VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234
DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10AT11	Programme:	B.Sc.,	CIA:	II
Date:	24.11.2021	Major:	Comp. Sci.	Semester:	I
Duration:	2 Hours	Year:	I	Max.Marks:	50
Course Title:	DISCRETE MATHEMATICS				

SECTION – A (Remembering)

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

1 The number of vertices in a full binary tree is _____.   **CO5**
   A. odd   B. even   C. equal   D. 0

2 Every connected graph contains a _____.   **CO5**
   A. tree   B. sub tree   C. spanning tree   D. spanning sub tree

3 A graph is Eulerian if it contains _____.   **CO5**
   A. Euler tour   B. Euler trail   C. Hamiltonian path   D. Euler path

4 In a graph if few edges have directions and few do not have directions then the graph is   **CO5**
   called_____.
   A. multi graph   `B. directed graph   C. undirected graph   D. mixed graph

5 The numbers in the sequence 0, 1, 2, 3, 5, 8, 13, 21, in which each new term is the sum of   **CO4**
   the previous two terms are called_____
   A. Factorial   B. Fibonacci   C. Recurrence   D. Function

6 _____is the process of inferring the truth form a general statement for particular   **CO4**
   cases.
   A. Mathematical Induction   B. Recursive   C. Recurrence   D. Function

7 _____ definitions can be used to solve counting problems   **CO4**
   A. Recursion   B. Recursive   C. Recurrence   D. Function

8 If A and B are square matrices such that AB= I and BA= I, then B is   **CO2**
   A. Unit matrix   B. Null matrix   C. Multiplicative inverse matrix D. –A

9 If A is of order 3 X 4 and B is of order 4 X 3, then the order of BA is   **CO2**
   A. 3 X 3   B. 4 X 4   C. 4X 3   D. not defined

10 If a matrix is of order 2 X 3, then the number of elements in the matrix is   **CO2**
   A.   5   B. 6   C. 2   D. 3

SECTION – B (Remembering)

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

11 Define Tree   **CO5**
12 Define Sorting   **CO5**
13 List out the types of Spanning Tree   **CO5**
14 Define Mathematical Induction   **CO4**
15 Define Recursion   **CO4**
16 Define Matrix   **CO2**
17 List out the types of Matrix.   **CO2**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Write about i) Isolated Vertex   ii) Pendant Vertex iii) Degree of a Vertex.   **CO5**
19 Find the generating function for $f_n = 3^n$, $n \geq 0$ in closed form   **CO4**
20 Find the recurrence relation, satisfying $Y_n = A(3)^n + B(-2)^n$ **CO4**
21 Explain about the types of Matrix.   **CO2**
22 Show that the matrix A $\begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix}$ satisfies the equation $A^3 – 6A^2 + 9A - 4I = 0$ and   **CO2**
   hence find A^{-1}

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Using generating function, solve the difference equation $Y_{n+2} - 6Y_{n+1} + 8Y_n = 0$, $Y_0 = 1$, **CO4**
   $Y_1 = 4$.

24 Find the Eigen values and Eigen vectors of A = $\begin{pmatrix} 3 & -1 & 1 \\ -1 & 5 & -1 \\ 1 & -1 & 3 \end{pmatrix}$ **CO2**

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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10AT31	**Programme:**	B.Sc.,	**CIA:**	II
Date:	24.11.2021	**Major:**	Comp. Sci.	**Semester:**	III
Duration:	2 Hours	**Year:**	II	**Max.Marks:**	50
Course Title:	OPERATIONS RESEARCH				

SECTION – A (Remembering)

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

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 **CO2**
of the objective function?
A) 0   B) 50   C) 60 D) 120

2 The basic solution is said to be _____ if no one of basic variable is zero **CO2**
A) non-denerate   B) feasible   C) denerate   D) non-feasible

3 In simplex optimal table zj-cj=0 then the solution is **CO2**
A) optimal   B)alternative solution C)unbounded solution   D)none

4 To formulate a problem for solution by the simplex method, we must add artificial **CO3**
Variable to
A) only equality constraints   B) only > constraints   C) both A & B D) None of these

5 If all xij values in the incoming variable column of the simplex table are negative, then **CO3**
A) solution is unbounded   B) there are multiple solution C) there exist no solution
D) None of these

6 The maximization or minimization of a quantity is the **CO3**
A) goal of management science.   B) decision for decision analysis.
C) constraint of operations research. D) objective of linear programming.

7 The assignment problem is said to be balanced if cost matrix is _____. **CO4**
A) square matrix.   B) rectangular matrix.
C) unit matrix .   D) triangular matrix.

8 In Hungarian method of solving assignment problem, the row opportunity cost matrix is **CO4**
obtained by:
A) Subtracting all the elements of the row from the highest element in the matrix.
B) Subtracting the smallest element from all other elements of the row,
C) Subtracting the elements of the row from the elements of the row above it,
D) Dividing each row by the elements of the row above it

9 In Assignment problem if row < column we add _____. **CO4**
A) dummy row with cost 0.   B) dummy column with cost 0.
C) dummy row with cost 1.   D) dummy column with cost 1.

