# VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST 

II Year B.Sc. Computer Science - Sessional Examination - II
DATE: 04.09.2018
Object Oriented Programming with C++
Sub.Code:10CT32
Time: 2 Hours
Maximum Marks:50

## SECTION - A

## ANSWER ALL THE QUESTIONS

$\qquad$ memory

1) Destructor destroy constructor created
(a) object
(b) variable
(c) access specifies
(d) data
2) The default visibility mode is
(a) Private
(b) Public
(c) virtual
(d) combined
3) Identify which one is the correct default function
(a) Function (inta,b)
(b) Function (int a , int $\mathrm{b}=10$ )
(c) Function (inta,b,c)
(d) Function (int)
$\qquad$ is invoked whenever an object of its associated class is created.
4) The
(a) Class
(b) Pointer
(c) Constructor
(d) Object
5) Which symbol used to denote destructor
(a) ~
(b) $\$$
(c) *
(d) \&
6) When apply virtual function $\qquad$ used to select base and derived class
(a) Array
(b) Pointer
(c) Structure
(d) Object
7) If constructor used argument then the constructor called $\qquad$ constructor
(a) Parameterized
(b) copy
(c) dynamic
(d) pointer
8) $\qquad$ is an entry controlled looping statement.
(a) For
(b) repeat
(c) until
(d) while
9). $\qquad$ function has access to all private and protected members of the class for which it is a friend.
(a) Friend
(b) member
(c) non-member
(d) void
9) $\qquad$ function is a function that calls itself repeatedly.
(a) Recursive
(b) friend
(c) member
(d) inline

## SECTION - B

## ANSWER ANY FIVE QUESTION

11) What are basic control structures?
12) What are the types of expressions?
13) Define function?
14) Define constructor?
15) What is class?
16) Define destructor?
17) Define friend function?

## SECTION - C

ANSWER ANY THREE QUESTIONS
18) What is inline function? explain with program
19) Explain about C++ operator precedence
20) Give a brief notes about constructor
21) Explain about copy constructor
22) What isfunction overloading? Explain with program

SECTION - D
ANSWER ANY ONE QUESTION
1 X12=12
23) Explain about destructor with example program
24) Explain about multiple constructors in class

## SECTION-A

Answer all questions

1) What type of memory allocation is referred for linked list?
a) Static
b) Secondary
c) Dynamic
d) main
2) The $\qquad$ for a linked list is pointer variable that locates the beginning of the list.
a) Anchor
b) Base
c) Footer
d) Header
3) In linked list each element has $\qquad$ field.
a) 4
b) 3
c) 2
d) 1
4) The single linked list almost similar to $\qquad$ linked list.
a) Double
b) Address
c) Memory
d) all the above
5) The Single linked list also known as $\qquad$ -
a) Value
b) Circle
c) Linear
d) Skip
6) In Double linked list each node is having $\qquad$ field.
a) 1
b) 2
c) 3
d) 4
7) The linked list data represents $\qquad$ element.
a) Value
b) Address
c) Memory
d) all the above
8) 

a) Doubly list
b) Single list
c) Grounder list
d) Circular list
9) The circular linked list form a circular $\qquad$ .
a) Ring
b) Bangle
c) Chain
d) clock
10) Which operation perform add new element at the end of the list in double linked list.
a) Insertion
b) Insert first
c) Insert last
d) Insert after

## SECTION-B

$(5 X 2=10)$
Answer any FIVE questions
11) Define Linked list?
12) Different between single Liked list and double linked list.
13) Define double linked list.
14) What are the any three basic operations in double linked list?
15) Write the real time example in circle linked list.
16) Implementing of circular linked list.
17) Define skip list.

## SECTION-C

Answer any THREE questions
(3X6=18)
18) Different between array and linked list.
19) Write a program to linked list.
20) Explain the single linked list with example.
21) Explain the implementation of double linked list.
22) Discuss about the skip list with example.

## SECTION-D

Answer any ONE question
(1X12=12)
23) Explain about the circle linked list with example.
24) Write a program in double linked list.

