# **BA 1<sup>st</sup> Sem. (Computer Applications)**

#### CA-01 Fundamentals of I.T.

- 1. What is computer?
- 2. Who is the father of computer?
- 3. Describe the basic organization of computer system using the block diagram.
- 4. Basic input devices.
- 5. Explain the functioning of each unit of Computer.
- 6. Why computer codes are needed? Explain in brief the ASCII and EBCDIC coding scheme.
- 7. What are the various input devices used in computer?
- 8. Explain the working of mouse.
- 9. Explain light pen and track ball.
- 10. Explain functioning of Keyboard.
- 11. What are the various output devices?
- 12. What are the various types of printers? Explain any two.
- 13. Discuss the role of Interpreter, Compiler and assembler.
- 14. Five an example of real time computing?
- 15. What is operating System? Give examples.
- 16. What are Dos system files?
- 17. What are the various types of commands? Explain with examples.
- 18. purpose of config.sys file
- 19. purpose of Autoexec.bat file
- 20. What is the purpose of Path Command?
- 21. Difference between internal and external commands?
- 22. What are batch files? How to create them?
- 23. What is the difference between Hardware and Software?
- 24. What is primary memory?
- 25. What is secondary memory?
- 26. Difference between RAM, ROM?
- 27. What is storage devices? Explain with examples.
- 28. Draw a block diagram of a computer. Explain the function of each of the blocks.
- 29. What is control Panel?
- 30. What is the difference between System and Application software?
- 31. What is Booting Process?
- 32. What is Memory? Explain types of Memory in brief.
- 33. Write short note on-Taskbar, Toolbar, scandisk
- 34. Explain mainframe computer
- 35. Explain mini computer
- 36. Types of computers
- 37. Generation of computer
- 38. Explain the role of computer in Office automation
- 39. What is an Operating System? Explain its features.
- 40. Explain assembler, compiler and interpreter.
- 41. What characteristics of ROM makes it useful?

- 42. Types of storage devices?
- 43. Convert 73 into binary number.
- 44. Convert 110011 into decimal number
- 45. Convert octal number (3245) into binary number.
- 46. Binary Number 10101 into Octal Number.
- 47. Hexadecimal Number 1516 Calculating Binary Equivalent

# **BA 1<sup>st</sup> Sem. (Computer Applications)**

## **CA-02 Application Software**

- 1. How documents can be merged in MS Word? Explain.
- 2. Explain the features of MS-Word
- 3. What is Macro? How to Create a Macro?
- 4. Write down the steps to create macro and used?
- 5. Explain the steps to create a table in MS Word.
- 6. Copy Delete and move commands
- 7. Purpose of Cut, copy, paste commands.
- 8. Character formatting
- 9. Spell check
- 10. You can use.....to copy selected text; and.....to paste it in a document.
- 11. What is a wizard? How is it different from template?
- 12. Name and explain any five items of INSERT menu.
- 13. Explain the number-formatting feature of MS-Excel?
- 14. What are worksheet links? How links can be established?
- 15. Name and explain any five built in functions of MS-Excel?
- 16. Viewing a presentation.
- 17. Printing a presentation.
- 18. A file is often referred to as a...
- 19. File extension of Ms Word Document.
- 20. File extension of Powerpoint File
- 21. File extension of Ms Access
- 22. File Extension of Ms excel
- 23. Explain the concept of database and its creation using MS-Access.
- 24. Explain primary key and setting it in MS- Access
- 25. How do you insert page numbers in MS-Word?
- 26. How charts can be created using MS-Excel?
- 27. What type of animations can be created using MS-PowerPoint?
- 28. How the contents in a database table can be edited using MS- Access?
- 29. What are header and footer? How are they put in document.
- 30. What are the different types of charts in MS-Excel?
- 31. Write steps to create a report in MS-Access.
- 32. Write steps to create pie chart in Excel.
- 33. What the difference is between save and save as?
- 34. .What for find and replace is used in Word?
- 35. What is a cell in MS-Excel
- 36. Write any two features of MS-Access
- 37. What is cell reference? Explain its advantages.
- 38. Explain custom animation
- 39. Explain slide transition
- 40. Page layout means
- 41. How you can insert shapes in MS-word document.

