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**BCACAC 260**

**Credit Based IV Semester B.C.A. Degree Examination, Sept./Oct. 2020**  
**(Credit Based Semester Scheme)**  
**(Common to All Batches) (Repeaters)**  
**COMPUTER GRAPHICS AND MULTIMEDIA**

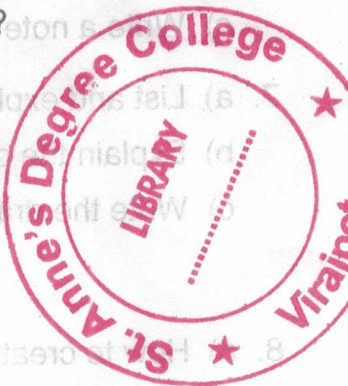
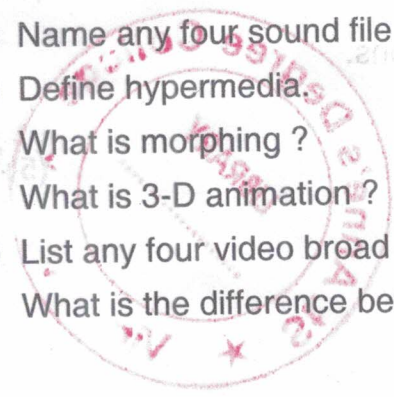
Time : 3 Hours

Max. Marks : 80

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

**PART – A**

1. a) What is the purpose of frame buffer ? (10x2=20)  
b) List any four line attributes.  
c) What is 4-way symmetry of an ellipse ?  
d) Write rotation and translation matrix for homogenous coordinates.  
e) What is clipping ? List its two types.  
f) What is difference between differential and uniform scaling ?  
g) Name any four sound file formats.  
h) Define hypermedia.  
i) What is morphing ?  
j) What is 3-D animation ?  
k) List any four video broad cast standards.  
l) What is the difference between overscan and underscan ?



**PART – B**

**Unit – I**

2. a) Explain the architecture of raster display system with a neat diagram.  
b) Derive midpoint algorithm to draw a circle.  
c) Explain the CRT monitor with neat diagram. (6+5+4)

P.T.O.



3. a) Write boundary fill and flood fill algorithm.  
 b) Write and explain DDA line algorithm.  
 c) Explain any two input devices. (5+5+5)

### Unit – II

4. a) Explain the different text attributes.  
 b) Prove that successive translation is additive and successive scaling is multiplicative.  
 c) Explain windows to viewport transformation with suitable example. (5+6+4)
5. a) Explain various reflection transformations with suitable diagram.  
 b) Write Cohen Sutherland line clipping algorithm.  
 c) Write a note on pattern fill. (5+6+4)

### Unit – III

6. a) Explain the five types of searches in web.  
 b) Explain the application of multimedia in various fields.  
 c) Write a note on bitmap image. (5+5+5)
7. a) List and explain different sound editing operations.  
 b) Explain the different attributes of Font.  
 c) Write the drawbacks of MIDI. (5+5+5)

### Unit – IV

8. a) How to create good titles for video ? Explain.  
 b) Write a note on computer animation.  
 c) List and explain various types of multimedia authoring tools. (5+5+5)
9. a) Write a note on video compression.  
 b) Explain the stages of multimedia project.  
 c) List the features of 3D modelling tools. (5+5+5)



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**BCACAC 262**



**Credit Based IV Semester B.C.A. Degree Examination,  
September/October 2020  
(Credit Based Semester Scheme)  
(Common to all Batches) (Repeaters)  
PRINCIPLES OF TCP/IP**

Time : 3 Hours

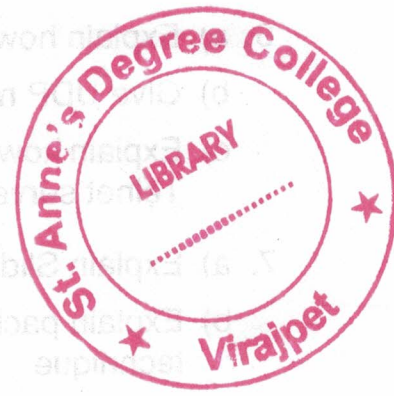
Max. Marks : 80

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

**PART – A**

**(10×2=20)**

1. a) Expand DARPA and NSFNET.
- b) What is RFC ?
- c) What is RARP ?
- d) What is routing table ?
- e) What are the functions of HELLO protocol ?
- f) List any two functions of IP.
- g) What is the use of Telnet protocol ?
- h) What do you mean by passive and active open in TCP ?
- i) What is the use of rlogin protocol ?
- j) What is the purpose of post office protocol ?
- k) What is the use of MIME protocol ?
- l) Write the DNS message format.