Department of
Computer Science
Vivekananda College
Tiruvedakam West
Date: 03.09.2018

III year B.Sc Computer Science
Computer Networks -10CT51

II Sessional Test
V Semester
Max.Marks: 50
Time : 2hrs

## SECTION-A

Answer all questions
(10X1=10)

1) The purpose of the $\qquad$ layer is to transport bits from one machine to another.
a) Application
b) Network
c) physical
d) Transport
2) Which of the following is not a guided medium?
a) Twisted pair
b) Coaxial cable
c) Fiber optic
d) Atmosphere
3) All of the parts in a computer talk to each other by sending $\qquad$
a) Digital Signals
b) Smoothly varying signal waves
c) Analog signal
d) light
4) $\qquad$ is better shielding than twisted pair.
a) Twisted pair
b) Coaxial cable
c) Fiber optic
d) Magnetic media.
5) A fiber optics pulse of light indicates a $\qquad$ bit.
a) 0
b) 1
c) 0 and 1
d) None
6) PSTN is meant for $\qquad$
a) Plain Old Telephone Network
b) Public Switched Telephone Network
c) Public Switched Transport Network
d) Protocol Service Telephone Network
7) Modem is abbreviation for $\qquad$
a) Modulator
b) Demodulator
c) Multiplexing
d) Modulator and demodulator
8) Multiplexer is work on $\qquad$ .
a) One to many
b) Many to one
c) Many to many
d) One to one
9) Frequency Division Multiplexing is $\qquad$ .
a) Database
b) Structure
c) Memory
d) Network
10) Switching methods can be divided into $\qquad$ types.
a) 2
b) 3
c) 4
d) 5

## SECTION-B

Answer any FIVE questions
11) Define physical layer.
12) What is magnetic media?
13) Define Modem.
14) Expand WDM, TDM.
15) Explain multiplexing.
16) Define switching.
17) Advantage of packed switching.

## SECTION-C

Answer any THREE questions
(3X6=18)
18) Elaborate the Twisted pairs.
19) Explain the politics of telephones.
20) Explain the ADSL.
21) Describe about the wavelength division multiplexing.
22) Discuss the Circuit switching

## SECTION-D

Answer any one question
23) Discuss the following (i) Coaxial cable (ii) Fiber optics.
24) Explain the structure of telephone system.

JAVA PROGRAMMING -10CT52

## SECTION-A

Answer all questions

1) Java Packages are therefore classified into two types what are these $\qquad$ .
a) Java API
b) User defined Packages
c) a \& b are both
d) None of these above
2) $\qquad$ is the peer class of string
a) String Buffer
b) Buffer
c) append
d) None of these above
3) $\qquad$ may only be used within a subclass constructor method
a) Super
b) destructor
c) subclass
d) none of these above
4) Inheritance may take how many different form $\qquad$
a) 5
b) 3
c) 4
d) 2
5) 

$\qquad$ hav
b) Destructors
c) Function
d) Members
6)
a) Constructors
$\qquad$ can be declared inside interface declarations.
a) Variables.
b) Classes.
c) Methods.
d) Keywords
7) The Java compiler produces an intermediate code known as $\qquad$
a) JVM
b) Byte code
c) JDK
d) JRE
8) Which of these keyword must be used to inherit a class?
a) Super.
b) This.
c) Extent.
d) Extends
9) Which of these keywords is used by a class to use an interface defined previously?
a) Import.
b) Imports.
c) Implements.
d) Implement
10) A package is a collection of $\qquad$ .
a) Keywords.
b) Classes and interfaces.
c) Editing tools.
d) Views.

## SECTION-B

## Answer any FIVE questions

$(5 X 2=10)$
11) Any two difference between Class and Interface?
12) Define Array and its types
13) Write types of packages
14) What is Inheritance?
15) What is an Interface?
16) What are packages?
17) Write about hiding classes in package.

## SECTION-C

Answer any THREE questions
(3X6=18)
18) Explain about Nesting of methods with example.
19) Write short notes on Constructors
20) Discuss about the Visibility Control?
21) Explain about the Implementing Interface
22) Explain about Single inheritance with example?

