KRISHNASAMY COLLEGE OF SCINCE,ARTS AND MANAGEMENT FOR WOMEN
S.KUMARAPURAM, CUDDALORE
I BCA
QUESTION BANK

Subject: Programming In C Sub Code: CCA 11

Two Marks Question:

1. Define Header File?
2. Define Array?
3. Define Function?
4. What is Recursion?
5. Define Variable, Constant, Identifier?
6. What is Typecasting?
7. Define Structure?
8. Define Pointer?
9. What is C Tokens?
10. Define String?
11. What is Control Structure?
12. What is Iterative Statement?
13. Difference between do and while.
14. Difference between for and while.
15. Difference between if and switch.
16. Define Keywords.
17. Write rules for creating variables?
18. Differentiate Array and String.
19. What is String Processing?
20. What is the use of Strlen(), Strcmp()?
21. Explain seek(), tellg()?
22. Define Union.
23. Differentiate Union and Structure.
24. Define Self referential Structure.
25. Define Files.
26. How files are accessed?
27. What is a command line argument?
28. What is the use of # Pre-processor directive?
29. What is the use of Conditional operator?
30. Difference between Sequential and random access file.

Five Marks Question:

1. a. What do you understand by constant, variable and keywords?

   b. Discuss the scope of a variable.

2. Describe the main features of C language with examples.

3. Is C a low-level or high-level language? Explain your answer.

4. Explain the terms flowchart and algorithm with examples.

5. Discuss the basic structure of a ‘C’ program.

6. Name and describe the various data types available in C.

7. Can multiple assignments be written in C. In what order will the assignment be carried out.

8. Explain nested if –else with example.

9. What is the different decision control structure available in C. Explain with examples?

10.What do you understand by operators? Explain the use of the following operators :a)relationalb)logical ANDc)arithmetic operators.

11. Discuss the conditional operator with the help of a program.

12. Discuss Precedence order and associatively of operators.

13. What is typecasting? When should a typecast be used?

14. What is the purpose of main( ) function? Can we have a program without main ( ).

15. What the term 'Nesting' refers to? Explain with the help of an example.

16. What are the various loop constructs available in C. Distinguish between while and do-while loops.

17. Why do we avoid the use of goto statements in programs?

18. If a 5 digit number is input through the keyboard, write a program to print the sum.

19. A cashier has currency notes of denominations 10, 50 and 100. If the amount to be withdrawn is input through the keyboard, find the total number of currency notes of each denomination the cashier will have to give the withdrawer.

20. If a four digit number is input through the keyboard, write a program to find the sum of first and last digit.

21. Differentiate between break and continue with examples.

22. What are functions? What is the advantage of using function in a program?

23. What are macros? Is it better to use a macro or a function?

24. In header files whether functions are declared or defined?

25. Explain call by value and call by reference with examples.

26. How can we swap two variables without using a temporary variable?

27. What do you understand by recursion? Explain with example.

28. Write a program in C to find the factorial of a number.

29. Write a program in C to find out the value of factorials from 1 to 10 using recursion.

30. What is an array? Explain the features of an array and their uses.

31. In what ways does an array differ from an ordinary variable? What advantage is there in defining an array size in terms of symbolic constant rather than a fixed integer constant?

32. Explain the concepts of multidimensional arrays in 'C' Language.

33. Explain Function and its Types?

34. Explain User defined Data types?

35. Explain Structure within Structure?

36. Explain Command line Argument?

37. Explain Pointers with Examples?

38. Explain Storage classes and its Types?

39. Explain Array and its Types with Example?

40. Explain Variables and its types with Example?

41. Explain Self Referential Structure?

42. Difference between Structure and Union with Example.

43. Explain Passing through Arguments?

44. Explain String Function with Example?

45. Explain Structure of C program?

46. Difference between Sequential File and Random Access file.

47. Explain Union with Example?

48. Explain exchanging the values of two values.

49. Write an algorithm for Counting of n numbers.

50. Explain Factorial Calculation.

Ten Marks Question:

1. Explain Operators and its Types with suitable Examples?

2. Explain Control Structures with Example?

3. Explain Function with Example?

4. Discuss about Types of functions with neat example.

5. Describe the File Handling Function with Example?

6. Explain Array and its Types with suitable?

7. Discuss about String Processing with example.

8. Explain For, do while, while loops with Examples?

9. Explain Switch, Break, Continue statement with Example?

10. Explain Structure and its Types with Examples?

11. Explain about Pointer and pointer arithmetic with example.

12. Explain Command line arguments with example.

13. Write about Reverse a digit of an integer?

14. Write an algorithm for Fibonacci series.

15. Explain GCD, Computing Prime factors of an integer.

Subject: MATHEMATICAL FOUNDATION I Sub Code: CAMA 15B

2 MARK QUESTIONS

UNIT I

1. Define a Tautology and give example
2. Define conditional statement
3. Define biconditional operator
4. Show that $(p \wedge q) \wedge \sim (p \vee q)$ *is a contradiction*
5. State any 2 laws of Algebra of proposition
6. Find the truth table for $p \vee \sim q$
7. Show that the proposition $p \rightarrow q$ and $\sim p \vee q$ are logically equivalent
8. Write down the negation of (i) All square are rectangle
   (ii) Some even numbers are prime number
9. Write down the contrapositive of (i) If a triangle is equilateral, it is isosceles
   (ii) If a number is divisible by 9, then it is divisible by 3
10. Classify the following as proposition or not (i) Trichy is the capital of Tamilnadu
    (ii) Are you going to school

UNIT II

11. Write down the domain and range of the relation R = $\{(x, \frac{1}{x}) / 0 < x < 4$, x is an integer$\}$
12. f,g: R→R are defined by f(x) = x+1 and g(x) = 2x-3. Find $\frac{f}{g}$ *and* $\frac{g}{f}$
13. Define difference of sets and given an example
14. Define equivalence relation
15. Write any two types of function
16. Let A={1,2,3}, B={1,3,5}, C={2,3,4,6}| Find A-(BUC)
17. Define partially ordered relation
18. Define symmetric relation
19. Define bijective relation
20. Define set

UNIT III

21. What are the types of binary operators
22. Find the value of $\frac{11C_8}{11C_7}$
23. How many even numbers of 4 digit can be formed out of the digits 1,2,3,…9 if repetition of digit is not followed
24. Find $10P_3$
25. Define Distributive operation and Identity operation. Give example
26. Define Symmetric difference
27. If S={A,B,C,D} where A= ∅, B={a,b} C={a,c}, D={a,b,c}. Show that U is a binary operation on S.
28. Let S be a set and * be a binary operation on S satisfying the condition a*a=0 for all a∈ S
    (a*b)*c = (b*c)*a. Show that * is both commutative and associative
29. Give an example of Boolean algebra and explain
30. Is subtraction, a binary operation operation in N ? Explain

UNIT IV

31. Find $\lim_{x\to 0} \frac{sinmx}{sinnx}$
32. What are the maximum and minimum value of $x + \frac{1}{x}$
33. Find the equation of tangent at (2,-12) on the curve $y = 4x - 3x^2 - x^3$
34. Write down the nessary and sufficient condition for existence of an envelope for a family of curves f(x,y,α)
35. Find the n^{th} derivative of sin2xcos3x
36. Write the formula for Radius of curvature
37. Evaluate $\lim_{x\to 0} \frac{x^3-8}{x-2}$
38. If u=(x-y)(y-z)(z-x) show that $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} = 0$
39. Find the n^{th} derivative of y = sin(ax+b)
40. If x=2at^2 and y = 2at find$\frac{dy}{dx}$

UNIT V

41. Find the equation of the straight line passing through intercepts on the axes
42. Give the condition for the two lines parallel
43. Find the slope of the line 2x-3y+7=0
44. Write down condition that the straight line y=mx+c is a tangent to the circle
$$x^2 + y^2 = a^2$$
45. Write down the condition for a$x^2 + 2hxy + by^2 = 0$
    (a) to represent a pair of real lines
    (b) to represent a pair of imaginary lines
46. Find the centre and radius of the circle $5x^2 + 5y^2 + 6x + 3y + 1 = 0$
47. show that the points (1,1), (5,-9) and (-1,6) are collinear
48. If the pair of lines $x^2 - 2pxy - y^2 = 0$ and $x^2 - 2qxy - y^2 = 0$ be such that each pair bisects the angle between other pair prove that pq = -1
49. Find the equation of the straight line passing through the points (7,-3) and cutting off equal intercepts on the axes
50. Find the equation of the circle whose centre is (a,-a) and radius ‘a

5-MARK QUESTIONS

UNIT-I

1. Find the truth table for ~ p V (q $\Lambda\sim r$).
2. Construct the truth table for the contra positive of $(p \to q) \to r$.°°Find the truth table of the proposition [q↔ $(r \to \sim p)[(\sim q \to p) \to r]$.
3. Test the validity of the argument $p \to \sim q, \sim r \to \sim q \vdash p \to \sim r$.
4. Show that $((\sim q) \Lambda p) \Lambda q$ is acontradiction.
5. Examine whether (pΛq)→(pVq) is a tautology.
6. Find the truth table for pΛ(qVr).
7. Prove that the proposition pV~(pΛq) is a tautology.
8. Prove that the De-Morgan’s law (i) ~(pΛq)≡ ~pV~q. (ii) ~(pVq)≡ ~pΛ~q.
9. Prove that p→(q→r) ≡(pΛ~r)→ ~q.
10. Construct the truth table for the proposition (pΛq)Λ~(pVq) where ~denote the negation.

UNIT-II

11. Show that A∪ $(B \cap C)$=(A∪ $B) \cap (A \cup C)$

12. If f and g are function defined by f(x)=3x+4 and g(x)=x^2+2. Find (gof)(x) and (fog)(x).
13. If af(x)+bf($\frac{1}{x}$)=x+$\frac{5}{x}$,a≠b find f(x).
14. For any three sets A,B,C prove (i) (A∪ B) − ($A \cap B$) = ($A - B$) ∪ ($B - A$)(ii) A-(B∪ C) = ($A - B$) ∩ ($A - C$).
15. If f(x)=$\frac{1}{1-x}$ find $f_o(f_of)$.
16. If f:A→B in a one –one and onto function. Prove that fof'=I_B and $f^{-1}$of=I_A where I_A and I_B are the identify function of the set A and B respectively.
17. Prove that A-(B∩ C) = ($A - B$) ∪ ($A - C$).
18. Find the inverse of the function f(x)=$1-2^{-x}$
19. Let A={1,2,3} Define f:A→A by f(1)=2,f(2)=1and f(3)=3 find $f^2, f^3, f^4 and f^{-1}$.
20. Explain types of functions with example.

UNIT-III

21. There are 4 bus lines between A and B and 3 bus lines between B and C.
    (i) In how many ways can a man travel by bus lines from A to C by way of B?
    (ii) In how many ways can a man travel round trip by bus from A to C by way of B if he does not want to use a bus line more then once?.
22. From 6 gentlemen and 4 ladies a committee of 5 is to be formed. In how many ways can this be done so as to include at least one lady?
23. Let S be a non empty set and * be a binary operation on S defined by x*y=x, for x,y∈S. Check whether * is commutative and associative.
24. Give example for the relation which is (i) Equivalence (ii) Transitive but neither symmetric nor reflexive (iii) Reflexive but neither transitive nor symmetric. Explain your answers.
25. Prove that $nC_r = nC_{n-r}$.
26. Define on Z, a*b= ,for all a,b∈Z. Show that * is not associative.
27. A committer of three is to be chosen out of 5 Englishmen, 4 Frenchmen and 3 Indians the committer to contain one of each nationality.
    (i) In how many ways can this be done?
    (ii) In how many arrangements will a particular Indian be included?
28. Show that b=c iffa+b=a+c and a.b=a.c.
29. Find the number of arrangements of 5 boys and 5 girls in a row so that no two boys and no two girls sit together.
30. If $nC_{10} = nC_6$ find nC_{11}.

UNIT-IV

31. Determine the maxima and minima of the function$y = x^5 - 5x^4 + 5x^3 + 10$.
32. If $u = \log(x^3 + y^3 + z^3 - 3xyz)$ show that$\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} = \frac{3}{x+y+z}$.
33. If f=$\frac{1}{\sqrt{x^2+y^2+z^2}}$ Show that $\frac{\partial^2 f}{\partial x^2} + \frac{\partial^2 f}{\partial y^2} + \frac{\partial^2 f}{\partial z^2} = 0$.
34. Find the equations of the tangent and normal to the curve $y = 4x - 3x^2 - x^3$.
35. Find the ewuation of tangent and normal at (2,-2) on the curve $y^2 = \frac{x^3}{4-x}$.
36. If$z = e^x(xcosy - ysiny)$, Show that $\frac{\partial^2 z}{\partial x^2} + \frac{\partial^2 z}{\partial y^2} = 0$.
37. Find the angle between the curves $y = x^2$and $y = (x-2)^2$.
38. Find the radius of curvature for the curve x=acosϴ, y=asinϴ.
39. Find the angle between the curves y^2=4x.
40. Show that the radius of curvature at the point (x,y) on the curve $y = ccosh(\frac{x}{a})$ is $\frac{y^2}{a}$.