10 Number of basic allocation in any row or column in Assignment Problem can be **CO4**
A) Exactly one   B) at most one   C) at least one   D) none of them

SECTION – B (Remembering)

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

11 Define LPP **CO3**
12 Define feasible region **CO2**
13 Define slack and surplus variables **CO3**
14 Define unbounded solution in Graphical method **CO2**
15 Define Maximization Assignment Problem and how solve it **CO4**
16 Define an unbalanced Assignment Problem **CO4**
17 What is the objective of Assignment Problem **CO4**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Solve the Assignment Problem for Maximum Profit **CO4**

	Machines			
	P	**Q**	**R**	**S**
A	51	53	54	50
B	47	50	48	50
Jobs C	49	50	60	61
D	63	64	60	60

19 A manufacturer of furniture makes two products, chairs and tables. Processing of these products is done on two machines A and B. A chair requires 2 hours on machine A and 6 hours on Machine B. A table requires 5 hours on Machine A and no time on Machine B. There are 16 hours on time per day available on Machine A and 30 hours on Machine B. Profit gained by the manufacturer from chair and a table is Rs.2 and Rs.10 respectively. Formulate An LPP **CO2**

20 Using Graphical Method, Solve the following LPP **CO2**
Maximize $Z=2x_1+3x_2$
Subject to
$x_1 - x_2 \le 2$
$x_1 + x_2 \ge 4$ and $x_1, x_2 \ge 0$.

21 Express the following LPP in standard form **CO3**
Maximize $Z=4x_1+2x_2 + 6x_3$
Subject to
$3x_1 + 4x_2 = 8$
$6x_1 - 4x_2 + x_3 \le 10$ and $x_1, x_2 \ge 0$.

22 Explain the steps of Simplex Procedure **CO3**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Use simplex method to solve the LPP **CO3**
Maximize $Z=4x_1+10x_2$
Subject to
$2x_1 + x_2 \le 50$
$2x_1 + 5x_2 \le 100$
$2x_1 + 3x_2 \le 90$
and $x_1, x_2 \ge 0$.

24 Solve the following LPP in Graphical method **CO2**
(i) Maximize $Z=4x_1+4x_2$
Subject to
$x_1 + x_2 \le 450$
$2x_1 + x_2 \le 600$
and $x_1, x_2 \ge 0$.
(ii) Maximize $Z=100x_1+40x_2$
Subject to
$5x_1 + 2x_2 \le 1000$
$3x_1 + 2x_2 \le 900$
$x_1 + 2x_2 \le 500$
and $x_1, x_2 \ge 0$.

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Course Code:	10CT11	Programme:	B.Sc.,	CIA:	II
Date:	19.11.2021	Major:	Comp. Sci.	Semester:	I
Duration:	2 Hours	Year:	I	Max.Marks:	50
Course Title:	PROGRAMMING IN C				

SECTION – A (Remembering)

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

1   Recursion is a process in which a function calls _____.   **CO3**
     A. itself.   B. another function.   C. main( ) function.   D. sub program.

2   By default the function returns_____.   **CO3**
     A. integer value.   B. float value.   C. char value.   D. double.

3   The meaning of keyword void before the function name means_____.   **CO3**
     A. function should not return any value.   B. function should return a value.
     C. no arguments are passed.   D. some arguments are passed

4   The function that returns multiple value with the help of_____ operators   **CO3**
     A. & and *.   B. -> and ?   C. * and -   D. ? and :

5   An external variable is one_____.   **CO4**
     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.

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

7   Identify the most appropriate sentence to describe the unions_____.   **CO4**
     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

8   .A file opened in w+ mode can be_____.   **CO5**
     A. read AND write. B. only read.   C. only write.   D. only close.

9   The function fopen() on failure returns_____-----.   **CO5**
     A. 0   B. NULL   C. 1   D. none of the above

10   This function is used to detect the end of file_____.   **CO5**
     A. fclose( ).   B. ferror( ).   C. fputs( ).   D. fgetch( ).

SECTION – B (Remembering)

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

11   Write a syntax of passing an array to function   **CO3**
12   Define Structure   **CO4**
13   Define Union   **CO4**
14   What is the usage of return statement   **CO3**
15   Write any two advantages of function   **CO3**
16   Define File   **CO5**
17   What is the purpose of fopen()   **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18   Explain about recursive Function with example   **CO3**
19   Explain File Functions any 6   **CO5**
20   Define union Explain how to create union and access union members with example   **CO4**
21   Explain pointers, how to declare pointer variable and access the variable of address   **CO5**
22   Differentiate arrays and Structure   **CO4**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23   Write a C program using Structure to get and display the following details name and age   **CO5**
24   Discuss about any three function categories with example   **CO3**

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	DEPARTMENT OF COMPUTER SCIENCE			
	Course Code:	10CT12	**Programme:** B.Sc.	**CIA:**	II
	Date:	23.11.2021	**Major:** Comp. Sci.	**Semester:**	I
	Duration:	2 Hours	**Year:** I	**Max.Marks:**	50
	Course Title:	**DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION**			

