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**BCACAC 312**

**Credit Based Fifth Semester B.C.A. Degree Examination, September/October 2020**  
**LINUX ENVIRONMENT**  
**(Common to All Batches) (Repeaters)**

Time : 3 Hours

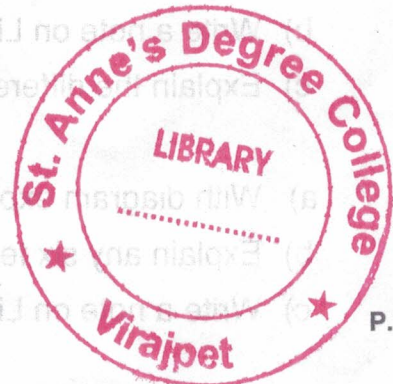
Max. Marks : 100

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

**PART – A**

**(2×10=20)**

1. a) What is the function of Process Control Subsystem of the kernel architecture ?
- b) Define a buffer. What are the parts of a buffer ?
- c) List any four fields of the super block.
- d) Define a stream.
- e) What are the three mechanisms of System V IPC ?
- f) What is meant by process tracing ?
- g) What is open source software ? Give example.
- h) Define Linux Kernel. List any two activities of Linux Kernel.
- i) Expand the term KDE and GNOME.
- j) What is Live USB ?
- k) What is GParted ?
- l) Define LAN and WAN.



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## PART – B

## UNIT – I

2. a) Explain the various services of UNIX operating system.  
b) Discuss UNIX file system with tree structure.  
c) Explain bread algorithm.  
d) Explain the buffer header with a neat diagram. (5+5+4+6)
3. a) Explain the high-level architecture of UNIX system with a neat diagram.  
b) Explain the various fields of a disk i-node.  
c) Explain block read ahead algorithm (breada). (7+7+6)

## UNIT – II

4. a) Define and explain the following system calls with syntax  
i) write ii) creat  
iii) close iv) mount  
b) Name the functions of line discipline.  
c) Write a note on the following :  
i) Pipes  
ii) File System Maintenance. (8+6+6)
5. a) Explain the system configuration with diagram.  
b) Explain lseek and link system calls with example.  
c) Explain socket model with diagram. (8+6+6)

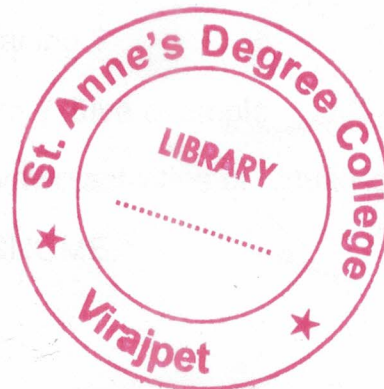
## UNIT – III

6. a) With diagram briefly explain the components of Linux window.  
b) Write a note on Linux distributions.  
c) Explain the different management operations for files and folders in Linux. (8+6+6)
7. a) With diagram explain the components of GNOME Desktop Startup screen.  
b) Explain any six features of Linux.  
c) Write a note on Linux files and folders. (8+6+6)



UNIT – IV

8. a) Write a note on System Testing.
- b) Write the uses of the following internet applications in LINUX :
- i) aMSN
  - ii) .Blogtk
  - iii) .Bluefish
  - iv) .CheckGMail.
- c) Write a note on Synaptic Package Manager.
- d) Differentiate P2P networking and Client/Server networking with a diagram. **(4+4+6+6)**
9. a) Write a note on Ubuntu software centre tool.
- b) Write a note on powers of an administrator in LINUX OS.
- c) Explain any six services provided by the Internet. **(6+7+7)**





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**BCACAC 315**

**Credit Based Fifth Semester B.C.A. Degree Examination,  
September/October 2020  
DISTRIBUTED COMPUTING  
(Common to all Batches) (Repeaters)**

Time : 3 Hours

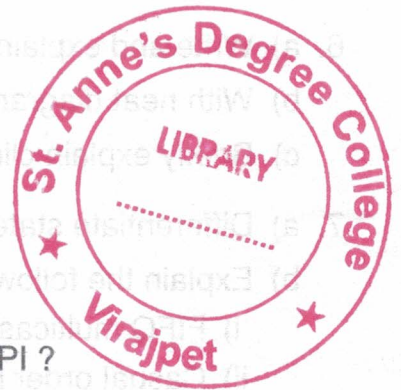
Total Marks : 100

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

**PART – A**

**(2×10=20)**

1. a) Define distributed computing.
- b) What are the two ways of creating threads in Java ?
- c) What is event diagram and sequence diagram ?
- d) What is message passing ?
- e) What are TCP and UDP ? Why they are used ?
- f) Expand JSSE, RPC.
- g) What is meant by unreliable multicasting ?
- h) Define echo protocol.
- i) What are the packages that provide reliable multicast API ?
- j) What are stubs and skeletons ?
- k) What is local procedure ?
- l) Define polling.

