VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10AE11	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	19.11.2022	**Part:**	III	**Semester:**	**I**
Duration:	2 Hours	**Academic Year:**	2022-23	**Max. Marks:**	**50**
Study Component:		Ability Enhancement Course			
Course Title:	**DISCRETE MATHEMATICS**				

SECTION – A (Remembering)

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

1 Individual Objects in a set are called **CO1**
A) Element B) set C) list D) None of above

2 A group or collection of objects is called **CO1**
A) Element B) set C) list D) group

3 If A={p,q,r,s}, B={r,s,t,u}, then A\B is **CO1**
(A){p,q} (B){t,u} (C){r,s} (D){p,q,r,s}

4 A finite non-empty set of symbols is called _____. **CO1**
A. alphabet B. letter C. string D. language

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

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

7 Find the generating function for the infinite sequence 1, 3, 9, 27….Where 3 is a fixed constant **CO4**
A. 1/1-3z B.1/1-2z C. 1-3z D.3z-1

8 _____is also a useful way for defining objects that have a repeated similar structural form. **CO4**
A. Recursion B. Recursive C. Recurrence D. Function

9 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_____ **CO4**
A. Factorial B. Fibonacci C. Recurrence D. Function

10 A _____ of integers is a function from the natural number to integers **CO4**
A. Sequence B. series C. Function D. none

SECTION – B (Remembering)

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

11 Define Permutation **CO1**

12 Define Combination **CO1**

13 Define Fibonacci series **CO4**

14 Write the term Recursion **CO4**

15 Write the formula for Generating function **CO4**

16 Define Mathematical Induction **CO4**

17 Write the term: sequence. **CO4**

SECTION – C (Understanding)

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

18 If n(A) = 25, n(B) = 40, n(A∪B) = 50 and n(B') = 25, find n(A∩B) and n(U). **CO1**

19 In a class, all students take part in either music or drama or both. 25 students take part in music, 30 students take part in drama and 8 students take part in both music and drama. Find (i) The number of students who take part in only music and only drama (ii) The total number of students in the class. **CO1**

20 Find the recurrence relation, satisfying $y^n = A(3)^n+B(-2)^n$ **CO2**

21 Find the generating function for the infinite sequence 1, α, α^2, α^3……. Where α is a fixed constant **CO2**

22 Suppose that f is defined recursively by f(0) = 2, f(n+1) = 3f(n) +2, Find f(1),f(2),f(3),f(4) **CO4**

SECTION – D (Applying)

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

23 a) Difference between permutation and combination **CO1**

b) In how many ways can a team of 3 boys and 3 girls be selected from 5 boys and 4 girls?

24 Show that the sum of the first n integers is n(n+1)/2 for all n **CO4**

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Duration:	2 Hours	**Academic Year:**	2022-23	**Max. Marks:**	**50**
Study Component:		Ability Enhancement Course			
Course Title:	**OPERATIONS RESEARCH**				

SECTION – A (Remembering)

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

1 Objective of linear programming for an objective function is to **CO2**
A. maximize or minimize B. Subset or proper set modeling
C. row or column modeling D. adjacent modeling

2 Shaded area to represent solution set is classified as **CO2**
A. closed half space B. open half space C. positive full space D. negative full space

3 In linear programming, most popular non-graphical procedure is classified as **CO2**
A, linear procedure b. non-graphical procedure c. graphical procedure d. simplex method

4 The two forms of LPP are _____. **CO2**
a. standard form and canonical form. b. standard form and general form.
c. matrix form and canonical form. d. matrix form and standard form.

5 The Hungarian method for solving an assignment problem can also be used to solve **CO4**
(a)a transportation problem (b) a traveling salesman problem (c)both (i)and(ii)
(d)only(ii)

6 In an assignment problem, **CO4**
(a) One agent can do parts of several tasks (b) One task can be done by several agents
(c) Each agent is assigned to its own best task(d) None of the above

7 . If number of rows and columns equal to number of allocated zero's then the problem is called------- **CO4**
a. Balanced b. unbalanced c. optimum d. not optimum

8 The unbalanced assignment problem is said to be ---------- **CO4**
a. rows=columns b. rows≠columns c. order of matrix=assigning zero's d. none

9 On travelling salesman problem staring city and ending city should be---------- **CO4**
a. Same b. not same c. different d. none

10 .In assignment problem if number of rows is greater than column then _____. **CO4**
a. dummy column is added . b.dummy row added . c. row with cost 1 is added.
d.column with cost 1 is added.