UNIT-V

41. Show that the points A(1,1), B(5,-9) and C(-1,6) are collinear.
42. Find the equation of the tangent at the point (2,-5) on the circle $x^2 + y^2 - 5x + y - 14 = 0$.
43. Find the equation of the line which passes through the point of intersection of the lines 5x-6y=1 and 3x+2y+5=0 and is perpendicular to the line 3x-5y+11=0.
44. Show that the circles $x^2 + y^2 - 2x + 6y + 6 = 0$ and $x^2 + y^2 - 5x + 6y + 15 = 0$ touch each other internally.
45. Find the values of λ so that the equation $x^2 - \lambda xy + 2y^2 + 3x - 5y + z = 0$ represents a pair of straight lines.
46. Find the equation of the straight line the portion of which between the axes divided by the point (4,3) in the ratio 2:3.
47. Find the length of the tangent from the point P(x_1, y_1) to the circle $x^2 + y^2 + 2gx + 2fy + c = 0$.
48. Prove that the lines 3x-4y+5=0, 7x-8y+5=0 and 4x+5y=45 are concurrent.
49. Find the equation of the hyperbola with focus (I,-2), eccentricity 2 and directrix 3x-4y=10.
50. Find the condition that the line y=mx+c may touch the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

10-MARK QUESTIONS

Unit – I

1. Test the validity of the argument " If a man is a bachelor he is unhappy , If a man is unhappy he dies young, Therefore bachelor dies young".
2. Prove by truth table p→(qVr) ≡ (p→q)Λ(p→r).
3. a) Show that $\sim(p \vee q) \equiv (\sim p) \wedge (\sim q)$&b) Check whether$((\sim p) \vee q) \vee (p \wedge (-q))$ is a tautology.
4. a) Write the inverse, converse and contrapositive for the following: i) If you do not practice you will never learn how to play your horn. ii) Being able to type is sufficient to learn word processing. & (b) test the validity of the argument: On my wife's birthday I bring her flowers. Either it is my wife's birthday or I work late. I did not bring my wife flowers today. Therefore, I worked late.
5. Prove that $(p \rightarrow \sim q) \wedge (r \rightarrow p) \wedge q \rightarrow \sim r$ is a tautology.
6. Construct the truth table for i) $\sim p \vee (q \wedge \sim r)$ $ii)$ $(p \vee \sim r) \wedge (q \vee \sim r)$

$$iii)\ (p \vee \sim q) \wedge (\sim p \vee r).$$

7. Write down the negation of each of the following proposition (a) If he studies he will pass the examination (b) He swims if and only if the water is warm (c) If Rama is rich then Ravi and Roy are happy (d) Magesh speaks English or Hindi if he speaks Tamil.
8. (a) Define Argument, Testing for validity of arguments. (b) Test the validity of the argument ' If I study then I will not fail in Mathematics, If I do not play Basket ball then I will study, But I failed in Mathematics. Therefore I played Basketball".
9. Prove the De Morgan's laws a) $\sim (p \wedge q) \equiv \sim p \vee \sim q$ (b) $\sim (p \vee q) \equiv \sim p \wedge \sim q$.
10. Prove that $\sim (p \vee q) \vee (\sim p \wedge q)$ by using the laws of algebra of proposition.

Unit – II

11. Out of 800 boys is a school, 224 played cricket, 240 played hockey and 336 played basket ball; 80 played cricket and basketball and 40 played cricket and hockey; 24

played is all the three games. How many did not play any one of the game and how many played only one game?

12. Prove that a) $A - (B \cap C) = (A - B) \cup (A - C)$. b) $A - (B \cup C) = (A - B) \cap (A - C)$.
13. (a) Let f(x) = x+1 and g(x) = $\begin{cases} x-1 & if x > 1 \\ 1 & if x = 1 \end{cases}$ Compute f∘g and g∘f and check whether they are onto. (b) If f : $[0,\frac{\Pi}{2}] \rightarrow R$ is given by f(x) = sinx and g: $[0,\frac{\Pi}{2}] \rightarrow R$ is given by g(x) = cosx, show that f+g is not one-to-one even though each of f and g is one-to-one.
14. Out of 880 boys in a school, 224 played cricket, 240 played hockey and 336 played basketball; of the total 64 played both basketball and hockey; 80 played cricket and basketball and 40 played cricket and hockey. 24 played all the three games. How many did not play any of the games and how many played only one game?
15. If R and S are equivalence relations in X. Prove that R∩S is an equivalence relation in X.
16. Explain types of function with neat example.
17. Let A = {1,2,3}. Define f:A→A by f(1) = 2, f(2) = 1, and f(3) = 3, find f^2, f^3, f^4 and f^{-1}.
18. Prove the De Morgan's law i) $(A \cup B)' = A' \cap B'$ $ii)(A \cap B)' = A' \cup B'$.
19. Explain types of Relations with neat example.
20. Let f and g be functions defined by f(x) = 3x+4 and g(x) = $x^2 + 2$. Find the formulate determining g∘f and f∘g.

Unit – III

21. A cricket team of 12 players is to be formed from 20 players including 6 bowlers and 3 wicket keepers. In how many ways can team be formed so that the team contains exactly 2 wicket keepers and atleast 4 bowlers?
22. Prove that $nP_r = (n-1)P_r + r(n-1)P_{r-1}$.
23. A man has 7 relatives, 4 of them are ladies and 3 gentlemen; his wife also has 7 relatives , 3 of them are ladies and 4 gentlemen. In how many ways can they invite a dinner party of 3 ladies and 3 gentlemen so that there are 3 of man's relatives and 3 of wife's relatives?
24. A student is to answer 12 out of 15 questions in an examination. How many choices does the student have? (a) in all? (b) if he must answer the first two questions? (c) if he must answer the first or second question but not the both? (d) if he must answer exactly 3 of the first five questions? (e) if he must answer at least 3 of the first five questions?
25. (a) Find i) $90C_{88}$ and ii) $15P_4$. & (b) Find the number of permutation of the letters of the word MISSISSIPPI.
26. In how many ways can the letters of the word NAGERKOIL be arranged? How many of them begin with NA? In how many of them the 4 vowels come together? How many of them begin with the 4 vowels.
27. The letters of the word NATURE are permuted and the words so formed are arranged as in a dictionary. Find the rank of the word NATURE.
28. In an examination paper, there are 7 questions in part A out of which any 4 are to be attempted and there are 6 questions in part B out of which 3 are to be attempted. In how many different ways can a candidate answer part A and part B in full?
29. If nC_r: nC_{r+1} = 1:2 and nC_{r+1}:nC_{r+2} = 2:3, determine the values of n and r.
30. Find the number of ways in which 12 persons may be divided into 4 sets of 3 each, one to play lawn tennis, one to play cards one to play badminton and one to play table tennis.

Unit – IV

31. If y = a cos(logx) + b sin(logx) prove that $x^2 y_{n+2} + (2n+1)xy_{n+1} + (n^2+1)y_n = 0$.
32. If $y = \sin^{-1}x$. Prove that $(1-x^2)y_2 - xy_1 = 0$ and $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} - n^2y_n = 0$.
33. (a) If sin y = x sin (a+y) find $\frac{dy}{dx}$& (b) If $u = x^3+y^3+z^3-3xyz$ find $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} + z\frac{\partial u}{\partial z}$.
34. Prove that the radius curvature at the point ($a\cos^3\Theta$, $a\sin^3\Theta$) on the curve $x^{2/3} + y^{2/3} = a^{2/3}$ is $3a\sin\Theta\cos\Theta$.
35. Find the radius of curvature at $x=y=\frac{3a}{2}$ to the curve $x^3 + y^3 = 3axy$.
36. Find the equation of tangent and normal at the point $t=\frac{1}{2}$ on the curve $x = \frac{2at^2}{1+t^2}$;

    $y = \frac{2at^3}{1+t^3}$.
37. Find the radius of curvature at t on the curve is $x=6t^2-3t^4$, $y=8t^3$ is $6t(1+t^2)^2$.
38. Find the maximum and minimum value of $x^3 - 18x^2 + 96x + 4$.
39. Find the angle between the curves $y^2 = 4x$ and $x^2 = 4y$.
40. If u = log (tan x+ tan y + tan z) prove that $sin\ 2x\ \frac{\partial u}{\partial x} + sin\ 2y\ \frac{\partial u}{\partial y} + sin\ 2z\ \frac{\partial u}{\partial z} = 2$.

Unit – V

41. Find the equation of the circle passing through the points (1,1), (2,-1) and (3,2).
42. Find the centre, foci, eccentricity and latus rectum of the ellipse $3x^2 + 4y^2 + 6x - 8y - 5 = 0$.
43. Find the value of k so that $2x^2 + 5xy + 2y^2 + 15x + 18y + k = 0$ may represent a pair of straight lines. Find the equation of bisectors of the angle between these lines.
44. Show that the area of the triangle formed by the lines $ax^2 + 2hxy + by^2 = 0$, $lx + my + n = 0$ *is* $\frac{n^2\sqrt{h^2-ab}}{am^2 - 2hlm + bl^2}$.
45. Find the equation of the circle whose centre lies on the line x = 2y and which passes through the points (-1,2) and (3,-2).
46. Find the equation of the tangent at the point (2,-5) on the circle $x^2+y^2-5x+y-14 = 0$.
47. Find the value of λ so that the equation $x^2 - \lambda xy - y^2 + 3x - 5y + 2 = 0$.
48. a) Find the centre and radius of the circle $x^2+y^2-14x+6y+9 = 0$. (b) Find the length of the tandent from the point (2,3) to the circle $x^2+y^2+8x+4y+8 = 0$.
49. If the slopes of one of the lines of $ax^2 + 2hxy + by^2 = 0$ is twice that of the other show that $8h^2 = 9ab$.
50. Show that the pair of lines $ax^2 + 2hxy + by^2 = 0$ is perpendicular to the pair $bx^2 - 2by + ay^2 = 0$.

II BCA

Sub Title: PROGRAMMING IN JAVA Sub Code: CCA 31

PART-A

1. What is meant by abstraction?

2. What is meant by Encapsulation?
3. What is mean by Polymorphism?
4. What are methods and how are they defined?
5. What are different types of access modifiers (Access specifiers)?
6. What is an Object and how do you allocate memory to it?
7. Explain the usage of Java packages.
8. What is method overloading and method overriding?
9. What gives java it's "write once and run anywhere" nature?
10. What is a constructor?
11. What is a destructor?
12. What is the difference between constructor and method?
13. What is Static member classes?
14. What is Garbage Collection and how to call it explicitly?
15. In Java, How to make an object completely encapsulated?
    What is static variable and static method?
16. What is finalize() method?
17. What is the difference between String and String Buffer?
18. What is the difference between Array and vector?
19. What is a package?
20. What is the difference between this() and super()?
21. Explain working of Java Virtual Machine (JVM)?
22. What is meant by Inheritance? What is the difference between superclass and subclass?
23. What is meant by Binding?
24. What is meant by Polymorphism? What is an Interface?
    What is reflection API? How are they implemented?
25. What is the difference between a static and a non-static inner class?
26. What is the difference between abstract class and interface?
27. Can you have an inner class inside a method and what variables can you access?
28. What is interface and its use?How is polymorphism acheived in java?
29. What modifiers may be used with top-level class?
30. What is a cloneable interface and how many methods does it contain?
31. What are the methods provided by the object class?
32. Define: Dynamic proxy.
33. What is object cloning?
34. What is the relationship between the Canvas class and the Graphics class?
35. How would you create a button with rounded edges?
36. What is the difference between the 'Font' and 'FontMetrics' class?
37. What is the difference between the paint() and repaint() methods?
38. Which containers use a border Layout as their default layout?
39. What is the difference between applications and applets?
40. Difference between Swing and Awt?
41. What is a layout manager and what are different types of layout managers available in java AWT?
42. How are the elements of different layouts organized?
43. Why would you use SwingUtilities.invokeAndWait or SwingUtilities.invokeLater?
44. What is an event and what are the models available for event handling?
45. What is the difference between scrollbar and scrollpane?
46. Why won't the JVM terminate when I close all the application windows?
47. What is the difference between a Choice and a List?
48. What is the purpose of the enableEvents() method?
49. What is the difference between the File and RandomAccessFile classes?
50. What is the lifecycle of an applet?
51. What is the difference between a MenuItem and a CheckboxMenuItem?

52. What class is the top of the AWT event hierarchy?
53. What is source and listener?
54. Explain how to render an HTML page using only Swing.
55. How would you detect a keypress in a JComboBox?
56. What an I/O filter?
57. How can I create my own GUI components?
58. What is an exception?
59. What is error?
60. What are the advantages of using exception handling?
61. What are the types of Exceptions in Java
62. How does a try statement determine which catch clause should be used to handle an exception?
63. What is the purpose of the finally clause of a try-catch-finally statement?
64. What is the difference between checked and Unchecked Exceptions in Java?
65. What is the difference between exception and error?
66. What is the catch or declare rule for method declarations?
67. When is the finally clause of a try-catch-finally statement executed?
68. What if there is a break or return statement in try block followed by finally block?

69. How to create custom exceptions?
70. Can we have the try block without catch block?
71. What is the difference between swing and applet?
72. What is the difference between throw and throws clause?
73. Where does Exception stand in the Java tree hierarchy?
74. Explain the exception hierarchy in java.
75. Explain different way of using thread?
76. What are the different states of a thread ?
77. Why are there separate wait and sleep methods?
78. What is synchronization and why is it important?
79. How does multithreading take place on a computer with a single CPU?
80. What is the difference between process and thread?
81. What happens when you invoke a thread's interrupt method while it is sleeping or waiting?
82. How can we create a thread?
83. What are three ways in which a thread can enter the waiting state?
84. How can i tell what state a thread is in ?
85. What is synchronized keyword? In what situations you will Use it?
86. What is serialization?
87. What does the Serializable interface do?
88. When you will synchronize a piece of your code?
89. What is daemon thread and which method is used to create the daemon thread?

90. What is the difference between yielding and sleeping?
91. What is casting?
92. What classes of exceptions may be thrown by a throw statement?
100. A Thread is runnable, how does that work?
101. What is JDBC?
102. What is JDBC Driver?
103. What are the steps to connect to the database in java?
104. What are the JDBC API components?
105. What are the JDBC statements?
106. What is the return type of Class.forName() method?
107. What are the differences between Statement and PreparedStatement interface?
108. What are the benefits of PreparedStatement over Statement?

109. What are the differences between execute, executeQuery, and executeUpdate?
110. How can we execute stored procedures using CallableStatement?
111. What is the role of the JDBC DriverManager class?
112. What are the functions of the JDBC Connection interface?
113. What does the JDBC ResultSetMetaData interface?
114. How can we store the file in the Oracle database?
115. How can we retrieve the file in the Oracle database?
116. What are different types of JDBC Drivers?
117. What is JDBC Connection?
118. What is the use of JDBC DriverManager class?
119. What is JDBC Statement
120. What is JDBC PreparedStatement?
121. What is JDBC ResultSet?

PART-B

1. Explain OOP Principles.
2. Explain the features of Java Language.
3. Compare and Contrast Java with C.
4. Compare and Contrast Java with C++.
5. Explain Constructors with examples.
6. Explain the methods available under String and String Buffer Class.
7. Explain the Date Class methods with examples.
8. Discuss in detail the access specifiers available in Java.
9. Explain the different visibility controls and also compare with each of them.
10. Explain the different methods in java.Util.Arrays class with example.
11. Explain Packages in detail.
12. Discuss the methods under Array Class.
13. Discuss some of the classes available under Lang package.
14. Illustrate with examples: static and final.
15. Explain method overriding with example program.
16. What is javaDoc? Explain the comments for classes, methods, fields and link.
17. Application Programs in Java.
18. Explain the concept of inheritance and its types.
19. Explain the concept of overriding with examples.
20. What is dynamic binding? Explain with example.
21. Explain the uses of reflection with examples.
22. Define an interface. Explain with example.
23. Explain the methods under “object” class and “class” class.
24. What is object cloning? Explain deep copy and shallow copy with examples.
25. Explain static nested class and inner class with examples.
26. With an example explain proxies.
27. Explain the classes under 2D shapes.
28. Explain event handling with examples.
29. Explain action event with an example.
30. What are the swing components. Explain.
31. Describe the AWT event hierarchy.
32. Explain the different states of a thread.
33. Explain thread synchronization with examples.
34. Explain the algorithm used for thread scheduling.
35. Describe multi threading.
36. Explain Deadlocks.
37. Explain the features of layout managers.
38. Write note on JDBC.
39. Explain two tier and three tier client server model.

