Department of	II year B.Sc. Computer Science	III Sessional Test
Computer Science		III Semester
Vivekananda College	**System Software -10SB31**	Max. Marks: 25
Tiruvedakam West		Time : 1 hrs
Date:		

SECTION-A

Answer all questions (5X1=5)

1. Which of the following is most general phase structured grammar?

A) Context – Sensitive   B) Regular   C) Context – Free   D) None of the above

2. Indicate which of the following, best describes the term "software"

A) Systems programs only   B) Application programs only

C) Both (a) and (b)   D) None of the above

3. A translator is best described as

(A) An Application software   (B) A system software

(C) A hardware component   (D) None of the above

4. The errors that can be pointed out by the compiler are

A) Syntax errors   B) Semantic errors   C) Logical errors   D) None of the above

5. The errors that can be pointed out by the compiler are

(A) Syntax errors   (B) Semantic errors   (C) Logical errors   (D) None of the above

SECTION-B

Answer any FIVE questions (2X2=4)

6. Define Operating System.

7. What is meant by Kernel?

8. Differentiate call by value from call by reference

9. Define the DBMS.

SECTION-C

Answer any THREE questions (1X6=6)

10) Write the overview of the editing process.

11) Explain the use of DBMS.

SECTION-D

Answer any one question (1X10=10)

12) Briefly discuss about UNIX operating system with diagram.

13) Explain the interactive debugging systems.

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Answer all the questions

1) A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is

   A) 1/4   B) 1/10   C) 7/15   D) 8/15

2) A and B complete a work in 6 days. A alone can do it in 10 days. If both together can do the work in how many days??

   A) 3.75 days   B) 4 days   C) 5 days   D) 6 days

3) A can do a piece of work in 4 days. B can do it in 5 days. With the assistance of C they completed the work in 2 days. Find in how many days can C alone do it?

   A) 10 days   B) 20 days   C) 5 days   D) 4 days

4) A and B can do a piece of work in 12 days and 16 days respectively. Both work for 3 days and then A goes away. Find how long will B take to complete the remaining work?

   A) 15 days   B) 12 days   C) 10 days   D) 9 days

5) A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

   A) 120 metres   B) 180 metres   C) 324 metres   D) 150 metres

6) The length of the bridge, which a train 130 metres long and travelling at 45 km/hr can cross in 30 seconds, is:

   A) 200 m   B) 225 m   C) 245 m   D) 250 m

7) Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes the slower train in 36 seconds. The length of each train is:

   A) 50 m   B) 72 m   C) 82 m   D) 80 m

8) A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?

   A) 40 sec   B) 42 sec   C) 45 sec   D) 48 sec

9) A 270 metres long train running at the speed of 120 kmph crosses another train running in opposite direction at the speed of 80 kmph in 9 seconds. What is the length of the other train?

   A) 230 m   B) 240 m   C) 260 m   D) 320 m

10) The last day of a century cannot be   .

   A) Monday   B) Wednesday   C) Tuesday   D) Friday

11) Richard deposits $ 5400 and got back an amount of $ 6000 after a year. Find the simple interest he got.

   A) 600   B) 700   C) 800   D) 900

12) Robert deposits $ 3000 in State Bank of India for 3 year which earn him an interest of 8%.What is the amount he gets after 1 year, 2 years and 3 years?

   A) 3480   B) 3240   C) 3720   D) 3000

13)) Diego deposited $ 10000 for 4 year at a rate of 6% p.a. Find the interest and amount Diego got

   A) 12400   B) 12000   C) 10400   D) 1000

14) Which letter will come exactly between the tenth letter from your left and the seventh letter from your right. Without changing any order in the original from the alphabet?

   A) N   B) P   C) O   D) Q

15) Tim invested $ 1500 for at the rate of 6% p.a. for 7 years and 3 months. Find the amount he got back

   A) 2870   B) 2800   C) 2500   D) 2000

16) Kyle borrowed $ 3400 at the rate of 8% p.a. for 225 days. Find the interest she paid.

   A) 167.67   B) 160   C) 160.25   D) 700

17) Alfred buys an old scooter for Rs. 4700 and spends Rs. 800 on its repairs. If he sells the scooter for Rs. 5800, his gain percent is:

   A) 4 4/7%   B) 5 5/11%   C)10%   D) 12%

18) The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:

   A) 15   B) 16   C) 18   D) 25

19) A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?

   A) 1090   B) 1160   C) 1190   D) 1202

20) The assignment operator used in C language

   A) =   B) ==   C) +=   D) None

21) The decimal number 58 is equivalent to

   A) 111010   B) 100111   C) 100110   D) 000111

22) The Binary number 10101111 is equivalent to

   A) 175   B) 176   C) 170   D) 172

23) The Octal number 776 is equal to

   A) 520   B) 510   C) 500   D) 652

24)complete the following sentences(24-25)

The medicine gave him a short -------------- escape from the suffering.