SECTION – B (Remembering)

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

11 Define LPP **CO2**

12 How many variables are need to solve graphical method **CO2**

13 Define Assignment problem **CO4**

14 Define unbalanced Assignment problem **CO4**

15 Define maximization case in Assignment problem **CO4**

16 List any two advantages of LPP **CO4**

17 If Max Z = 5x1 + 10x2 the feasible points are (5,7),(10,0) and (7,8) what will be the answer? **CO4**

SECTION – C (Understanding)

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

18 Explain procedure to solve graphical method **CO2**

19 Solve graphically the following LPP **CO2**

Maximize Z = $300X_1 + 200 X_2$

Subject to

$5X_1 + 2X_2 \leq 180$

$3X_1 + 3X_2 \leq 135$

and $X_1, X_2 \geq 0$

20 Solve the Assignment Problem **CO4**

Jobs

		J1	**J2**	**J3**	**J4**	**J1**
	A	8	4	2	6	1
	B	0	9	5	5	4
Persons	**C**	3	8	9	2	6
	D	4	3	1	0	3
	E	9	5	8	9	5

21 Solve the Assignment Problem

Jobs

		J1	**J2**	**J3**	**J4**
	A	10	5	13	15
	B	3	9	18	3
Persons	**C**	10	7	3	2
	D	5	11	9	7

CO4

22 Explain Hungarian algorithm **CO4**

SECTION – D (Applying)

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

23 Use graphical methods to solve the LPP **CO4** **CO2**

Maximum $Z= 5x_1 + 8x2$

Subject to

$15x_1 +10 x_2 \leq 180$

$10x_1 + 20x_2 \leq 200$

$15x_1 + 20x_2 \leq 210$

And $x_1, x_2 \geq 0$

24 Solve the Assignment Problem to get Maximize profit **CO4**

Territories

		T1	**T2**	**T3**	**T4**
	A	60	50	40	30
	B	40	30	20	15
Persons	**C**	40	20	35	10
	D	30	30	25	20

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Course Code:	10CT11	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	15.11.2022	**Part:**	III	**Semester:**	**I**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Core Course			
Course Title:	**PROGRAMMING IN C**				

SECTION – A (Remembering)

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

1 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

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

3 The structure combines variables of_____. **CO4**
A. similar data types. B. dissimilar data types. C. unsigned data types. D. signed data types.

4 The pointers can be used to achieve _____. **CO4**
A. call by function. B. call by reference. C. call by name. D. call by procedure

5 Pointer is variable that stored _____. **CO5**
A. an address value represented in hexadecimal.
B. an address value represented in octal.
C. the address of another variable.
D. an address value represented in binary.

6 C language is available for which of the following Operating Systems? **CO5**
A. DOS B. Windows C.Unix D.All of these

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

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

9 A file opened in r mode can be_____. **CO5**
A. read AND write. B. only read. C. only write. D. only close.

10 The goto statement transfers the control _____. **CO5**
A. any place in the program**.** B. exit C. counter loop D. file.

SECTION – B (Remembering)

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

11 Define Function **CO4**

12 Give any two advantages of function **CO4**

13 Define structure **CO5**

14 Define union **CO5**

15 Define file **CO5**

16 If p=&x[0] (1000) what is the answer of p+1? **CO5**

17 Give different types of file modes **CO5**

SECTION – C (Understanding)

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

18	Explain about structure	**CO4**
19	Explain about Arrays of structure with example	**CO4**
20	Explain about scope, lifetime of variables	**CO5**
21	Write short notes on pointer	**CO5**
22	Write procedure to open and close a file	**CO5**

SECTION – D (Applying)

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

23	Write a C program to get employee details using structure	**CO4**
24	Explain about various file operations	**CO5**

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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10CT12	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	18.11.2022	**Part:**	III	**Semester:**	**I**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Core Course			
Course Title:	**DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION**				

SECTION – A (Remembering)

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

1 The _____ format is usually used to store data. **CO4**
a) BCD b) Decimal c) Hexadecimal d) Octal

2 The 8-bit encoding format used to store data in a computer is _____ **CO4**
a) ASCII b) EBCDIC c) ANCI d) USCII

3 Which memory device is generally made of semiconductors? **CO4**
a) RAM b) Hard-disk c) Floppy disk d) Cd disk

4 The small extremely fast, RAM's are called as _____ **CO4**
a) Cache b) Heaps c) Accumulators d) Stacks

5 The decoded instruction is stored in _____ **CO5**
a) IR b) PC c) Registers d) MDR

6 In the case of, Zero-address instruction method the operands are stored in _____ **CO5**
a) Registers b) Accumulators c) Push down stack d) Cache

