0$, using Euler's method and tabulate the solutions at $x=0.1$ and 0.2.

8. Solve the following assignment problem :

	A	B	C
I	120	100	80
II	8	90	110
III	110	140	120

9. A firm considering replacement of a machine, whose cost price is 12,000 and the scrap value Rs. 200. The maintenance and operating costs are found as follows :

Year :	1	2	3	4	5	6	7	8
Running cost (Rs.) :	200	500	800	1200	1800	2500	3200	4000

When should the machine be replaced?

10. Describe any one Iterative method of solving systems of simultaneous linear equations.

PART C — (4 × 10 = 40 marks)

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

All questions carry equal marks.

11. Model building is the essence Operation Research. Exemplify with examples.

12. Solve the following transportation problem :

	D_1	D_2	D_3	Supply
S_1	8	5	6	120
S_2	15	10	12	80
S_3	3	9	10	80
Demand	150	80	50	280

Does it a unique solution? If not, what are the other alternatives?

13. Solve the following system of equation by Gauss-Seidal iteration method :

$10x_1 + 2x_2 + x_3 = 9$; $2x_1 + 20x_2 - 2x_3 = -44$;
$-2x_1 + 3x_2 + 10x_3 = 2$.

14. Derive the Newton's backward interpolation formula.

15. (a) Explain Bisection method.

(b) Use Lagrange's interpolation formula to fit a polynomial to the data :

X :	0	1	3	4
Y :	–12	0	6	12

Find the value of y when $x = 2$.

16. (a) Solve $\frac{dy}{dx} = 1 - y$, $y(0) = 0$ using Euler's method. Find y at $x = 0.1$ and $x = 0.2$. Compare the result with results of the exact solution.

(b) Find by Regula-Falsi method, the positive root of $x^2 - \log_{10} x - 12 = 0$.

17. Fit a curve of the form $y = ax^b + c$ to the following data using the group average method :

X :	2	3	4	5	6	7	8	9
Y :	18	33	52	80	112	153	197	248