SECTION – A (Remembering)

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

1 In D flip-flop, D stands for **CO3**
a) Distant   b) Delay   c) Desired   d) Data

2 A register is defined as **CO3**
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

3 A shift register is defined as **CO3**
a) The register capable of shifting an information to another register
b)The register capable of shifting an information, either to the right or left
c) The register capable of shifting an information to the right only
d) The register capable of shifting an information to the left only

4 The _____ format is usually used to store data. **CO3**
a) BCD   b) Decimal c) Hexadecimal d) Octal

5 _____ is used to store data in registers. **CO4**
a) D flip flop b) JK flip flop c) RS flip flop d) None of the mentioned

6 ANSI stands for _____ **CO4**
a) American National Standards Institute b) American National Standard Interface
c) American Network Standard Interfacing d) American Network Security Interrupt

7 The type of control signal is generated based on _____ **CO4**
a) contents of the step counter   b) Contents of IR
c) Contents of condition flags   d) All of the mentioned

8 The name hardwired came because the sequence of operations carried out is determined by the wiring. **CO5**
a) True   b) False

9 The DMA differs from the interrupt mode by _____ **CO5**
a) The involvement of the processor for the operation
b) The method of accessing the I/O devices
c) The amount of data transfer possible
d) None of the mentioned

10 The DMA transfers are performed by a control circuit called as _____ **CO5**
a) Device interface b) DMA controller c) Data controller d) Overlooker

SECTION – B (Remembering)

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

11 Bring out the difference between synchronous sequential circuits and asynchronous sequential circuits. **CO3**

12 State the classification of Sequential circuits **CO3**

13 Define flip flop. **CO3**

14 What are the various units in the computer? **CO4**

15 What is the function of ALU? **CO4**

16 What is cache memory? **CO5**

17 What is Addressing Modes? **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Explain about D-Latch with truth table. **CO3**

19 What is bus explain it in detail? **CO4**

20 Deduce the concept of performance and factors projecting the performance   **CO4**

21 Explain multi wired control.   **CO5**

22 What are addressing modes and enhance the types of addressing modes   **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Elucidate the basic functional units of a computer.   **CO4**

24 Apply the concept of interfacing between processor and memory by using bus.   **CO5**

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Course Code:	10CT31	Programme:	B.Sc.	CIA:	II
Date:	19.11.2021	Major:	Comp. Sci.	Semester:	III
Duration:	2 Hours	Year:	II	Max.Marks:	50
Course Title:	COMPUTER NETWORKS				

SECTION – A (Remembering)

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

1 The receive equalizer reduces delay distortions using _____   **CO3**
A. tapped delay lines   B. gearshift   C. descrambler   D. difference edging.

2 In a synchronous modem, the receive equalizer is known as _____ analyzer.   **CO3**
A. adaptive   B. statistical   C. impairment   D. compromise

3 Which of the following is not a standard synchronous communication protocol?   **CO3**
A. SDLC   B. SLIP   C. SMTP   D. PAS.

4 IPV6 has _____ bit addresses.   **CO3**
A. 32   B. 4   C. 128   D. variable

5 The amount of uncertainty in a system of symbol is called _____   **CO4**
A. bandwidth   B. entropy   C. loss   D. Quantum

6 The inner core of an optical fiber is _____ in composition.   **CO4**
A. glass or plastic   B. bimetallic   C. copper   D. liquid

7 Which transmission media has the highest transmission speed in a network?   **CO4**
A. coaxial cable   B. twisted pair cable   C. optical fiber   D. electrical cable

8 A device that links two homogenous packet-broadcast local networks is _____   **CO5**
A. hub   B. gateway   C. repeater   D. bridge

9 Which of the following is not a connecting device?   **CO5**
A. Bridge   B. Gateway   C. Transceiver   D. Hub.

10 A modem is connected in between a telephone line and a _____   **CO5**
A. network   B. computer   C. communication adapter   D. serial port

SECTION – B (Remembering)

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

11 Define Data Link layer.   **CO3**
12 What is meant by Error Detection?   **CO3**
13 Define Protocols?   **CO3**
14 Expend : E-mail , WWW,   **CO4**
15 Define Cryptography.   **CO4**
16 Define Network Layer?   **CO5**
17 Explain digital signature.   **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Brief a note on sliding window protocol.   **CO3**
19 Explain the IP address.   **CO4**
20 Difference between TCP and UDP   **CO4**
21 Brief a note on E-mail.   **CO5**
22 Elaborate the public key algorithm.   **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Explain the distance vector routing   **CO4**
24 Enumerate on the characteristics of DNA   **CO5**

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DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10CT32	Programme:	B.Sc.,	CIA:	II
Date:	23.11.2021	Major:	Comp. Sci.	Semester:	III
Duration:	2 Hours	Year:	II	Max.Marks:	50
Course Title:	COMPUTER GRAPHICS				

SECTION – A (Remembering)