7 The addressing mode, where you directly specify the operand value is _____ **CO5**
a) Immediate b) Direct c) Definite d) Relative

8 Individual control words of the micro routine are called as _____ **CO5**
a) Micro task b) Micro operation c) Micro instruction d) Micro command

9 The DMA controller has _____ registers. **CO5**
a) 4 b) 2 c) 3 d) 1

10 The special memory used to store the micro routines of a computer is _____ **CO5**
a) Control table b) Control store c) Control mart d) Control shop

SECTION – B (Remembering)

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

11 List the types of shift registers **CO4**

12 Give the types modes in Parallel-In-Serial-Out? **CO4**

13 Define opcode and operand. **CO5**

14 List the types of Instruction set formats. **CO5**

15 Define MAR? **CO5**

16 Define MDR? **CO5**

17 What is meant by Micro Architecture? **CO5**

SECTION – C (Understanding)

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

18 Brief a note bi-directional shift register? **CO4**

19 Discuss about the Universal shift register? **CO4**

20 Describe the types of bus structures used in a computer? **CO5**

21 Write note on zero instruction format? **CO5**

22 Discuss on the steps involved execution instruction cycle in computer? **CO5**

SECTION – D (Applying)

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

23 Explain any three types of shift registers. **CO4**

24 Explain the computer architecture and its roles? **CO5**

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DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10CT31	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	15.11.2022	**Part:**	III	**Semester:**	**III**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Core Course			
Course Title:	**COMPUTER NETWORKS**				

SECTION – A (Remembering)

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

1 All of the parts in a computer talk to each other by sending _____ **CO4**
A. digital signals B. smoothly varying signal waves
C. analog signals D. light

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

3 Which of the following is not a standard synchronous communication protocol? **CO4**
A. SDLC B. SLIP C. SMTP D. PAS.

4 IPV6 has _____ bit addresses. **CO4**
A. 32 B. 4 C. 128 D. variable

5 The amount of uncertainty in a system of symbol is called _____ **CO5**
A. bandwidth B. entropy C. loss D. Quantum

6 The inner core of an optical fiber is _____ in composition. **CO5**
A. glass or plastic B. bimetallic C. copper D. liquid

7 Which transmission media has the highest transmission speed in a network? **CO5**
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 Network layer. **CO4**
12 What is meant by IP? **CO4**
13 Define Protocols? **CO5**
14 Expend : E-mail , WWW, **CO5**
15 Define Cryptography. **CO5**
16 Define Encryption? **CO5**
17 Explain digital signature. **CO5**

SECTION – C (Understanding)

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

18 Brief a note on design issue of Network layer. **CO4**
19 Explain the IP address. **CO4**
20 Difference between TCP and UDP **CO5**
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 routing Algorithm **CO4**
24 Enumerate on the characteristics of DNS **CO5**

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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10CT32	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	18.11.2022	**Part:**	III	**Semester:**	**III**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Core Course			
Course Title:	**COMPUTER GRAPHICS**				

SECTION – A (Remembering)

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

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

2 A procedure that identifies those portions of a picture that are either inside or outside of a specified region or space is called ___ **CO4**
a) composite transformation b) Clipping c) Areafill d) floodfill algorithm

3 To set line width attributes in a PHIGS package, ____ function is used **CO4**
a) setLineWidthScale Factor(lw) b) setLinethickness(lw) c) setpolylineWidth(lw) d) setLinewidth(lw)

4 The rectangle portion of the interface window that defines where the image will actually appear is called __ **CO4**
a) Viewport b) clipping window c) screen coordinate d)transform viewing

5 Coordinates of a viewport are known as ____ **CO5**
a) world coordinates b) polar coordinates c) screen coordinates d) Cartesian coordinates

6 Translation of a two dimensional point can be done by adding ____ **CO5**
a) Translation distances b) translation difference c) translation points d) repositioning

7 In __ mode the application program initiates the data entry where the input values are received **CO5**
a) Request b) Sample c) Event d) Locator

8 The sweep representation of an object refers to the ____ **CO5**
2D representation b) 3D representation c) 4D representation d) none of these

9 The method of varying the intensity of objects according to their distance from the viewing position is called ___ **CO5**
a) parallel projection b) perspective projection c) depth cueing d) surface rendering

10 ___ is used to add realism to displays by setting surface intensity of objects according to light conditions in a scene. **CO5**
a) surface identification b) surface rendering c) exploded view d)3D image

SECTION – B (Remembering)