   A)Escape   B) relief   C) respite   D) release

25)The serious -------------- with her is that she does not know typing.

    A) disadvantage   B) inconvenience   C) handicap   D) obstacle

26) Father is aged three times more than his son Ronit. After 8 years, he would be two and a half times of Ronit's age. After further 8 years, how many times would he be of Ronit's age?

    A) 2 times   B) 2 1/2 times   C) 2 3/4   D) 3 times

27) The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

    A) 8 years   B) 8 years   C) 10 years   D) none

28) A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 38 years now, the son's age five years back was:

    A) 14 years   B) 19 years   C) 33 years   D) 38 years

29) Present ages of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Anand's present age in years?

    A)24   B) 27   C) 30   D) 40

30) A man is 24 years older than his son. In two years, his age will be twice the age of his son. The present age of his son is:

    A) 14 years   B) 18 years   C) 20 years   D) 22 years

31) It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?

    A) Sunday   B) Saturday   C) Friday   D) Wednesday

32) What was the day of the week on 28th May, 2006?

    A) Thursday   B) Friday   C) Saturday   D) Sunday

33) What was the day of the week on 17th June, 1998?

    A) Monday   B) Tuesday   C) Wednesday   D) Thursday

34) Today is Monday. After 61 days, it will be:

A) Wednesday   B) Saturday   C) Tuesday   D) Thursday

35) The last day of a century cannot be   .

    A) Monday   B) Wednesday   C) Tuesday   D) Friday

 36) On 8th Feb, 2005 it was Tuesday. What was the day of the week on 8th Feb, 2004?

    A) Tuesday   B) Monday   C) Sunday   D) Wednesday

37) A person crosses a 600 m long street in 5 minutes. What is his speed in km per hour?

    A) 3.6   B) 7.2   C) 8.4   D) 10

38) In covering a distance of 30 km, Abhay takes 2 hours more than Sameer. If Abhay doubles his speed, then he would take 1 hour less than Sameer. Abhay's speed is: .

    A) 5 kmph   B) 6 KMPH   C) 6.25 KMPH   D) 7.5 KMPH

39) Which letter will come exactly between the tenth letter from your left and the seventh letter from your right. Without changing any order in the original from the alphabet?

    A) N   B) P   C) O   D) Q

40) If it is possible to from a word with the first, fourth, seventh and eleventh letters in the word 'SPHERVLVODS' write the second letter of thet word. Otherwise, X is the answer.?   .

    A) S   B) E   C) L   D) O

41) If the letters in the word RUTHENIUM are rearranged in the alphabatical order, which letter will be second to the right of middle letter?

    A) I   B) T   C) N   D) R

42) If in the word 'DISTURBANCE', the first letter is interchanged with the last letter, the second letter is interchanged with the tenth letter and so on, which letter would come after the letter T in the newly formed word?

    A) T   B) S   C) R   D) C

43)   From the word 'CARRIAGE', how many independent words can be made without changing the order of the letter only once.

    A) 1   B) 3   C) 2   D) 4

44) 15, 31, 63, 127, 255, (....)

    A) 513   B) 511   C) 517   D) 523

45) 1, 8, 27, 64, 125, 216, (....)

    A) 354   B) 343   C) 392   D) 245

46) 5, 13, 10, 16, 20, 19, (....)

    A) 22   B) 40   C) 38   D) 23

47) 22) 2, 4, 12, 48, 240, (....)

    A) 960   B) 1440   C) 1080   D) 1920

48) 23)1, 4, 9, 16, 25, 36, 49, (....)

    A) 54   B) 56   C) 64   D) 81

49) 24)6 ,10, 14, 18, 22, 26, 30,?,?

    A) 36 40   B) 34 38   C) 38 42   D) 33 37

50) 25) A cyclist covers distance of 750m in 2min 30 sec. what is the speed in KM/HR of the cyclist?

