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BCA 5th Semester (Full & Re-appear)

Examination, December-2024

MANAGEMENT INFORMATION SYSTEM

Paper : BCA-301

Time allowed : 3 hours] *[Maximum marks : 80*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :** Attempt **five** questions in all, selecting **one** question from each unit. **Question No. 1 is compulsory.

1. (a) What is EDP?

(b) Define Information.

(c) Explain MIS.

(d) What do you mean by System Approach?

(e) Define Structured Systems.

(f) Explain E-Commerce Applications.

(g) Define E-Business.

(h) Differentiate Data and information with example. 8×2=16

Unit–I

2. Define Information System with its types in detail. How information helps in decision making? 16

3. Explain : 16

(a) EDP

(b) DSS

(c) MIS

Unit–II

4. Explain MIS with its characteristics and components in detail. 16

5. Differentiate : 16

(a) Structured and unstructured Decision

(b) Formal vs Informal

Unit–

6. How we can design a Information System? V

7. (a) What are the Pitf

(b) What is the MIS?

U

8. Explain the concep Management Infor

9. (a) Define Decis and Contro

(b) Explain E-C

Unit–III

6. How we can design and analysis of Management Information System? Write in detail. 16

7. (a) What are the Pitfalls in MIS development? 8

   (b) What is the role of Implementation in MIS? 8

Unit–IV

8. Explain the concept of Financial and Production Management Information System in detail. 16

9. (a) Define Decision Support System for Planning and Controlling. 8

   (b) Explain E-Commerce Technologies. 8

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B.C.A. 5th Semester (Full & Reappear)

Examination, December - 2024

VISUAL BASIC

Paper -BCA-304

Time allowed : 3 hours] *[Maximum marks : 80*

Note : ***Question No. 1 is compulsory.*** *Attempt* ***five*** *questions in total, the* ***first being compulsory*** *and select* ***one*** *question from each unit.*

1. (a) Explain the code window. 2

(b) What is the relation between Event Procedures? 2

(c) Explain the common properties of a form. 2

(d) VB is an event-driven programming language. Justify it. 2

(e) Write the steps to create an MDI form. 2

(f) What do you mean by variables? What is its scope? 2

(g) What do you mean by sub-menu? 2

(h) Discuss the menu bar and toolbar in detail. 2

Unit - I

2. (a) What do you mean by Visual Programming and Non-Visual Programming? Explain in detail. 8

(b) What is form? How do we create and manage it? 8

3. (a) Differentiate between Procedural and Object-Oriented Programming Language in detail. 8

(b) What is an event? Discuss some of the events supported by VB objects. Also, explain the role of the event processor in VB. 8

Unit - II

4. What do you mean by variables? What is its scope? Explain the different variables used in VB. 16

5. What is data type? Describe the different user-defined data types supported by VB. 16

Unit - III

6. Disucss various decision and condition used in VB with examples. 16

7. (a) Describe looping statements in VB language with examples. 8

(b) What is an array and what are its types? Explain with an example. 8

Unit - IV

8. (a) Explain creating Menus, Sub Menus using example. 8

(b) What is the popup menu? How to create a Popup Menu? Explain. 8

9. Explain Functions. What do you mean by passing arguments by value and passing arguments by reference? Explain by taking suitable examples. 16

97678

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Computer Graphics

Paper : BCA-302

Time allowed : 3 hours] *[Maximum marks : 80*

Note : Question No. 1 is compulsory. *Attempt* ***four*** *questions by selecting* ***one*** *question from each unit. All questions carry equal marks.*

1. (a) What is 2D viewing transformation?

(b) What is 3D shearing?

(c) What is random scan system?

(d) Why Bresenham's line algorithm is preferred over DDA line algorithm?

(e) What are viewing coordinates? Illustrate.

(f) What is quadric surface?

(g) What is meant by coordinate systems transformation?

(h) What is interactive computer graphics? State its relevance. 8×2=16

Unit–I

2. (a) What is flood-fill algorithm? What is its relevance? Illustrate. 6

(b) What steps are required to plot a line whose slope is between 0 and 30° using Bresenham's method? Indicate which raster locations would be chosen by Bresenham's algorithm when scan-converting a line from screen coordinate (2, 5) to screen coordinate (6, 10). 10

3. Explain the following :

(a) Ellipse algorithm 8

(b) Plasma Displays 8

Unit–II

4. (a) What is Cyrus-beck Line Clipping algorithm? Illustrate through a suitable example. 7

(b) Find the normalization transformation that maps a window whose lower left corner is at (2,3) and upper right corner is at (7,9) onto : 9

(i) A viewport that is the entire normalized device screen and

(ii) A viewport that has lower left corner at (0, 0) and upper right corner $(\frac{1}{2}, \frac{1}{2})$.

5. Explain the following :

(a) 2D Shearing Transformation 8

(b) Sutherland-Hodgeman polygon clipping algorithm 8

Unit–III

6. (a) What are Bezier surfaces? How are these represented? Illustrate their relevance in graphics. 8

(b) What are polygon-rendering methods? Which is most popular? Justify your answer. 8

7. Explain the following :

(a) Hermite Curve 8

(b) Illumination Models 8

Unit–IV

8. (a) What is meant by viewing pipeline? Illustrate. 8

(b) What is general projection transform? How is it significant? Illustrate. 8

9. Explain the following :

(a) 3D Reflection 8

(b) 3D Composite Transformations 8

97679

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Data Communication and Networking

Paper : BCA-303

Time allowed : 3 hours] *[Maximum marks : 80*

Note : *Students shall be required to attempt five questions, selecting at least one question from each unit. All questions carry equal marks.* ***Question No. 1 will be compulsory.***

1. (a) What is Internetworking?

(b) What is Flooding?

(c) What is Repeater?

(d) What is Gateways?

(e) What is Data Rate?

(f) What is Baud Rate?

(g) What is Frame Relay?

(h) What is ATM? 8×2=16

Unit–I

2. (a) What is a computer network? Differentiate between connection-oriented and connectionless services. 8

   (b) Explain the Architecture of TCP/IP in detail with example. 8

3. Explain the following with example : 8+8=16

   (a) Network Design Issues and Protocols

   (b) Decentralized and Centralized Network

Unit–II

4. (a) Explain three ways to convert an analog signal into digital. 8

   (b) Draw the pulse diagram for bit stream 101110001011, for the following encoding techniques : 8

   (i) NRZ-L

   (ii) Manchester

   (iii) Differential Manchester

5. Explain the following with example : 4×4=16

   (a) Dialup Networking

   (b) Distributed Systems

   (c) Digital Carrier Systems

   (d) Switching and Multiplexing

Unit–III

6. (a) What is meant by Sliding Window Protocols? How is it useful in networks? Explain. 8

   (b) Write a short note on Media Access Control. 8

7. Explain the following with example : 8+8=16

   (a) Flow Control

   (b) Detection and Correction

   (c) Random Access Protocols

   (d) Wireless LAN

Unit–IV

8. Write a short note on : 6+6+4=16

   (a) Congestion control algorithms

   (b) Symmetric key algorithms

   (c) Hierarchical Routing

9. Explain the following with example : 4×4=16

   (a) Virtual Circuit and Datagrams

   (b) Distance Vector Routing

   (c) Link State Routing

   (d) Encryption Methods