40. Explain classes and interfaces in JDBC.
41.Write note on Database Metadata.
42.Write note on Resultset Metadata.

PART-C

1. Explain the basic concept of oops in detail.
2. Describe the concept of method overriding with example
3. Discuss about method of defining and accessing packages in java
4. Explain the concept of i/o stream classes in java in detail.
5. List out various decision making statement in java
6. Explain layout managers.
7. Explain the following i)client server ii)proxy server iii)DNS
8. Explain exception handling mechanism in java
9. Discuss stream classes available in java
10. Explain various types of controls in AWT?
11. Explain fundamental of applet
12. Write short notes on
    a)Drawing line b)Drawing Rectangle c)Drawing Ovals
13. discuss on JButton
14. write five colour constants and their RGB values
15. write about menu with frames
16. write program to create a menu by using JFrame
17. Discuss about thread synchronization
18. Explain control statement in java
19. Explain sequential file with example
20. Explain menus with frames
21. Explain types of drivers in JDBC.
22Explain Architecture in JDBC.
23.Explain steps in developing JDBC Applications.
24.Write a program to create a new database and table with JDBC.

Subject: E-Commerce Sub Code: CCA 31

Two Mark Question:

1. Define E-Commerce?
2. What is super Highway?
3. Name the pillars supporting e-commerce
4. Write the components of I-way
5. Give any two e-commerce application?
6. Define supply chain Management?
7. List two function of SCM.
8. What is NSFNET?
9. What are the six stages of internet growth?
10. What is NAPS?
11. Define EBONE
12. What are the categories of ISP?
13. What is network?
14. What is client server security?
15. What is packet?
16. What is meant by data transaction security?
17. Define firewall?

18. What is an Encryption?
19. What is a decryption?
20. What is public key?
21. What is private key?
22. Define cryptography?
23. Define web server?
24. What is a router?
25. Expand PGP?
26. Define DES?
27. Define RSA?
28. Expand RSA?
29. Expand DES?
30. Define internet?
31. Define WWW?
32. Expand WWW?
33. Expand HTML?
34. Expand HTTP?
35. What is web browser?
36. Give four application of e-commerce
37. What is hypertext?
38. What is hypermedia?
39. Define webpage?
40. List out some web address?
41. Define URL?
42. What is EPS?
43. What are the types of Electronic tokens?
44. Define EDI?
45. Give benefits of EDI
46. What is E-mail?
47. What do you mean by EDIFACT?
48. What is ECR?
49. Define data warehouse?
50. What are the types of data warehouse?

Five mark Question:

1. Explain e-commerce framework
2. Explain about media coverage
3. Describe e-commerce consumer application
4. Explain components of I way
5. Write note on NSFNET
6. Explain technologies used in global information distribution network
7. Write note on NAP and RA
8. Explain IETF
9. Discuss about National independent ISP
10. What are client server network problem
11. Discuss about firewalls and network security
12. Describe about challenge response system.
13. Explain digital signature standard?
14. Explain about encrypted document and electronic mail?
15. What is WWW? Explain
16. Give consumer oriented e-commerce application
17. Write note on HTTP and HTML
18. Explain secure socket layer

19. Explain E-cash
20. Explain E-checks
21. Explain Smart cards
22. What are the categories of credit card based EPS?
23. What are the categories of debit card based EPS?
24. Explain EDI
25. What are the new directories in EDI
26. How EDI works
27. Write about document based work flow
28. Write about Digital Libraries
29. Write note on inter organizational E-commerce
30. Write about SCM
31. Explain the types of data warehouse
32. Explain architecture of EDI
33. What are the benefits of EDI
34. What are the types of financial EDI

Ten Marks question:

1. Explain anatomy of E-commerce in detail
2. Explain about pressures influencing business
3. Explain policy issues shaping the I-way
4. Explain traditional Vs Electronic E-commerce
5. What are the stages if internet growth? Explain?
6. Explain about internet application
7. Explain the logistics of ISP
8. Explain about network security and firewall?
9. Explain architectural framework for E-commerce
10. Explain about ecommerce and WWW?
11. What are various E-payment systems?
12. Explain about data and message security
13. Explain about EDI applications in business?

Subject: OPERATION RESEARCH. Subject code: CCA 33

1. Define operation Research.
2. Define general formulation of LPP
3. Define General Formulation of LPP.
4. Define Matrix form of LPP.
5. What do you mean by a general LPP?
6. Give the matrix form of representing general LPP?
7. Define a feasible region.
8. Define a feasible solution.
9. Define optimal solution.
10. Define Basic solution.
11. Define non-degenerate solution.
12. Define degenerate solution.

13. What are the two forms of LLP?
14. Define unbounded solution.
15. What do you mean by canonical form of LLP?
16. What are slack and surplus variable?
17. What are the limitations of LPP?
18. Define Feasible Solution.
19. What is optimum solution?
20. Define optimal solution.
21. What is optimality test?
22. What do you understand by transportation model?
23. Define Basic solution.
24. Define non-degenerate solution
25. Give the mathematical formulation of a T.P.
26. Describe the assignment problem giving a suitable example.
27. Distinguish between transportation and an assignment problem.
28. Give a mathematical formulation of the assignment problem.
29. Describe the algorithm for the solution of the assignment problem.
30. What is no passing rule in a sequencing algorithm?
31. What sequence problem.
32. Describe the method of processing n jobs through two machines.
33. Explain the principal assumption made while dealing with sequencing problem.
34. Define ideal time on a machine.
35. Define replacement problem.
36. Any two uses of replacement problem.
37. Define group replacement policy.
38. Define individual replacement policy.
39. Define activity.
40. What are the types of estimate time?
41. Distinguish between PERT & CP.
42. Define activity.
43. Describe rules of Network construction.
44. Define scheduling.

Section – B

45. Solve the following LPP by graphical method

$$\text{Min } Z = 20x_1+10x_2$$
$$\text{S.to.c, } x_1+2x_2 \leq$$
$$40,\ 3x_1+x_2 \leq 30,$$
$$4x_1+3x_2 \leq$$
$$60 \text{ and } x_1,$$
$$x_2 \geq 0$$

46. Explain the procedure for Simplex method.
47. Explain the procedure for Graphical method.
48. Egg contains 6 unity of vitamin A per gram and 7 units of vitamin B per gram and cost 12 paisa per gram. Milk contains 8 unity of vitamin A per gram and 12 unity of vitamin B per gram and costs 20 paise per gram. The daily minimum requirement of vitamin A and vitamin B are 100 obtain unities and 120 unity respectively. Find the optimal product mix.
49. Solve the following LPP by graphical method

$$\text{Max } Z = 5x_1+7x_2$$
$$\text{S.to.c, } x_1+x_2 \leq 4,$$
$$3x_1+8x_2 \leq 24,$$
$$10x_1+7x_2 \leq 35,$$
$$\text{and } x_1,\ x_2 \geq 0$$

50. Explain North West Corner Rule.
51. Explain least cost method.
52. Difference between Transportation problem and Assignment problem
53. Explain Vogel's approximation method.
54. Explain MODI method.
55. Explain degeneracy in a T.P and how to resolve it.
56. Give mathematical formulation of a T.P.
57. Explain an algorithm to solving a transportation problem.
58. Explain Hungarian method.
59. Give a mathematical of the Travelling Salesmen problem.
60. How can you maximize an objective function in the assignment problem?
61. Explain the nature of i in travelling salesmen problem and give its mathematical formulation.
62. Explain the principal assumption made while dealing with sequencing problem.
63. Describe the method of processing n jobs through two machines.
64. Explain the method of processing n job through three machines.
65. Explain the Graphical method to solve Two job on n machine with given technological ordering for each job.
66. What is the limitation of n job through two machines?
67. Discuss the importance of replacement model.
68. For the set of data given below determine the sequence that minimize the total elapsed time for the five job

Job	A	B	C	D	E
M_1	5	4	8	7	6
M_2	3	9	2	4	10

69. A small project is composed of seven activities whose time estimates are listed in the table as follows:

Activity	1-2	1-3	1-4	2-5	3-5	4-6	5-6
a	1	1	2	1	2	2	3
m	1	4	2	1	5	5	6
b	7	7	8	1	14	8	15

i. Draw the project network
ii. Find the c.p m.Calculate the variance and standard deviation of project length.
iii. What is the probability that the project will be completed?
   a) 4 weeks earlier than expected.
   b) b)Not more than 4 weeks later than expected

70. Write the PERT for procedure.
71. Let the value of money be assumed to be 10% per year. Assuming machine A is replaced after every 3 years machine B is replaced after every 6 years. The yearly costs of both the machines are given below. Determine which machine should be purchased.
72. A machine costs Rs.10000. operating costs are Rs.500 per year for the five years. In the sixth and succeeding years the operating cost increases by Rs.100 per year. Find the minimum length of time required to hold the machine before we replace it.
73. A truck owner finds from his past records that the maintenance costs per year of a truck whose purchase price is Rs. 8000 are as given below.

Year	1	2	3	4	5	6	7	8
Maintenance cost	1000	1300	1700	2200	2900	3800	4800	6000
Resale price	4000	2000	1200	600	500	400	400	400

Determine the time at which it is profitable to replace the truck.

74. The cost pattern for two machines A and B, when money value is not considered is given in the table below

Year	Cost at the beginning of year Machine A	Machine B
1	900	1400
2	600	100
3	700	700

75. The probability P_n of failure just before age n is shown below. If individual replacement costs Rs.12.50 and group replacement costs Rs.3.00 per time fine the optimum replacement policy.

n	1	2	3	4	5
P_n	0.1	0.2	0.25	0.30	0.15

76. The following table gives the running cost per year and resale price of a cost taint equipment whose purchase price is Rs .5000.

year	1	2	3	4	5	6	7	8
Running cost	1500	1600	1800	2100	2500	2900	3400	4400
Resale value	3500	2500	1700	1200	800	500	500	500

77. Explain the three types of estimate time.

Section – C

78. Solve the following LPP by graphical method

Min Z = 20x1+10x2

S.to.c, x1+2x2 ≤

$$40,\ 3x_1+x_2 \leq 30,$$
$$4x_1+3x_2 \leq$$
$$60 \text{ and } x_1,$$
$$x_2 \geq 0$$

79. Explain the procedure for Simplex method.

80. Use simplex method to solve the LLP.

$$\text{Max } Z = x_2 - 3x_3 + 2x_5 \text{ s.to.c,}$$
$$3x_2 - x_3 + 2x_5 \leq 7,$$
$$-2x_2 + 4x_3 \leq 12,$$
$$-4x_2 + 3x_3 + 8x_5 \leq 10$$
$$\text{and } x_2, x_3, x_5 \geq 0$$

81. Solve the following LPP by graphical method.

$$\text{Min } Z = 20x_1 + 10x_2$$
$$\text{S.to.c, } x_1 + 2x_2 \leq 40,$$
$$3x_1 + x_2 \leq 30,$$
$$4x_1 + 3x_2 \leq 60 \text{ and } x_1, x_2 \geq 0$$

82. By graphical method solve the following LPP. Max $Z = 3x_1 + 4x_2$

Subject to $5x_1 + 4x_2 \leq 200$

$3x_1 + 52 \leq 150$

$5x_1 + 4x_2 \geq 160$

And $X_1 x_2 \geq 0$

83. $\text{MinZ} = -6x_1 - 4x_2$

Sub to

$2x_1 + 3x_2 \geq 30$

$3x_1 + 2x_2 \leq 24$

$x_1 + x_2 \geq 3$

$X_1 x_2 \geq 0$

84. Solve graphically the following LPP. $\text{MinZ} = 3x_1 - 2y$

Sub to $-2x_1 + 3y \leq 9$

$x_1 - 5x - 20$

$x_1 + x_2 \geq 3$ X,

$y \geq 0$

85. Max $Z = 3x_1 - 2x_2$

$x_1 + x_2 \leq 1$

$2x_1 + 2x_2 \geq 4$

$x_1 + x_2 \geq 0$

86. Max $Z = -x_1 + x_2$

Subject to $x_1 - x_2 \geq 0$

$-3x_1 + 22 \geq 3$

$x_1+x_2 \geq 0$

87. Solve the LPP. Max $Z = 3x_1+2x_2$ Subject to
$4x_1+3x_2 \leq 12$ $4x_1+x_2 \leq 8$
$4x_1-x_2 \leq 8$
$x_1, x_2 \geq 0$

88. Max $Z = x_1+x_2+3x_3$
Subject to $3x_1+2x_2+x_3 \leq 2$
$2x_1+x_2+2x_3 \leq 2$
$x_1, x_2, x_3 \geq 0$

89. Max $Z = x_1+x_2+x_3$
Subject to $2x_1+ x_2- x_3 \geq -2$
$-2x_1+x_2+5x_3 \leq 6$
$4x_1+x_2+x_3 \leq 6$
$x_1, x_2, x_3 \geq 0$.

90. Solve the travelling salesman problem.

	A	B	C	D	E
A	∞	4	7	3	4
B	4	∞	6	3	4
C	7	6	∞	7	5
D	3	3	7	∞	7
E	4	4	5	7	∞

91. Find the sequence that minimise the total elapsed time recurred to complete the following task on the machine in the order 1-2-3. Find the minimum total elapsed and ideal time of the machine.

Task	A	B	C	D	E	F	G
M1	3	8	7	4	9	8	7
M2	4	3	2	5	1	4	3
M3	6	7	5	11	5	6	12

92. Obtain the initial solution for the following TP using (i) NECR (ii) Least cost method (iii) VAM

Destination

	A	B	C	D	Supply
P	5	4	2	6	20
Q	8	3	5	7	30
R	5	9	4	6	50
Demand	10	40	20	30	100

93. Solve the assignment problem.

	A	B	C	D	E
A	5	0	8	9	4
B	4	7	6	3	4
C	7	6	5	7	5
D	3	3	7	3	7
E	4	4	5	7	2

94. Solve the maximisation in assignment problem.

	A	B	C	D	E
1	62	78	50	111	82
2	71	84	61	73	59
3	89	92	111	71	81
4	48	64	7	77	80

95. Solve the travelling salesman problem.

	A	B	C	D	E
A	–	4	7	3	4
B	4	–	6	3	4
C	7	6	–	7	5
D	3	3	7	–	7
E	4	4	5	7	–

96. Solve n-job three machines problems

Job	1	2	3	4	5	6	7
M_1	5	7	3	4	6	7	12
M_2	2	6	7	5	9	5	8
M_3	10	12	11	13	12	10	11

97. Solve n-job two machines problems

Job	1	2	3	4	5	6	7
M_1	6	8	4	4	6	7	11
M_2	3	5	7	5	9	4	7

98. Solve 2 job n machines problems

Job 1	Sequence Time	A 2	B 4	C 5	D 1
Job 2	Sequence Time	D 6	B 4	A 2	C 3

Use graphical method to obtain the minimum elapsed time.