    A) 18 km/hr   B) 16 km/hr   C) 30 km/hr   D) 45 km/hr

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Department of Computer Science	I year B.Sc Computer Science	III Sessional Test
Vivekananda College		V Semester
Tiruvedakam West	**DISCRETE MATHEMATICS – 10AT11**	Max.Marks: 50
Date:		Time : 2hrs

SECTION-A

Answer all questions

(10X1=10)

1. _____ definitions can be used to solve counting problems   **CO1   K1**
   A. Recursion   B. Recursive   C. Recurrence   D. Function
2. _____ relations occur constantly in practical applications, analysis of algorithms, error correcting code. **CO1, K1**
   A. Recursion   B. Recursive   C. Recurrence   D. Function
3. _____is the process of inferring the truth form a general statement for particular cases   **CO1, K1**.
   A. Mathematical Induction   B. Recursive   C. Recurrence   D. Function
4. The numbers in the sequence 0, 1, 2, 3, 5, 8, 13, 21, in which each new term is the sum of the previous two terms are called_____   **CO1, K1**
   A. Factorial   B. Fibonacci   C. Recurrence   D. Function
5. Find the generating function for the sequence 1, 1, 1,1,1,1 is   **CO2, K2**
   A. $z^6 – 1/z\text{-}1$ B. $z^5 – 1/z\text{-}1$ C. $z^2 – 1/z\text{-}1$ D. $z – 1/z^6\text{-}1$
6. Find the generating function for the infinite sequence 1, 3, 9, 27….Where 3 is a fixed constant **CO2   K2**
   A. $1/1\text{-}3z$ B. $1/1\text{-}2z$ C. $1\text{-}3z$ D. $3z\text{-}1$
7. Each loop counting has _____ edges.   **CO1   K1**
   A. 1   B. 2   C. 3   D. 4
8. An edge with identical ends is called _____.   **CO1   K1**
   A. complete graph   B. bipartite graph   C. loops   D. link
9. An edge with same ends is called _____.   **CO1   K1**
   A. complete graph   B. bipartite graph   C. loops   D. link
10. Any vertex having degree one is called _____.   **CO1   K1**
    A. Simple vertex   B. pendent vertex   C. regular vertex   D. complete vertex

SECTION-B

Answer any FIVE questions   **(5X2=10)**
11) Define Graph   **CO1   K1**
12) Define Simple Graph   **CO1   K1**
13) Define Complete Graph   **CO1   K1**
14) Write the types of connectedness in directed graph   **CO1   K1**
15) Write about Fibonacci number   **CO1   K1**
16) Define Mathematical Induction   **CO1   K1**
17) Write about Principle of Mathematical Induction   **CO1   K1**

SECTION-C

Answer any THREE questions   **(3X6=18)**
18) Show that the sum of the first n integers is n(n+1)/2 for all n.   **CO3   K3**
19) Show that the sequence $\{f_n\}$ is a solution of the recurrence relation $f_n = -3f_{n-1} + 4f_{n-2}$ if $fn=2(-4)^n+3$. **CO3   K3**
20) Find the recurrence relation, satisfying $y^n = A(3)^n+B(-2)^n$ **CO3   K3**
21) Find the generating function for the infinite sequence 1, α, α^2, α^3……. Where α is a fixed constant **CO3   K3**
22) Explain about Infix, prefix and postfix notation   **CO2   K2**

SECTION-D

Answer any one   **(1X12=12)**
23) Explain about Tree Traversals and its example   **CO2   K2**
24) Using generating function, solve the difference equation $Y_{n+2} -6Y_{n+1} + 8Y_n=0$, $Y_0 =1$, $Y_1=4$.   **CO3   K3**

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Department of Computer Science

Vivekananda College
Tiruvedakam West
Date:

II year B.Sc Computer Science

OPERATIONS RESEARCH-10AT31

III Sessional Test
III Semester
Max.Marks: 50
Time : 2hrs

SECTION-A

Answer all questions (10X1=10)

1. The objective function for a L.P model is $3X_1+2X_2$, if $X_1=20$ and $X_2=30$, what is the value of the objective function?

   A) 0   B) 50   C) 60   D) 120

2. The first step in formulating a linear programming problem is

   A) Identify any upper or lower bound on the decision variables

   B) State the constraints as linear combination soft the decision variables

   C) Understand the problem   D) Identify the decision variables

3. In simplex optimal table zj-cj=0 then the solution is

   a) optimal   b)alternative solution   c)unbounded solution   d)none

4. To formulate simplex problem we introduce slack and surplus variables for

   a) only equality   b)only unequality   c)both   d) none

5. Linear programming inolves more than two variables can be solved by

   a) simplex method   b) Big-M method   c) both   d) graphical Method

6. The best use of Linear Programming to find optimal of

   a)Money   b)manpower   c)Machine   d)All the above

7. . Linear inequalities are graphically represented on Cartesian plane by a

   A. negative full space   B. closed half space   C. open half space   D. positive full space

8. Objective of linear programming for an objective function is to

   A. maximize or minimize   B. Subset or proper set modeling

   C. row or column modelling   D. adjacent modeling

9. Shaded area to represent solution set is classified as

   A. closed half space   B. open half space   C. positive full space   D. negative full space

10. Feasible region's optimal solution for a linear objective function always includes

    A) Downward point   B. upward point   C. corner point   D. front point .