SECTION-D
Answer any one question
23) Write a java program to create a student mark list using Interface.
24) Briefly discuss on package with example and compiling procedure.

## SECTION - A

## Answer ALL Questions:

1. Shaded rectangles in DFD shows $\qquad$
a) Data sources
b) Data Flow
c) Data transform
d) Field
2. ---------------specifies action to be taken when an event occurs under different conditions.
a) Transition Table.
b) Peri nets.
c) Decision Table.
d) Event Table.
3. DFD stands for- $\qquad$
a) Data Flow Diagram.
b) Data Flow Dictionary.
c) Data fill Diagram.
d) None.
4. In Delphi cost estimation, a coordinator provides each estimator with the $\qquad$ document.
a) System Definition.
b) System Flow.
c) System Estimation.
d) System Chart
5. Cost estimating technique occur which phase of the software engineering.
a) Planning
b) Design.
c) Maintenance.
d) Testing.
6. Specification for the user interface displays and reports are refinement of information contained $\qquad$
a) Software Requirements
b) Software Design
c) Project plan
d) None
7. ----------------- specifies changes in state of a system as function of deriving forces.
a) Transition Table.
b) Peri net.
c) Decision Table.
d) Event Table
8. Circle is also called as $\qquad$ .
a) Round
b) shape
c) bubbles
d) flow.
9. A data flow diagram is
a) The primary output of the systems design phase
b) Mainly used at the systems specification stage.
c) The modern version of flowchart.
d) All of the above
10. The Data flow diagram shows:
a) The flow of data.
b) The processes.
c) The areas where they are stored. d) All of the above.

## SECTION - B

## Answer Any FIVE Questions:

11. Define software requirement
12. What are the cost factors?
13. Define data dictionary.
14. What are the needs for SRS?
15. Define correctness and completeness
16. Define verifiable.
17. What is SSA?

## SECTION - C

## Answer Any THREE Questions:

18. Explain WBS.
19. Explain the Software Requirement Specifications
20. How to estimate the cost for software maintenance?
21. Explain the Algorithmic cost models.
22. What are the characteristics of an SRS?
SECTION - D

## Answer Any ONE Questions:

23. What are the formats of SRS?
24. Explain PSL and SADT

| Department of | II year B.Sc Computer Science | I Sessional Test |
| :--- | :--- | :--- |
| Computer Science |  | III Semester |
| Vivekananda College | System Software -10SB31 | Max. Marks: 25 |
| Tiruvedakam West |  | Time : 1 hrs |
| Date: $\mathbf{1 0 . 0 9 . 2 0 1 8}$ |  |  |

## SECTION-A

Answer all questions
(5X1=5)

1) $\qquad$ tools for convert high level language programming to machine level language
a) Assemble
b) Loaders
c) Compilers
d) Linkers
2) A grammar $G$ is defined as $\qquad$ tuples.
a) 3
b) 4
c) 5
d) 6
3) A program in execution is called.
a) Process
b) Instruction
c) Procedure
d) Function
4) An assemble is $\qquad$
a) Syntax dependant
b) Programming language dependent.
c) Machine dependant
d) Data dependant
5) Load address for the first word of the program is called.
a) Load address origin
b) Linker address origin
c) Phase library
d) Absolute library

## SECTION-B

Answer any TWO questions
6) Define compilers
7) What is Grammars?
8) List out the any two compiler features.
9) Explain the interpreters.

## SECTION-C

Answer any ONE questions
10) Write the role of the lexical analyzer.
11) Explain the compiler-compilers.

## SECTION-D

## Answer any ONE question

12) Discuss about sun OS c compiler.
13) Explain the classification of operating systems and types.