99. A machine costs Rs.10, 000. Its operating cost and resale values are given below:

Year	1	2	3	4	5	6	7	8
Operating costs	1000	1200	1400	1700	2000	2500	3000	3500
Resale value	6000	4000	3200	2600	2500	2400	2000	1600

Determine at what time it could be replace

100. The data for a small PERT project is as given below, where a represents optimistic

time, m the most likely time and b the pessimistic time. Estimates (in days) of the activities A, B…..J,K.

Activity	A	B	C	D	E	F	G	H	I	J	K
a	3	2	6	2	5	3	3	1	4	1	2
m	6	5	12	5	11	6	9	4	19	2	4
b	5	14	30	8	17	15	27	7	28	9	12

i. Draw the arrow network of project.
ii. Find out C.P.M
iii. What is the probability that the project will completed 2 days later than expected.

101. The following table shows the jobs of a network along with their time estimate.

Jobs	1-2	1-6	2-3	2-4	3-5	4-5	6-7	5-8	7-8
a(days)	1	2	2	2	7	5	5	3	8
m(days)	7	5	14	5	10	5	8	3	17
b(days)	13	14	26	8	19	17	29	9	32

102. The cost pattern for two machines A & B when money value is not considered is given in the table below.

year	Cost at the beginning of year	
	Machine A	Machine B
1	900	1400
2	600	100
3	700	700

Find the cost pattern for each machine when money is worth 10 % per year and hence find which machine is less costly.

103. A project has the following time schedule.

Activity	1-2	1-3	1-4	2-5	3-6	3-7	4-6	5-8	6-9	7-8	8-9
Duration (month)	2	2	1	4	8	5	3	1	5	4	3

Construct the network and compute (i) Total float for each activity. (ii) Critical path and its duration.

104. Describe PERT procedure.

Section – B

1. Solve the travelling salesman problem.

	A	B	C	D	E
A	∞	4	7	3	4
B	4	∞	6	3	4
C	7	6	∞	7	5

D	3	3	7	∞	7
E	4	4	5	7	∞

2. Obtain the initial solution for the following TP using (i) NECR (ii) Least cost method (iii) VAM

Destination

	A	B	C	D	Supply
P	5	4	2	6	20
Q	8	3	5	7	30
R	5	9	4	6	50
Demand	10	40	20	30	100

3. Solve the assignment problem.

	A	B	C	D	E
A	5	0	8	9	4
B	4	7	6	3	4
C	7	6	5	7	5
D	3	3	7	3	7
E	4	4	5	7	2

4. Solve the maximisation in assignment problem.

	A	B	C	D	E
1	62	78	50	111	82
2	71	84	61	73	59
3	89	92	111	71	81
4	48	64	7	77	80

5. Solve the travelling salesman problem.

	A	B	C	D	E
A	–	4	7	3	4
B	4	–	6	3	4
C	7	6	–	7	5
D	3	3	7	–	7
E	4	4	5	7	–

6. Solve the travelling salesman problem.

	A	B	C	D	E
A	β	4	7	3	4
B	4	β	6	3	4

C	7	6	β	7	5
D	3	3	7	β	7
E	4	4	5	7	β

7. Explain Hungarian method.
8. A company has 5 jobs to be done on five machines. Any job can be done on any machine. The cost of doing the jobs in different machines so as to minimize the total cost.

Jobs	Machines				
	3 4 5 A	B	C	D	E
1 2 3 4 5	13 9 12 6 15	8 15 9 12 17	16 24 4 10 18	18 9 4 8 12	19 12 4 13 20

9. A company has 5 jobs to be done on five machines. Any job can be done on any machine. The cost of doing the jobs in different machines so as to minimize the total cost.

Jobs	Machines				
	3 4 5 A	B	C	D	E
1 2 3 4 5	13 9 12 6 15	8 15 9 12 17	16 24 4 10 18	18 9 4 8 12	19 12 4 13 20

UNIT – IV Sequencing problem.

Section – A

1. What is no passing rule in a sequencing algorithm?
2. What sequence problem.
3. Describe the method of processing n jobs through two machines.
4. Explain the principal assumption made while dealing with sequencing problem.
5. Define ideal time on a machine.

Section – B

1. Explain the principal assumption made while dealing with sequencing problem.
2. Describe the method of processing n jobs through two machines.
3. Explain the method of processing n job through three machines.
4. Explain the Graphical method to solve Two job on n machine with given technological ordering for each job.
5. What is the limitation of n job through two machines?
6. Discuss the importance of replacement model.
7. For the set of data given below determine the sequence that minimize the total elapsed time for the five job

Job	A	B	C	D	E
M_1	5	4	8	7	6
M_2	3	9	2	4	10

8. For the set of data given below determine the sequence that minimize the total elapsed time for the five job

Job	A	B	C	D	E
M_1	5	4	8	7	6
M_2	3	9	2	4	10
M_3	5	4	6	8	11

9. A machine shop has four machines A,B,C,D. Two jobs must be processed through each of these machines. The time (in hours). Taken on each of the machines and the necessary sequence of jobs through the shop are given below.

Job 1	Sequence Time	A 2	B 4	C 5	D 1
Job 2	Sequence Time	D 6	B 4	A 2	C 3

Use graphical method to obtain the minimum elapsed time.

Job 1	Sequence Time	A 3	B 4	C 2	D 6	E 2
Job 2	Sequence Time	B 5	C 4	A 3	D 2	E 6

Section – C

105. Find the sequence that minimise the total elapsed time recurred to complete the following task on the machine in the order 1-2-3. Find the minimum total elapsed and ideal time of the machine.

Task	A	B	C	D	E	F	G
M1	3	8	7	4	9	8	7
M2	4	3	2	5	1	4	3
M3	6	7	5	11	5	6	12

106. Solve n-job three machines problems

Job	1	2	3	4	5	6	7
M1	5	7	3	4	6	7	12
M2	2	6	7	5	9	5	8
M3	10	12	11	13	12	10	11

107. Solve n-job two machines problems

Job	1	2	3	4	5	6	7
M1	6	8	4	4	6	7	11
M2	3	5	7	5	9	4	7

108. Solve 2 job n machines problems

Job 1	Sequence Time	A 2	B 4	C 5	D 1
Job 2	Sequence Time	D 6	B 4	A 2	C 3

Use graphical method to obtain the minimum elapsed time.

UNIT – V Networking Analysis.

Section – A

1. What do you mean by a project?
2. What are the two basic planning and control techniques in a networking analysis.
3. What are the three main phases of a project?
4. What is a network?
5. What do you mean by an activity of a project?

6. Define total float.
7. Define critical activity.
8. What is the critical path?
9. Distinguish between PERT and CPM.
10. Write down at least two main assumptions in PERT network calculation.
11. What you mean by parallel path.
12. What is resource scheduling?
13. What are the types of estimate time?
14. Define planning.
15. Define event.
16. What is a dummy activity?

Section – B

1. Describe the rules of networking construction.
2. Construct a network for the project whose activities and their precedence relationships are as given below:

Activities	A	B	C	D	E	F	G	H	I
Immediate predeccessor	-	A	A	-	D	B,C,E	F	D	G,H

3. Construct a network for the project whose activities and their precedence relationships are as given below:

Activities	A	B	C	D	E	F	G	H	I	J	K
Immediate predeccessor	-	-	-	A	B	B	C	D	E	H,I	F,G

4. Explain critical path method (CPM).
5. A small project is composed of seven activities whose time estimates are listed in the table as follows:

Activity	1-2	1-3	1-4	2-5	3-5	4-6	5-6
a	1	1	2	1	2	2	3
m	1	4	2	1	5	5	6
b	7	7	8	1	14	8	15

   iv. Draw the project network

   v. Find the CPM.Calculate the variance and standard deviation of project length.

   vi. What is the probability that the project will be completed?

      a) 4 weeks earlier than expected.

      b) b)Not more than 4 weeks later than expected

6. Explain PERT procedure.

Section – C

1. The data for a small PERT project is as given below, where a represents optimistic time, m the most likely time and b the pessimistic time. Estimates (in days) of the activities A, B…..J,K.

Activity	A	B	C	D	E	F	G	H	I	J	K
a m b	3 6 5	2 5 14	6 12 30	2 5 8	5 11 17	3 6 15	3 9 27	1 4 7	4 19 28	1 2 9	2 4 12

iv. Draw the arrow network of project.

v. Find out C.P.M

vi. What is the probability that the project will completed

2 days later than expected.

2. The following table shows the jobs of a network along with their time estimate.

Jobs	1-2	1-6	2-3	2-4	3-5	4-5	6-7	5-8	7-8
a(days)	1	2	2	2	7	5	5	3	8
m(days)	7	5	14	5	10	5	8	3	17
b(days)	13	14	26	8	19	17	29	9	32

3. A project has the following time schedule.

Activity	1-2	1-3	1-4	2-5	3-6	3-7	4-6	5-8	6-9	7-8	8-9
Duration (month)	2	2	1	4	8	5	3	1	5	4	3

Construct the network and compute (i) Total float for each activity. (ii) Critical path and its duration.

Subject: FINANCIAL ACCOUNTING Subject Code: CACM 15C

SECTION – A (2 MARKS)

1. What is Accounting equation?
2. Define the term accounting.
3. What is going concerns concept?
4. What is dual aspect concept?
5. What is double entry concept?
6. What is suspense account?
7. What is ledger?
8. What is journal?
9. Give journal entries for the following transactions: (a) Paid salary Rs.5,000, (b) Sold goods for Rs.25,000.
10. What is narration?
11. What is business entity concept?
12. What is Booking-Keeping?
13. Give the meaning of bank reconciliation statement.
14. Mention any two objectives of accounting.
15. Journalise: cash withdrawn from bank Rs.5,00,000.
16. Point out the types of errors found in accounting records.
17. What do you mean by suspense account?
18. What is average due date?
19. What is Red Ink interest?
20. What is meant by bad debts?
21. Write a note on statement of affairs method.
22. Calculate the missing figure. Opening capital Rs.1,50,000. Profits Rs. 60,000. Drawings or capital introduced Rs.----------
23. What is direct expenses?
24. Why are final accounts are prepared?
25. Rent received shown inTrial balance as on 31st March 2001, Rs. 10,000. Rent received in advance is Rs.1,000. You are required to show how it appear in the profit & loss account and balance sheet.
26. Trial balance (31.03.05) shows salaries paid Rs.1,50,000. Salary for March 2005 Rs.4,000 not yet paid. Pass adjusting entry and show how this item will appear in the final accounts.
27. What shall be the profits of the concern if: opening capital : Rs.1,60,000, Closing capital: Rs.1,80,000, Drawings Rs.36,000, Additional capitalRs.10,000.
28. Calculate the missing information: Closing capital Rs.1,63,800, Additional Capital Rs.42,300, Drawings Rs.25,200, Loss Rs.12,600.
29. What is balance sheet?
30. What is gross profit?
31. Capital Rs.90,000 liabilities Rs. 3,00,000. Find out assets.

PARTICULARS	RS.	PARTICULARS	RS.
Sales	3,00,000	Sales returns	10,000
Purchases	1,00,000	Closing stock	50,000
Opening stock	20,000		

32. Ascertain opening stock. Purchase Rs.2,50,000, sales Rs.3,25,000, Closing stock Rs.60,000, wages Rs.3,000, Rate of gross profit on cost 25%.
33. What do you understand by a balance sheet?

34. What is trial balance?
35. What is order of liquidity?
36. What is interest on drawings?
37. What is interest on loan?
38. What is interest on capital?
39. What is outstanding income?
40. What is prepaid expenses?
41. What is unsold stock?
42. State the uses of trial balance.
43. What is income received in advance?
44. What do you mean by implied interest?
45. What is reserve?
46. What are the components of final accounts?
47. What is meant by money measurement concept?
48. Define Indemnity period.
49. What is average clause in five claims?
50. What is the need for average due date?
51. What is an average due date?
52. What is the purpose of average due date?
53. What do you mean by revenue expenditure?
54. What do you mean by capital expenditure?
55. How would you ascertain profit from incomplete records?
56. Give some examples of current liabilities.
57. What are current assets?
58. What do you mean by bad and doubtful debts?
59. What is bad debts?
60. What is fixed assets?
61. What are bank transactions?
62. What is operating expenses?
63. Mention two methods of ascertainment of profit under single entry system.
64. State any two limitations of single entry system.
65. State any two features of single entry system.
66. State any two benefits in single entry system.
67. What is double entry system?
68. Define conversation method.
69. What is single entry system?
70. What is account current?
71. What is statement of affairs?
72. What is commission?
73. What is contingent liability?
74. What is dishonour of bill of exchange?
75. What do you mean by assets?
76. What do you by liabilities?
77. What do you mean by long term liabilities?
78. What do you mean by current liabilities?
79. What do you mean outstanding expenses?
80. What do you mean by prepaid expenses?
81. What do you mean by biils payable?
82. What do you mean by bills receivable?
83. What is conversion method?
84. List out any four revenue expenditure.

85. List out any four capital expenditure.

86. Prepare Trial balance from the following:

PARTICULAR	RS	PARTICULAR	RS
Drawings	23,760	Capital	34,000
Land	20,000	Car	25,240
Opening stock	62,000	Rent	9,000
Debtors	90,000	Creditors	35,000
Bank	21,000	Purchases	4,00,000
Postage	3,000	Sales	6,10,000
Plant	25,000		

87. Journalise the following

i. Paid cash to Hari Rs.300.
ii. Cash sales Rs.600.
iii. Sold good to selvan on credit Rs.1,000.
iv. Paid wages Rs.500.

88. Rectify the following errors :

a) Purchase book is over cast by Rs.300.
b) Sales book has been under cast by Rs.200.
c) Purchase returns books has been over cast Rs. 75
d) Sales return a book has been under cast by Rs.50.

89. A firm purchased a machine for Rs.80,000. On 1.4.2000 it was depreciated at 10% on Return down value method on 31st march 2002,they decided to sell the machine at Rs.60,000. The books are closed on 31st march of each year. Prepared machinery Account.