- 42. Discuss the ways to insert a table in document?
- 43. Define Bookmark
- 44. Define Hyperlink
- 45. WordArt
- 46. Explain the concept of Page break.
- 47. Different views available in PowerPoint.
- 48. In PowerPoint, the header and footer button can be found on the insert tab in what group?
- 49. The slide that is used to introduce a topic and set the tone for the presentation is called the
- 50. What is the default PowerPoint standard layout?
- 51. Which type of view is not present in MS PowerPoint?
- 52. How background color is apply on PowerPoint slide?

# **BA 2<sup>nd</sup> Sem. (Computer Applications)**

# **CA-03-C Programming Language**

- 1. Short notes on :a)Machine Language
  - b) High-Level Language
  - c) Assembly Language
- 2. Define keyword
- 3. Why C is called as middle level language?
- 4. What is variable?
- 5. Constant vs. variable
- 6. Data types
- 7. What is an algorithm?
- 8. What is flowchart?
- 9. Various symbols used in flowchart?
- 10. What is the use of decision table?
- 11. What do you mean by control statements.
- 12. What are various decision control statements?
- 13. Difference between if and if-else
- 14. Nested if statement.
- 15. Difference b/w while and for loop
- 16. Do-while loop.
- 17. Difference b/w local and global variable.
- 18. '&' operator.
- 19. **\*\*** operator.
- 20. What do you mean by array?
- 21. Types of array?
- 22. Memory representation of array?
- 23. How address of an element is calculated in array?
- 24. What is pointer?
- 25. Free () function.
- 26. What is string?
- 27. What is null character?
- 28. Explain Nested structures.
- 29. What are the various string handling functions?
- 30. What is structure?
- 31. What is Union?
- 32. Difference between structure and union?

- 33. Various mode of opening a file?
- 34. How to open and close a file?
- 35. What is file?
- 36. How can you access structure members?
- 37. Why we use header files?
- 38. Discuss in detail various steps in developing a program.
- 39. What is data flow diagram? Discuss by taking an example of ATM system
- 40. What is decision table? Explain with the help of example
- 41. Explain with the help of diagram various decision control statements.
- 42. Explain various looping statements.
- 43. Difference b/w switch and else-if statement.
- 44. Difference b/w call by value and call by reference.
- 45. What is an array? Discuss its types?
- 46. Discuss various methods of dynamic memory allocation.
- 47. Discuss various string handling functions.
- 48. Difference b/w structure and union.
- 49. Discuss file streams hierarchy with the help of diagram.
- **50**. Difference b/w text and binary files.

# BA 2<sup>nd</sup> Sem. (Computer Applications)

## **CA-04-Operating System Concepts**

- 1. What do you mean by operating system? What are the various functions performed by it?
- 2. What are the various types of operating system?
- 3. Explain the architecture of an Operating System?
- 4. What is the difference by single task operating system and multitasking operating system?
- 5. What is system call? What are the various system calls? Explain the function of each of them?
- 6. Explain the process concept briefly with its states?
- 7. What is PCB? Explain in detail.
- 8. Give difference between a process and thread?
- 9. Comparison between preemptive and non-preemptive scheduling?
- 10. What is the role of short term scheduler, midterm scheduler, and long term scheduler?
- 11. What is round robin scheduling technique? Explain the effect of minimizing and maximizing the time slice?
- 12. What are the necessary conditions for a deadlock?
- 13. Explain the Banker's algorithm of deadlock avoidance.
- 14. What is deadlock prevention? How can you prevent the deadlock in a given system?
- 15. Explain memory fragmentation?
- 16. What is paging and how paging is used to remove external fragmentation?
- 17. Explain demand paging?
- 18. Give the various page replacement algorithms?
- 19. How memory management takes place in operating system?
- 20. What do you mean by thread? Explain user and kernel thread?
- 21. Define user mode and kernel mode. Why two modes are required?
- 22. What are the drawbacks of monolithic system?
- 23. What is a semaphore?
- 24. What is a process? List the various state of a process.
- 25. What is relation between path name and a working directory?
- 26. Differentiate between field and record.
- 27. Differentiate between thread and process.
- 28. What are the types of system calls?
- 29. Explain batch system and multi programmed system in detail.
- 30. What is a monitor? Explain solution for producer-consumer problem using monitor
- 31. Explain essential features of O.S.
- 32. Consider following process with length of CPU burst time in milliseconds:

Process	Burst time
$P_1$	6
P <sub>2</sub>	10
P <sub>3</sub>	3
P <sub>4</sub>	4
P <sub>5</sub>	2

- a. Draw Gantt Charts illustrating execution of these processes for round robin scheduling (quantum=2)& FCFS.
- b. Calculate waiting time for each process for each scheduling algorithm.
- c. Calculate average waiting time for each scheduling algorithm. Consider all processes arrived in order P<sub>1</sub>,P<sub>2</sub>,P<sub>3</sub>,P<sub>4</sub>,P<sub>5</sub> at timezero
- 33. What are the methods of free space management of disk?
- 34. What is demand paging?
- 35. Differentiate between fixed partition and variable partitions.
- 36. What is page fault and page fault frequency?
- 37. Why device drivers are required?
- 38. Describe in short: magnetic disk, DVDs.
- 39. Explain Semaphores?
- 40. Preemptive and non -preemptive scheduling.
- 41. Define seek time algo.
- 42. Explain Scheduling algorithms.
- 43. Difference between short term scheduling and long term scheduling.
- 44. What are the conditions for deadlock?
- 45. Mention various recovery methods for deadlock.
- 46. Write any 4 features of windows 7.
- 47. Explain deadlock avoidance with banker's algorithm in detail.
- 48. Explain architectural features of windows 7.
- 49. Explain file system of windows 7.
- 50. What is segmentation? Explain basic segmentation method.

# BA 3<sup>rd</sup> Sem. (Computer Applications)

#### CA-05-Programming in C++

- 1. Difference between C and C++.
- 2. Difference between procedural and non-procedural language?
- 3. Define ADT?
- 4. Difference Between static binding and run time binding?
- 5. Cast operator?
- 6. Manipulators?
- 7. Library functions?
- 8. Features of OOPs?
- 9. What is an access specifier?
- 10. How is encapsulation implementation in C++?
- 11. What is class instantiation?
- 12. What do you mean by constructor? Why do we need it?
- 13. List the characteristics of a constructor?
- 14. If a class contains no constructor, can its objects be created?
- 15. What do you mean by default constructor?
- 16. What is operator overloading?
- 17. How will you overload a binary operator?
- 18. What are the pitfalls of operator overloading?
- 19. Difference between public and private inheritance?
- 20. What is the order of execution of constructors and destructors in inheritance?
- 21. Write note on AWK pattern scanning?
- 22. Give full form of AWK?
- 23. Why do we use class instead of structures?
- 24. Explain access specifier? How it is used?
- 25. What is scope resolution operators? How it is useful for defining the members of a class?
- 26. How will you define a member function inside and outside the class?
- 27. What are the various types of functions used in a class? Explain with suitable example?
- 28. What is an array of class objects? How are they defined in C++?

#### Create the following classes:

a) Class-Employee

Data members-Employee identification number, employee name, basic pay, dearness allowance, house rent allowance.

Member Functions: Input the data, calculate the total salary and display it along with the employee detail.

b) Class-Student

Data members-Roll numbers, marks of three subjects

Member functions-input the data, compute average marks in three subjects, compute and display grade of the student.

- 29. Explain the concept of inline member functions?
- 30. How will you define a constructor inside and outside a class?

- 31. What do you mean by dynamic initialization of objects? Why do we need it?
- 32. What is copy constructor? Explain its need?
- 33. How will data conversion be performed?
  - (a.) If the source object's class contains the conversion function.
  - (b.) If the destination object's class contain the conversion function.
- 34. What do you mean by public inheritance? Explain with example?
- 35. Explain private inheritance with suitable example?
- 36. Can we access the private members of the base class by objects of derived class? If yes. How?
- 37. What are abstract classes?
- 38. Differentiate between base virtual class and virtual function?
- 39. Explain the concept of inheritance
- 40. What are various types of Inheritance?
- 41. Write a program to implement Single Inheritance?
- 42. Write a program to implement Multiple Inheritance?
- 43. Write a program to implement Multilevel Inheritance?
- 44. Write a program to implement Hybrid Inheritance?
- 45. What are character files and Binary files? Differentiate between two?
- 46. What are various mode of file? Explain
- 47. Write a program to extract and print vowels in a file?
- 48. Differentiate between object oriented and procedural programming?
- 49. Differentiate between C and C++
- 50. Explain static and run time polymorphism?
- 51. How Encapsulation is implemented in C++? Explain