## Answer all the questions

1. Average of all prime numbers Between 30 to 50
a) 37
b) 37.8
c) 39
d) 39.8
2. Reeya obtained $65,67,76,82$ and 85 out of 100 in different subjects, what will be the average
a) 70
b) 75
c) 80
d) 85

3 . Find the sum of first 30 natural numbers
a) 470
b) 468
c) 465
d) 463
4. Find the average of all numbers between 6 and 34 which are divisible by 5
a) 15
b) 20
c) 25
d) 30
5. What percent is 70 of 280 ?
a) $25 \%$
b) $50 \%$
c) $75 \%$
d) none

6 . What percent is 36 paisa's of 12 rupees?
a) $3 \%$
b) $0.03 \%$
c) $0.0035 \%$
d) none
7. Find the highest common factor of 36 and 84 .
a) 4
b) 6
c) 12
d) 18
8. Find the H.C.F of $2 / 3,8 / 9,94 / 81,10 / 27$
a) $2 / 3$
b) $2 / 81$
c) $160 / 3$
d) $160 / 81$
9. The L.C.M of 148 and 185 is
a) 680
b) 740
c) 2960
d) 3700

10 to 14 find odd man out
10. $3,5,11,14,17,21$
a) 21
b) 11
c) 14
d) 21
11. $8,27,64,100,125,216,343$
a) 27
b) 100
c) 125
d) 343
12. $10,25,45,54,60,75,80$
a) 45
b) 10
c) 54
d) 80
13. 396, 462, 572, 427, 671, 264
a) 396
b) 427
c) 572
d) 264
14. $6,9,15,21,24,28,30$
a) 28
b) 24
c) 6
d) 30
15.Average age of 7 family members is 75 years. But average age of 6 of them is 74 years 6 months. What is the age of the $7^{\text {th }}$ family member?
a) 75.5
b) 78
c) 68
d) 80
16. Average age of 5 people in a family is 55 years. However it is seen that 3 of the 5 people also have an average age of 55 years. What will be the average age of remaining two people of the family?
a) 82.5 years
b) 27.5 years
c) 55 years
d) 110 years
17. The average of fifty numbers is 28 . If two numbers, namely 25 and 35 are discarded, the average of the remaining numbers is nearly,
a) 29.27
b) 27.92
c) 27.29
d) 29.72
18. The average of three numbers is 77 . The first number is twice the second and the second number is twice the third. Find the first number.
a) 33
b) 66
c) 77
d) 132
19. 3 boxes have some average weight. When one box which weighs 89 kg is replaced by another box, the average weight increases by 5 kg . How much the new box weighs?
a) 109 kg
b) 94 kg
c) 104 kg
d) 84 kg
20. Knowing that Vijay's expenditure for first 3 days is Rs. 100, Rs. 125 and Rs. 85, what is his $4^{\text {th }}$ day expenditure as his 4 days average expenditure Rs. 90 ?
a) Rs. 220
b) Rs. 60
c) Rs. 50
d) Rs. 90
21. The average of the first five multiples of 9 is:
a) 20
b) 27
c) 28
d) 30
22. Find the average of first 97 natural numbers.
A. 47
B. 37
C. 48
D. 49
23. A's salary is $50 \%$ more than B's. How much percent is B's salary less than A's?
a) $33(1 / 4) \%$
b) $33(1 / 3) \%$
c) $33(1 / 2) \%$
d) $33 \%$
24. In a country $55 \%$ population is female. $80 \%$ of the male population is literate. How much of females are literate if total literacy is $58 \%$ ?
a) $45 \%$
b) $55 \%$
c) $40 \%$
d) $22 \%$
25. $5 \%$ of $5 \%$ of Rs. 100 is
a.) Rs. 0.25
b) Rs. 0.50
c) Rs. 10
d) Rs. 25
26. Half percent, written as a decimal, is
a) 0.2
b) 0.02
c) 0.005
d) 0.05
27. What will be the fraction of $4 \%$
a) $1 / 20$
b) $1 / 50$
c) $1 / 75$
d) $1 / 25$
28. A fruit seller had some apples. He sells $40 \%$ apples and still has 420 apples. Originally, he had:
a) 588 apples
b) 600 apples
c)672 apples
d) 700 apples
29. If $a: b: c=3: 4: 7$, then the ratio $(a+b+c): c$ is equal to
a) $2: 1$
b) $14: 3$
c) $7: 2$
d) $1: 2$
30. Two numbers are in ratio $4: 5$ and their LCM is 180 . The smaller number is
A. 9
B. 15
C. 36
D. 45
31. 10.Two numbers are in ratio $4: 5$ and their LCM is 180 . The smaller number is
A. 9
B. 15
C. 36
D. 45
32. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:
A. 276
B. 299
C. 322
D. 345
33. Greatest Common Divisor of two numbers is 8 while their Least Common Multiple is 144 . Find the other number if one number is 16 .
a. 108
b. 96
c. 72
d. 36
34. The greatest number of four digits which is divisible by $15,25,40,75$ is
a. 600
b. 9000
c. 9600
d. 9400
35. Where is RAM located?
a) Expansion Board
b) External Drive
c) Mother Board
d) All of above
36. If a computer has more than one processor then it is known as?
a)Uniprocess b)Multiprocessor c)Multithreaded d)Multiprogramming
37. What is HCF of $36 / 75,48 / 150,72 / 135$ ?
a. 12/1350
b. $150 / 36$
c. $1350 / 36$
d. 72/225
38. Rajesh had to arrange his books in uniform groups. He makes groups of 4 books each. But 3 books are left. He tries it with groups of 5 books each. But still 3 books are left. 3 books are still left when he tried with groups of 9 or 10 books each. How many books does he have?
a. 90
b. 180
c. 900
d. 183
39. HCF and LCM of two numbers is 8 and 96 . Sum of those numbers is 56 . Then what is sum of their reciprocals?
a. $1 / 56$
b. $7 / 96$
c. $1 / 96$
d. $1 / 8$
40. The L.C.M. of two number is 60 . The numbers are in the ratio $4: 5$. Find the sum of numbers.
a. 27
b. 33
c. 38
d. 45
41. Find the fourth proportion to $2,3,6$
a) 18
b) 12
c) 9
d) 4
42. Full form of URL is ?
a)Uniform Resource Locator b)Uniform Resource Link
c)Uniform Registered Link d)Unified Resource Link
43. The ratio of two numbers is $4: 5$ and their H.C.F is 4. Find their L.C.M.
a. 96
b. 80
c. 73
d. 48
44. 3 bells beep at an interval of 12,20 , and 35 minutes. If they beep together at $10 \mathrm{a} . \mathrm{m}$., then they will again beep together at:
a. 12 p.m.
b. 1 p.m.
c. 4 p.m.
d. 5 p.m.
45. Find the lowest common multiple of 24,36 and 40.
a) 120
b) 240
c) 360
d) 480
46. A ratio equivalent to $3: 7$ is:
а) $3: 9$;
b) $6: 10$;
c) $9: 21$;
d) $18: 49$
47. The ratio $35: 84$ in simplest form is:
a) $5: 7$;
b) $7: 12$;
c) $5: 12$;
d) none of these
48. In a class there are 20 boys and 15 girls. The ratio of boys to girls is:
A) $4: 3$;
b) $3: 4$;
c) $4: 5$;
d) none of these
49. The ratio of 1.5 m to 10 cm is:
а) $1: 15$;
b) $15: 10$;
c) $10: 15$;
d) $15: 1$
50. $7: 12$ is equivalent to:
а) $28: 40$;
b) $42: 71$;
c) $72: 42$;
d) $42: 72$