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

1 To generate a rotation, ___ must be specified   **CO3**
a) rotation angle $^\theta$ b) Distances dx and dy   c) rotation   d) all the above

2 The transformation that is used to alter the size of an object is ___   **CO3**
a) Scaling   b) rotation   c) translation   d) reflection

3 ___ is a transformation that produces a mirror image of an object   **CO3**
a) Reflection   b) Rotation   c) Scaling   d) Shear

4 The two dimensional rotation equation in the matrix form is ___   **CO3**
a) $P^1 = P + T$ b) $P^1 = P – T$ c) $P^1 = P * T$ d) $P^1 = P$

5 A world coordinate area selected for display is called ___   **CO4**
a) Viewport   b) Transformation   c) Rasterization   d) Window

6 An area on a display device to which a window is mapped is called a___   **CO4**
a) Window   b) Graphics card   c) Animation   d) View port

7 The Process of extracting a portion of a database or a picture inside or outside a specified   **CO4**
region are called ___ a) transformation   b) Projection   c) Clipping   d) Mapping

8 The region against which an object is clipped is called a ____   **CO5**
a) boundary   b) enclosing rectangle   c) Clip window   d) clip square

9 ___ is used to display objects with color or shaded surfaces by making the hidden surfaces   **CO5**
obscured. a) depth cueing   b) surface rendering   c) projection   d) cut away view

10 Stretching out a line from a starting position on moving the screen cursor by   **CO5**
using___method. a) Gravity   b) rubber band   c) dragging   d) drawing

SECTION – B (Remembering)

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

11 Why translation is called a rigid body transformation?   **CO3**
12 Classify the types of scaling?   **CO3**
13 List any two raster methods to perform 2D transformation?   **CO3**
14 Define viewport in a two dimensional viewing plane?   **CO4**
15 Define clipping?   **CO4**
16 List the types of input modes in graphics?   **CO5**
17 Give any two 3 Dimensional display methods?   **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Distinguish between translation and rotation in 2D plane?   **CO3**
19 Discuss a note on transformation functions?   **CO4**
20 Brief a note on raster methods to perform transformation?   **CO4**
21 Describe 2D viewing transformation pipeline?   **CO5**
22 Differentiate parallel and perspective projection?   **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Explain in detail any five types of clipping used in graphics packages?   **CO4**
24 Enumerate on 3 Dimensional display methods?   **CO5**

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SECTION – A (Remembering)

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

1 Python pandas was developed by? **CO3**
A. Guido van Rossum　　B. Travis Oliphant　　C. Wes McKinney　D. Brendan Eich

2 Axis 1, in panel represent? **CO3**
A. minor_axis　　　B. major_axis　　　C. items　　　D. None of the above

3 The _____ project builds on top of pandas and matplotlib to provide easy plotting of data. **CO3**
A. yhat　　　　B. Seaborn　　　C. Vincent　　　D. Pychart

4 Which of the following keyword is used to access the numpy module in python ? **CO3**
A.access　　　　B.import　　　　C.fetch　　　　　D.from

5 what is constant defined for Boltzmann constant in SciPy? **CO4**
A. G　　　B. e　　　C. R　　　D. k

6 Different learning methods does not include? **CO4**
A. Introduction　　　B. Analogy　　C. Deduction　D. Memorization

7 What will be the output of the following Python statement?　　>>>"a"+"bc" **CO4**
A. a　　　B. bc　　　C.bca　　　D. abc

8 What is the return type of function id? **CO5**
A. int　　　B.float　　　C. bool　　　D. dict

9 Which function is used to returns the string in upper case. **CO5**
A. lower()　　　B. strip()　　C. upper()　　　D. replace()

10 Which of the following is not a token defined in Python? **CO5**
A. keyboard　　　B. comments　　　C. Literals　　D. Operators

SECTION – B (Remembering)

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

11 How to create a list in python **CO3**
12 Define Tuple **CO3**
13 List Length() with example. **CO3**
14 How to create function **CO4**
15 Define Counting **CO4**
16 What is long integer **CO5**
17 Comment files in python **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Write a python program in find a duplicate number in list. **CO3**
19 Write a FOR loop with example. **CO4**
20 Explain String Slicing in python with example **CO4**
21 Explain about pickling in python with example **CO5**
22 Write a Sparse matrices in python **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Construct the List operator in python with example **CO4**
24 Write a python program using matrix addition and multiplication **CO5**

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Course Code:	10CT52	**Programme:**	B.Sc.,	**CIA:**	II
Date:	22.11.2021	**Major:**	Comp.Sci.	**Semester:**	V
Duration:	2 Hours	**Year:**	III	**Max.Marks:**	50
Course Title:	JAVA PROGRAMMING				

SECTION – A (Remembering)

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

1 . A package is a collection of _____.   **CO3**
A. keywords.   B. classes and interfaces.   C. editing tools.   D. views.

2 Package statement helps to create many classes to have _____ name.   **CO3**
A. differ.   B. vanity.   C. same.   D. punch.