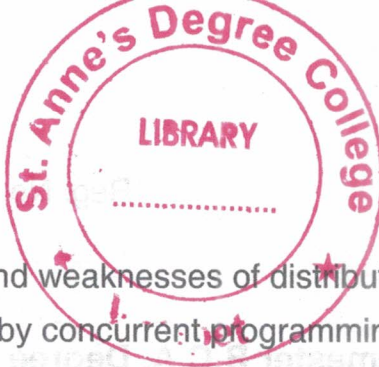


**PART – B**

**Unit – I**

2. a) List and explain different forms of computing.
- b) What do you mean by concurrent programming ? Explain its types.
- c) Explain with block diagram.
  - i) Synchronous send and Synchronous receive.
  - ii) Asynchronous send and Synchronous receive. **(6+6+8)**

P.T.O.



3. a) Explain strengths and weaknesses of distributed computing.  
 b) What do you mean by concurrent programming ? Explain its types.  
 c) Explain simplified state transition diagram of a process. **(7+8+5)**

#### Unit – II

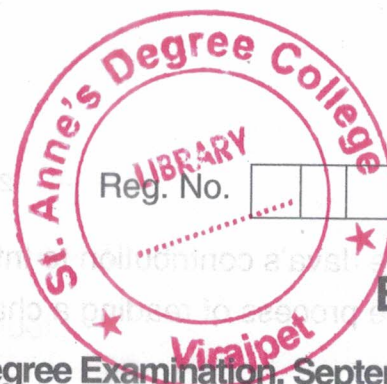
4. a) What is message system paradigm ? Explain its two types.  
 b) What do you mean by stream-mode socket API ? Explain with diagram.  
 c) Write a note on trade-offs of distributed computing paradigms. **(8+6+6)**
5. a) With a neat diagram, explain object request broker paradigm and object space paradigm.  
 b) With neat diagram explain remote procedure call.  
 c) With diagram explain connectionless datagram socket. **(8+7+5)**

#### Unit – III

6. a) Write and explain the classification of reliable multicast systems.  
 b) With neat diagram explain client-server distributed computing paradigm.  
 c) Briefly explain client server paradigm issues. **(8+6+6)**
7. a) Differentiate stateful and stateless servers.  
 b) Explain the following with example.  
 i) FIFO multicast  
 ii) Casual order multicast.  
 c) Explain the mechanism for testing a network service. **(7+8+5)**

#### Unit – IV

8. a) What is archetypal distributed object architecture ? Explain with diagram.  
 b) Write a note on RMI security manager.  
 c) Write the algorithm for developing the server-side software when building an RMI application with client callback. **(8+6+6)**
9. a) With an example explain a sample RMI application in Java.  
 b) Explain stub downloading with neat diagram.  
 c) Explain RPC with neat diagram. **(10+5+5)**



BCACAC 314

Credit Based Fifth Semester B.C.A. Degree Examination, September/October 2020  
**JAVA PROGRAMMING**  
(Common to All Batches) Repeaters)

Time : 3 Hours

Max. Marks : 100

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

**PART – A**

1. a) What is Java Virtual Machine ? (2×10=20)
- b) Differentiate character and byte stream.
- c) What is type conversion ? Write the different ways of type conversions in assignment.
- d) Write the syntax of for each with an example.
- e) Define object. Write the purpose of new operator.
- f) What is the purpose of super keyword ?
- g) What is an interface ? Write the differences between interface and class.
- h) Define Thread. How to set priority for thread ?
- i) List any four built in exceptions.
- j) What is Applet ? Name two ways to create an Applet.
- k) Write the purpose of show Status() method with syntax.
- l) What are the limitations of AWT components against SWING components ?

