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BCACAC 262

**Credit Based IV Semester B.C.A. Degree Examination, April/May 2015  
(New Syllabus) (2013-2014 Batch Onwards)  
PRINCIPLES OF TCP/IP**

Time : 3 Hours

Max. Marks : 80

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

**PART – A**

1. a) Expand IRTF and CSNET. (10×2=20)
- b) What is loopback address ? Why is it used ?
- c) Define internet protocol.
- d) What is indirect delivery of datagram ?
- e) Name the contents of routing table.
- f) What is subnet mask ?
- g) Expand IMAP and MIME.
- h) What is internet domain name system ?
- i) What is the purpose of Telnet ?
- j) What are name servers ?
- k) Give the general structure of IPv6 datagram.
- l) What is the purpose of POP ?



**PART – B**

**Unit – I**

2. a) What is IAB ? Explain the organization of IAB.
- b) Explain three primary classes of IP addresses.
- c) Explain the TCP/IP reference model. (4+6+5)

P.T.O.



3. a) Write a note on evolutionary history of internet services.  
b) What is reverse address resolution protocol ? Explain.  
c) Write a short note on : (i) Dotted decimal notation (ii) Direct broadcast address. **(5+4+6)**

### Unit – II

4. a) What is RIP ? Explain the working of RIP.  
b) Explain IP routing algorithm.  
c) What is BGP ? Explain any four characteristics of BGP. **(5+5+5)**
5. a) What is next-hop routing ? Explain with example.  
b) What is subnet addressing ? Explain.  
c) Write a short note on : (i) HELLO protocol (ii) Open SPF protocol. **(5+4+6)**

### Unit – III

6. a) Explain the format of UDP datagram.  
b) What is Karn's algorithm. Explain.  
c) Briefly explain the steps involved in Domain name resolution. **(5+4+6)**
7. a) What is sliding window technique ? Explain its advantages.  
b) Explain different fields of Domain server message format.  
c) Write a note on send-side silly window avoidance. **(6+6+3)**

### Unit – IV

8. a) What is FTP ? Explain FTP process model with diagram.  
b) List and explain any five features of IPv6.  
c) Write a note on SMTP. **(6+5+4)**
9. a) Give the format of IPv6 base header. Explain its fields.  
b) What is NFS ? Explain NFS implementation with diagram.  
c) Write a note on TFTP. **(6+5+4)**



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**BCACAC 254**



**Credit Based IV Semester B.C.A. Degree Examination,  
April/May 2015**

**(Old Syllabus) (2012-13 and Earlier Batches)**

**TCP/IP PROTOCOL AND PROGRAMMING**

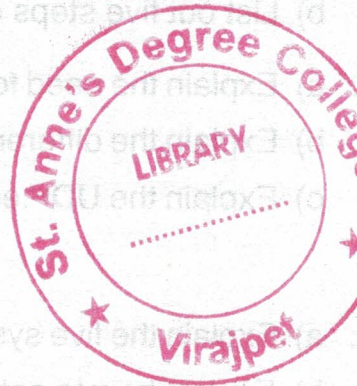
Time : 3 Hours

Max. Marks : 80

**PART – A**

**Note : Answer any ten from Part A and one full question from each unit of Part B. (10×2=20)**

1. a) Differentiate between LAN and WAN.
- b) Mention any four companies who participated in funding the internet.
- c) What are the loopback address and broadcast address ?
- d) What is FDDI ?
- e) List out the two types of subnets.
- f) How do you connect socket to destination address ?
- g) What is a client server model ?
- h) Mention the conceptual layers of TCP/IP software.
- i) What do you mean by RFCs ?
- j) List the disadvantages of layering.
- k) What is subnet mask ?
- l) List out advantages of proxy ARP.



**PART – B**

**UNIT – 1**

2. a) Write a note on IAB reorganization.
- b) Explain thin wire and twisted pair Ethernet.
- c) Write a note on network level internet service.

**(5+5+5)**

**P.T.O.**



3. a) Explain how CSMA/CD works with an analogy to real life situation.
- b) Explain all the five classes of IP addresses.
- c) Explain ARP cache timeout and address resolution through direct mapping. (5+5+5)

## UNIT - 2

4. a) Explain next hop routing with an example. (5+4+6)
- b) Explain service type field informally called type of service.
- c) Explain the datagram size, network MTU and fragmentation.
5. a) Explain source route and timestamp option.
- b) Explain IP routing algorithm.
- c) What is meant by datagram encapsulation? Explain. (5+5+5)

## UNIT - 3

6. a) Explain the seven conceptual layers in ISO model. (10+5)
- b) List out five steps of the master server.
7. a) Explain the need for multiple protocols. (5+5+5)
- b) Explain the different types of subnet mask representation.
- c) Explain the UDP echo server.