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

11 Give any two viewing functions in 2D? **CO4**
12 List the types of clipping? **CO4**
13 Define point clipping? **CO5**
14 List the types of Input functions? **CO5**
15 Define Projection? **CO5**
16 Define Depth cueing? **CO5**
17 Give three dimensional viewing transformation pipeline? **CO5**

SECTION – C (Understanding)

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

18 Distinguish point clipping and line clipping? **CO4**
19 Critically analyze input functions used in graphical user interfaces? **CO4**
20 Brief a note on types of input modes graphical user interfaces? **CO5**
21 Summarize on Window-To-Viewport coordinate Transformation? **CO5**
22 Discuss on types of projection methods? **CO5**

SECTION – D (Applying)

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

23 Explain in detail on clipping and its types? **CO4**
24 Enumerate on interactive picture construction techniques? **CO5**

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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10CT51	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	16.11.2022	**Part:**	III	**Semester:**	**V**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Core			
Course Title:	**PYTHON PROGRAMMING**				

SECTION – A (Remembering)

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

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

2 What arithmetic operators cannot be used with strings? **CO4**
A. + B. * C. – D. All of the mentioned

3 Which function is use to find length of the string. **CO4**
A. find() B. len() C. index() D. join()

4 What is a variable defined outside a function referred to as? **CO4**
A. A static variable B. A global variable
C. A local variable D. An automatic variable

5 What is the output for the below program **CO5**
x, y, z = "Orange", "Banana", "Cherry"
print(y)
A. Orange B Banana C. Cherry D. all the above

6 Which is the following is an Arithmetic operator in Python? **CO5**
A. // (floor division) operator B. & (binary and) operator
C. ~ (navigation) operator D. >> (right shift) operator

7 What will be the output of the following Python statement? >>>2**3 **CO5**
A. 6 B. 8 C.7 D. 9

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 Tuple in python **CO4**
12 Define random number with example **CO4**
13 What is Dictionary with example? **CO5**
14 Define Sparse matrices **CO5**
15 Define Counting letters **CO5**
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. **CO4**
19 Write a Nested list with example. **CO4**
20 Explain Dictionary methods in python with example **CO5**
21 Explain about pickling in python with example **CO5**
22 Write a Exceptions in python **CO5**

SECTION – D (Applying)

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

23 Construct the cloning lists and List parameter with example. **CO4**
24 Write a python program using matrix addition and substation **CO5**

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DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10CT52	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	17.11.2022	**Part:**	III	**Semester:**	**V**
Duration:	2 Hours	**Academic Year:**	2022-23	**Max. Marks:**	**50**
Study Component:		Core			
Course Title:	**JAVA PROGRAMMING**				

SECTION – A (Remembering)

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

1 . _____ is at the top of the exception class hierarchy. **CO4**
A. try. B. throwable. C. exception class. D. catch.

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

3 Which method will contain the body of the thread? **CO4**
A. run () B. start () C. stop () D. main ()

4 Runnable is _____. **CO4**
A. Class B. Method C. Variable D. Interface

5 Graphics object can only be drawn on _____. **CO5**
A. view. B. windows. C. applet. D. zoom.

6 An _____ is a special kind of Java program that is designed to be transmitted over the internet. **CO5**
A. viewlet. B. applet. C. servlet. D. object.

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

8 Which of these Exceptions is thrown by remote method? **CO5**
A. RemoteException B. InputOutputException
C. RemoteAccessException D. RemoteInputOutputException

9 _____ is an applet tag. **CO5**
A. (applet). B. >applet<. C. <applet>. D. <applet tag>.

10 When we invoke repaint() for a JAVA.awt.Component object, the AWT invokes the method_____. **CO5**
A. update(). B. draw(). C. show(). D. paint().

SECTION – B (Remembering)

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

11 Define Multithreading **CO4**
12 Define Multitasking **CO4**
13 Write about awt package **CO5**
14 Write any 5 HTML tag **CO5**
15 Define RMI **CO5**
16 Define Servlet **CO5**
17 Difference between Applet and AWT **CO5**

SECTION – C (Understanding)

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

18 Difference between Multithreading and Multitasking **CO4**
19 Explain about the Thread Priority **CO4**
20 Define Applet. Write about local and remote applet **CO5**
21 Write a simple program in applet using java with Explanation **CO5**
22 Explain about RMI **CO5**

SECTION – D (Applying)

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

23 Explain the Life Cycle of Thread **CO4**
24 Explain the Life Cycle of Applet **CO5**

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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10CT53	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	18.11.2022	**Part:**	III	**Semester:**	**V**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Core			
Course Title:	**SOFTWARE ENGINEERING**				

SECTION – A (Remembering)