SECTION-B

Answer any FIVE questions (5X2=10)

11. Define LPP
12. Define feasible region
13. Define unbounded solution
14. Define infeasible solution
15. Define alternative solution
16. How many variables are need to find graphical solution?
17. Define slack and surplus variables

SECTION-C

Answer any THREE questions (3X6=18)

18. A person wants to decide the constituents of diet which will fulfil his daily requirements of proteins, fats and carbohydrates at the minimum cost. The choice is to be made from four different types of foods. The yields per unit of these foods are given below

Food type	Yield/unit			Cost/unit Rs
	Proteins	Fats	Carbohydrates	
1	3	2	6	45
2	4	2	4	40
3	8	7	7	85
4	6	5	4	65
Minimum requirements	800	200	700	

Formulate LPP

19. Write graphical method procedure

20. Express the following LPP canonical form and standard form
Maximize $Z=4x_1+2x_2+6x_3$
Subject to
$2x_1+3x_2+2x_3>=6$
$3x_1+4x_2=8$
$6x_1-4x_2+x_3<=10$ and $x_1, x_2>=0$

21. Use graphical methods to solve the LPP
Maximum $Z= 5x_1 + 8x2$
Subject to
$15x_1 +10 x_2 <= 180$
$10x_1 + 20x_2<= 200$
$15x_1 + 20x_2<= 210$
And $x_1, x_2 >= 0$

22. Explain applications of LPP

SECTION-D

Answer any ONE question (1X12=12)

23. A company manufactures two products A and B on which the profits earned per unit are Rs.3 and Rs.4 respectively. Each product is processed on two machine M1 and M2, product A requires one minute of processing time on M1and two minutes on M2 while B requires one minute on M1and one minute on M2. Machine M1 is available for not more than 7 hrs 30 min while M2 is available for 10 hrs during any working day. Find the number of units of products A and B to be manufactured to get maximum profit. Formulate the above as a LPP and solve by graphical method.

24. Explain computational procedure and simplex algorithm

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Department of Computer Science
Vivekananda College
Tiruvedakam West
Date:

I year B.Sc Computer Science

PROGRAMMING IN C-10CT11

III Sessional Test
I Semester
Max.Marks: 50
Time : 2hrs

SECTION-A

Answer all questions   **(10X1=10)**

1. An external variable is one_____.   **K1   CO5**
A. which is globally accessible by all functions.   B. which is declared outside the body of any function.
C. which resides in the memory till the end of the program.   D. which is locally accessible by all functions.

2. If a storage class is not mentioned in the declaration then default storage class is_____.   **K1   CO4**
A. automatic.   B. static.   C. external.   D. register.

3. Identify the most appropriate sentence to describe the unions_____.   **K1   CO6**
A. unions contain members of different data types which share the same storage area in memory.
B. unions are like structures.   C. unions are less frequently used in the program.
D. unions are used for set operations

4. The member variable of structure is accessed by using_____.   **K1   CO6**
A. dot (.) operator.   B. arrow (->) operator.   C. asterisk * operator.   D. ampersand & operator.

5. The structure combines variables of_____.   **K1   CO6**
A. similar data types.   B. dissimilar data types.   C. unsigned data types.   D. signed data types.

6. struct stud   **K1   CO6**
{
int roll;
char name[20];
float marks;
} *s;
What will be the byte size of s?
A 24   B 2   C 26   D None

7. Structure is a_____.   **K1   CO6**
A. scalar data type.   B. derived data type.   C. both a and b.   D. primitive data type.

8. It is necessary to declare the type of a function in the calling program if _____.   **K1   CO5**
A. the function returns a non-integer value.   B. the function returns an integer.
C. the function is not defined in the same file.   D. the function is defined in the same file.

9. Recursion is a process in which a function calls _____.   **K1   CO5**
A. itself.   B. another function.   C. main( ) function.   D. sub program.

10. By default the function returns_____.   **K1   CO5**
A. integer value.   B. float value.   C. char value.   D. double.