90. Calculate the gross profit from the following data:

PARTICULARS	RS	PARTICULAR	RS
Opening stock	80,000	Cash purchases	1,00,000
Credit purchases	2,00,000	Cash sales	1,60,000
Credit sales	2,50,000	Purchases returns	6,000
Sales returns	10,000	Carriage inwards	12,000
Closing stock	60,000		

91. Ascertain the credit sales by preparing total debtors account:

PARTICULARS	RS	PARTICULAR	RS
Debtors as on 31.3.2005	28,000	Debtors as on 31.3.2004	24,000
Sales returns	1000	Cash received	74,800
B/R	26,000	Discount allowed	1,000
Bad debts	1,000	Cheque received from debtors	10,000
B/R dishonoured	4,000	Cheque dishonoured	6,000

92. The transport company purchases ten trucks at Rs.90,000 each on April 1st 1992. On October 1 ,1994 one of the trucks is involved in an accident and is completely Destroyed. Rs.54,000 is received from the insurers in full settlement. On the same Date , another truck is purchased by the company for the sum of Rs.1,00,000. The company writes of 20% on the original cost per annum and observes the Calendar year as its financial year. Give the motor trucks account for two Years ending 31st December 1995.

93. Kumer a retail merchant commenced business with a capital of Rs.15,000. On 1.1.1995. Subsequently on 1.5.1995, he invested a further sum of Rs.7,000 as capital in the business. During the year he has withdrawn Rs.3,000 for is personal use .On 31.12.1995 his assets and liabilities were; cash at bank Rs.6,000,debtorsRs.8,000,stock of goods Rs.32,000. Furniture Rs.4,000 and sundry creditors Rs.10,000.Ascertain the profit or loss for the year 1995

94. Rectify the following errors without using suspense account.
    i. Purchases Rs.5,000 from sheela wrongly entered into the sales books.
    ii. Goods taken by the proprietor Rs.1,000 non recorded in the books at all
    iii. Discount Rs50 allowed to mala has been credited to discount account
    iv. Credit sales to leela Rs.1,500, wrongly posted to credit her account.

95. The trial balance 31st 2004, show the following

	Dr	Cr
Bank loan at 10% 1.4.2003	-	10,00,000
Interest paid	Rs.60,000	

Provide for interest outstanding. Pass adjustment entry and show how this item will appear in the final accounts.

96. The following are the balances extracted from the Trial Balances of Kumar as on 31.3.2002

Trial Balances as on 31.3.2002.

Particulars	Debit Rs.	Credit Rs.
Sundry debtors	1,20,000	-
Bad debts	10,000	-
Provision for bad and doubtful debts	-	20,000

Adjustment;
Create provision for Provision for bad and doubtful debts @5% on sundry debtors.
Pass adjusting entry and show how these items will appear in the accounts.

97. Find out profits of the business for the year 2004 from the particulars given below:
    Capital as on 1.1.2004-Rs.15,000
    Capital as introduced during the year –Rs. 3,000
    Capital as on 31.12.2004-Rs. 21,000
    Drawings for personal use – Rs.1,500.

98. From the following particulars ,prepare a bank reconciliation statements as on 31.12.2000
    a) Bank balance as per passbook as on 31.12.2000 Rs.5400.
    b) Cheques issued but not presented for payment Rs.515.
    c) Bank charges debited in pass book Rs.30.
    d) Interest on current account credited by the bank but not recorded in the cash book Rs.25.

99. Prepare a trading a/c of Mr. kannan for the year ending 31.3.2003from the following figures:

PARTICULARS	RS.	PARTICULARS	RS.
Purchases	3,00,000	Sales	5,00,000

Stock 1.4.2002	40,000	Return outwards	3,000
Wages	30,000	Return inwards	2,500
Carriage inwards	4,000	Manufacturing expenses	5,000
Stock 31.3.2003	42,000		

100. Raj & Co purchased a machinery for Rs.20,000 on 1.1.1993. It is depreciated at 10% per annum on reducing balance for three years . Prepare machinery account for three years ending 31.12.1993.every year.

101. Rectify the errors:
   a) Purchase books was overcast Rs.700.
   b) Sales books are cost short Rs.250.
   c) Purchase return book was cast short Rs.100.
   d) Sales return book was overcast Rs.100.

102. A machine was acquired on 1.4.2002 for Rs.90,000. The cost of installation was Rs.10,000. The total life of the machine is expected to be 20,000 hours. During the years 2002,2003 and 2004 the machine worked for 4,000, 6,000 and 5,000 hours respectively.

103. From the following particulars prepare a bank reconciliation statement as on 31.3.2009,of CD associates
   a) Balance as per cash book Rs.11,600.
   b) Cheques issued but not presented for payment upto 31.3.2009 Rs.4,000.
   c) Cheques sent for collection but not collected upto 31.3.2009.Rs.3,000.
   d) The bank had wrongly credited the firms account Rs.400.
   e) Interest on securities collected by the bank directly and credited Rs.800.

104. Prepare a bank reconciliation statement from the following data as on 31.12.2010.
   a) Balance as per cash book Rs.12,500
   b) Cheques issued but not presented for payment Rs.900.
   c) Cheques deposited in bank but not collected Rs. 1,200.
   d) Bank paid insurance premium Rs.500.
   e) Direct deposit by a customer Rs.800.
   f) Interest on investment collected by bank Rs.200.
   g) Bank charges Rs.100

105. The following balances extracted from the books of Mr.Durai as on 31.3.2008. Prepare Trading and Profit and Loss A/c for the year ended 31.3.2008 and a Balance Sheet as on that date.

	Rs		Rs
Opening Stock	10,000	Capital	50,000
Machinery	20,000	Purchase return	500
Purchases	35,000		
Sales return	500	Sales	45,000
Wages	1,000	Sundry creditors	14,500
Salaries	2,500		
Office rent	1,000		
Insurance	500		

Sundry Debtors	25,000		
Cash	500		
Bank Balance	14,000		
	1,10,000		1,10,000

106. Rajeev keeps his books on Single Entry basis. On 31.3.2008 his position is as follows:

	Rs		Rs
Cash	2,400	Bank Balance	25,500
Debtors	18,400	Stock	28,600
Furniture	5,000	Creditor	18,700
Outstanding expenses	2,000		

On 1.10.2008 he introduced additional capital Rs.10,000. He draw from the bank Rs.7,000 and purchased a Machine for Rs.5,000.

His financial position on 31.3.09 is as follows:

	Rs		Rs
Cash	2,100	Bank Balance	27,500
Stock	31,500	Debtor	24,200
Furniture	6,000	Creditor	25,200
Prepaid Insurance	200		

Adjustments:

a) Depreciate machine and furniture by 10%
b) After writing off Bad debts Rs. 1,200; 5% provision for doubtful debts to be created.
c) Interest on capital 10%

Find out the Profit for the year ending 31.3.09.

107. From the following Trial Balance of Mr.John Paul, prepare trading and Profit loss A/c for the year ended 31st March 2003 and balance sheet as on that date.

Trial Balance sheet as on 31st March 2003.

Debit Balances	Rs	Debit Balances	Rs
Cash in hand	27,000	Capital	4,00,000
Cash at bank	80,000	Sales	3,25,000
Drawings	10,000	Sundry creditors	75,000
Wages	8,000		
Purchases	50,000		
Opening Stock	75,000		
Buildings	3,00,000		
Bills receivable	25,000		
Sundry debtors	1,75,000		
Rent	5,000		
Commission	8,000		
General Expenses	22,000		
Insurance	15,000		
	8,00,000		8,00,000

Adjustments:

- Closing stock Rs.50,000
- Outstanding wages Rs. 2,000
- Prepaid insurance Rs.5,000
- Interest on capital at 6% per annum to be provided
- Depreciate buildings by 10% per annum.

Roja & Co purchases a plant for Rs.50,000 on January 1t 2012. The firm writer off depreciation at 10% of the original cost every year. The books are closed on 31st December of every year.

108. The Ganesh book shows the following balances. Prepare his trading and profit and loss account for the year ended 31st March 1995 and balance sheet as on date.

Particulars	Debit	Particulars	Credit
Stock 1.4.94	15,000	Sales	30,000
Purchases	13,000	Sundry creditors	2,000
Carriage inwards	200	Capital	25,000
Salaries	5,000	Loan	3,000
Printing & Stationary	800		
Drawings	1,700		
Sundry debtors	18,000		
Furniture	1,000		
Postage	750		
Interest	550		
Machinery	4,000		
	60,000		60,000

Adjustments:

a) Depreciate machinery by 10% and furniture by 5%
b) Allow interest on capital at 5%
c) Provide 5% for bad and doubtful debts on debtors
d) Stock on 31.3.95 Rs.12,000

109. Sankar started his business with Rs.25,000 as capital on January 1, 2000. During the year he introduced Rs.4,000 as additional capital and withdrew at the rate of Rs.600 per month. On Dec.31 2001, his position was as follows:-

Bank Balance	2,000
Stock	20,000
Debtors	12,000
Furniture	500
Cash in hand	500
Sundry creditors	6,000
Expenses outstanding	400

He keeps his books under the single entry method. Determine his profit or loss for the period 2000.

111. The cash book of Revathi showed a bank balance of Rs.2,760 on 31.7.1999. On comparison with the bank pass book the following particulars were ascertained.

a) Cheques paid in but not yet credited in the passbook Rs.6,000
b) Cheques issued but not yet presented for payment Rs. 2,500
c) Life Insurance premium remitted by the bank but not yet entered in the cash book Rs. 8,320.
d) Interest on debentures collected by the bank recorded in passbook only Rs.6,000.

e) Bank column on the credit side of the cash book undercast by Rs.110.

f) Bank charges entered in the passbook only Rs.70.

112. From the following Trial Balance of M/s S.M. Agency, prepare final accounts for the year 2000.

	Debit Rs.	Credit Rs
Capital		1,00,000
Drawings	18,000	
Buildings	15,000	
Furniture	7,500	
Motor Van	25,000	
Loan from Hari		15,000
Interest paid	900	
Sales		1,00,000
Purchases	75,000	
Opening stock	25,000	
General expenses	15,000	
Wages	2,000	
Insurance	1,000	
Commission received		7,500
Debtors	28,100	
Bank	20,000	
Creditors		10,000
	2,32,500	2,32,500

Adjustments:

(a) Closing stock Rs.32,000

(b) Outstanding wages Rs.1,000

(c) Prepaid insurance Rs.250

(d) Depreciate motor van 5%, Furniture 10%

113. Mr.Vikram commenced business as cloth merchant on 1.1.2003 with a capital of Rs.10,000. On the same day he purchased furniture and fittings for cash Rs.3,000. From the books kept under single entry you are required to prepare his final accounts for the year ended 31.12.2003.

	Rs
Sales (inclusive of cash Rs.7,000)	17,000
Purchases (inclusive of cash Rs.4000)	15,000
Drawings	1,200
Salaries to staff	2,000
Bad debts written off	500
Business expenses	700

Mr.Vikram took cloth worth Rs.500 from the shop for private use and paid Rs.200 cash to his son. But these transaction are omitted to record in his books. 31.12.03 his sundry debtors were Rs.5,00 and sundry Rs.3,600. Stock on hand on 31.12.03 was Rs.6,500.

114. Prepare a Bank Reconciliation statement as on 31.2.2008.

a) Cheques deposited into bank before 31.12.2008 but not collected Rs.1,085.
b) Cheques issued before 31.12.2008 but not cashed amounted to Rs.1,500.
c) Dividend Rs.800 collected by bank is not recorded in the cash book.
d) Insurance premium Rs.300 paid by the bank has not been recorded in the cash book.
e) On 31.12.2008 the cash book showed a bank overdraft of Rs.3,000.

116. . From the following trial balance prepare the trading and profit and loss account for the year ended 31st December 2000 and a balance sheet a at the date.

Particulars	Dr RS	Cr RS
Capital		40,000
Sales		25,000
Purchases	15,000	
Salaries	2,000	
Rent	1,500	
Insurance	300	
Drawings	5,000	
Machinery	28,000	
Bank	4,500	
Cash	2,000	
Stock	5,200	
Debtors	2,500	
Creditors		1,000
	66,000	66,000

a) Closing stock on hand Rs.4,000
b) Salaries owing Rs.300
c) Rent paid in advance Rs.200
d) Insurance paid in advance Rs.90
e) Depreciate machine by 10%
f) During December Ram tools Rs.100in good for his own house.

117.. From the following particulars, prepare:
a) Total debtors a/c
b) Total creditors account
c) Bills receivable a/c

	RS
On 1.1.92	
Total debtors	40,000
Total creditors	15,000
Total bills receivable	16,000
Total bills payable	6,000
Transactions during the year :	
Cash received from debtors	30,000
Discount allowed to debtors	6,000
Bad debts written off	3,000
Return inwards	5,000
Cash sales	16,000

Cash purchases	7,000	d) Bills payable account
Cash received against B/R	10,000	
Cash paid to suppliers (including a payment of Rs.1,000 for purchasing machine)	10,000	
Cash paid against B/P	3,000	
Discount received from suppliers	600	
Return outward	1,500	
Bills payable dishonoured	600	

On 31.12.1992	Rs
Total debtors	70,000
Total creditors	15,000
Total bills receivable	16,000
Total bills payable	8,000

118. Mr.Sivam keeps his books by single entry system. His assets and liabilities were as under.

Particulars	Dr	Cr
	RS	RS
Cash at Bank	4,000	
Sundry debtors	2,000	3,000
Bank (overdraft)		2,000
Office equipments	2,000	2,000
Sundry creditors	1,400	2,800
Furniture	2,000	2,000
Cash in hand	5,000	500
Expenses outstanding		400

Sivam has withdrawn Rs.500. p.m. for personal use. He had introduced Rs.2,000 as additional capital on 14th August 2010. Provision for doubtful debts @ 5% an sundry debtors is to be provided. Charge depreciation @ 10% on furniture and office equipments. Ascertain the profit or loss for the year.

119. On 31sts Jan. 2008 the pass book of Prabhu showed a debit balance of RS.41,000. Prepare a bank reconciliation statement with the following information:

a) Cheques amounting to Rs.15,600 were drawn on 27th Jan. 2008 out of which cheques for Rs.11,000 were not cashed upto 31st Jn. 2008.
b) A wrong debit of Rs.800 has been given by the bank in pass book.
c) A cheque for Rs.200 was credited in pass book but was not recorded in cash book.
d) Cheques amounting to Rs.21,000 were deposited for collection. But cheques for Rs.7,400 have been credited in pass book at 5th Feb. 2008.
e) A cheque for Rs.1,000 returned dishonoured and were debited in pass book only.
f) Interest and bank charges amounted to Rs.100 and were not accounted for in cash book.
g) A cheque o Rs.500 debited in the cash book omitted to be banked.
h) A wrong credit has been given by the banker for Rs.500in the pass book.

