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BCACAC 260

IV Semester B.C.A. Degree Examination, April/May 2019

(Credit Based Semester Scheme)

(Common to All Batches)

Computer Graphics and Multimedia

Time : 3 Hours]

[Max. Marks : 80

Instructions : Answer any ten questions from Part - A and one full question from each Unit in Part - B.

PART - A

(10 × 2 = 20)

1. Answer **any ten** of the following :

- Define aspect ratio.
- Expand GKS and PHIGS.
- What is the purpose of frame buffer?
- List any four character attributes.
- Write the purpose of the homogeneous coordinate system.
- What is meant by differential scaling?
- What is interactive media?
- Why digital audio is called device independent?
- Name any four Image File Formats.
- What is morphing in animation?
- Define story boarding.
- List two drawbacks of CD-ROM technology.

PART - B

UNIT - I

- Explain the architecture of vector display system with a neat diagram.
 - Explain the DDA algorithm.
 - Explain flood filling with a procedure.

(5 + 5 + 5)



3. (a) Write a note on touch panel and light pen.
- (b) Explain Midpoint circle algorithm.
- (c) Explain two methods for generating thick primitives. **(5 + 5 + 5)**

UNIT - II

4. (a) Consider the polygon with vertices A(200, 200), B(250, 200), C(250, 100), D(200, 100). Rotate this polygon by 45 degree about A(200, 200) and write the coordinate of new points.
- (b) Explain window to viewport transformation with a suitable diagram.
- (c) What is clipping? Explain trivial accept, trivial reject and partial accept cases with suitable example. **(6 + 5 + 4)**
5. (a) Explain various Reflection transformations with suitable diagrams.
- (b) Write a note on Pattern fill.
- (c) Explain the procedure of Sutherland Hodgeman polygon clipping along with suitable diagrams. **(6 + 3 + 6)**

UNIT - III

6. (a) Write a note on additive and subtractive colors.
- (b) Write the steps involved to bring an audio recording into multimedia project.
- (c) Explain sampling and quantization. **(5 + 5 + 5)**
7. (a) List and explain different attributes of font.
- (b) Write a note on vector drawing.
- (c) List the drawbacks of MIDI. **(5 + 5 + 5)**

UNIT - IV

8. (a) Write a note on Animation File Formats.
- (b) Give some suggestions for creating good titles for video.
- (c) Write a note on video compression (CODEC). **(5 + 5 + 5)**
9. (a) Explain the various image recognition steps.
- (b) Explain how digital video is recorded?
- (c) Write a note on MPEG. **(5 + 5 + 5)**

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BCACAC 266

IV Semester B.C.A. Degree Examination, April/May 2019

(Credit Based Semester Scheme)

(New Syllabus – Common to All Batches)

Elective – I — System Analysis and Design

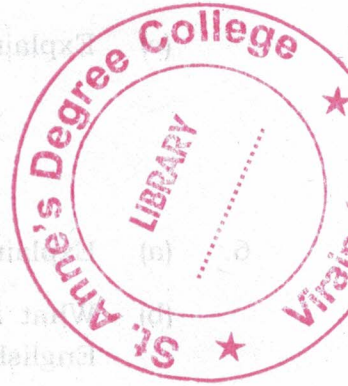
Time : 3 Hours]

[Max. Marks : 80

Instructions : Answer any ten questions from Part – A and any one full question from each Unit of Part – B.

PART – A

1. Answer **any ten** of the following : (10 × 2 = 20)
- What is a system? Give any two examples of system.
 - List any two roles of a System analyst.
 - Define business process reengineering?
 - What is the difference between open ended and closed ended questions?
 - List the different types of data flow diagrams.
 - Define context diagram.
 - What are disruptive technologies?
 - List any four deliverables of logical modeling.
 - Differentiate forms and reports.
 - Define functional dependency.
 - What is an interface? Give examples.
 - What is unit testing and system testing?