SECTION-B

Answer any FIVE questions   **(5X2=10)**
11. Define storage class   **K1   CO5**
12. How to access structure's data members   **K1   CO6**
13. What are the types of function?   **K1   CO5**
14. Define function   **K1   CO5**
15. What are types of storage classes in C?   **K1   CO6**
16. How to declare global variable inside main function?   **K1   CO5**
17. What are the rules of creating structure?   **K1   CO6**

SECTION-C

Answer any THREE questions   **(3X6=18)**
18. Explain function with arguments and return value with example   **K2   CO6**
19. Explain function with no argument and no return value with example   **K2   CO6**
20. Write a factorial program using recursive function   **K3   CO5**
21. Explain array of structure with example   **K3   CO6**
22. Differentiate call by value and call by reference with example   **K3   CO5**

SECTION-D

Answer any ONE Questions   **(1X12=12)**
23. Explain function and how to declare, define and call function with example   **K3   CO5**
24. Differentiate array, structure and union with example   **K3   CO6**

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Time: 2 Hours   Maximum Marks: 50

PART A

ANSWER ALL THE QUESTIONS   10*1=1
1. A register is defined as   K1 CO1
a) The group of latches for storing one bit of information
b) The group of latches for storing n-bit of information
c) The group of flip-flops suitable for storing one bit of information
d) The group of flip-flops suitable for storing binary information
2. A decimal counter has _____ states.   K1 CO1
a) 5   b) 10   c) 15   d) 20
3. Ripple counters are also called   K1 CO1
a) SSI counters   b) Asynchronous counters   c) Synchronous counters   d) VLSI counters
4.The parallel outputs of a counter circuit represent the   K1 CO1
a) Parallel data word   b) Clock frequency   c) Counter modulus   d) Clock count
5. How much storage capacity does each stage in a shift register represent?   K1 CO1
a) One bit   b) Two bits   c) Four bits   d) Eight bits
6. By adding recirculating lines to a 4-bit parallel-in serial-out shift register, it becomes a _____, _____,
and _____out register.   K1 CO1
  a) Parallel-in, serial, parallel   b) Serial-in, parallel, serial
  c) Series-parallel-in, series, parallel   d) Bidirectional in, parallel, series
7. Based on how binary information is entered or shifted out, shift registers are classified into____ categories. K1 CO1
a) 2   b) 3   c) 4   d) 5
8.In serial shifting method, data shifting occurs   K1 CO1
a) One bit at a time   b) simultaneously   c) Two bit at a time   d) Four bit at a time
9. In a parallel in/parallel out shift register, D0 = 1, D1 = 1, D2 = 1, and D3 = 0. After three clock pulses, the
data outputs are _____   K1 CO1
a) 1110   b) 0001   c) 1100   d) 1000
10. A sequential circuit design is used to   K1 CO1
a) Count up   b) Countdown   c) Decode an end count   d) Count in a random order

PART B

 ANSWER ANY FIVE QUESTION   (5*2=10)
11) Construct a truth table for Negative-edge-triggered RS flip flop ?   K1 CO4
12) Draw a Logical diagram for Clocked D flipflop ?   K2 CO2
13) Define theUART ?   K1 CO2
 14) What is ripple counter ?   K1 CO2
15)What is parallel shift ?   K1 CO2
16) What is propagation delay?   K1 CO2
 17)What is bistable ?   K1 CO2

PART C

ANSWER ANY THREE QUESTIONS   (3X6=18)
   18) Explain and Draw the neat diagram of Edge-Triggered D flip-flop.   K3 CO4
   19) What is flip-flop? Explain using NOR gate.   K3 CO2
   20) Write note on J-K Master slave Flip-Flop.   K3 CO2
   21)Explain Serial-In-Serial-Out register. .   K3 CO2
   22) Briefly discuss about 555-Astablemultivibrator.   K3 CO2

PART D

ANSWER ANY ONE QUESTION   1 *12=12
23)Explain Parallel-In Serial-Out register.   K3CO2
24) Explain Ring counter in detail.   K3CO2

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST
II Year B.Sc. Computer Science – Sessional Examination – III
Computer Organization 10CT31

Time: 2 Hours   **Maximum Marks: 50**

SECTION - A

ANSWER ALL THE QUESTIONS   **10*1=1**

1.To avoid loading during read operation, the device used is
  a) latch   b) flipflop   c) buffer   d) tristate buffer

2.The drawback of building a large memory with DRAM is _____
  a) The large cost factor   b) The inefficient memory organisation
  c) The Slow speed of operation   d) All of the mentioned

3. The fastest data access is provided using _____
  a) Caches   b) DRAM's   c) SRAM's   d) Registers

4. The last on the hierarchy scale of memory devices is _____
  a) Main memory   b) Secondary memory   c) TLB   d) Flash drives

5. CPU fetches the instruction from memory according to the value of
  a) program counter   b) status register   c) instruction register   d) program status word

6. Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called
  a) fragmentation   b) paging   c) mapping   d) none of the mentioned

7. Program always deals with
  a) logical address   b) absolute address   c) physical address   d) relative address

8. Operating System maintains the page table for
  a) each process   b) each thread   c) each instruction   d) each address

9. The method of placing the heads and the discs in an air tight environment is called as
  a) RAID Arrays   b) ATP tech   c) Winchester technology   d) Fleming reduction

10. A hard disk with 20 surfaces will have _____ heads.
  a) 10   b) 5   c) 1   d) 20

SECTION - B

ANSWER ANY FIVE QUESTION   **(5*2=10)**

    11) What is ASCII?
    12) Draw a Flow chart of multiply operation?
    13) What is Algorithm?
    14) What is I/O command?
    15) What is Main memory?
    16) Define pages in memory?
    17)What is peripherals?