## SECTION-A

## Answer all questions

$(10 \times 1=10)$

1) An empty set is denoted by $\qquad$
a) Null
b) $\}$
c) $a \& b$
d) none
2) If $R$ is reflexive, symmetric and transitive then the relation is said to be $\qquad$ .
a) Binary relation
b) Compatibility relation
c) Equivalence relation
d) Partial order
3) A finite non-empty set of symbols is called $\qquad$ _.
a) alphabet
b) letter
c) string
d) language
4) One to one onto function is also called $\qquad$ .
a) bijective
b) injective
c) surjective
d) composite function
5) Let $\mathrm{R}=\{(3,3),(6,6),(9,9),(12,12),(3,6),(6,3),(3,9),(9,3),(9,12),(12,9)\}$ be a relation on the set $A=\{3,6,9,12\}$. The relation is $\qquad$
a) Reflexive and transitive
b) reflexive and symmetric
c) symmetric and transitive
d) Equivalence relation
6) Individual Objects in a set are called
a) Element
b) set
c) list
d) None of above
7) A group or collection of objects is called
a) Element
b) set
c) list
d) group
8) There are only five distinct Hasse diagrams for partially ordered sets that contain
$\qquad$ elements.
a) 2
b) 3
c) 4
d) 6
9) $\mathrm{A}=\{1,3,5,7,9\}$ is a $\qquad$ .
a) null set
b) finite set
c) singleton set
d) infinite set
10) Let $R=\{(1,3),(4,2),(2,2),(3,3),(1,1),(4,4)\}$ be a relation on the set $A=\{1,2,3,4\}$.