**PART – B  
Unit – I**

2. a) Write a note on evolution of open network.
- b) Explain the various classes of IP addressing scheme.
- c) Explain Cache and ARP timeout.

**(5+5+5)**

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3. a) What is IAB ? Explain the organization of IAB.
- b) Explain address resolution through dynamic binding with the help of a diagram.
- c) Explain the TCP/IP five layer reference model. (5+5+5)

**Unit – II**

4. a) Write the structure of IP datagram. Explain any three fields.
- b) What is RIP ? Explain its working.
- c) What is subnet addressing ? Explain. (5+5+5)
5. a) What is next-hop routing ? Explain with an example.
- b) Write IP routing algorithm.
- c) Explain the various characteristics of BGP. (5+5+5)

**Unit – III**

6. a) Explain how TCP establishes connection using 3-way hand shake.
- b) Give UDP message format and explain any three fields.
- c) Explain how application programs are used to implement Telnet client and Telnet server with diagram. (5+5+5)
7. a) Explain Sliding Windows Technique with a neat diagram.
- b) Explain packet delivery using positive acknowledgement with retransmission technique.
- c) Write a note on IGMP. (5+5+5)

**Unit – IV**

8. a) What is SMTP ? Explain.
- b) Explain FTP process model with a diagram.
- c) Explain any five features of IPv6. (5+5+5)
9. a) What is NFS ? Explain NFS implementation with diagram.
- b) Write a note Internet Message Access Protocol.
- c) Write a note on Multipurpose Internet Mail Extensions Protocol. (5+5+5)



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**BCACAC 266**

**Credit Based IV Semester B.C.A. Degree Examination, Sept./Oct. 2020**  
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**Elective – I : SYSTEM ANALYSIS AND DESIGN**

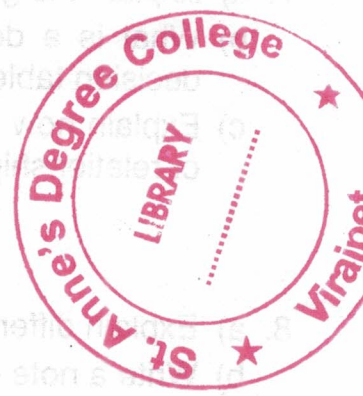
Time : 3 Hours

Max. Marks : 80

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

**PART – A**

1. a) What is SDLC ? **(10×2=20)**
- b) Differentiate between structured and unstructured information.
- c) What is prototyping ?
- d) Expand NGT and BPR.
- e) Write any two symbols used in DFD.
- f) List any four deliverables of logic modeling.
- g) Define functional dependency.
- h) What is conceptual data model ?
- i) What is normalization ?
- j) Differentiate forms and reports.
- k) What is meant by command language interaction ?
- l) What is unit testing and system testing ?

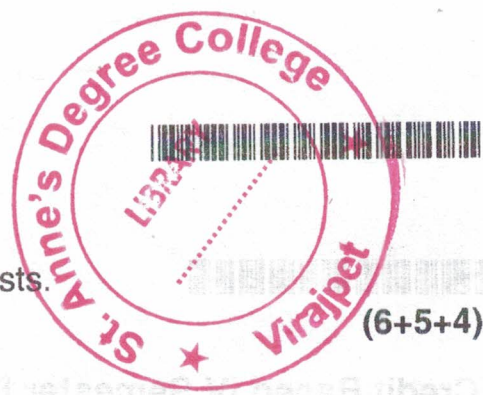


**PART – B**

**Unit – I**

2. a) What is a system ? Explain its parts.
- b) Explain the features of Transaction Processing System.
- c) Explain (i) coupling (ii) cohesion. **(6+5+4)**

P.T.O.