## UNIT - 4

8. a) Explain the five system calls used to receive data through a socket. (10+5)
- b) Explain how to get a local and remote socket address.
9. a) Explain the following system calls with respect to socket. (6+4+5)
  - i) Writev
  - ii) Sendto
  - iii) Getsockopt
- b) Explain how a server accepts connection.
- c) Explain various network byte order conversion routines.



**Credit Based IV Semester B.C.A. Degree Examination, April/May 2015****SYSTEM ANALYSIS AND DESIGN****(New Syllabus) (2013-14 Batch Onwards) (Elective – I)**

Time : 3 Hours

Max. Marks : 80

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

**PART – A**

1. a) Define (i) Open system (ii) Closed system. (10x2=20)
- b) What is System Development Life Cycle ?
- c) What is Business process re-engineering ?
- d) What is OOAD ? What is its goal ?
- e) What are the advantages of group interview ?
- f) List the different types of data flow diagrams.
- g) What are Disruptive Technologies ?
- h) List any four deliverables of logic modelling.
- i) What is meant by binary relationship ? Give an example.
- j) What is meant by Command Language Interaction ?
- k) What is normalisation ?
- l) What is program testing ?

**PART – B****Unit – I**

2. a) Explain preliminary investigation phase of SDLC. (5+5+5)
- b) List and explain technical skills for system analysts.
- c) What is a transaction processing system ? Explain its features.
3. a) Explain system analysis phase of SDLC. (5+5+5)
- b) Describe the management skills for system analysts.
- c) What is a management information system ? Explain its features.

P.T.O.



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**BCACAC 257**

**Credit Based IV Semester B.C.A. Degree Examination, April/May 2015**  
**SYSTEM ANALYSIS AND DESIGN (SAD)**  
**(Old Syllabus) (2012-13 and Earlier Batches)**

Time : 3 Hours

Max. Marks : 80

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

**PART – A**

**(10×2=20)**

1. a) Give the meaning of system and storyboarding.
- b) Distinguish between heterogeneous and homogeneous networks.
- c) Define *etic* and *emic*.
- d) What is a Context diagram ?
- e) Name the two ways to determine whether the project is worthwhile.
- f) Define entity set and attributes.
- g) What is an evolutionary design ?
- h) Define fan-in and scope of control of a module.
- i) What is a decision table ?
- j) What is the role of moderator and a reader incase of quality assurance ?
- k) Define scripting.
- l) What is the role of a Walkthrough leader ?

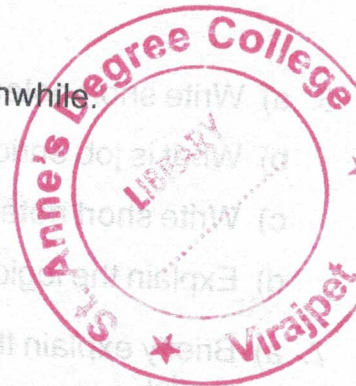
**PART – B**

**Unit – I**

2. a) Describe the basic components of a computer base system with the help of a neat diagram.
- b) Explain the interview structure with a neat diagram.
- c) Write short notes on :
  - i) Distributed System
  - ii) End Users.

**(6+5+4)**

**P.T.O.**





3. a) List the advantages and disadvantages of gathering information through questionnaires.
- b) Justify the role of system analyst in the system development.
- c) Who are involved in building system ? Explain any two in detail. (5+5+5)

#### Unit – II

4. a) What are the differences between DFD's and Flowcharts ?
  - b) Explain the problems of waterfall cycle model in system development.
  - c) With the help of a neat diagram explain ER diagram. (5+5+5)
5. a) List and explain the different types of team structures.
  - b) Explain the process of building entity relationship models.
  - c) Write a note on Cost Benefit Analysis. (6+5+4)

#### Unit – III

6. a) Write short notes on interactive interface.
  - b) What is job enrichment ? Explain.
  - c) Write short notes on imperative sentences.
  - d) Explain the logical model. (5+3+4+3)
7. a) Briefly explain the steps in designing the physical model from a new logical model.
  - b) Explain interface designing tools.
  - c) Mention the characteristics of a good user interface. (5+5+5)