3 Interface methods can be declared with which the following modifiers?   **CO3**
A. public.   B. private.   C. synchronized.   D. native.

4 Before doing garbage collection, _____ method is called .   **CO3**
A. main ().   B. finalize ().   C. final ().   D. collect ().

5 . In java thread to thread communication is called _____.   **CO4**
A. passing.   B. sending.   C. messaging.   D. calling.

6 When we implement the Runnable interface, we must define the method   **CO4**
A. run().   B. start().   C. init().   D. main().

7 What is the default thread at the time of starting the program?   **CO4**
A. Main Thread.   B. Thread Group.   C. Child Thread.   D. Thread Pool.

8 "request" is instance of which one of the following classes?   **CO5**
A. Request   B. HttpRequest   C. HttpServletRequest   D. ServletRequest

9 Application is instance of which class?   **CO5**
A. javax.servlet.Application   B. javax.servlet.HttpContext
C. javax.servlet.Context   D. javax.servlet.ServletContext

10 AWT stands for_____.   **CO5**
A. abstract window toolkit.   B. abstract window toolbar.
C. access window toolkit.   D. access window toolbar.

SECTION – B (Remembering)

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

11 Write the syntax of Interface   **CO3**
12 Write the compiling and execution procedure of package   **CO3**
13 List out the types of Package   **CO3**
14 List out the types of error and its example   **CO4**
15 Define Thread   **CO4**
16 Define RMI   **CO5**
17 Define Servlets   **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Explain the implementation of Interface   **CO3**
19 Differentiate Multitasking and Multithreading   **CO4**
20 Explain about the Thread Priority   **CO4**
21 How to build the Applet Program   **CO5**
22 Explain about the RMI   **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Demonstrate the Life Cycle of Thread   **CO4**
24 Illustrate Life Cycle of Applet   **CO5**

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	DEPARTMENT OF COMPUTER SCIENCE			
	Course Code:	10CT53	**Programme:** B.Sc.	**CIA:**	II
	Date:	23.11.2021	**Major:** Comp.Sci.	**Semester:**	V
	Duration:	2 Hours	**Year:** III	**Max. Marks:**	50
	Course Title:	SOFTWARE ENGINEERING			

SECTION – A (Remembering)

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

1 _____ abstraction refers to a sequence of instructions that have a specific and limited function. **CO3**
a) Data   b) Procedural   c) functional   d) data structure

2 _____ divides a software into named and addressable components **CO3**
a) data structure   b) function point   c) modularity   d) validation

3 ____ is an indication of the relative interdependence among modules **CO3**
a) cohesion   b) coupling   c) testing   d) requirements

4 _____ elements are used to depict a model of information represented from the user's view? **CO3**
a) Architectural design   b) component-level
c) data design elements   d) Interface design

5 Finding _____ is the key objective of Integration testing **CO4**
a) Design Errors   b) Interface Errors   c) Procedure Errors   d) Validation errors

6 Identifying the level of cyclomatic complexity is_____ **CO4**
a) White-box testing   b) Black box testing   c) Grey box testing   d) cleanroom testing

7 Usability testing is a _____ testing technique. **CO4**
a) White-box   b) Grey box   c) Black Box   d) integration

8 _____ is developed using historical cost information that relates some software metric to the project cost. **CO5**
a) Algorithmic cost model   b) Expert judgement
c) Estimation by analogy   d) Parkinson's Law

9 _____ approach develop estimates of the information domain characteristics **CO5**
a) Function point sizing   b) Change sizing   c) Standard component sizing   d) Fuzzy logic sizing

10 COCOMO stands for ____ **CO5**
a) consumed cost model   b) constructive cost model
c) common control model   d) composition cost model

SECTION – B (Remembering)

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

11 List the types of abstraction used in software designing? **CO3**
12 Define Domain analysis? **CO3**
13 List the elements used to build an analysis model? **CO3**
14 Define unit testing? **CO4**
15 Give the advantages of smoke testing? **CO4**
16 List the four organizational paradigms in software engineering project? **CO5**
17 What is an Agile team in software project management? **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Discuss with a neat diagram flow oriented modeling? **CO3**
19 Brief a note on types of coupling and cohesion ? **CO4**
20 Elucidate on transform flow and transaction flow? **CO4**
21 Comment on W^5HH principle? **CO5**
22 Write a note on types of software measurement methods? **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Explain in detail types of white box and black box testing techniques? **CO4**
24 Explain in detail the COCOMO cost estimation model? **CO5**

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234
DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10EP5A	**Programme:**	B.SC.,	**CIA:**	II
Date:	24.11.2021	**Major:**	Comp. Sci.	**Semester:**	V
Duration:	2 Hours	**Year:**	III	**Max.Marks:**	50
Course Title:	CLOUD COMPUTING				

SECTION – A (Remembering)

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

1. What is the most important area of concern in cloud computing? **CO3**
   A. Security   B. Scalability   C.Storage   D.None of the mentioned

2. ._____ is surely an impediment to established businesses starting new enterprises. **CO3**
   a) Proposition b) Capitalization c) Globalization d) None of the mentioned