3. a) List and explain the six phases of SDLC.
- b) Explain interpersonal skills of the system analysts.
- c) Explain (i) Modularity (ii) Decomposition. (6+5+4)

**Unit – II**

4. a) Explain any two contemporary methods of collecting information system.
  - b) Explain the major interview guidelines.
  - c) List and explain the three phases of planning game in extreme programming. (6+5+4)
5. a) Explain any two traditional methods of collecting information system.
  - b) Explain agile usage-centered design technique for requirement determination.
  - c) Write a short note on (i) JAD (ii) CASE tools. (6+5+4)

**Unit – III**

6. a) What are the deliverables and outcome of process modeling ?
  - b) What is structured English ? Explain logic modeling using structured English.
  - c) What are the guidelines of displaying the tables and lists ? (5+5+5)
7. a) Explain the guidelines of drawing data flow diagram.
  - b) What is a decision table ? Explain with example logic modeling using decision table.
  - c) Explain how E-R notation modeling data represent the concept of degree of relationship. (5+5+5)

**Unit – IV**

8. a) Explain different steps in programming.
  - b) Write a note on normalization in database design.
  - c) What is acceptance testing ? What types of testing are performed during the acceptance testing ? (5+5+5)
9. a) Explain the different methods of interacting with the system.
  - b) What are the roles of the database administrator ?
  - c) Explain different types of validation tests. (5+5+5)



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**BCACAC 263**

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**(Credit Based Semester Scheme)**  
**(Common to all Batches) (Repeaters)**  
**E-COMMERCE**

Time : 3 Hours

Max. Marks : 80

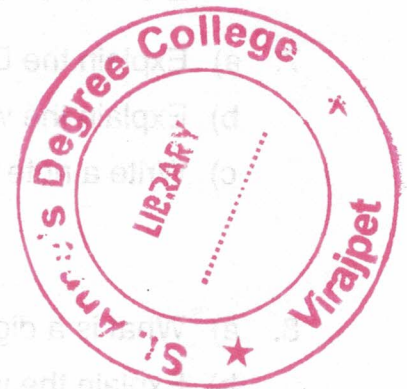
**Instruction : Answer any ten questions from Part – A and one full question from each Unit of Part – B.**

**PART – A**

1. a) What is E-Commerce ? (10×2=20)
- b) Define B2B E-Commerce. Give an example.
- c) What is Information Content Model ? Give an example.
- d) What is EDI ?
- e) What is FTP ? Why is it used ?
- f) What are the services provided by an E-Mail system ?
- g) Give any two benefits of ring topology.
- h) What is the difference between TCP and UDP ?
- i) What is a Probe ?
- j) What is cryptography ?
- k) Name the 4 mobile payment models.
- l) Give any two applications of M-commerce.

**PART – B**  
**UNIT – I**

2. a) Explain B2C E-Commerce with an example.
- b) Explain the applications of E-Commerce technology.
- c) What is electronic store model ? How is it different from digital products merchant model ? (5+4+6)



P.T.O.



- 3. a) Explain C2B and C2C E-Commerce with examples.
- b) How does supply chain management take place using E-Commerce?
- c) What is the purpose of an advertisement model ? Explain the different forms of advertisement techniques. **(5+4+6)**

**UNIT – II**

- 4. a) Explain the role of application layer in an EDI system.
- b) Explain the various services provided by Value Added Network.
- c) Write a short note on WWW server. **(5+5+5)**
- 5. a) Explain the architecture of an E-Mail system with a neat diagram.
- b) Write a short note on HTTP.
- c) Explain the benefits of EDI system. **(6+5+4)**

**UNIT – III**

- 6. a) Explain star topology used in LANs with a neat diagram.
- b) Write a short note on Wide Area Network.
- c) Explain the different types of security problems and threats in E-Commerce. **(5+5+5)**
- 7. a) Explain the Domain Name System.
- b) Explain the working of a coaxial cable with a neat diagram.
- c) Write a note on firewall. **(5+5+5)**

**UNIT – IV**

- 8. a) What is a digital signature ? Explain its working.
- b) Explain the working of E-Cash payment system with a neat diagram.
- c) Explain the wireless network architecture used in M-Commerce. **(5+5+5)**
- 9. a) Explain the public key cryptosystem with a neat diagram.
- b) Explain the advantages of mobile commerce over traditional E-Commerce.
- c) Write a note on micropayments. **(6+4+5)**



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**BCACAC 263**

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**(Credit Based Semester Scheme)**  
**(Common to all Batches) (Repeaters)**  
**E-COMMERCE**

Time : 3 Hours

Max. Marks : 80

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

**PART – A**

1. a) What is E-Commerce ? (10×2=20)  
b) Define B2B E-Commerce. Give an example.  
c) What is Information Content Model ? Give an example.  
d) What is EDI ?  
e) What is FTP ? Why is it used ?  
f) What are the services provided by an E-Mail system ?  
g) Give any two benefits of ring topology.  
h) What is the difference between TCP and UDP ?  
i) What is a Probe ?  
j) What is cryptography ?  
k) Name the 4 mobile payment models.  
l) Give any two applications of M-commerce.