The relation R is $\qquad$ .
a) transitive
b) reflexive
c) not symmetric
d) function

## SECTION-B

## Answer any FIVE questions

$(5 \times 2=10)$
11) Define Function
12) Write the types of Relations
13) Define Sets
14) Write the De-Morgan's Law
15) If $A=\{1,2,6,7,8\} B=\{a, b, 2,1,6\}$ Find $A U B, A / B$
16) Define Subset
17) Write about Permutation

## SECTION-C

Answer any THREE questions
(3X6=18)
18) Discuss about relation
19) Define the following: i) Even Functions ii) Odd Functions iii) One to one and onto
20) Draw the venn diagram of De-Morgan's Law
21) Prove that the product of three consecutive integers is divisible by 3 !
22) Let $f: Z->Z$ be a function defined by $f(x)=2 x+3$, Let $g: Z->Z$ be a function defined by $g(x)=3 x+2$. Find i) fog ii) gof.

## SECTION-D

Answer any one
(1X12=12)
23) a) Let $A=\{-5,-3,-2,-1\} \quad B=\{-2,-1,0\}$ and $C=\{-6,-4,-2\}$. Find $A \backslash(B \backslash C)$ and $(A \backslash B) \backslash C$.
b) Write about a) Dictionary Order
b) Cryptography
c) Equivalence Relations
24) Explain about functions and its types with example.

OPERATIONS RESEARCH-10AT31

## SECTION-A

## Answer all the questions

$(10 \times 1=10)$

1) Which method is used to obtain optimum solution for TP $\qquad$
a) VAM
b) MODI
c) hungarian
d) none
2) If $m+n-1=$ number of occupied cells, then the solution is
a) feasible
b) un feasible
c) un balanced
d) none
3) When the constraints are equal type we introduce $\qquad$ variables in canonical form
a) slack
b) surplus
c) none
d) $>=$
4) The transportation problem is special case of
a) Assignment
b) LPP
c) graphical
d) none
5) North - west corner refers to $\qquad$ .
a) Top left corner
b) Top right corner
c) Both of them
d) none
6) The penalty in VAM represents difference between $\qquad$ costs of respective Row / column.
a. Two largest
b. Smallest two
c. Largest and smallest
d. None of them
7) VAM stands for:
a) Value added method.
b) Value assessment method.
c) Vogel's approximation method
d) Vogel adam method.
8) In least cost method the allocation is done by selecting $\qquad$ -
a) Upper left corner.
b) upper right corner.
c) Middle cell in the transportation table
d) cell with the lowest cost.
9) In transportation problem is said to be balanced if $\qquad$ -.
a) Total supply is not equal to total demand
b) total supply is greater than total demand
c) Total supply is lesser than total demand
d) total supply is equal to total demand .
10) MODI stands for:
a. modern distribution
b. mendel's distribution method
c. modified distribution method
d. Model index method.