SECTION - C

ANSWER ANY THREE QUESTIONS   **(3X6=18)**

  18) Explain about Division Algorithm?
  19) Explain the Cache Memory?
  20) Explain the Decimal Arithmetic Operations?
  21) Explain Handshaking method in I/O devices?   .
  22) Briefly discuss about Mode of Transfer in I/O devices?

SECTION - D

ANSWER ANY ONE QUESTION   **(1 *12=12)**

23) Explain the Multiplication Algorithms?
24) Explain Direct Memory Access in detail?

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Max Marks: 50

DATE: **TIME: 2Hrs**

SECTION - A

ANSWER ALL THE QUESTIONS

                                                     1*1=10

1._____ operator has the highest priority among the following.
A. =   B. +   C.::   D. ()
2. _____ is the mechanism which allows a class A to inherit properties of a class B.
A. Data abstraction   B. Encapsulation   C. Inheritance   D. Polymorphism
3. A _____ is a special method used to initialize the instance variable of a class.
A. Member function   B. Destructor   C. Constructor   D. Structure
4. The name of a function variable or class is called____.
A. libraries.   B. stream.   C. identifiers.   D. keywords.
5.>> is called as _____ operator.
A. insertion.   B. extraction   C. greater than   .D. lesser than.
6. Which of the following is not a type of inheritance?
A. Multiple.   B. multilevel   C. Distributive   D. Hybrid
7. Every statement in C++ program should end with a _____.
A. comma (,)   .B. full stop (.).   C. semicolon (;)   .D. colon (:).
8. Every function in C++ are followed by _____.
A. parameters.   B. curly braces.   C. parenthesis   .D. none of these.
9. Array indexing always starts with the number _____.
A. 1   B. 2   C. 0   D. 3
10._____ is names location in memory that is used to hold a value that may be modified by the Program.
A. Pointer.   B. Expression.   C. Variable.   D. Function.

SECTION - B

ANSWER ANY FIVE QUESTION   **(5*2=10)**
11) What is an abstract class?
12) Define multiple inheritance?
13) Define inheritance?
14) What is hybrid inheritance?
15) What is virtual base class?
16) Define pointer?
17) What are the application of this pointer?

SECTION - C

ANSWER ANY THREE QUESTIONS   **(3X6=18)**
18) Illustrate single inheritance concept with an example
19) Explain hybrid inheritance
20) Write about 'this' pointer
21) Explain about virtual base class.
22) Explain the two methods of opening a file

SECTION - D

ANSWER ANY ONE QUESTION   **1 *12=12**
23) Explain multiple and multilevel inheritance in detail
24) Write about formatted and unformatted I/O operations

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Department of Computer
Science
Vivekananda College
Tiruvedakam West
Date:

II year B.Sc. Computer Science

III Sessional Test
III Semester

DATA STRUCTURE - 10CT33

Max.Marks: 50
Time : 2hrs

SECTION-A

Answer all questions

(10X1=10)

1) A tree is a data structure which represents hierarchical relationship between individual _____.
   A. data items   B. fields   C. nodes   D. linked list
2) In a directed tree any node which has out degree 0 is called a terminal node or_____.
   A. a tree.   B. a list.   C. a node.   D. a leaf.
3) _____ a tree means processing it in such a way that each node is visited only once.
   A. Traversing.   B. Implement.   C. Partition.   D. Node.
4) The length of the path is the number of_____ on the path.
   A. nodes.   B. fields.   C. data.   D. edges.
5) The children node of same parent is called_____.
   A. binary tree.   B. tree.   C. sibling.   D. list.
6) The _____ is used in an elegant sorting algorithm.
   A. Heap sort   B. Quick sort   C. Merge sort   D. Radix sort.
7) _____ data structure is used to implement Depth First search.
   A. Array   B. Linked list   C. Queue   D. Stack.
8) Each entry in a linked list is a called a_____.
   A. Link   B. Node   C. Data Structure   D. Avail
9) In a linked list the _____field contains the address of next element in the list.
   A. Link field.   B. Next element field   C. Start field   D. Info field.
10) A list that has no nodes is called_____.
   A. End list   B. Zero list   C. Null list   D. Sentinel list

SECTION-B

Answer any FIVE questions   **(5X2=10)**

11) Define tree with example?
12) What do you mean by leaf node?
13) Different between binary tree and tree.
14) Draw the tree in this expression: (A-B) / (C*D) + E.
15) Define sorting.
16) Write a types of sorting methods.
17) Define merge sort.

