B.C.A. DEGREE EXAMINATION – DECEMBER 2019.

Second Year

WINDOWS PROGRAMMING

(Including Lateral Entry)

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. What is dialog box? Explain how is created in windows.

2. Describe any four features of Visual Basic.

3. How do you build a Dynamic form at run time?

4. Explain how to use timer control in VB application.

5. What are Intrinsic controls?

6. Discuss the need of control array.

7. Describe WINAPI.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain how to create and run a simple project in VB.

9. What is IDE? Discuss the features of Visual Basic IDE?

10. What do you understand by mouse event? Explain how will you position a control using mouse event?

11. Write short note on scope rules.

12. Discuss the different types of loops in VB and write coding to find the sum of odd integers (i.e. S =1 + 3 + 5 + +N)

13. What is menu? Explain the steps of creating a menu with a suitable example.

14. Create an application program to accept student information and display it using message box. Give the design, properties and code.

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B.C.A. DEGREE EXAMINATION DECEMBER 2019.

Second Year

MULTIMEDIA

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Define Multimedia and its types.

2. Write short notes on Animation.

3. Describe how multimedia is used in publishing industry.

4. Discuss about knowledge transfer of multimedia.

5. Write short notes on Everest authoring system.

6. Write short notes on program storyboard.

7. Brief note on Image Q.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the components of multimedia in detail.

9. Briefly explain the hardware requirements for multimedia.

10. What is Authoring tools? Explain Authorware.

11. Explain multimedia in Business industry.

12. What is Hypertext? Explain the elements of hypertext.

13. Discuss briefly about multimedia development tools.

14. Explain copyright issue in detail.

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UG–396	BCA–09

B.C.A. DEGREE EXAMINATION — DECEMBER, 2019.

Second Year

RELATIONAL DATABASE MANAGEMENT SYSTEMS

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Write short note on Relational model with example.

2. What is Relational data integrity?

3. What is the role of Normalization in database management?

4. Write the rules of BCNF with example.

5. Describe about Functional dependencies.

6. Write the steps for Table creation in MS ACCESS.

7. How does sorting is performed in MS ACCESS.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the components of ER Diagram in detail.

9. Describe in detail about Relational model definitions.

10. Elaborate single valued normalization.

11. Discuss in detail about Creation of Forms in MS Access.

12. Illustrate the creation queries in MS ACCESS with clear diagrams.

13. Explain the Field data types of an Access table.

14. Write the steps for Creation of reports in design view with MS Access.

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UG – 397	BCA–10

B.C.A. DEGREE EXAMINATION — DECEMBER, 2019.

Second Year

COMPUTER NETWORK

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions

1. Write short note on LAN, WAN and MAN.

2. What are the uses of computer networks?

3. Describe about elementary data link protocols?

4. Write notes on ALOHA Protocol?

5. What are the design issues of Network layer?

6. Write about Email and WWW?

7. What is the role of Brides in network data transmission?

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8.   Explain OSI reference model in detail

9.   Elaborate Transmission media with necessary diagrams.

10. Describe Data link layer design issues?

11. Write a detailed note on Routing algorithms?

12. Explain about transport layer protocols?

13. Discuss about Network devices in detail?

14. Explain TCP / IP reference model layers?

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B.C.A. DEGREE EXAMINATION — DECEMBER, 2019.

Second Year

Computer Applications

INTRODUCTION TO SOFTWARE ENGINEERING

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Write about Linear Sequential method.

2. Explain fourth generation techniques.

3. Describe the planning objectives for a product.

4. Explain software project estimation.

5. What are the Quality Assurance Activities?

6. Write in detail about Behavioural Modeling.

7. Give a brief note on integration testing.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the phases in Software development.

9. Explain the role of System Analyst.

10. Write in detail about Project standards and Outsourcing.

11. Discuss about Software formal technical reviews.

12. Give a detailed note on Software Configuration management.

13. Explain Specification Modeling and Information flow detail.

14. Explain the Art of debugging.

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UG-399	BCA-12

B.C.A. DEGREE EXAMINATION – DECEMBER 2019.

Second Year

COMPUTER ORIENTED NUMERICAL METHODS

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Find the real root of the equation $x^3 - 9x + 1 = 0$ by Regula - Falsi method.

2. Find the real root of $x^3 - x - 1 = 0$ using bisection method.

3. Solve the system with three variables by Cramer's Rule.

4. Write the basic steps to solve a linear equation problem using Gauss Elimination method.

5. Find f(3) for

x	0	1	2	4	5	6
f	1	14	15	5	6	19

By Newton's divided difference formula.

6. Find f(0.15) using Newton backward difference table from the data

x	f(x)	∇f	$\nabla^2 f$	$\nabla^3 f$	$\nabla^4 f$
0.1	0.09983				
		0.09884			
0.2	0.19867		−0.00199		
		0.09685		−0.00156	
0.3	0.29552		−0.00355		0.00121
		0.0939		−0.00035	
0.4	0.38942		−0.0039		
		0.09			
03	0.47943				

7. Write note on Simpson's Rule with necessary diagrams.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Find a root of $x^4 - x - 10 = 0$

Consider $g1(x) = 10 / (x^3 - 1)$ and the fixed point iterative scheme

$x_{i+1} = 10 / (x_i^3 - 1)$, i = 0, 1, 2,. . .let the initial guess x_0 be 2.0

9. Solve the following system of linear equations using Gauss-Jordan elimination.

$6x + 8y + 6z + 3w = -3$

$6x - 8y + 6z - 3w = 3$

$8y - 6w = 6$

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10. Solve the Equations 2x + 5y = 16, 3x + y = 11 using Gauss Seidel method.

11. Interpolate the value of the function corresponding to X = 4X = 4 using Lagrange's interpolation formula from the following set of data:

X	2	3	5	8	12
f(X):	10	15	25	40	60

12. Using least square method fit the straight line to the following data.

X	1	2	3	4	5
Y	1	2	3	4	5

13. Obtain the Newton's forward interpolating polynomial, $P_5(x)$ for the following tabular data and interpolate the value of the function at $x = 0.0045$.

14. Approximate $\int_{-1}^{1} \sin^2(x)\cos(x)dx$ using Gaussian Quadrature. Evaluate the problem symbolically.

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