#### Unit – IV

8. a) Write a note on different types of module strength.
  - b) What is normal form ? Explain the fifth normal form with an example.
  - c) Write a note on Inspection. (6+5+4)
9. a) With a neat diagram explain how walkthroughs are carried out.
  - b) Write a note on Reports and enquiries.
  - c) Briefly explain the relational and network database management system of the database. (6+4+5)



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**BCACAC 263**

**Credit Based Fourth Semester B.C.A. Degree  
Examination, April/May 2015  
(New Syllabus) (2013-14 Batch Onwards)  
E-COMMERCE**

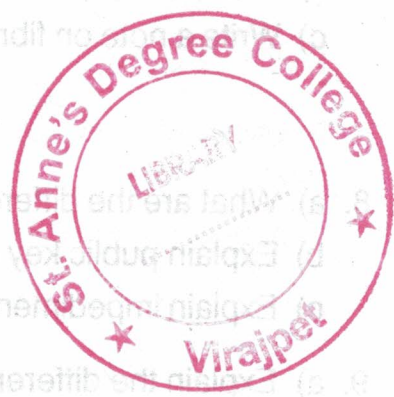
Time : 3 Hours

Max. Marks : 80

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

**PART – A**

1. a) Define B2B e-commerce. Give an example. **(10x2=20)**
- b) What is freeware model ?
- c) Give any two benefits of EDI.
- d) Give the general format of URL.
- e) What are the services of FTP ?
- f) What is sniffing ?
- g) Give any two drawbacks of ring topology.
- h) Expand :
  - i) ARP
  - ii) IPOP
- i) What is digital signature ?
- j) What is Micro payment ?
- k) What is WPA ?
- l) What is E-Cash ?



**PART – B  
Unit – I**

2. a) Explain C2B and C2C E-Commerce.
- b) Explain Digital Products Merchant Model.
- c) Explain benefits of E-commerce. **(5+5+5)**
3. a) Explain different phases of E-commerce market elements.
- b) Explain any two applications of E-commerce.
- c) Explain electronic store model. **(5+5+5)**

P.T.O.

9



**Unit – II**

4. a) Briefly explain interconnection layer of EDI system.  
b) Explain interaction in HTTP session with diagram.  
c) Write a note on Value Added Network (VAN) (5+6-)
5. a) Explain benefits of EDI.  
b) Briefly explain the framework of e-commerce with a neat diagram.  
c) Explain WWW server. (5+6-)

**Unit – III**

6. a) Explain 10 Base T (Twisted pair) with diagram.  
b) What is spoofing? Explain any two types of spoofing.  
c) Write a note on twisted pair cable. (6+5-)
7. a) Explain Domain name system.  
b) Explain 10 Base 5 (Thick coaxial cable).  
c) Write a note on fibre optic cable. (5+6-)

**Unit – IV**

8. a) What are the different issues of network transaction security?  
b) Explain public key cryptosystem.  
c) Explain impediments in mobile network. (5+5-)
9. a) Explain the different network security services to ensure the security.  
b) Write a note on 3G network.  
c) Write a note on Mondex. (5+5-)

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**BCACAC 261**

**Credit Based Fourth Semester B.C.A. Degree Examination,  
April/May 2015**

**VISUAL BASIC .NET PROGRAMMING  
(New Syllabus) (2013-14 Batch Onwards)**

Time : 3 Hours

Max. Marks : 80

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

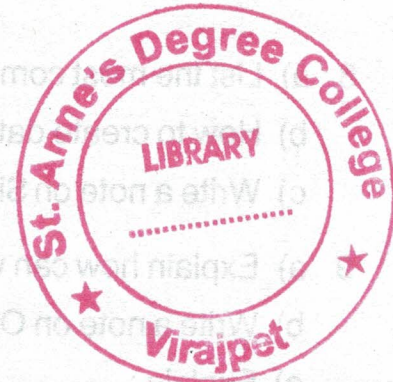
**PART – A**

1. a) List any two System Namespaces. (10×2=20)
- b) Define Intellisense.
- c) Mention any two conversion functions.
- d) Which are the different kinds of scope in VB.NET ?
- e) Name the arguments passed to an InputBox Function.
- f) How are panels different from GroupBox ?
- g) Which are the possible values you have for size mode property of a PictureBox ?
- h) How to add scrollbars to textboxes ?
- i) What are context menus ? Why it is used ?
- j) List the values associated with the style property of Toolbar Button.
- k) What is a Data Grid ?
- l) What is the use of Server Explorer ?