SECTION-C

Answer any THREE questions   **(3X6=18)**

18) Explain the implementation of binary tree.
19) Write a program in binary tree.
20) Define insertion sort with example.
21) Explain the quick sort.
22) Discuss about the decision tree with example.

SECTION-D

Answer any one question   **(1X12=12)**

23) Explain about the binary tree traversal.
24) Discuss about the bubble sort with example.

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Department of   III year B.Sc. Computer Science   III Sessional Test
Computer Science   V Semester
Vivekananda College   **Computer Networks -10CT51**   Max.Marks: 50
Tiruvedakam West   Time : 2hrs
Date:

SECTION-A

Answer all questions   **(10X1=10)**

1. The third layer of OSI model is _____
    A. physical layer   B. data link layer   C. network layer   D. transport layer

2. As a data packet moves from the lower to the upper layers, headers are _____
    A. added   B. subtracted   C. rearranged   D. modified

3. Which layer functions as a liaison between user support layers and network support layers?
    A. Physical   B. Network   C. Transport   D. Session.

4. CRC stands for
    A. cyclic redundancy check   B. code repeat check
    C. code redundancy check   D. cyclic repeat check

5. To connect a computer with a device in the same room user will likely to use _____
    A. coaxial cable   B. ground station   C. dedicated line   D. fibre optic cable.

6. A device that links two homogenous packet-broadcast local networks is _____
    A. hub   B. gateway   C. repeater   D. bridge

7. The simultaneous transmission of data to a number of stations is known as _____
    A. broadcast   B. bandwidth   C. analog transmission   D. aloha

8. Which layer of OSI determines the interface of the system with the user?
    A. Network   B. Application   C. Data link   D. Physical

9. CDMA is meant for
    A. Console Division Multiple Access   B. Connection Division Multiple Access
    C. Code Detach Multiple Access   D. Code Division Multiple Access

10. Repeaters function in the _____ layers
    A. application, presentation   B. session, transport
    C. physical, data link   D. data link, network

SECTION-B

Answer any FIVE questions   **(5X2=10)**

11) Define Data link layer.
12) Explain design issues for data link layer.
13) Compare feedback-back flow control and rate-based flow control.
14) Explain error correcting code.
15) Expand DNS, HTTP, E-mail, and MIME
16) List out the mail delivery features.
17) Different between static and dynamic web page.

SECTION-C

Answer any THREE questions   **(3X6=18)**

18) Elaborate service provide to the network layer.
19) Explain the any two framing methods.
20) Explain the name servers.
21) Describe about the architecture and services for E-mail.
22) Discuss the HTTP.

SECTION-D

Answer any ONE question   **(1X12=12)**

23) CRC, given frame=1101011011, G(x) = 10011 calculate and find the transmitted frame.
24) Explain the DNS name space.

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Department of Computer Science   III year B.Sc Computer Science   III Sessional Test
Vivekananda College   V Semester
Tiruvedakam West   **JAVA PROGRAMMING – 10CT52**   Max.Marks: 50
Date: Time : 2hrs

SECTION- A

Answer all the Questions   **(1*10=10)**

1. _____ is at the top of the exception class hierarchy.
A. try.   B. throwable.   C. exception class.   D. catch.
2. In java thread to thread communication is called _____.
A. passing.   B. sending.   C. messaging.   D. calling.
3 _____ is a small unit of a process.
A. method.   B. thread.   C. applet.   D. stream.
4. What is the base class for all Exception?
A. java.lang.Exception   B. java.lang.Throwable
C. java.lang.RuntimeException   D. java.lang.Error
5. Which of these keywords is not a part of exception handling?
A. finally.   B. catch.   C. thrown.   D. try.
6. Threads can be created by implementing _____ interface.
A. new.   B. creator.   C. main.   D. runnable.
7. Which method will contain the body of the thread?
A. run ()   B. start ()   C. stop ()   D. main ()
8. _____ is an applet tag.
A. (applet).   B. >applet<.   C. <applet>.   D. <applet tag>.
9. AWT stands for_____.
A. abstract window toolkit.   B. abstract window toolbar.
C. access window toolkit.   D. access window toolbar.
10. An _____ is a special kind of Java program that is designed to be transmitted over the Internet.
A. viewlet.   B. applet.   C. servlet.   D. object.

SECTION- B

Answer all the Questions   (5*2=10)
11. Write 4 important mechanisms in exception Handling.
12. Define Error
13. Define Thread
14. Write about Remote applet
15. Write any 4 HTML Tag
16. Write about Thread Priority
17. Write about Stop () and destroy () Command.