# BA 3<sup>rd</sup> Sem. (Computer Applications) CA-06-Web Designing

- What are merits and demerits of WWW?
- Define internet addressing.
- Define web browser.
- List various HTML formatting tags.
- What is need of frame?
- List various features of JQuery.
- What are various characteristics of JavaScript?
- Define URL.
- Write a PHP program to check whether the number is positive or negative.
- Define CSS. What are its different types? Explain with examples.
- Explain : Types of internet connections
- Explain :Creating table using HTML
- •
- 3. What are various conditional statements in JavaScript? Explain with examples.
- 4. Write notes on the following:
- a) Features of DOM
- b) Form and its components.
- 5. Write notes on the following:
- a) Use of XML HttpRequest
- b) Features of Server Script
- 6. What is use of PHP? Write and explain the working of different looping statements available in PHP.

- 7. Explain the following:
- a) Types of operators in PHP
- b) Manipulating database using PHP

# BA 4<sup>th</sup> Sem. (Computer Applications)

#### CA-07- Data structure

- 1. List out the areas in which data structures are applied extensively?
- 2. What are the major data structures used in the following areas: RDBMS, Network data model & Hierarchical data model.?
- 3. If you are using C language to implement the heterogeneous linked list, what pointer type will you use?
- 4. Minimum number of queues needed to implement the priority queue?
- 5. What is the data structures used to perform recursion?
- 6. What are the notations used in Evaluation of Arithmetic Expressions using prefix and postfix forms?
- 7. What are the methods available in storing sequential files?
- 8. List out few of the Application of tree datastructure?
- 9. Traverse any tree using Inorder, Preorder and Postorder traversals.
- 10. Sort the given values using Quick Sort? 65 70 75 80 85 60 55 50 45
- 11. . What is a spanning Tree?
- 12. Whether Linked List is linear or Non-linear data structure?
- 13. Draw a binary Tree for the expression : A \* B (C + D) \* (P / Q)
- 14. What is the difference between a queue and a stack?
- 15. Translate infix expression into its equivalent post fix expression: (A-B)\*(D/E)
- 16. .Translate infix expression into its equivalent post fix expression: A\*(B+D)/E-F\*(G+H/K)
- 17. Write an algorithm to traverse a linked list.
- 18. List out few of the Application of tree data structure?
- 19. What are priority queues?
- 20. What are the limitations of arrays?
- 21. What is the difference between an array and a linked list?
- 22. What is a linked list?

- 23. What is a node?
- 24. What is sorting?
- 25. List some popular sorting methods.
- 26. Explain bubble sort.
- 27. What is the complexity of bubble sort?
- 28. Explain the procedure for insertion sort.
- 29. What is insertion sort?
- 30. Sort 20,35,40,100,3,10,15 using insertion sort.
- 31. What is the complexity of insertion sort?
- 32. What is merge sort?
- 33. What is selection sort?
- 34. Write the process of selection sort.
- 35. What is the complexity of insertion sort?
- 36. Write Selection Sort Algorithm
- 37. Name some operations on Linked Lists
- 38. Explain circularly linked lists
- 39. What is a binary tree?
- 40. What is quicksort algorithm?
- 41. Program to add a new node to the ascending order linked list.
- 42. What are complete trees?
- 43. Big Oh Notation
- 44. Complexity of an algorithm
- 45. Applications of Data structure
- 46. Types of Data Structure
- 47. Searching and its types.
- 48. Comparison between linear and Binary search
- 49. Explain Linear Search
- 50. Explain Binary search
- 51. Program that implements depth first search algorithm.
- 52. Consider the following stack of characters, where STACK is allocated N = 8 mmory cells

STACK: A,C,D,F,K,\_,\_. ( \_ means empty allocated cell)

Describe the stack as the following operations takes place:

POP(STACK, ITEM) (b) POP(STACK, ITEM) (c) POP(STACK, ITEM) (d) PUSH(STACK, R) (e) PUSH(STACK, L) (f) PUSH(STACK, S) (g) PUSH(STACK, P) (h) POP(STACK, ITEM)

# **BA 4<sup>th</sup> Sem. (Computer Applications)**

# **CA-08-Java Programming**

- 1. Why is Java Known as platform neutral language?
- 2. How is Java More secured than other languages?
- 3. Why do you need the import statement?
- 4. What is Byte code?
- 5. Write short note on JVM
- 6. Write short note on JDK
- 7. What do you mean ternary operator?
- 8. What is the significance of Operator precedence?
- 9. What is the difference between unary, binary and ternary operators?
- 10. What do you mean by labelled loop?
- 11. WAP to find reverse of a number?
- 12. WAP to calculate sum of digits of a number.
- 13. What is method overloading?
- 14. Why we need a constructor?
- 15. Define access specifier?
- 16. Differentiate between local variables, instance variable and class variables?
- 17. In what ways does a Switch statement differ from if statement?
- 18. What are the user defined exceptions?
- 19. Difference between Procedure oriented and Object Oriented Approach?
- 20. Name the various data types used in Java.
- 21. What is a container in a GUI?
- 22. What is the importance of paint() method In Applet?
- 23. What is deadlock in multithreading.
- 24. Write any six characteristics of Java programming language?
- 25. Explain various types of inheritance supported in Java with suitable examples.
- 26. Discuss the various flow control statements in Java programming
- 27. Explain the use of Final keyword.
- 28. How to implement interfaces in Java? Explain with suitable example.

- 29. Discuss any two functions of String Buffer class.
- 30. What are the types of packages? Discuss the access protection in package with a program.
- 31. Write short notes on one-dimensional Arrays and Streams
- 32. What are the types of Exception? How Exceptions can be handled in Java? Explain with suitable examples.
- 33. Explain the Java thread model.
- 34. What are the types of applet? Discuss the applet lifecycle and give suitable example.
- 35. What is Layout manager in Java? Explain the Flow Layout, Border Layout, and Grid Layout.
- **36.** What is the use of JDBC? Write the steps to insert and delete record in database using **JBC**?
- 37. What are various types of inheritance implemented in Java?
- 38. How is multiple inheritance implemented in Java?
- 39. What are Interfaces? Explain with Program
- 40. How multiple interfaces is are implemented in java? Explain with program?
- 41. What is dynamic binding?
- 42. What are two ways methods by which we may stop threads?
- 43. How do you add a class or interface to a package?
- 44. How does Sting Class differ from StringBuffer class?
- 45. How do the various access modifiers provide the data protection in programs?
- 46. What is the significance of Keyword Super?
- 47. What is the difference between suspending and stopping a thread?
- 48. Describe the Applet Life cycle?
- 49. WAP to demonstrate different types of initialization of arrays?
- 50. What are various string handling methods used in Java?
- 51. What are the similarities between interfaces and classes?
- 52. WAP to demonstrate how to pause execution of running thread using Sleep() method?
- 53. Types of error in Java?
- 54. WAP to demonstrate the use of throws in exception handling/
- 55. How applets differ from applications?

# **BA 5th Sem. (Computer Applications)**

## **CA-09-Programming with VB.net**

- 1. What is Visual Basic?
- 2. When and who developed Visual Basic?
- 3. Which are the three editions of Visual Basic?
- 4. Expand COM and DCOM?
- 5. Define IntelliSense?
- 6. What is the use of ADODC control?
- 7. What are Addins?
- 8. What do you mean by Title Bar?
- 9. What do you mean by Menu Bar?
- 10. What do you mean by Tool bars?
- 11. What is a List box?
- 12. What is a Combo box?
- 13. What is a Timer?
- 14. What is Drive List box?
- 15. What is Dir List box.
- 16. What is Form Layout Window?
- 17. What is a Resource File?
- 18. What is a Project File?
- 19. What is ActiveX Control File?
- 20. Explain the three editions of Visual Basic?
- 21. Explain any three IDE components of Visual Basic?
- 22. Explain any three controls of Visual Basic?
- 23. Name the different types of projects that can be created in VB?
- 24. What are the different options available in Menu bar?
- 25. How is the Immediate Window used in VB.
- 26. Explain the function of Properties Window?
- 27. Explain the function of Project Window?
- 28. What is IDE? Discuss the features of Visual Basic IDE?
- 29. Explain the different Windows available in Standard EXE project of VB?
- 30. Explain the important features of VB?
- 31. Explain briefly the usage of any five controls in the Toolbox?
- 32. Create a VB program to input two numbers add display their sum?
- 33. What is an Empty Value?
- 34. What is a local variable?
- 35. What is a global variable?
- 36. Which keyword is used to preserve the value of a local variable?
- 37. What are the two types of constants?
- 38. How are system-defined and user defined constants declared?
- 39. .Name the three types of operators in Visual Basics.
- 40. Name any two arithmetic operators.
- 41. Name any two relational operators.
- 42. Name any two logical operators?
- 43. What are the features of ADO Data Control?
- 44. Explain data aware controls?