## SECTION-B

## Answer any FIVE questions

11. Define Transportation Problem
12. Define unbalanced Transportation Problem
13. Explain Maximization Transportation Problem and how solve it
14. What are the methods to find IBFS in Transportation Problem?
15. Give the mathematical formulation of Transportation Problem
16. Define optimal solution
17. Define degeneracy in Transportation Problem

## SECTION-C

## Answer any THREE questions

(3X6=18)
18. Find the initial basic feasible solution for following transportation problem using least cost method

## Distribution Centres

|  |  | D1 | D2 | D3 | D4 | Availability |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Origin | S1 | S2 | 1 | 2 | 1 | 4 |
|  |  |  |  |  |  |  |
|  | S3 | 4 | 3 | 2 | 1 | 50 |
|  | Requirements | 20 | 40 | 30 | 10 |  |

19. Explain LCM procedure
20. Find the starting solution of the following transportation problem using NWCR

## Destination

| Source | D1 | D2 | D3 | Availability |
| :--- | :--- | :--- | :--- | :--- |
| S1 | 1 | 2 | 6 | 7 |
| S2 | 0 | 4 | 2 | 12 |
| S3 | 3 | 1 | 5 | 11 |
| Requirements | 10 | 10 | 10 |  |

21. Explain NWCR procedure
22. Find the initial basic feasible solution for following transportation problem using VAM method Distribution Centres

|  |  | D1 | D2 | D3 | D4 | Availability |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Origin | S1 | S2 | 11 | 13 | 17 | 14 |
|  | 18 | 14 | 10 | 300 |  |  |
|  | S3 | 21 | 24 | 13 | 10 | 400 |
|  | Requirements | 200 | 225 | 275 | 250 |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Answer any ONE
(1X12=12)
23. Explain MODI algorithm method
24. Solve the following transportation to maximize profit

## destination

| source | a | b | c | d | supply |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | 15 | 51 | 42 | 33 | 23 |
| $\mathbf{2}$ | 80 | 42 | 26 | 81 | 44 |
| $\mathbf{3}$ | 90 | 40 | 66 | 60 | 33 |
| Demand | 23 | 31 | 16 | 30 |  |
|  | $* * * * * *$ |  |  |  |  |

## SECTION-A

## Answer all questions

$(10 \times 1=10)$

1. character array always ends with $\qquad$ ?.
A. null ( 10 ) character.
B. question mark (?).
C. full stop(.).
D. exclamation mark(!).
2. Which header file is essential for using stremp() function?
A. string.h;
B. strings.h;
C. text.h;
D. stremp.h
3. Which among the following is a unconditional control structure?
A. do-while.
B. if-else.
C. goto.
D. for.
4. How many times the following loop will execute?
void main()
\{
for ( $\mathrm{a}=0 ; \mathrm{a}<4 ; \mathrm{a}++$ )
printf("hello");
\}
A 3 B $4 \quad$ C $5 \quad$ D infinite
5. The-------------------- statement helps immediate exit from any part of the loop
A. break
B. continue
C. both
D. none
6. The --------------------------- loop executes at least once.
A. for
B. while
C. do-while
D. while \& do-while
7. All keywords must be written in $\qquad$ -.
A. upper case.
B. lower case.
C. within codes .
D. separately.
8. A multidimensional array $\mathrm{A}[10][9]$ can store-------- number of elements
A 91 B 88
C 90
D 89
9. If 'str' is a string of 7 characters, the statement printf("\%4s", str); will display ------characters.
A. 4
B. 7
C. 6
D. 0
10. Find out on which line number you will get an error ?

Line 1: void main ()
Line 2: \{
Line 3: print("In Hello World")
Line 4: \}
A) Line 1
B) Line 2
C) Line 3
D) Line 4

SECTION-B

## Answer any FIVE questions

11. Define loop
12. Define Array
13. Define string
14. Write syntax of Array declaration
15. Define entry controlled loop give example
16. Define exit controlled loop give example
17. Define break and continue

## SECTION-C

## Answer any THREE questions

18. Explain one dimensional Array with example
19. Write a program to find factorial number
20. Explain getchar() and gets function with example
21. Explain for loop with example
22. Explain putchar() and puts function with example

SECTION-D
Answer any ONE question
(1X12=12)
23. Explain different between while and do...while with example
24. Explain two dimensional Array with example and write a program