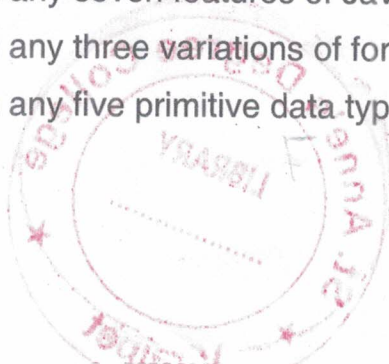
**PART – B**

**Unit – I**

2. a) Explain any seven features of Java.
- b) Explain any three variations of for loop with an example each.
- c) Explain any five primitive data types in Java.

(7+8+5)

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3. a) Explain the Java's contribution to Internet.
- b) Explain the process of reading a character from the keyboard with suitable example.
- c) With the syntax and example, explain the working of switch statement.

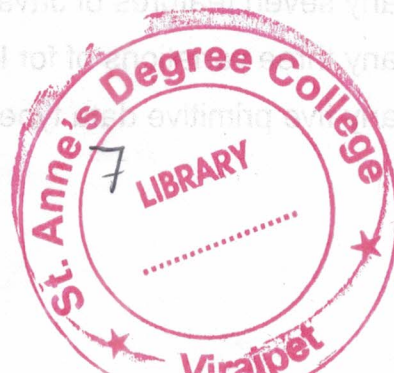
(9+5+6)

### Unit – II

4. a) Define array. With an example explain the different ways to create a one dimensional array.
  - b) With an example, explain the command line arguments.
  - c) With an example, explain method overloading.
  - d) Explain single level inheritance with a suitable example. (5+5+5+5)
5. a) Explain any five String methods with syntax and example.
  - b) What is constructor ? Explain different types of constructors with examples.
  - c) With an example explain the working of static block.
  - d) With an example explain method overriding. (5+5+5+5)

### Unit – III

6. a) Define package. With an example explain how to create and import the user defined package.
  - b) With an example explain how the exceptions are handled by using multiple catch statements.
  - c) With an example explain how the thread created by implementing Runnable interface. (8+7+5)
7. a) With an example explain implementing an interface.
  - b) Explain how user defined exception is created.
  - c) Define Synchronization. With an example explain how synchronization is achieved by synchronized statement. (6+7+7)





**Unit – IV**

- 8. a) Explain the delegation event model.
  - b) Explain any two layout managers.
  - c) Explain the following swing controls.
    - i) JCheckBox                      ii) JButton.
  - d) Explain any four methods of Applet. **(6+4+6+4)**
  
  - 9. a) With an example explain the passing parameters to an Applet.
  - b) What is the purpose of Mouse Listener Interface ? With the syntax and example explain any five methods of Mouse Listener interface.
  - c) Explain the following AWT controls.
    - i) Textfield                      ii) Choice.
  - d) Explain with example, menubar menus. **(6+4+6+4)**
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**BCACAC 317**

**Credit Based Fifth Semester B.C.A. Degree Examination, Sept./Oct. 2020**  
**(Common to all Batches) (Repeaters)**  
**MANAGEMENT INFORMATION SYSTEMS**  
**Stream – II (Elective)**

Time : 3 Hours

Max. Marks : 100

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

**PART – A**

1. a) Define MIS. (2×10=20)
- b) What are the differences between Classical and System Approach ?
- c) What is decision theory ?
- d) What is the significance of general business planning ?
- e) Write any two characteristics of Decision-Assisting Information Systems.
- f) What do you mean by decision making ?
- g) What are the two classification of system constraints ?
- h) What is conceptual design ?
- i) What is documentation ?
- j) Why information is essential for good system design ?
- k) What is Gantt-Chart ?
- l) What is cut-over ?

**PART – B**

**Unit – I**

2. a) What is the need of MIS within the company ? Explain.
- b) Explain General Management System with neat diagram.
- c) Write a note on Classical Process Theory. (7+7+6)

**BCACAC 317**

3. a) Explain system approach to organizing.
- b) Write a note on Systems view of Business.
- c) Explain dimensions of plans.