PART – B

UNIT – I

2.
 - Explain system analysis phase of SDLC.
 - Explain the features of Transaction Processing System.
 - Explain the interpersonal skills for system analysts. (5 + 5 + 5)

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3. (a) What is Management Information System? Explain its features.
(b) What is prototyping? What are its advantages? How a prototype can be developed?
(c) Explain the following system components :
(i) Coupling
(ii) Cohesion

(5 + 6 + 4)

UNIT - II

4. (a) What is JAD? What are its merits and limitations?
(b) What are the major interview guidelines?
(c) What is a "Planning Game" in extreme programming? How requirements are determined in this methodology?
5. (a) Explain Agile Usage-Centered Design technique for requirement determination.
(b) What are CASE tools? How can CASE tools be used to support requirement determination?
(c) Explain the Nominal Group Technique for determining the requirements

(5 + 4 + 4)

(5 + 5 + 4)

UNIT - III

6. (a) Explain the guidelines for drawing Data Flow Diagrams.
(b) What is structured English? Explain logic modeling using structured English.
(c) What is a Decision table? What are the set of basic procedures we have to follow in constructing decision tables?
7. (a) What is E-R model? Explain relationships of different degrees in E-R Model with example.
(b) Explain the deliverables and outcomes from process modeling.
(c) What are the guidelines for displaying tables and lists?

(5 + 5 + 4)

(5 + 5 + 4)

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UNIT - IV

BCACAC 266

8. (a) State the guidelines for menu design.
(b) Explain different types of validation tests.
(c) Explain the concept of normalization in database design. **(5 + 5 + 5)**
9. (a) Explain different steps in programming.
(b) Explain the different methods of interacting with the system.
(c) What is a process design? Illustrate grouping process with example. **(5 + 5 + 5)**

Instructions: Answer any two questions from Part - A and any one full question from part - B

PART - A

1. Answer any two of the following: **(10 x 2 = 20)**
- (a) What is a system? Give any two examples of system.
 - (b) List any two roles of a system analyst.
 - (c) Define business process reengineering?
 - (d) What is the difference between open ended and closed ended questions?
 - (e) List the different types of data flow diagrams.
 - (f) Define entity-relationship diagram.
 - (g) List four disruptive technologies?
 - (h) List any four characteristics of logical modeling.
 - (i) Differentiate forms and reports.
 - (j) Define functional dependency.
 - (k) What is an interface? Give examples.
 - (l) What is unit testing and system testing?



PART - B

2. Answer any one of the following: **(15 + 5 = 20)**
- (a) Explain system analysis phase of SDLC.
 - (b) Explain the features of Transaction Processing System.
 - (c) Explain the interpersonal skills for system analysis.

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IV Semester B.C.A. Degree Examination, April/May 2019*(Credit Based Semester Scheme)**(Common to All Batches)***Principles of TCP/IP**

Time : 3 Hours]

[Max. Marks : 80

Instructions : Answer any ten questions from Part – A and any one full question from each Unit of Part – B.

PART – A1. Answer **any ten** of the following :**(10 × 2 = 20)**

- (a) Expand IETF and ARPANET.
- (b) What is the use of routers in internet architecture?
- (c) What is loopback address? Why is it used?
- (d) What is a routing table?
- (e) What is meant by subnet mask?
- (f) What are the functions of HELLO protocol?
- (g) What is the use of rlogin protocol?
- (h) What do you mean by reliable stream delivery?
- (i) What do you mean by passive and active open in TCP?
- (j) What is the purpose of Post Office Protocol?
- (k) What is the purpose of MIME protocol?
- (l) What is Internet Domain Name System? Give example.

PART – B**UNIT – I**

2. (a) What is IAB? Explain the organization of IAB.
- (b) Explain the TCP/IP reference model.
- (c) Explain how RARP works.