## SECTION-A

## Answer all questions

$(10 \times 1=10)$

1. Which of the following circuit can be used as parallel to serial converter?
a) Multiplexer
b) Demultiplexer
c) Decoder
d) Digital counter
2.A combinational circuit is one in which the output depends on the
a) Input combination at the time b) Input combination and the previous output
c) Input combination at that time and the previous input combination
d) Present output and the previous output
2. The inputs/outputs of an analog multiplexer/demultiplexer are
a) Bidirectional
b) Unidirectional
c) Even parity
d) Binary-coded decimal
4.In a multiplexer the output depends on its
a) Data inputs
b) Select inputs
c) Select outputs
d) None of the Mentioned
5.How many basic binary subtraction operations are possible?
a) 1
b) 4
c) 3
d) 2
6.The selector inputs to an arithmetic/logic unit (ALU) determine the:
a) Selection of the IC
b) Arithmetic or logic function
c) Data word selection
d) Clock frequency to be used
7.The addition of two decimal digits in BCD can be done through
a) BCD adder
b) Full adder
c) Ripple carry adder
d) Carry look ahead
8.How many outputs are present in a BCD decoder?
a) 4
b) 5
c) 15
d) 10
3. How many types of parity bits are found?
a) 2
b) 3
c) 4
d) 1
10.What is a parity bit?
a) An error detection is achieved by adding an extra bit
b) After addition, the carry is found
c) Bit generated during data transmission
d) None of the Mentioned

## SECTION-B

## Answer any FIVE questions

$(5 X 2=10)$
11.Define parity bit?
12.Define nibble?
13.Write about demultiplexer?
14.What is odd parity?
15.Define BCD?
16.Write four rules for binary addition?
17.BCD for 429 ?

## SECTION-C

Answer any THREE questions
$(3 \times 6=18)$
18.Explain the Encoder with neat diagram?
19.Explain the decoder?
20.Explain BCD with neat diagram and give example?
21.Explain the parity generator?
22.Explain the Binary subtraction?

## SECTION-D

## Answer any ONE question

23.Explain multiplexer and it's types?
24.Explain flip flops and any three flipflops?

## SECTION-A

## Answer all questions

1.The memory unit that directly communicates with CPU is called $\qquad$ memory.
a) main
b)auxiliary
c)device
d) backup
2.The $\qquad$ memory access time is less than the access time of the main memory.
a) virtual
b) associative
c) cache
d) mapping
3.The expansion of RPN is $\qquad$ -.
a) Reverse Polish Notation
b) Review Polish Notation
c) Reverse Pointer Notation
d) Review Pointer Notation
4.The notation $\mathrm{A}+\mathrm{B}$ is $\qquad$ .
a) prefix notation
b)postfix notation
c)infix notation
d)none of these
5.The bits of the instruction are divided into groups called $\qquad$ d).
a) formats
b)fields
c)bytes
d)address.
6.ADD R1, A, B is $\qquad$ .
a)zero address instruction format
b)one address instruction format
c)two address instruction format
d)three address instruction format
7.The instruction that performs arithmetic, logic and shift operations are $\qquad$ .
a)data transfer instruction b)data manipulation instruction c) register transfer instruction d)program control instruction 8.SISD stands for $\qquad$ .
a)Single Instruction stream, Single Data stream
b) Simple Instruction stream, Simple Data stream
c) Stack Instruction stream, Stack Data stream
d) Storage Instruction stream, Storage Data stream 9.The $\qquad$ contains an address to specify the desired location in the memory.
a)word count register b)address register c)control register d)none of the above
10.The term that provides simultaneous data processing tasks are $\qquad$ _.
a)parallel processing b)array processing c)vector processing d)distributed processing.

## SECTION-B

## Answer any FIVE questions

11. Define vector processing?
12. DefineIndirect address mode?
13. Write about Register mode?
14.What is stack pointer?
15.Define Infix notation?
16.Define parallel processing?
14. Define Opcode?

## SECTION-C

## Answer any THREE questions

18.Explain the Instruction formats?
19.Explain the Control word?
20.Explain Pipelining process?
21.Explain Reverse polish notation?
22.Explain the Stack organization?

## SECTION-D

## Answer any two

(1X12=12)
23.Explain the Address mode in central processing unit?
24.Explain the program control in central processing unit?