3. Which of the following provider rely on the virtual machine technology to deliver servers? **CO3**
   a) CaaS   b) AaaS   c) PaaS d) IaaS

4. Which of the following benefit is provided by the PaaS service provider? **CO3**
   a) A larger pool of qualified developers   b) More reliable operation
   c) A logical design methodology   d) All of the mentioned

5. Communication between services is done widely using _____ protocol. **CO4**
   a) REST   b) SOAP   c) RESTful   d) None of the mentioned

6. Which of the following monitors the performance of the major cloud-based services in real time in Cloud Commons ? **CO4**
   a.CloudWatch   b. CloudSensor   c. CloudMetrics   d. All of the mentioned

7. Security methods such as private encryption, VLANs and firewalls comes under _____ subject area. **CO4**
   a) Accounting Management b) Compliance c) Data Privacy   d) All of the mentioned

8. Cloud model relies on **CO5**
   a. communication api B. middleware   c. web documents   d. embedded device

9. Which of the following is the first level applicable attribute? **CO5**
   a) Availability   b) Monitoring   c) Configuring   d) All of the mentioned

10. The cloud needs governance bodies that deal with the standardization of services and other shared infrastructure issues. **CO5**
    a. True   b.False.

SECTION – B (Remembering)

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

11. Define system testing. **CO3**
12. What are the considerations for selecting cloud solution. **CO3**
13. Define load test. **CO3**
14. When a system can be described as scalable in nature? **CO4**
15. Define Cloud Governance. **CO4**
16. Mention the types of Audit logs. **CO5**
17. What are the security standards in cloud? **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: (3 X 6= 18 Marks)

18. Write short notes on Cost benefit analysis. **CO3**
19. Write short notes on cloud standards. **CO4**
20. Write short notes about security standards. **CO4**
21. What is the need for cloud governance. **CO5**
22. Explain briefly the security concerns of cloud computing. **CO5**

SECTION – D (Applying)

Answer any **ONE** Question: (1X 12= 12 Marks)

23. Apply the key management functions in cloud computing? **CO4**
24. Discuss the regulatory issues of cloud computing and the government policies. **CO5**

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	VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234				
	DEPARTMENT OF COMPUTER SCIENCE				
	Course Code:	10NE11	**Major:**	Non-Major	**CIA:**	II
	Date:	22.11.2021			**Semester:**	I
	Duration:	2 Hours	**Year:**	I	**Max.Marks:**	50
	Course Title:	**INTRODUCTION TO INFORMATION TECHNOLOGY**				

SECTION – A (Remembering)

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

1 Website is a collection of. **CO1**
    A. audio files.   B. video file   C. image file.   D. html file.

2 Second Generation computer uses. **CO1**
    A. CRT   B. typewriter   C. magnetic disc   D. plastic tape

3 Website is a collection of. **CO2**
    A. audio files.   B. video file   C. image file.   D. html file.

4 WAN stands for **CO2**
    A. wire and network   B. wire accessible network
    C. widely accessible network   D. wide area network.

5 GPS is mean for **CO3**
    A. Global Pointing System   B. Global Positioning System
    C. Great Pointing System   D. Great Positioning System

6 The web page means **CO3**
    A. plain page.   B. hyperlink   C. designed page   D. pictures

7 A source program is written in. **CO4**
    A. high level language   B. English language
    C. machine language.   D. symbolic language

8 Computer performs calculations **CO4**
    A. in accurately   B. accurately.   C. 1 million decimals   D. 2 decimals.

9 First generation computers uses. **CO5**
    A. cathode ray tube.   B. typewriter   C. printers.   D. paper tapes.

10 The web page means **CO5**
    A. plain page.   B. hyperlink   C. designed page   D. pictures

SECTION – B (Remembering)

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

11 Give any four advantages of information technology? **CO1**
12 What is CPU? **CO1**
13 Type of memory in computer. **CO2**
14 List out the any four web browsers? **CO3**
15 Expand LAN and WLAN. **CO4**
16 Define hardware and software. **CO4**
17 List out the any four social media. **CO5**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

18 Briefly explain about computer network with types. **CO1**
19 Explain the types of network topology. **CO2**
20 Briefly discuss about the input device and output device. **CO3**
21 Explain about the computer with types. **CO4**
22 Explain the followings **CO5**
    (i) website
    (ii) browser

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

23 Explain the different types of operating system? **CO2**
24 Explain the functional unit in a computer. **CO5**

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234
DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10SB31	**Programme:**	B.Sc.	**CIA:**	II
Date:	18.11.2021	**Major:**	Comp. Sci.	**Semester:**	III
Duration:	1 Hour	**Year:**	II	**Max. Marks:**	25
Course Title:	**OPERATING SYSTEM**				

SECTION – A

Answer **ALL** the Questions: (5 X 1 = 5 Marks)

1 What is the full name of the DSM?   **CO3**
(a) Direct system module   (b) Direct system memory
(c) Demoralized system memory   (d)Distributed shared memory