120. Prepare a trading account for the year ending 30th June 2008 of Mr.Arun Sharma from the following balances:

	Rs
Stock on 1st July 2007	4,80,000
Cash purchases	3,60,000
Credit purchases	8,40,000
Freight	27,500
Carriage	2,500
Octroil duty	12,000
Import duty	1,30,000
Excise duty on finished goods	35,000
Clearing expenses	40,000
Manufacturing expenses	1,20,000
Cash sales	7,60,000
Credit sales	14,20,000
Closing stock	3,00,000
Subsidies on purchase of goods	30,000
Duty drawback	15,000

121. From the following information, you are required to calculate total sales:

	Rs
Bills receivable in the beginning	7,800
Debtors in the beginning	30,800
Bills receivable encashed during the year	20,900
Cash received from debtors	70,000
Bad debts written off	2,800
Return inwards	8,700
Bills receivable at the end	6,000
Debtors at the end	25,500
Cash sales (as per cash book)	40,900
Bills receivable dishonoured	1,800

122. From the following Trial balance of Mr.Balaji, prepare trading, profit and loss account for the year ended 31st March, 2009 and balance sheet as on that date:-

Debit	Rs	Credit	Rs
Cash in hand	14,000	Sales	32,000
Drawings	7,000	Sundry creditors	9,000
Purchases	4,000	Capital	40,000
Wages	2,000		
Stock (on 1.4.08)	12,000		
Buildings	20,000		
Sundry debtors	8,800		
Bills receivable	5,800		
Rent	900		
Commission	500		
General expenses	1,600		
Furniture	1,000		
Cash at bank	3,400		
	81,000		81,000

Adjustments:

a) Closing stock Rs.8,000

b) Wages outstanding Rs.200
c) Rent prepaid Rs.200
d) Depreciate Furniture and Buildings by 10%

123. Thiru Prabu keeps his books by single entry. From the following information given below prepare a Trading and Profit and Loss account for the year ended 31st December, 2009 and a Balance sheet as on that date.

	1.1.2009	31.2.2009
Capital	7,500	-
Sundry debtors	3,440	4,500
Stock	1,750	2,000
Sundry creditors	1,125	850
Machinery	1,560	1,560

Analysis of the cash book for the year ended 31st December 2009.

124. How will you prepare balance sheet?

SUBJECT: Web Technology SUBJECT CODE: CSCA 34

Two Mark Questions:

1. What is the internet?
2. Expand URL & WWW.
3. What is HTML?
4. Define E-Mail.
5. Why is it called Gopher?
6. What is pornography?
7. Define SGML.
8. What is the use of <p>
 tag?
9. What is the list?
10. How you will include an image on your web page?
11. Define Table.
12. What is cell spacing?
13. How will you specify header in tables?
14. Define anchors.
15. What are the modes of link in all browsers?
16. Can you jump within the same document? How?
17. What is the use of frameset tag?
18. What are the disadvantages of using frames?
19. What are frames?
20. What is the use of no frame tag?
21. How will you create an inline frame?
22. Expand XML, ASP, CSS.
23. What is chatting?
24. Give the basic structure of HTML program.
25. What is out empty tag?
26. What is CSS?
27. Write about external style sheet?
28. What are the different ways to include style sheets?
29. List out the margin properties in CSS.

30. What is JavaScript?
31. How do you give comments in JavaScript?
32. Name the types of assignment operators in JavaScript.
33. Write the syntax of switch statement.
34. Name any two scripting languages.
35. Write the syntax for conditional operators?
36. What is event? Give example.
37. How to declare user defined objects in JavaScript?
38. Compare Java and JavaScript.
39. What can a JavaScript do?
40. How to put JavaScript in HTML?
41. Display the output statement in JavaScript.
42. Write the use of for loop.
43. Explain the functions of toString() and Valueof().
44. What is the importance of @ output cache directive?
45. Define Array object.
46. How String Object is used?
47. What is the use of Window alert () and blur () method?
48. What is HTML DOM object?
49. Define Cookies.
50. What is ASP.net?
51. Name the four different web controls.
52. List the ASP label control properties.
53. What do you understand about resume next?
54. What is e-mail? State its advantages.
55. List out some JavaScript special characters with their meanings.
56. What is Classic ASP?
57. How does ASP.net work?
58. What is an ASP.net file?
59. What is ASP+?
60. How to use C# in ASP.net?
61. Define Event driven programming.
62. Define Database.
63. Expand OLEDB.
64. What is command class?
65. Give the structure of VBScript.
66. Define VBScript Procedures.
67. What are type casting variables?
68. Define VBScript coding conventions.
69. Define Err object.
70. State the use of dictionary object in VBScript.

Five Mark Questions:

1. Explain the history of internet.
2. Write in detail about Gopher?
3. Write a short note on electronic mail.
4. What are the benefits of client server model?
5. What is the use of header tag? Explain.
6. What are the various rendering available for lists?
7. How graphics are inserted into HTML? Explain briefly.

8. Explain HTML forms.
9. Explain about external style sheet.
10. How will you change the background of the page?
11. Explain link and image tag with example.
12. With a program explain the use of frames.
13. Write about CSS.
14. Explain about external style sheet.
15. What are the special properties in tables? Explain.
16. How is text formatting implement in CSS.
17. Explain with example how to include CSS in HTML.
18. Write note on JavaScript.
19. List any 5 uses of JavaScript.
20. Explain the looping constructor available in JavaScript.
21. Describe event handling in HTML using JavaScript.
22. What are built – in functions in JavaScript? Explain.
23. State the advantages of JavaScript.
24. Write a JavaScript function to calculate n!.
25. Write short notes on screen object.
26. Explain any five methods of string object with examples.
27. Differentiate Java and JavaScript.
28. Write in detail about control statements in JavaScript.
29. Write a note on operators in JavaScript.
30. Explain Date object with example.
31. State and explain Math object with example.
32. Describe the various methods and properties of a page class.
33. Write short notes on Grid control.
34. Give an account of HTML server controls.
35. State the uses of check and radio buttons.
36. Write down the process of request and response of a article through web pages.
37. Write short notes on IP address and its structure.
38. Explain the various response object methods.
39. Explain any one method to secure you ASP.net web page.
40. Discuss about window object.
41. Discuss about cookies.
42. How a cookie works with data? Explain
43. Write a note on OLEDB Connection Class?
44. Write about command and transaction class with example.
45. Explain data adaptor class.
46. Explain data set class.
47. Explain VBScript code basics.
48. Write note on VBScript data types.
49. Explain variables and constants in VBScript.
50. Explain the logical statements in VBScript.
51. Explain VBScript procedures.
52. Write note on string functions.
53. Explain user define function in javascript.
54. Describe in detail about VBscript coding conventions.
55. Write note on math, string and date functions.

Ten Mark Questions:

1. List the advantages and disadvantages of internet.
2. Explain various types of List tag in detail.
3. How tables are created in HTML? Explain with example.
4. Explain how style sheet added to HTML document.
5. Explain Display properties in HTML.
6. What is dense array? Explain the different array functions with examples.
7. Write a JavaScript program to read a string and display its content character by character?
8. Explain the various form elements and its associated properties and methods.
9. What is CSS in HTML? Explain in detail.
10. Give an account of server side scripting.
11. What is window object in JavaScript? Discuss.
12. Discuss about document and Browser object.
13. Explain Event handling and Navigator object with example.
14. Write about Build in object and user defined object.
15. State the advantages of .net framework and functions of CLR.
16. Write the steps to connect ASP.net to database.
17. Discuss the various HTML server controls with examples.
18. How to connect the ASP.NET page into backend RDBMS? Explain with example.
19. Discuss about cookies with example.
20. Explain Web server controls with example.
21. Discuss about Request and Response object.
22. Explain OLEDB connection class with example.
23. Explain in brief about VBScript operators.
24. Explain VBscript conditional and logical statements with examples.
25. Explain array and its types in javascript.
26. Explain looping statements in javascript.
27. Explain constructor function in javascript.
28. Write in detail about IIS working.
29. Explain IP authentication.
30. Explain application issues in brief.

Subject: MANAGEMENT CONCEPT Subject code: CNBA37

SECTION - A

- What is management?
- Define management.
- State any two importance of management.
- Who is manager?
- What are three levels of management?
- What is scalar chain?
- What are human skills?
- What is scientific management?
- Define planning.
- What are policies?
- State the differences between policies and procedures.
- What is decision making?
- Define Brain storming.
- What is organizing?

- Define organizational structure.
- What do you mean by span of control?
- Define departmentation.
- What is informal organization?
- What do you mean by authority?
- What is meant by delegation?
- Define staffing.
- Define directing.
- What do understand by motivation?
- Define coordination.
- What is controlling?
- What is break even analysis?
- What is external coordination?
- Give two differences between coordination and cooperation.
- What is MBO?
- What do you mean by Leadership?
- What is autocratic leadership?
- Define communication.
- What is informal communication?
- How communication is a Two way traffic?
- State any two principles of Henry Fayol.
- Give the meaning of the term committee.
- What is delegation of authority?
- What do you mean by Grapevine?
- State the different types of coordination.
- What is effective control?
- Why is management considered as science?
- How does management differ from administration?
- What are the limitations of planning?
- Define objectives.
- What is span of supervision?
- What is decentralization?
- What are non monetary motivations?
- Name any two tools used for control.
- Give the meaning of budgetary control.
- Write any two functions of manager.
- Define organization chart.
- Bring out any two objectives of control.
- Is management an art?
- What is ad-hoc planning?
- What is departmentation?
- What is division of work?
- Define Directing.

What are the principles of direct contact in coordination?

- What do you mean by selection?
- What is Training?
- What is procedure?
- What is centralization of authority?
- Define Responsibility.

- What is Responsibility?
- State the meaning of Recruitment.
- Define Recruitment.
- What do you mean by on-the-Job training?
- What do you mean by off-the-Job training?
- What do you mean by Directing?
- Is motivation is a Goal-oriented process.
- What are social needs?
- What are physiological needs?
- What are Esteem needs?
- What do you mean by Liaison?
- What do you mean by effective communication?
- What do you mean by management audit?
- What do you mean by Total quality management?
- What is management information system?
- Expand: PERT
- Expand: MBO
- Expand: CPM
- State any two qualities of effective leader.
- What is message?
- What is Encoding?
- What is Decoding?
- What is feedback?
- What are the channels of communication?
- What are the barriers of communication?
- Who is sender in communication?
- Who is receiver in communication?
- What is budget?
- Who is subordinate?
- Who is a leader?
- What is meant by power?
- What is meant by line and staff organization?
- State the types of organization structure.
- Who give the concept of MBO?
- State the types of plans.
- Who is the father of scientific management?

SECTION – B

- What are the features of management?
- What are the different levels of management?
- Define planning. Describe major steps in planning.
- Write a note on MBO.
- What are the factors which determine the extent of decentralization?
- Explain the advantages and barriers of delegation.
- Enumerate the different methods of motivation.
- What are the qualities of a goo leader?
- Explain the principles of coordination.
- What factors make control possible?
- Briefly explain the qualities of a good manager.
- Explain the characteristics of management.

- What the different types of planning?
- What are the premises of planning?
- What are the advantages of line and staff organization?
- State the features of span of management.
- What are the principles of effective directing?
- What are the objectives of motivation?
- Explain the special features of control.
- Write any five importance of coordination.
- Distinguish between entrepreneur and manager.
- What are the merits of planning?
- Explain the benefits of MBO.
- Describe the principles of delegation.
- What are the types of organization chart?
- State the process of communication.
- Explain the importance of motivation.
- Explain the nature of planning.
- Describe the importance of planning.
- Explain the characteristics of organization.
- What are the factors determining centralization of authority?
- Explain the salient features of directives.
- What are the advantages of oral communication?
- Explain the advantages of control.
- Explain the techniques of effective coordination.
- Explain the various functions of manager.
- Explain the nature of management.
- Describe the various steps in the process of MBO.
- Describe the importance of organization in business.
- Explain the merits and demerits of centralization.
- Describe the various methods of motivation.
- Explain the characteristics of control.
- What is the scope of management?
- Explain the techniques of scientific management.
- Elaborate the decision theory approach.
- Explain the nature and importance of staffing.
- State the characteristics of a good procedure.
- Explain the types of span of control.
- Explain the advantages and disadvantages of committee.
- Explain Maslow's need hierarchy theory.

SECTION – C

- Explain the process of management.
- Describe the major types of planning.
- Explain different type of organization.
- Explain the barriers of communication and how should they be tackled?
- Describe the way in which the control process works.
- Explain the role and responsibilities of a manager.
- Discuss the advantages and limitations of planning.
- What is delegation? Explain the factors affecting delegation of authority and its process.
- Explain the Maslow's theory of motivation in detail.
- Discuss the different techniques of control in a business organization.

- Discuss the contribution made by Henry Fayol to management thought.
- Enumerate the steps in the process of planning.
- Explain the salient features of line and staff organization.
- Explain the different approaches to achieve effective coordination.
- "is Management an art, science or profession." Explain.
- Explain the advantages and disadvantages of planning.
- Discuss the principles of organization.
- What are the various barriers to the communication? What would you suggest to overcome them?
- Discuss the role of manager.
- Explain the various traditional techniques of effective coordination.
- Explain the various types of communication.
- Explain the nature and importance of leadership.
- Discuss theories of leadership.
- Discuss various methods of controlling.
- Describe various types of control.
- Discuss the various modern techniques of controlling.
- Define recruitment. Explain various sources of recruitment.
- What is selection? Explain steps in selection process.
- Discuss various types of motivation.
- Explain the principles and process of delegation of authority.
- Explain the advantages and disadvantages of centralization and decentralization.
- Describe the various basis of departmentation.
- Explain the reasons of line-staff conflict.
- What is formal organization? Discuss its merits &demerits.
- Discuss the characteristics of decision making. Explain what difficulties in decision making.
- Discuss various techniques of decision making.
- Explain the types of policies and its importance.
- Explain the purpose of organizing and its importance.
- Briefly explain the types of span of control.
- What is committee? Explain its types, uses, advantages and disadvantages.
- Discuss the process and principles of organizing.
- Give the meaning of formal and informal organization. Differentiate between formal and informal.
- What are the needs of delegation? Point out the difficulties in delegation.
- Briefly explain the advantages & disadvantages of centralization.
- What is training? Explain its kinds.
- What are the natures of directing? Explain the purpose of directing.
- Explain the steps and process of selection.
- Explain the techniques to be followed in controlling,
- State out the styles of leadership.
- Briefly analyze the nature and importance of communication.
- Explain the principles and process of communication

III BCA

TWO MARKS

Unit I

1.What is Mobile Application ?
2.What is Android ?
3.What is OHA ?
4.What is XML ?
5.Define IDE.
6.Define Native Applications.
7.Define Dalvik VM.
8.What is Emulator ?
9.List the Versions of Android.
10.Define Web Application.
11.How to make call in Emulator ?
12.How do you send Message from Emulator.
13.Write some Features of IDE.
14.What is the difference between Code Editor and IDE.
15.Give the Properties of IDE.
16.Write any two Advantages of IDE.
17.What is AndroidSDK ?
18.Define Android SDK.
19.Define Database.
20.Define Android Device.
21.Define Mobile Operating System.