- 45. List any three properties of ADO data control?
- 46. List any three events of ADO data control?
- 47. What is the function of data combo control?
- 48. How's the Data Grid control used in VB application.
- 49. Explain the different types of Record Sets?
- 50. What are the advantages of an ActiveX data object?
- 51. What is a connection object?
- 52. What is a Command object? Explain.
- 53. What are the most common methods used with the command object?
- 54. What is a RecordSet?List some common properties of a Record Set object?

# **BA 5<sup>th</sup> Sem. (Computer Applications)**

# **CA-10- Database Management using ORACLE**

- 1. What is DBMS? Why we use it?
- 2. What is foreign key
- 3. What is an outer join?
- 4. what is the use of minus set operator?
- 5. What is the need of database security?
- 6. What do you mean by operator precedence?
- 7. How can you refer PL/SQL variables?
- 8. How will you drop a trigger?
- 9. What are various attributes of Cursor?
- 10. What are the difference between primary key & unique key?
- 11. What are the difference between candidate key and super key?
- 12. What is the function of Like operator?
- 13. What is variable? How it's different from constant?
- 14. What is the difference between SQL & PL/SQL?
- 15. What are the major components of DBMS? Describe with a diagram.
- 16. How data is organizes and manages in RDBMS approach? Discuss with relevant example.
- 17. What do you mean by 3 tier architecture of DBMS?
- 18. What do you mean by DBMS? Write and explain advantages & disadvantages of DBMS?
- 19. Explain E.F. Codd 12 rules used in RDBMS.
- 20. What is Join? How is it used to query multiple tables?
- 21. Discuss the various built in function used in Oracle?
- 22. Discuss the various DDL, DML operations with examples?
- 23. What do you mean by sequence? How do you create a sequence? How can you alter or drop it?
- 24. Write a program to demonstrate the predefined exception?
- 25. What is the cursor and its type? Explain with suitable example?
- 26. What are the various function performed by triggers?
- 27. Draw and explain general architecture of PL/SQL?
- 28. Write a PL/SQL block to calculate the factorial of number
- 29. What do you mean by database security? What are the major security threats in a database system?
- 30. What is data models? Comparison between different models?
- 31. What is normalization? Explain different forms & its advantages?

# **BA 6<sup>th</sup> Sem. (Computer Applications)**

#### **CA-11- Computer Networks**

- 1. Explain Network?
- 2. Explain LAN, MAN, WAN.
- 3. What is switching?
- 4. Define ISDN.
- 5. Differentiate between static and dynamic channel allocation.
- 6. Write a note on flooding.
- 7. What is the significance of HTTP?
- 8. Define FTP.
- 9. Explain internet, intranet, extranet.
- 10. What is Hub? How it is different from Switch?
- 11. Differentiate between analog and digital signals?
- 12. What is Laser transmission?
- 13. Define internetworking.
- 14. Define communication media.
- 15. Co-axial cable.
- 16. Why we use Fiber optics?
- 17. Distinguish between Connection oriented and connection-less services.
- 18. Define Full duplex mode.
- 19. What is the purpose of bridge?
- 20. What is HDLC? How it is different from SDLC.
- 21. Flow control.
- 22. SLIP & PPP
- 23. Leased line
- 24. Frequency Spectrum
- 25. Optimality Principle.
- 26. Services provided by network layer
- 27. What do you mean by computer network? What are the various hardware and software requirement for network?
- 28. What are network topologies? Explain various network topologies with their advantages and disadvantages.
- 29. Explain various types of wireless transmission in brief.
- 30. What is Multiplexing? Explain its various types in brief.
- 31. What is Ethernet? Explain IEEE standards.
- 32. What is packet switching? Compare it with circuit switching.
- 33. Explain the various services offered by data link layer.