**PART – B**

**UNIT – I**

2. a) Explain B2C E-Commerce with an example.  
b) Explain the applications of E-Commerce technology.  
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P.T.O.



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## UNIT – II

4. a) Explain the role of application layer in an EDI system.  
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 c) Write a short note on WWW server. (5+5+5)
5. a) Explain the architecture of an E-Mail system with a neat diagram.  
 b) Write a short note on HTTP.  
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**BCACAC 261**

**Credit Based IV Semester B.C.A. Degree Examination, September/October 2020**  
**(Credit Based Semester Scheme)**  
**(Common to All Batches) (Repeaters)**  
**VISUAL BASIC • NET PROGRAMMING**

Time : 3 Hours

Max. Marks : 80

**Instruction : Answer any ten questions from Part – A and one full question from each Unit in Part – B.**

**PART – A**

1. a) What is the purpose of Common Language Runtime ? (10×2=20)  
b) How do you declare dynamic arrays in VB•Net ? Give an example.  
c) What do you mean by intellisense in VB•Net ?  
d) How do you link the website using **link label** control ?  
e) Write the difference between visible and enabled properties.  
f) Write any two events of a form.  
g) List the possible values for size mode property of a PictureBox.  
h) What is context menu and why it is used ?  
i) When do we use splitter control ? Write any one property of it.  
j) Name any one property and method associated with OleDbDataAdapter object.  
k) Expand : ADO and ODBC.  
l) Name any two data provider to access a database in VB•Net.

**PART – B**

**Unit – I**

2. a) Explain the following in VB IDE :  
i) Solution Explorer  
ii) Properties Window.



P.T.O.



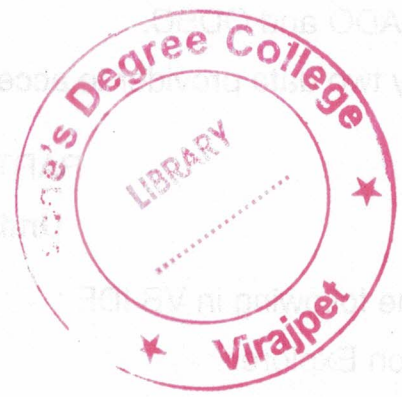
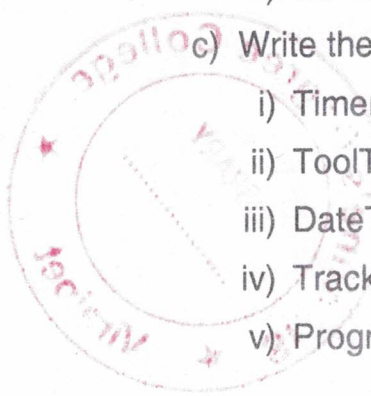
- b) Explain **Do.. Until** loop with syntax and example.
- c) Differentiate Sub Procedure and Function with suitable examples. (5+5+5)
3. a) Explain Select CASE statement with syntax and example.
- b) Explain different logical operators in VB•Net.
- c) Explain Structured Exception handling in VB•NET with examples. (5+5+5)

### Unit – II

4. a) Explain any five properties of Text Box.
- b) Explain MsgBox() with suitable example.
- c) Write a note on MDI forms. (5+5+5)
5. a) Explain InputBox() with suitable example.
- b) Write a code to create a Text Box.
- c) Write a note on rich text boxes. (5+5+5)

### Unit – III

6. a) What is the use of scroll bar control ? Explain any four properties.
- b) Explain any two properties and methods of List Box object.
- c) Explain the use of Color Dialog and Font Dialog with code example. (5+5+5)
7. a) Write the code to copy checked items of CheckedListBox into a ListBox.
- b) Differentiate :
- Tool Bar and Status Bar
  - List box and Combo box.
- c) Write the use of :
- Timer
  - ToolTip
  - DateTimePicker
  - TrackBar
  - ProgressBar.



(5+5+5)



Unit – IV

8. a) Explain connection, data adapter and data set objects of ADO•Net with a neat diagram.

b) Describe data binding in data grid view.

c) Explain how navigation is done using dataset with example. (5+5+5)

9. a) What is Data Binding ? Explain different types of DataBinding in VB•NET.

b) How do you access data with the Server Explorer ?

c) Write a sample code to delete records in a table. (5+5+5)