2 Who provides the interface to access the services of the operating system? **CO3**
(a)API   (b)System call   (c) Library   (d)Assembly instruction

3 What type of scheduling is round-robin scheduling?   **CO4**
a)Linear data scheduling   (b)Non-linear data scheduling
(c)Preemptive scheduling   (d)Non-preemptive scheduling

4 Which of the following scheduling algorithms is preemptive scheduling? **CO4**
(a)FCFS Scheduling   (b)SJF Scheduling
(c)Network Scheduling   (d)SRTF Scheduling

5 What type of memory stores data in a swap file on a hard drive? **CO5**
(a) Secondary memory   (b) Virtual memory   (c) Low memory   (d) RAM

SECTION – B

Answer any **TWO** Questions: (2 X 2 = 4 Marks)

6 How is the protection for memory provided?   **CO4**
7 What is a process?   **CO4**
8 Define deadlock.   **CO5**
9 What is the main function of the memory-management unit?   **CO5**

SECTION – C

Answer any **ONE** Question: (1 X 6= 6 Marks)

10 List the various services provided by operating systems   **CO3**
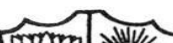11 List the steps needed to handle page fault.   **CO4**

SECTION – D

Answer any **ONE** Question: (1 X 10= 10 Marks)

12 Elaborate about the free space management on I/O buffering and blocking. **CO5**
13 Explain about given memory management techniques. (i) Partitioned allocation (ii) Paging **CO5**
and translation look-aside buffer.

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234
DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10SB51	**Programme:**	B.Sc.	**CIA:**	II
Date:	18.11.2021	**Major:**	Comp. Sci.	**Semester:**	V
Duration:	1 Hour	**Year:**	III	**Max. Marks:**	50
Course Title:	COMPETITIVE EXAMINATION FOR IT				

SECTION – A

Answer **ALL** the Questions: **(50 X 1 = 50 Marks)**

1 What will be the output of this program?
   main()
   {printf("javatpoint");
   main();}
   a.Wrong statement   b.It will keep on printing javatpoint
   c.It will Print javatpoint once   d.None of the these

2 Which of the following comment is correct when a macro definition includes arguments?
   a.The opening parenthesis should immediately follow the macro name.
   b.There should be at least one blank between the macro name and the opening parenthesis.
   c.There should be only one blank between the macro name and the opening parenthesis.
   d.All the above comments are correct

3 What is a lint?
   a.C compiler   b.Interactive debugger   c.Analyzing tool   d.C interpreter

4 What is the output of this statement **"printf("%d", (a++))"?**
   a.The value of (a + 1)   b.The current value of a   c.Error message   d.Garbage

5 What does this declaration mean? **int x : 4;**
   a.X is a four-digit integer.   b.X cannot be greater than a four-digit integer.
   c.X is a four-bit integer.   d.None of the these

6 In the C language, the constant is defined _____.
   a.Before main   b.After main   c.Anywhere, but starting on a new line.   d.None of the these.

7 How many times will the following loop execute? **for(j = 1; j <= 10; j = j-1)**
   a.Forever   b.Never   c.0   d.1

8 A pointer is a memory address. Suppose the pointer variable has p address 1000, and that p is declared to have type int*, and an int is 4 bytes long. What address is represented by expression p + 2?
   a.1002   b.1004   c.1006   d.1008

9 What is the result after execution of the following code if a is 10, b is 5, and c is 10?
   If ((a > b) && (a <= c))
        a = a + 1;
   else
        c = c+1;
      a. a = 10, c = 10   b. a = 11, c = 10   c. a = 10, c = 11   d .a = 11, c = 11

10 Which one of the following is a loop construct that will always be executed once?
    a.for   b.while   c.switch   d.do while

11 Which of the following is the correct syntax to add the header file in the C++ program?
    a. #include<userdefined>   b .#include "userdefined.h"
    c. <include> "userdefined.h"   d. Both A and B

12 Which of the following is the correct syntax to print the message in C++ language?
    a. cout <<"Hello world!";   b. Cout << Hello world! ;
    c.Out <<"Hello world!;   d.None of the above

13 Which of the following is the correct identifier?
    a.$var_name   b.VAR_123   c. varname@   d.None of the above

14 Which of the following is the address operator?
     a.@   b.#   c.&   d.%

15 Which of the following features must be supported by any programming language to become a pure object-oriented programming language?

a.Encapsulation   b.Inheritance   c.Polymorphism   d.All of the above

16 The programming language that has the ability to create new data types is called___.

a.Overloaded   b.Encapsulated   c.Reprehensible   d.Extensible

17 Which of the following is the original creator of the C++ language?

a.Dennis Ritchie   b.Ken Thompson   c.Bjarne Stroustrup   d.Brian Kernighan

18 Which of the following is the correct syntax to read the single character to console in the C++ language?

a.Read ch()   b.Getline vh()   c. get(ch)   d.Scanf(ch)