- 34. Explain CSMA/CD/CA.
- 35. Discuss the concept of multiplexing. Explain various types of multiplexing in detail.
- 36. List major design issues of data link layer. Discuss data link protocols for noisy andnoiseless channels.
- 37. Explain the significance of error detection and error correction codes for data transfer. Construct the hamming code for bit sequence 1001110.
- 38. Discuss various IP address classes highlighting the concept of sub netting and subnetmask.
- 39. Explain the principles of congestion control. Discuss working of leaky bucket and tokenbucket algorithms.
- 40. Explain the architecture and services of electronic mail in detail. Write a note on MIME.
- 41. Explain SMTP
- 42. Discuss the different routing algorithms.
- 43. How data Communication is done in OSI Reference model? Discuss the activity carried at each layer?
- 44. What are the uses of computer networks? Explain various topologies used in computer networks with advantages and limitations of each.
- 45. Difference between LAN, MAN, WAN
- 46. Explain POP
- 47. Explain DNS
- 48. Explain FTP Commands.
- 49. Explain parallel and serial transmission concepts.
- 50. Differentiate between (a)analog and Digital
  - (b) Simplex and Half Duplex.

# BA 6th Sem. (Computer Applications)

## **CA-12-Working with Linux**

- What is Linux OS?
- 2. What are the features of linux?
- 3. Explain the grep command used for searching a pattern with any 4 options.
- 4. What was the origin of Linux operating system?
- 5. What are the partitions required for installing Linux in general?
- 6. How to start and stop OpenSSH?
- 7. What do you mean by packages in linux?
- 8. Ubuntu is derived from -----.
- 9. Discuss the privileges of Linux administrator.
- 10. Explain the standard file descriptors with suitable commands.
- 11. Describe the following commands: chown, chmod, expr.
- 12. Explain the cut command.
- 13. What is a shell?
- 14. What is shell script?
- 15. What is the command for viewing date and time in the terminal?
- 16. Write a note on commands for disk space management in linux.
- 17. Write a shell script to accept a filename. Check if the file exists and display the number of lines, words, and characters in the file. Display an appropriate message if the file is not present.
- 18. Explain the pipe feature in Unix with examples.
- 19. Write a note on the contents of the etc/passwd file.
- 20. Explain sort command with any three parameters.
- 21. What is the role of linux kernel in linux OS?
- 22. Give the expansion of CUPS.

- 23. What does CUPS relate to?
- 24. Which commands will give you information about how much disk space each file in the current directory uses?
- 25. What is the 'man' command used for?
- 26. What is the command to change the home directory of the user?
- 27. Explain the system memory management function in Linux.
- 28. What is a boot loader? Write a note on Grub or LILO.
- 29. Which commands are used for creating and maintaining user accounts in Linux? Explain with examples.
- 30. What are the duties of a system administrator?
- 31. What is meant by "monitoring and tuning performance" of a linux system?
- 32. Explain the following commands with examples: ls, rm, cp, mv, chown, chmod.
- 33. Which are the different file systems supported by Linux? Which feature of Linux makes this support possible (Virtual File Systems Layer)?
- 34. What are memory and virtual file systems? Explain any three (CRAMFS, RAMFS, PROC).
- 35. Write a short note on linux file permissions.
- 36. What is meant by Linux disk management?
- 37. Write a note on system shell configuration scripts.
- 38. Write short notes on piping and redirection
- 39. Write short notes on working with an editor
- 40. Explain cut copy and paste deleting and replacing in VR mode
- 41. Write short notes on creating backup
- 42. What is a partition what are types of partition write steps to create a partition
- 43. List 5 useful 5 most useful properties list 5 most useful file system properties
- 44. What is a swap space write steps to create a swap file
- 45. Explain etc password configuration file
- 46. Explain how to create a shell script.explain how to create execute a script?