**Unit – II**

4. a) With the help of diagram explain the Basic Information System.
- b) Explain Personnel Information System.
- c) Write a note on Evolution of an information system. **(7+7+6)**
5. a) Write a short note on MIS objectives.
- b) How management science solves Decision problems ? Explain.
- c) Explain the inter relation between strategic planning and project planning and MIS. **(5+8+7)**

**Unit – III**

6. a) Explain the process of setting system objectives.
- b) Explain the constraints of MIS design with a neat diagram.
- c) Develop a list of criteria for company's alternative conceptual design. **(7+7+6)**
7. a) Explain the process of documenting the system design.
- b) What are the personal managerial attributes ? Explain.
- c) Why is the need of information for managers and management ? **(7+7+6)**

**Unit – IV**

8. a) Explain MIS software development with a block diagram.
- b) Explain computer related acquisitions for implementation.
- c) Discuss the various implementation issues in MIS. **(8+6+6)**
9. a) Explain the developing procedures for implementation.
- b) Explain the process of MIS evaluation.
- c) Explain the pitfalls in MIS development. **(6+6+8)**

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BCACAC 313



**Credit Based Fifth Semester B.C.A. Degree Examination, Sept/Oct. 2020**  
**(Common to all Batches) (Repeaters)**  
**WEB DEVELOPMENT IN .NET**

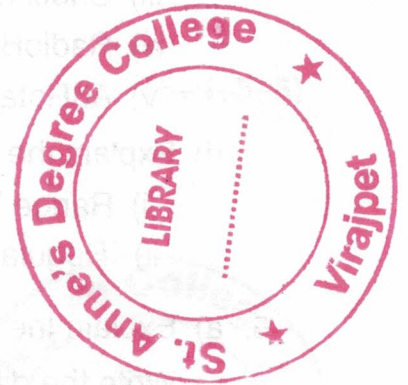
Time : 3 Hours

Max. Marks : 100

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

PART – A

1. a) Difference between <BR> and <P> tag. (10×2=20)
- b) Explain any two attributes of <BODY> tag.
- c) Differentiate between strokeRect() and fillRect() method.
- d) Write any two differences between XML and HTML.
- e) What is web server control ?
- f) What is container control ? Give example.
- g) Differentiate between value type and reference types.
- h) What is SOAP ?
- i) Write any two properties of a Thread.
- j) What do you mean by Boxing ? Give an example.
- k) What is a Delegate ?
- l) What is an Interface ?



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## PART – B

## Unit – I

2. a) How to insert an image into a web page ? Explain the attributes used.  
b) List and explain the various structural elements used in HTML5.  
c) Explain any five text formatting tags.  
d) Illustrating with an example state how the tables are created and their tags be made use in HTML. (5+5+5+5)
3. a) Write a note on :  
i) Geo location API.  
ii) Working-Off line.  
b) Explain the various CSS3 properties.  
c) How transforming of image is done in HTML5 ?  
d) Explain the various role attributes used to achieve WAI-ARIA. (5+5+5+5)

## Unit – II

4. a) Explain the architecture of ASP.NET.  
b) Explain the building blocks of XML documents.  
c) Write the purpose of the following five ASP.Net controls with example.  
i) TEXTBOX  
ii) BUTTONS.  
iii) CheckBox.  
iv) RadioButton.  
v) AdRotator.  
d) Explain the following validators with example.  
i) Range Validator.  
ii) Regular Expression Validator. (5+5+5+5)
5. a) Explain the various ADO.NET objects.  
b) Write the different characteristics of ASP.NET.  
c) Explain the following controls :  
i) SqlDataSource.  
ii) ObjectDataSource.  
d) Explain different types of DTD with example. (5+5+5+5)



**Unit – III**

- 6. a) Explain the different data types in C#.
  - b) Explain the different states of ASP.NET.
  - c) Write a note on UDDI.
  - d) What is caching ? Explain different types. (5+5+5+5)
- 7. a) Write a note on deployment.
  - b) Explain the different elements of web service.
  - c) How does C# differ from Java ? Give any five differences.
  - d) Explain security mechanism used in ASP.NET. (5+5+5+5)

**Unit – IV**

- 8. a) What are method parameters ? Explain different types.
  - b) Write a note on constant members and read only members of a class in C#.
  - c) Differentiate between :
    - i) for and for each
    - ii) break and continue.
  - d) What are parameter arrays ? Explain with example. (5+5+5+5)
- 9. a) Explain with syntax and example, how delegates are declared.
  - b) What is a property ? Explain with example implementing a property.
  - c) Explain constructor overloading in C#.
  - d) Explain Delegate methods. (5+5+5+5)