Unit II

1.What is Java ?
2.What is Eclipse ?
3.What is Virtualization ?
4.What is Android File System ?
5.Define Activity Stack.
6.What are Launch Modes ?
7.Define Android Activities.
8.What is Intent ?
9.List the use of Intent.
10.Define Intent Filters.
11.What is Intent PutExtra ?
12. What is Intent GetExtra ?
13.Write the Types of Intent.
14.What is Emulator ?
15.Expand DDMS and API.
16.Define Android Studio.

Unit III

1.What is Simple Services ?
2.What is Foreground ?
3.What is Background ?
4.Explain Bound Service.
5.Define Broadcast Receiver.
6.What is meant by Content Provider ?
7.Define Content Resolver.
8.What is Database Schema ?
9. Define SQL Database.

10.Define Data Analysis.
11.What is an Adapter in Android ?
12. What is Intent GetExtra ?
13.Write the Types of Intent.
14.What is Emulator ?
15.Expand DDMS and API.
16.Define Android Studio.

Unit IV

1.What is Layout ?
2.List the major Attributes of Layout.
3.Define Style along with Example.
4.Define Linear Layout.
5.Define Relative Layout.
6.What is meant by Table Layout ?
7.Define Grid View.
8.What is Frame Layout ?
9. Define Menu.
10.List Various Types of Menus.
11.What is Option Menu ?
12. What is Context Menu ?
13.Define PopUp Menu.
14.What is List View.
15.Define Notification.
16.What are the Steps to create and send Notification.
17.What is the use of Button ?
18.What are the various Types of Button.
19.What is the use of Text Field ?
20. What is the use of Check Box ?
21.What are the uses of Alert Dialog ?
22.What is Spinner ?
23.Define Progress Bar.

Unit V

1.What is Pin Ball Game ?
2.What is Android Alarm Clock ?
3.Define Calendar App.
4.Define Converter App.
5.Define Phonebook App.
6.What is meant by Phonebook Adapter ?
7.Define Doodlz App.
8.What is Tip Calculator App ?
9. Define Weather Viewer App.
10. What is Adapter Layout App ?

5 Marks

Unit - I

1. List features of the Android Operating System.
2. Define Android Virtual Devices (AVD).
3.Write the directory path where images are stored while developing Android Applications.

4. List all attributes to develop a simple button.
5. Write the syntax for Intent-Filter tag.
6. Define services in Android operating system.
7. Enlist the steps to publish the Android application.

Unit II

1. Describe the Anroid architecture in detail.
2. Differentiate between JVM and DVM.
3. Explain the activity life cycle.
4. Explore the Steps to install and configure Android Studio and SDK .
5. During an activity life cycle which methods invoked only once?
6. What is a the use of setContentView() method?
7. Where will you declare your activity so the system can access it?
8. Where can you define the icon for your Activity?
9. What do you mean by resource?
10. Which object is passed to onCreate () method?
11. To create an Activity which class must be inherit

Unit III

1.Describe the significance of SQLite database in Anroid.
2.Discuss Developer console with its purpose.
3.What is Simple Services ? Explain.
4.Dicuss on Broadcast Receiver in detail.
5.Explain in detail about Content Providers.
6.What is Content Resolver ? Explain.
7.How to work with Databases ? Explain.
8.Narrate some Database Applications.
9.Write brief note on Data Analysis.

Unit IV

1. Write a program to display a circular progress bar.
2. What is Layout ? Explain
3. Discuss on Linear Layout.
4. Briefly Explain Relative Layout.
5. Explain briefly Table Layout.
6. Discuss on Frame Layout.
7. Write brief note on Menus.
8. Explain the Types of Menus in detail.
9. Explain in detail about Android Option Menu.
10. Explain in detail about Android Context Menu.
11. Discuss on Android Popup Menu.
12. Elaborate on Listview.

Unit V

1.Discuss on PinBall Game.
2.What is Calendar App ? Explain.

3.How do we use Converter App ? Explain.
4.Discuss on Phonebook App.

10 Marks

Unit I

1.Activity Life Cycle.
2. Android Stack
3. Explain in detail about user interface and its types?
4.What are the core components under the Android application architecture? Explain any two in detail.
5. What does an Android APK file contains?
6. To monitor debugging process which tool is useful?
7. Explain other tool of Android in detail.
8. Write a note on Dalvik Virtual Machine component of Android Runtime.
9.Explain more features of Android version which contains NFC.
10.List all the versions of android.

Unit II

1.Which file is considered as managing file in Android application?
2.Explain each node of that file in detail.
3.Write a note on Android device available in market.
4.Explain various resources which can be specified in Android application project. Give an appropriate example for each.
5. Which are the four essential states of an activity?
6. During an activity life cycle which methods invoked only once?
7. What is a the use of setContentView() method?
8. Where will you declare your activity so the system can access it?
9. Which object is passed to onCreate () method?
10. To create an Activity which class must be inherits in our sub class?

Unit III

1.Describe the significance of SQLite database in Anroid.
2.Discuss Developer console with its purpose.
3.What is Simple Services ? Explain.
4.Dicuss on Broadcast Receiver in detail.
5.Explain in detail about Content Providers.
6.What is Content Resolver ? Explain.
7.How to work with Databases ? Explain.
8.Narrate some Database Applications.

9.Write brief note on Data Analysis.

Unit IV

1.Write a Sample program using XML.
2.What is the use of Adapter ? Explain.
3.Discuss on Notification.
4.Write brief note on Buttons.
5.What is Android Text Fields ? Explain.
6. What is Android Check Box ? Explain.
7.Explain in detail about Android Alert Dialog.

Unit V

1.Discuss on PinBall Game.
2.What is Calendar App ? Explain.
3.How do we use Converter App ? Explain.
4.Discuss on Phonebook App.
5.Explain about Tip Calculator App.
6.What is Weather Viewer App ? Explain.
7.Explain about Adapter Layout File.

Subject: OPERATING SYSTEM Subject code: BCA 52

PART – A (2 Marks)

1. What is an operating system?
2. What does an operating system do?
3. Where are operating systems found?
4. What is a general purpose operating system?
5. What is simple operating system for a security control system?
6. What s Input and Output devices?
7. What is a single-user operating system?
8. What is a multi-user operating system?
9. What are the operating system utilities?
10. List out the operating system interfaces
11. What are the advantages of multi-user operating system?
12. What is a multi-tasking operating system?
13. What are the various parts of operating system?
14. What is real-time executive?
15. What is a computer program?
16. How does operating system run more than one program at once?
17. What is co-operative and pre-emptive switching?
18. Define dispatching
19. What is system overhead?
20. What is context switching?

21. Define scheduling?
22. What are the other ways of scheduling process?
23. What is a process?
24. Write about process states
25. What is a process control block?
26. How does the process inter-communicate?
27. Define synchronize
28. What is a thread?
29. What is a shell?
30. Write examples of deadlock
31. Define paging system
32. What ar the types of access methods?
33. Define seek optimization
34. Define UNIX file system
35. What is the UNIX I/O system?
36. Define spooling
37. What do you mean by non-pre-emptive scheduling?
38. Define throughput
39. What are the advantages of dynamic loading?
40. How can external fragmentation problem be solved?
41. Define rotational latency
42. Define inode
43. What is the system call?
44. What is communication?
45. Write notes on GUI
46. Define preemptive scheduling.
47. Define multilevel queue scheduling algorithm
48. Define thrashing
49. What is protection?
50. Define access controls
51. Mention all the page replacement algorithms
52. Mention the problems that are associated with contiguous allocation
53. What do you mean by free-space list?
54. What is compile time binding?
55. Define virtual memory
56. What is meant by executable file?
57. What is meant by shell?
58. Define file
59. What is meant by graceful degradation?
60. Define message passing
61. What is the use of datagram sockets in UNIX?
62. Define CPU scheduling
63. What is paging?
64. Define demand paging
65. What is the use of internal file structure?
66. List out the types of file system
67. What is a page table?
68. What is the work of a command interpreter?
69. What is overlay?
70. What are the types of operating systems?

PART – B (5 Marks)

1. Explain about the operating system operation
2. Explain about process management
3. Explain the characteristics of deadlock
4. Write about virtual memory management
5. Explain about demand paging
6. Explain about free-space management
7. Describe the allocation methods
8. Explain any two disk scheduling algorithms
9. Explain distributed UNIX system
10. Describe system programs
11. Write short note on command-interpreter systems
12. Explain simple batch systems
13. Give a short account on indirect communication
14. Explain the necessary conditions that cause deadlock
15. Write note on Thrashing
16. Explain optimal page replacement algorithm
17. Explain two level directory structure
18. Give brief account on free space management
19. Explain the concept of swapping in UNIX
20. Explain the implications of inode
21. Explain the security in operating system
22. Write note on simple structure of operating system
23. Write about synchronization
24. Write about segmentation
25. Explain the ways to handle deadlocks
26. Write about page replacement algorithms
27. Define scan scheduling
28. Explain about file attributes
29. Explain the KERNAL of UNIX
30. Write about the history of UNIX
31. Explain the two major methods of keeping tracks of blocks
32. With an example, explain about tree-structured directories
33. Explain the different components of UNIX systems
34. Write note on virtual file system in UNIX
35. Discuss the components of OS with block diagram
36. Explain about round robin scheduling algorithm
37. Is it possible to have a deadlock involving a single process? Justify your answer.
38. Explain about multiple partition allocation
39. What is the need for page replacement algorithm?
40. Explain about the various file operations
41. Explain linked allocation methods
42. Explain UNIX directory structure
43. How IPC is performed in UNIX. Explain
44. Define spooling and explain it
45. Explain the state of process with the help of state diagram
46. Write note on buffering
47. Explain the implementation of segment table
48. Explain the block buffer cache
49. Discuss on SSTF scheduling

50. Write note on Concurrency control

PART – C (10 Marks)

1. Explain the various types of system calls
2. Describe the ways for deadlock avoidance
3. Write any five CPU scheduling algorithms
4. Differentiate between internal and external fragmentation with example
5. Explain any two replacement algorithms
6. Discuss in detail about inter process communication
7. Explain about memory management of UNIX systems
8. Give a detailed account on operating system services
9. Explain in detail about deadlock prevention
10. Describe indexed allocation in detail
11. Describe the file system of UNIX
12. Explain about distributed systems
13. What is deadlock? Explain the various strategies for deadlock
14. Explain the various operations performed on a file
15. Discuss in detail about process scheduling
16. Explain the free space management technique
17. Describe the use of priority scheduling algorithm with example
18. Describe the CPU scheduling algorithms used for a UNIX system
19. Explain about random file access in distributed file system
20. Describe about virtual memory

Subject: Data Communication and Networks Subject Code: BCA 53

Two Marks Question:

1. Define networks.
2. Define Computer communication.
3. What are the types of networks?
4. Define protocol and its standards.
5. What are the various components of data communication?
6. List out the common protocols.
7. Define topology.
8. What are the basic types of topology?
9. What is data communication?
10. List out the various types of network topology.
11. Define switching.
12. What is packet switching?
13. What is OSI model?
14. List the layers in OSI model.
15. What is peer to peer process?
16. Define Data Link layer.
17. Define E-Mail.
18. What is encryption and decryption?
19. Define multimedia.

20. What is WWW, internet?

Five Marks Question:

1. Discuss about data communication model.
2. Explain communication tasks.
3. Discuss about types of networks.
4. Discuss about topology.
5. Explain TCP/IP reference model.
6. Explain protocol architectures.
7. What are the internet terminologies? Explain.
8. Explain Network Software.
9. Discuss about Network Hardware.
10. Explain Network architecture.
11. Discuss about Cable television.
12. Write note on data link layer design issues.
13. Explain channel allocation problem.
14. Discuss about Ethernet.
15. Write about Network layer design issues.
16. Explain Routing algorithm.
17. Write about internetworking.
18. Explain Transport layer issues.
19. Discuss about User datagram protocol.
20. Explain multimedia.

Ten Marks Question:

1. List out and explain OSI model.
2. Discuss about the types of protocols.
3. Explain about multimedia.
4. Explain about transmission media.
5. Discuss about Transmission impairments.
6. Explain in detail about MAC.
7. Discuss about Wireless LAN.
8. Explain IEEE 802.11
9. Write short note on shortest path routing algorithm.
10. Discuss about Broadcast, Multicast routing algorithm.
11. Explain Elements of transport protocols.
12. Discuss about E-|Mail.
13. Discuss about Network security.
14. Write note on Symmetric cryptosystem.
15. Write note on Asymmetric cryptosystem.
16. Explain RSA, Diffiie Hellman algorithm.