SECTION- C

Answer any THREE   (3*6=18)
18. What are they common error in Compile time and Run time
19. Write about the Multiple catch statement in Exception Handling
20. Difference between Multithreading and Multitasking?
21. Briefly discuss on Life cycle of a Applet
22. Explain about the Applet and how it run?

SECTION- D

Answer any ONE   (1*12=12)
23. Briefly explain about the Life cycle of a thread?
24. Explain about Exception handling with examples?

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Time: 2 hrs   **Max Marks: 50**
Date:

SECTION – A

Answer ALL Questions: **(10 X 1 = 10)**

1. One class of potential failure in a GUI is failure to recognize _____ position.
   a) Pixel   b) mouse   c) screen   d) cursor.
2. The condition testing focuses on testing each _____ in the program.
   a) Path   b) Condition   c) Value   .d) Data.
3. Black box testing is also called as _____ testing.
   a) white-box.   b) Behavioral   c) integration.   d) Validation.
4. Additional tests that focus on software functions affects the change can be avoided by _____ testing.
   a) Smoke   b) regression   c) validation.   d) Integration.
5. One of the data manipulation activities is _____.
   a) Drawing creation b) symbol creation   c) graphs.   d) Charts.
6. _____ modules are identified at integration testing.
   a). Basic   b) Critical   c) Lengthy   d) Interface.
7. Which test is conducted at the developer's site by end-users?
   a) Alpha Test.   b) Beta Test   C) Smoke Test   .d) Regression Test.
8. The relationship in bidirectional link applies in _____ directions.
   a) one   .b) both   c) tri.   d) four.
9. Equivalence partitioning defines a _____ that uncovers classes of errors.
   A) Value.   b) Test cases.   c) Analysis.   d) Range.
10. Which activity refers to the action "Are we building the right product?"?
   a) Verification.   b) Validation   c) Testing.   d) Debugging.

SECTION – B

Answer any FIVE Questions: **(5*2=10)**

11. Define modular composability.
12. What is Design?
13. Define inheritance.
14. Define concurrency
15. What is technical Design?
16. Define system testing.
17. Define quality assurance?

SECTION – C

Answer Any THREE Questions: **(3*6=18)**

18. Explain walkthrough process and its types.
19. Write about debugging aids
20. Discuss about managerial aspects of software maintenance? .
21. Explain types of software testing.
22. Discuss about configuration management?

SECTION – D

Answer Any ONE Question: **(1 X 12 = 12)**

23. Give the detailed note on design notations.
24. Explain about unit testing and debugging

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Time: 2 Hours   Maximum Marks: 50

SECTION- A

ANSWER ALL QUESTIONS   10*1=10

1. Which software used for read the document?
  a) AVG   (b) Adobe reader   (c) Photoshop   (d) none

2. What is the Expansion of ALU?
  a) Additional process unit   (b) Arithmetic and logic unit
  (c) Anti log unit   (d) none of the above

3. A collection of 8 bit is called_____
  (a) Nibble   (b) byte   (c) KB   (d) GB

4.1024 MB of memory is equivalent to_____?
  a) 1GB   (b) 1MB   (c) 8 byte   (d) 1TB

5. What is the equivalent binary value of decimal number 11?
  a) 1011   (b) 1101   (c) 0101   (d) 1111

6. Which one is the example for output device?
  a) mouse   (b) monitor   (c) joystick   (d) Keyboard

7. Which one is the example for Tamil font?
a) azhaki   (b) Times new roman   (c) Arial   (d) sanserif

8. Which one the following is windows OS?
a) MAC   (b) Unix   (c) Linux   (d) Windows XP

9. Webpage is a collection HTML codlings
(a)True   (b) False

10. FTP stands for
a) File transfer protocol   (b)File protocol   (c) Frame text protocol   (d) no expansion

SECTION- B

ANSWER ANY FIVE QUESTIONS   5*2=10

11. What is CPU?
12. What is ROM?
13. What is SOFTWARE?
14. What is internet?
15. Convert 48 to binary
16. Convert 1110101 to decimal
17. List out the different types of OPERATING SYSTEMS?

SECTION- C

ANSWER ANY THREE QUESTIONS   3*6=18

18.What is the use of IT in ARTS? Explain
19. How is IT used in Education?
20. Write a short note on Microprocessor?
21. Explain about different types of printers?
22. What is keyboard? Discuss about briefly?

SECTION- D

ANSWER ANY ONEQUESTIONS   1*12=12

23. Discuss in detailed about the usage of IT in different field
24. Discuss briefly about the Keyboard descriptions in a computer system?

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