

97677

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.

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- (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-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

BCA 5th Semester (Full & Re-appear)

Examination, December-2024

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. $8 \times 2 = 16$

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. ●
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. ●
9. Explain the following :
- (a) 3D Reflection 8
- (b) 3D Composite Transformations 8

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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 : $4 \times 4 = 16$
- (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

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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

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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. Discuss 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