Subject: DATA MINING Subject Code: BECA 54A

PART – A (2 Marks)

1. Define data
2. What is information?
3. What is knowledge?

4. Define Data mining
5. List out any two uses of data mining
6. List out any two applications of data mining
7. Define Prediction
8. What are Association rules?
9. What is spatial database?
10. Define data warehouse
11. What is OOD?
12. Define relational database
13. Define temporal database
14. What is outlier analysis?
15. Define discrimination
16. Define prediction
17. What is clustering?
18. Define regression
19. List out any three classification of data mining systems
20. What is data integration?
21. Define coupling
22. Define loose coupling
23. Define semi tight coupling
24. Define tight coupling
25. Define data warehousing
26. List any two characteristics of data warehousing
27. Differentiate between operational data and data warehousing
28. What is noisy?
29. Define DQML
30. List out the various pre-processing technique
31. Why pre-process the data?
32. Define outlier analysis
33. Define regression
34. What is concept description?
35. What is data generalization?
36. Define data cube
37. What is quantitative rule?
38. Define association rule
39. What is APRIORI?
40. Define binning
41. What are subjective and objective measures?
42. Define classification
43. What is prediction?
44. List the issues regarding classification and prediction
45. Define CART
46. Define ID3
47. What is back propagation?
48. Define over fitting
49. What are Bayesian classifiers?
50. What is Naive Bayesian classification?
51. Define CPT
52. What is cluster analysis?
53. What is good cluster analysis?
54. List out any two requirements of clustering in DM

55. Define nominal variable
56. Define ordinal variable
57. Define ratio-scaled variable
58. What is partitioning method?
59. Define grid based method
60. Define hierarchical method
61. Define density based method
62. What is BIRCH?
63. What is ROCK?
64. What id DBSCAN?
65. Define OLAP
66. Define star schema
67. Define snowflake schema
68. Difference between star and snowflake schema
69. Define data mart
70. What is virtual warehouse?
71. List out any two regarding the design of a data warehouse
72. Define top down approach in data warehousing
73. Define bottom down approach in data warehousing
74. Define OLAM
75. List out any three data warehouse applications

PART – B (5 Marks)

1. Explain about data mining in detail
2. Explain any two applications of data mining in detail
3. Write a note on data mining issue in detail
4. Explain about data mining metrics
5. Discuss about social implications of data mining
6. Write note on spatial database
7. Explain about Temporal database
8. Discuss about text and multimedia database
9. Explain heterogeneous database in detail
10. Write note on object oriented database
11. Explain about relational database
12. Explain about data mining functionalities
13. Discuss about pattern interestingness
14. Explain about classification of data mining system
15. Briefly explain about data mining primitive tasks
16. Explain about typical architecture of data mining system with neat diagram
17. Explain the characteristics of data warehousing
18. Discuss the future of data warehousing
19. Explain the applications of data warehousing
20. Discuss in detail about advantages of data warehousing
21. Bring out the difference between OLTP and data warehousing
22. Why separate data warehouse? Explain
23. Explain data pre-processing with a suitable example
24. Explain data cleaning as process in detail
25. Discuss about data integration

26. Explain about data transformation
27. Briefly explain about DQML
28. Explain about data reduction strategies
29. Discuss about major tasks in data pre-processing
30. Explain the methods of handling missing data
31. Explain about descriptive data summarization
32. Discuss about mining class comparison
33. Explain data generalization and summarization based characterisation
34. Define association rule mining and explain how apriori algorithm works with example
35. Explain the process involved in apiori algorithm with the help of the pseudo code
36. Define association rule and explain the FP growth algorithms in association techniques
37. Explain mining association rules in large databases
38. Explain about mining associations rules from transactional databases
39. Explain about mining association rules from data warehouses
40. Discuss about constraint based association mining in detail
41. Explain about the issues regarding classification and prediction
42. Write note on back propagation
43. Explain Bayesian classification
44. Discuss about naive Bayesian classification
45. Explain about rule based induction
46. Discuss about lazy learners
47. Write short note on genetic algorithms
48. Discuss fuzzy set approach
49. Discuss about cluster analysis
50. Briefly explain about types of data in cluster analysis
51. Explain about categorization of cluster methods
52. Explain about the hierarchical method
53. Explain about grid based methods
54. Discuss in detail about OPTICS
55. Explain about data warehouse schema
56. Difference between OLTP and OLAP
57. Discuss about need for OLAP
58. Explain about multi dimensional model
59. Discuss about categorization of OLAP tools
60. Explain about architecture of data warehouse in detail
61. Explain in detail about data warehouse design process
62. Explain OLAP engine in detail
63. Discuss data warehouse back end tools and utilities
64. Explain about data warehouse implementation
65. Explain about data cube operation in detail
66. Discuss about efficient computation of data cube
67. Explain in detail about architecture of OLAM with neat diagram

PART – C (10 Marks)

1. Write a detailed note on data mining task primitives
2. Explain the data transformation process in detail with example
3. Describe star schema of a data warehouse with example
4. Explain in detail about mining quantitative association rules with example

5. Discuss the application of data mining in telecommunication industry
6. Explain in brief about data mining issue in detail
7. Give the statistical base algorithm
8. Explain any two hierarchical algorithms
9. Explain the association rules with examples
10. Explain any two applications of data warehouse
11. Explain data mining metrics
12. What is decision tree? Explain
13. Describe partitional algorithm
14. Write a brief note on the various aspects of data mart and data modelling
15. Give any two tools for data warehousing
16. Explain data pre-processing with example
17. Explain apriori algorithm for frequent patterns from large volume of data
18. Explain advanced concepts of data mining
19. Discuss on data reduction
20. Explain cube aggregation and data compression
21. Discuss about density based methods
22. Explain about K-nearest neighbour classifiers with example
23. Explain back propagation algorithm
24. Explain data generalization and summarization
25. Explain missing and noisy data

Subject: SOFTWARE ENGINEERING Subject code: BSCA 54

Section -A(2Marks)

1. Define Software Engineering.
2. What is meant by Software engineering paradigm?
3. Whatarethe Advantagesofincremental model?
4. Writeanytwocharacteristics of softwareasaproduct.
5. Whichprocessmodelleadsto software reuse?Why?
6. Giveatleasttworeasonsforprototypingisproblematic.
7. MentiontheAdvantageandDisadvantageof waterfallmodel.
8. Distinguishbetweenprocessandmethods.
9. Definesoftwareprocess.Statetheimportantfeaturesofaprocess.
10. Distinguishbetweenverification&validation.
11. DefineSystemModeling.
12. StatetheSystem EngineeringHierarchy.
13. MentionsomeofthefactorstobeconsideredduringSystemModeling.
14. DefineVerification&Validation.
15. Whatarethephases encompassedinthe RAD model?
16. Listthetaskregionsinthespiral model.
17. Whatis requirementengineering?
18. Whatismeantbyfeasibilitystudy?
19. Whatismeant byrequirement validation?
20. What ismeantbyRequirement management?
21. Whatismeantbysoftware prototyping?

22. Differentiatedataflowdiagramandstatetransitiondiagram.
23. DefinecardinalityandModalityof arelation.
24. Compareevolutionaryandthrowawayprototyping?
25. Definethetermproductandprocessinsoftwareengineering?
26. Listouttheelementsof analysismodel?
27. Whymodularityis importantindata dictionary?
28. Specifyatleastfourquestionnairewhichsupportstoselecttheprototypingapproach.
29. Distinguishbetweenexpectedrequirementsandexcitedrequirements.
30. Whatismeant bysoftware prototyping?
31. Whatarethenon-functional requirementsofsoftware?
32. Whatisdatadictionary?Howisitusedin softwareengineering?
33. DefineBehavioralModeling.
34. DefineDatadictionary.
35. DefineProcessSpecification.
36. Whatdoes data dictionarycontains?
37. Whatismeant byThrow awayPrototyping?
38. Whatisthemajordistinctionbetween userrequirementsandsystemrequirements?
39. WhatisDFD?
40. Whatare thecommoncharacteristicsofdesignmethods?
41. Whatare thedifferentlevels ofabstraction?
42. Whatare the elementsofdesignmodel?
43. HowtheArchitectureDesigncanberepresented?
44. Definedesignprocess.
45. Listtheprinciplesof asoftwaredesign.
46. Whatis the benefitofmodulardesign?
47. Whatis a cohesive module?
48. Whatiscoupling?
49. Whatarethecommonactivitiesindesignprocess?
50. Listtheguidelinesfordatadesign.
51. Namethecommonlyusedarchitectural styles.
52. WhatisTransform mapping?
53. Whatismeant byfan-in, fan-out?
54. Definesoftwaretesting?
55. DefineSmokeTesting?
56. Whatare the objectivesoftesting?
57. DefineWhite BoxTesting.
58. Whatare the two levelsoftesting?
59. Whatarethevarioustestingactivities?
60. Writeshortnote onblackbox testing.
61. Whatis equivalence partitioning?
62. WhatisRegressionTesting?
63. Whatis a boundaryvalue analysis?

64. What are the reasons behind to perform white boxtesting?
65. Whatiscyclomatic complexity?
66. Howtocomputethecyclomaticcomplexity?
67. Distinguishbetweenverificationandvalidation.
68. Whataretheapproachesof integrationtesting?
69. Whatare the benefitsofsmoke testing?
70. Distinguishbetweenalphaandbetatesting.
71. Whatarethevarioustypesof systemtesting?
72. Statetheobjectivesandguidelinesfordebugging.
73. Whatdo youmean bytest casemanagement?
74. Whatistheneedforcyclomaticcomplexity?
75. Whatismeant bysoftwareprojectmanagement?
76. Whatismeant bysoftware management?
77. Definedebugging.
78. Whatarethe commonapproaches indebugging?
79. Write aboutthe types ofprojectplan.
80. Writeshortnote onthevarious estimationtechniques.
81. WhatistheObjectiveofFormalTechnicalReviews?
82. WhatisCOCOMOmodel?
83. Whatis thepurpose oftimelinechart?
84. Whysoftware change occurs?
85. Writeaboutsoftwarechangestrategies.
86. DefineCASETools.
87. Whatis softwaremaintenance?
88. Definemaintenance.
89. Whatare the types ofsoftwaremaintenance?
90. Whatarethevarious elementsof datadesign?

Section-B(5Marks)

1. What are the major differences between system engineering and software engineering? Stateexplainsthestagesthatdistinguishthetwo.
2. Explain Water fall Model. What are the problems that are sometimes encountered when thewaterfallmodel
3. Whichismoreimportant-theproductorprocess?Justifyyouranswer.
4. With suitable illustration explain SPIRAL model .
5. Explain the Evolutionary and Incremental Model
6. WriteashortnotesanSystemengineeringandComputerbasedSystem
7. Howdoyoudifferentiatesoftwareengineeringfromsystem engineering?
8. Explain incremental process model
9. Explain the spiral model.
10. What are the necessities of Life cycle model? Elaborate on the various issues of Software

lifecycle

11. Differentiateproductengineeringandbusinessengineeringoverview
12. Explaintheprocessmodel thatcombinestheelementof waterfall anditerativefashion.
13. Whatis the useofcontextdiagram?Drawa Level-1DFD
14. Explain about requirement management?
15. What is requirement engineering? State its process and explain requirements elicitation problem
16. Explain functional and behavioral modeling.
17. What is prototypingapproach?Explain.
18. Explainaboutthecardinalityandmodalitywithsuitableexample.
19. Comparefunctionalandbehavioral models
20. Explainindetail aboutallmodelingtechniqueinsoftwarerequirements.
21. Explainaboutrapidprototypingtechniques.
22. Writeadetailednoteonscenariobasedmodeling.
23. Withanexample explainaboutDFD.
24. Writeshortnoteson datamodeling?
25. explaintheelementsoftheanalysismodel
26. Define the concept of cohesion and coupling. State the difference.
27. What are different types of architectural styles exist for software and explain any one softwarearchitecture.
28. What is transform mapping? Explain the process with an illustration. What is its strength andweakness?
29. Explainaboutthevariousdesignconceptsconsideredduringdesign?
30. Writeshortnotesonuserinterfacedesignprocess?
31. What are the different types of architectural styles exist for software and explain any onesoftwarearchitectureindetail.
32. Explaindataarchitecturalandproceduraldesignforasoftware.
33. Justify“Designisnotcodingandcodingisnotdesign”.
34. Explainindetail aboutthecharacteristicsandcriteriaforagooddesign.
35. Describethegoldenrulesforinterfacedesign.
36. Whatis thedesign document?
37. Discussindetail thebasicstructureofanalysismodel.
38. Explainthetestingobjectivesanditsprinciples.
39. Explainthebasispathtestingindetail.
40. Whatis theneed forsoftwaremaintenance and maintenance report.
41. Whatare theattributesof the goodtest? Explainthe testcase design.
42. Integrationtesting.
43. Explain the cyclometric complexity in detail
44. What is black boxtesting?Explain

45.Whatisthe necessityofunittesting?Write downallunittestconsiderations.

46. Explainaboutsystem testing.

47. Why is it so important to include boundary values in your black-box test data? Explain

48.Discussthedifferencesbetweenblackboxandwhiteboxtesting.[8]

49. Explainthedifferentintegrationtestingapproaches.

50. Whatdoyou meanbysystemtesting? Explainindetail

51. Explainboundaryvalueanalysis.

52. Justifytheimportanceof testingprocess

53.Discussindetailaboutalphaandbetatesting.

54. Whatdoyoumeanbyintegrationtesting?Explaintheiroutcomes.

55. Explaintheintegrationtestingprocessandsystem testingprocessanddiscusstheiroutcomes:

56. . What do you mean by boundary value analysis? Give two examples.

57. Whatisperformancetesting?Describe.

58. What are the various testing strategies to software testing? Discuss them briefly.

59. Describethetestingobjectivesanditsprinciples.

60. Explainthebasispathtestingindetail.

61. Whatis needforsoftwaremaintenance andmaintenance report.

62. Whatarethe attributesofagood test.Explain thetestcase design.

63. Explainthevarioustypesofblack-boxtestingmethods.

64. Whatis thenecessityofunittesting?Write down allunittestconsiderations.

65. Writeanoteanregression testing.

66. Explainindetail theCOCOMOmodel.

67.Explainindetailaboutthemaintenanceprocess

68. Discussindetail aboutsoftwareevolution.

69. Justify the statement “Software maintenance is costlier”.

70. Discusstheconceptofsoftwaremaintenanceprocess.

71. Explaintheschedulingof softwareproject.

72. Explaintask network.Constructaschematictasknetwork forconceptdevelopmentproject.

73. ExplaintheConstructiveCostmodel.

74. Explainthevariousmethodencounteredincostestimation

Section C (10 marks)

1. Explain the changing nature of Software.
2. Explain Evolutionary process model.
3. With suitable illustration explain SPIRAL model .
4. Explainsoftwareprototyping?Whatarethevariousprototypingmethodsandtools?
5. What is requirement engineering? State its process and explain requirements elicitation problem.
6. Explainindetail aboutallmodelingtechniqueinsoftwarerequirements.
7. Explainthefundamentalsoftwaredesignconceptsindetail.

8. Discussindetail thebasicstructureofanalysismodel.
9. What is transform mapping? Explain the process with an illustration
10. Explainaboutthevariousdesignconceptsconsideredduringdesign?
11. Writeshortnotesonuserinterfacedesignprocess
12. Discussindetailaboutthedesignprocessinsoftwaredevelopmentprocess.
13. Explainthedifferentintegrationtestingapproaches.
14. Explainboundaryvalueanalysis.
15. What are the various testing strategies to software testing? Discuss them briefly.
16. Explainthevarioustypesofblack-boxtestingmethods.
17. What are the different activities in project planning
18. Discusstheconceptofsoftwaremaintenanceprocess
19. Explain about Formal Technical Review.