(5 + 5 + 5)



3. (a) Explain various classes of IP addressing scheme.
(b) Explain address resolution through direct mapping.
(c) Explain Directed and limited broadcast. (5 + 5 + 5)

UNIT - II

4. (a) Write the IP datagram format and explain the fields VERS, HLEN, TOTAL LENGTH of datagram.
(b) Explain various characteristics of BGP.
(c) What is next-hop routing? Explain with an example. (5 + 5 + 5)
5. (a) What is RIP? Explain the working of RIP.
(b) Explain the IP routing algorithm.
(c) Write a short note on Open shortest Path First Protocols. (5 + 5 + 5)

UNIT - III

6. (a) Explain the sliding window technique with a neat diagram.
(b) Explain how application programs are used to implement telnet client & telnet server with a diagram.
(c) Write UDP message format and explain the various fields. (5 + 5 + 5)
7. (a) Explain how TCP establishes connection using 3-way hand shake.
(b) What are the advantages and disadvantages of delayed acknowledgement scheme?
(c) What is the use of IGMP in multicasting? Explain its phases. (5 + 5 + 5)

UNIT - IV

8. (a) Explain FTP process model with diagram.
(b) Give the format of IPv6 base header. Explain its fields.
(c) Write a note on Simple Mail Transfer Protocol. (5 + 5 + 5)
9. (a) Write a note on Multipurpose Internet Mail Extensions protocol.
(b) Write a note on TFTP.
(c) Explain any five features of IPv6. (5 + 5 + 5)

**IV Semester B.C.A. Degree Examination, April/May 2019***(Credit Based Semester Scheme)**(Common to All Batches)***Visual Basic .Net Programming**

Time : 3 Hours]

[Max. Marks : 80

Instructions : Answer any ten questions from Part - A and one full question from each Unit of Part - B.

PART - A1. Answer **any ten** of the following :**(10 × 2 = 20)**

- (a) What is an event? Give an example.
- (b) Write the usage of **With** statement with example.
- (c) What are namespaces? List any two namespaces used in VB.NET.
- (d) Differentiate Panel and GroupBox.
- (e) List any four methods of Windows Forms.
- (f) How to create TextBox in Code?
- (g) What are Context menus?
- (h) What is the use of Splitter control?
- (i) What is the use of TreeView?
- (j) Write any two uses of DataBinding.
- (k) What is dataset?
- (l) What is the purpose of Data Adapter?



PART - B

UNIT - I

2. (a) List and explain the following components of VB IDE.
- (i) ToolBox
 - (ii) Solution Explorer
 - (iii) Properties Window
 - (iv) Code Designer
 - (v) Dynamic Help Window
- (b) Explain **Do ... While** and **Do Until** with syntax and examples.
- (c) Explain unstructured exception handling with suitable example. (5 + 6 + 4)
3. (a) Explain different data types available in VB.NET.
- (b) Explain Select Case statement with syntax and example.
- (c) Explain passing variable number of arguments to a procedure with example. (5 + 5 + 5)

UNIT - II

4. (a) Explain any five unique properties of TextBox.
- (b) Explain InputBox() with suitable example.
- (c) Explain the process of handling Mouse Events with suitable example. (5 + 5 + 5)
5. (a) Explain MsgBox() with syntax and example.
- (b) Write a note on :
- (i) MDI Forms
 - (ii) Owned Forms
 - (iii) Rich TextBox
- (c) Explain the process of sending keystrokes to other applications in VB.NET. (5 + 6 + 4)



UNIT - III

6. (a) List different types of dialogs. Explain any two with examples. (2019)
- (b) Explain the process of
- (i) Getting/Setting the image in PictureBox
 - (ii) Adjusting the size of PictureBox.
- (c) Explain the following :
- (i) Adding items to a ListBox
 - (ii) Making ListBox scroll horizontally
 - (iii) Sorting ListBox
 - (iv) Removing a particular item in a ListBox
 - (v) Making ListBox empty
- (6 + 4 + 5)**
7. (a) Explain the unique properties of ScrollBar.
- (b) Explain the usage of the following controls :
- (i) ToolTip
 - (ii) NotifyIcon
 - (iii) Timer
 - (iv) ProgressBar
- (c) Write a note on :
- (i) MonthCalender
 - (ii) TrackBar
 - (iii) ListView
- (5 + 4 + 6)**