**PART – B**

**UNIT – 1**

2. a) Write the steps for creating windows application.
- b) Explain switch and choose function with syntax.
- c) Write the usage of finally block in structured exception handling. (8+4+3)
3. a) Explain VBIDE.
- b) Explain any four string handling functions with example. (7+8)



P.T.O.

51  
61





## UNIT - 2

4. a) Write a note on MsgBox function.  
 b) Write the code for creating TextBox.  
 c) Write a note on CheckBoxes. (5+5+5)
5. a) Explain MDILayout enumeration values which define the layout of MDI child forms.  
 b) Describe any 3 properties of  
 i) TextBox ii) Rich TextBox  
 c) Write a code to add a picture to a button. (4+6+5)

## UNIT - 3

6. a) Define any two properties and methods of ListBox objects.  
 b) Why Splitter controls are used ? Explain the steps for creating it.  
 c) How to create List Views in code ? (4+5+6)
7. a) How to add images to image lists in code ?  
 b) Write a note on TrackBar.  
 c) How to determine what items are checked in CheckedList boxes ? (6+5+4)

## UNIT - 4

8. a) List the most common ADO.NET objects.  
 b) How to create data forms with the Data Form Wizard ?  
 c) Write a note on Simple Data Binding. (5+6+4)
9. a) Explain how can we access data with Data Adapters and Data Set.  
 b) Write a note on OleDbConnection class.  
 c) Explain :  
 i) Data Row class ii) Data Column class (6+4+5)

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BCACAC 20

**Credit Based Fourth Semester B.C.A. Degree Examination,**  
**April/May 2015**  
**(New Syllabus) (2013-14 Batch Onwards)**  
**COMPUTER GRAPHICS AND MULTIMEDIA**

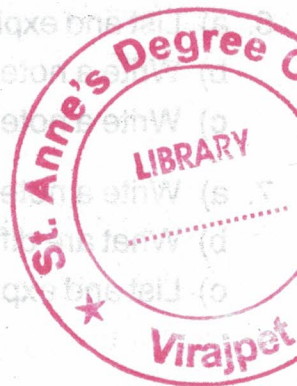
Time : 3 Hours

Max. Marks :

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

**PART – A**

1. a) What are horizontal and vertical retrace ? (10×2=20)
- b) What are impact and non-impact printers ? Give example for each.
- c) What is the purpose of frame buffer ?
- d) Define translation and scaling.
- e) Write the purpose of homogeneous coordinate system.
- f) List any two character attributes.
- g) Define storyboarding.
- h) Why digital audio is called device independent ?
- i) What are palettes ? List any one common color palettes.
- j) What is 3-D animation ?
- k) What is morphing in animation ?
- l) What are chroma key technology in digital video editing ?







PART - B

Unit - I

2. a) Explain the architecture of raster display system with neat diagram. (4+4+)
- b) Write a note on Graphics Software.
- c) Derive mid-point algorithm to draw a circle.
3. a) Explain Track ball, Joystick, Space ball. (6+)
- b) Derive mid-point algorithm to draw an ellipse.

Unit - II

4. a) Prove that successive rotations is additive. (5+3+)
- b) Explain the different Text attributes.
- c) Write and explain Cohen-Sutherland line clipping algorithm.
5. a) Explain window to viewport transformation with a suitable diagram. (5+4+)
- b) Explain the Pivot Point Rotation with an example.
- c) Discuss various Reflection transformations with suitable diagrams.

Unit - III

6. a) List and explain the various application of multimedia in various fields. (5+5+)
- b) Write a note on bitmaps.
- c) Write a note on MIDI audio.
7. a) Write a note on additive and subtractive colors. (5+5+)
- b) What are different methods for searching in hypermedia ?
- c) List and explain the various sound editing operations.

Unit - IV

8. a) List and explain different stages of a multimedia project. (5+5+)
- b) Write a note on Shooting Platforms.
- c) Write a note on MPEG.
9. a) List and explain different types of authoring tools for multimedia. (5+5+)
- b) Write a note on video compression (CODEC).
- c) Discuss intangible elements needed to make good multimedia.