19 Which of the following statements is correct about the formal parameters in C++?

a.Parameters with which functions are called

b.Parameters which are used in the definition of the function

c.Variables other than passed parameters in a function

d.Variables that are never used in the function

20 The C++ language is _____ object-oriented language.

a.Pure Object oriented   b.Not Object oriented

c.Semi Object-oriented or Partial Object-oriented   d.None of the above

21 Which of the following option leads to the portability and security of Java?

a.Bytecode is executed by JVM   b.The applet makes the Java code secure and portable

c.Use of exception handling   d.Dynamic binding between objects

22 Which of the following is not a Java features?

a.Dynamic   b.Architecture Neutral   c.Use of pointers   d.Object-oriented

23 _____ is used to find and fix bugs in the Java programs.

a.JVM   b.JRE   c.JDK   d.JDB

24 Which of the following is a valid declaration of a char?

a.char ch = '\utea';   b.char ca = 'tea';   c.char cr = \u0223;   d.char cc = '\itea';

25 What is the return type of the hashCode() method in the Object class?

a.Object   b.int   c.long   d.void

26 What will be the output of the following program?

```
public class Test {
public static void main(String[] args) {
int count = 1;
   while (count <= 15) {
  System.out.println(count % 2 == 1 ? "***" : "+++++");
   ++count;
     }     // end while
  }     // end main
 }
```

a.15 times ***   b.15 times +++++

c.8 times *** and 7 times +++++   d.Both will print only once

27 Which of the following tool is used to generate API documentation in HTML format from doc comments in source code?

a.javap tool   b.javaw command   c.Javadoc tool   d.javah command

28 Which of the following creates a List of 3 visible items and multiple selections abled?

a. new List(false, 3) b. new List(3, true) c. new List(true, 3) d. new List(3, false)

29 Which of the following for loop declaration is not valid?

a. for (int i = 99; i >= 0; i / 9)   b. for (int i = 7; i <= 77; i += 7)

c. for (int i = 20; i >= 2; - -i)   d. for (int i = 2; i <= 20; i = 2* i)

30 Which method of the Class.class is used to determine the name of a class represented by the class object as a String?

a. getClass()   b.intern()   c. getName()   d. toString()

31 Which of these is a standard interface for serial data transmission?

a.ASCII   b.RS232C   c.2   d.Centronics

32 Which type of topology is best suited for large businesses which must carefully control and coordinate the operation of distributed branch outlets?

a.Ring   b.Local area   c.Hierarchical   d.Star

33 "Parity bits" are used for which of the following purposes?

a.Encryption of data   b.To transmit faster

c.To detect errors   d.To identify the user

34 What kind of transmission medium is most appropriate to carry data in a computer network that is exposed to electrical interferences?

a.Unshielded twisted pair   b.Optical fiber   c.Coaxial cable   d.Microwave

35 The location of a resource on the internet is given by its?

a.Protocol   b.URL   c.E-mail address   d.ICQ

36 The term HTTP stands for

a.Hyper terminal tracing program   b.Hypertext tracing protocol

c.Hypertext transfer protocol   d.Hypertext transfer program

37 A proxy server is used as the computer

a.with external access   b.acting as a backup

c.performing file handling   d.accessing user permissions

38 Which one of the following would breach the integrity of a system?

a.Looking the room to prevent theft

b.Full access rights for all users

c.Fitting the system with an anti-theft device

d.Protecting the device against willful or accidental damage

39 Which software prevents the external access to a system?

a.Firewall   b.Gateway   c.Router   d.Virus checker

40 Which one of the following is a valid email address?

a.javat@point.com   b.gmail.com   c.tpoint@.com   d.javatpoint@books

41 Which number system has a base 16

a.Hexadecimal   b.Octal   c.Binary   d.Decimal

42 What is a digital-to-analog converter?

a.It stores digital data on the computer.

b.It converts alternating current (AC) into direct current (DC).

C.It converts electrical power into mechanical power.

d.It takes the digital data from an audio CD and converts it to a useful form.

43 The following hexadecimal number $(1E.43)_{16}$ is equivalent to

a.$(36.506)_8$ b.$(36.206)_8$ c.$(35.506)_8$ d.$(35.206)_8$

44 How many entries will be in the truth table of a 4-input NAND gate?

a.6   b.8   c.32   d.16

45 Convert $(312)_8$ into decimal

a.$(201)_{10}$ b.$(202)_{10}$ c. $(203)_{10}$ d.$(204)_{10}$

46 Which of these sets of logic gates are known as universal gates?

a.XOR, NAND, OR   b.OR, NOT, XOR   c.NOR, NAND, XNOR   d. NOR, NAND

47 What is the addition of the binary number 101001+ 010011=?

a.010100   b.111100   c.000111   d.101110

48 A digital circuit that can store only one bit is a

a.Register   b.NOR gate   c.Flip-flop   d.XOR gate

49 The queue is also known as

a.Flash memory   b.FILO memory   c.Flash memory   d.FIFO memory

50 The representation of octal number $(532.2)_8$ in decimal is _____

a) $(346.25)_{10}$ b) $(532.864)_{10}$ c) $(340.67)_{10}$ d) $(531.668)_{10}$

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