UNIT - IV

8. (a) Explain how navigation is done in data set with example.
- (b) Explain :
- (i) DataReader
 - (ii) DataSet
 - (iii) DataAdapter
- (c) Write a note on OLEDB Connection class. (5 + 6 + 4)
9. (a) What is DataBinding? Explain different types with example.
- (b) Write a note on ADO.NET objects.
- (c) Explain how data connection is created in code. (5 + 5 + 5)

Reg. No.

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BCACAC 263

IV Semester B.C.A. Degree Examination, April/May 2019

(Credit Based Semester Scheme)

(Common to All Batches)

E-Commerce

Time : 3 Hours]

[Max. Marks : 80

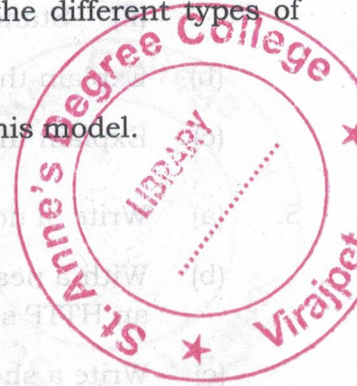
Instructions : Answer any ten questions from Part – A and any one full question from each Unit of Part – B.

PART – A

1. Answer **any ten** of the following :

(10 × 2 = 20)

- (a) Define electronic commerce.
- (b) How does an advertising model work? Which are the different types of advertising methods?
- (c) What is Manufacturer Model? Give an example for this model.
- (d) Give any two benefits of EDI.
- (e) What are digital certificates?
- (f) What are the services of an FTP?
- (g) Differentiate TCP and UDP.
- (h) What is ALOHA?
- (i) What is sniffing?
- (j) What is PGP?
- (k) What is data integrity in Security services?
- (l) What is WAP?



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PART - B

UNIT - I

2. (a) Explain the different phases in an E-Commerce market element.
 (b) Explain the different categories of Native Content Models with an example for each.
 (c) What is a Subscription Model? How does it work? (5 + 5 + 5)
3. (a) Explain any two applications of E-Commerce.
 (b) Explain the B2C electronic commerce with an example.
 (c) What are the services provided by Web hosting and Internet services model? (5 + 5 + 5)

UNIT - II

4. (a) Write a note on :
 (i) Application/Conversion Layer of EDI
 (ii) Standard Formats Layer of EDI
 (b) Explain the Network infrastructure in framework of E-Commerce.
 (c) Explain the architecture of an E-mail system with a diagram. (5 + 5 + 5)
5. (a) Write a note on Value Added Network.
 (b) With a neat diagram explain the different steps in a typical interaction of an HTTP session.
 (c) Write a short note on WWW Server. (5 + 7 + 3)

UNIT - III

6. (a) What do you mean by denial of service? How to prevent it?
 (b) Explain Domain Name System.
 (c) Explain the following with neat diagrams
 (i) Bus topology
 (ii) Star topology (4 + 5 + 6)



7. (a) Write a note on twisted pair cables.
(b) What is Spoofing? Explain any two types of spoofing.
(c) Explain type of incidents in network security. (4 + 5 + 6)

UNIT - IV

8. (a) What are the different issues of network transaction security?
(b) Explain the public key cryptosystem with a diagram. (5 + 5 + 5)
(c) Write a note on Mondex.
9. (a) Explain the working of E-Cash payment system with a neat diagram.
(b) Write a note on 3G network.
(c) Explain the different applications of M-Commerce. (5 + 5 + 5)