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

1 Which term is used to define testing? **CO4**
a) Evaluating deliverable to find errors b) finding broken code
c) a stage of all projects d) Configuration Management

2 Which of these are white box testing techniques? **CO4**
a) Statement coverage testing b) Decision coverage testing c) Data flow testing
d) All of the above

3 Which of the below is not a part of the Test Plan? **CO4**
a) Schedule b) Risk c) Incident reports d) Entry and exit criteria

4 Cyclomatic complexity is? **CO4**
a) White-box testing b) Black box testing c) Grey box testing d) cleanroom testing

5 _____ abstraction refers to a sequence of instructions that have a specific and limited function. a) Data b) Procedural c) functional d) datastructure **CO5**

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

7 Which software project sizing approach develop estimates of the information domain characteristics? **CO5**
a) Function point sizing b) Change sizing c) Standard component sizing
d) Fuzzy logic sizing

8 How many forms exists of Barry Boehm's COCOMO Model? **CO5**
a) Two b) Three c) Four d) No form exists

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

10 ._____ is also called risk estimation which attempts to rate the nature of risks. **CO5**
a) risk identification b) risk projection c) risk refinement d) risk mitigation

SECTION – B (Remembering)

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

11 Give any two types of white box testing strategies? **CO4**
12 Define verification? **CO4**
13 Define software reliability? **CO5**
14 Define Debugging? **CO5**
15 List the types of cost estimation techniques? **CO5**
16 What is meant by cyclomatic complexity? **CO5**
17 List the McCall's quality factors? **CO5**

SECTION – C (Understanding)

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

18 Brief a note on orthogonal testing? **CO4**
19 Critically analyze basis path testing. **CO4**
20 Discuss on problem based decomposition and process based decomposition **CO5**
21 Write a short note Delphi cost estimation method. **CO5**
22 Write a note project scheduling? **CO5**

SECTION – D (Applying)

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

23 Explain types of decomposition techniques. **CO4**
24 Explain in detail Constructive cost model and its characteristics. **CO5**

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10EP5A	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	19.11.2022	**Part:**	III	**Semester:**	**V**
Duration:	2 Hours	**Academic Year:**	2022-23	**Max. Marks:**	**50**
Study Component:		Elective			
Course Title:	**CLOUD COMPUTING**				

SECTION – A (Remembering)

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

1 _____ Model attempts to categorize a cloud network based on four dimensional factors. **CO4**
A. Cloud Square B. Cloud Service C.Cloud Cube D. All of the mentioned

2 Most of the cloud architectures are built on this type of architecture. **CO4**
A. skeleton B. grid C. linear D.template

3 A _____ is a facility that is a self-contained semiconductor assembly line. **CO4**
A. fab B. touch C. rep D. all of the mentioned

4 . _____ is the most refined and restrictive service model. **CO4**
A. IaaS B. CaaS C. PaaS D. All of the mentioned

5 Cloud model relies on **CO5**
A. communication api B. middleware C. web documents D. embedded device

6 Amazon AWS Consists of following services **CO5**
A. iaas B. paas C. saas D. all of above

7 Which of the following is the first level applicable attribute? **CO5**
A. Availability B. Monitoring C. Configuring D. All of the mentioned

8 Virtualizing the client desktop can happen in ___ ways. **CO5**
A. Two B. Three C. Four D. None of the above

9 For the _____ model, the security boundary may be defined for the vendor to include the software framework and middleware layer. **CO5**
A. SaaS B. PaaS C. IaaS D. All of the mentioned

10 Which of the following is related to the service provided by Cloud? **CO5**
A. Sourcing B. Ownership C. Reliability D. AaaS

SECTION – B (Remembering)

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

11 List out the Cloud services development tools **CO4**

12 Write about the Google App Engine **CO4**

13 Define cloud governance **CO5**

14 What are security risks of cloud computing? **CO5**

15 Define Data Security **CO5**

16 Define Encryption **CO5**

17 What are the security concerns in cloud computing? **CO5**

SECTION – C (Understanding)

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

18 Explain about the following cloud services development tools: Amazon and IBM **CO4**

19 Write about Pros and cons of cloud service development. **CO4**

20 Explain about security design principle **CO5**

21 Explain about cloud governance **CO5**

22 Write about risks and security concerns of cloud. **CO5**

SECTION – D (Applying)

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

23 Explain about the Discovering cloud services and tools **CO4**

24 Explain about Key Management and Encryption **CO5**

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DEPARTMENT OF COMPUTER SCIENCE

Course Code:	10GE11	**Programme:**	B.A. / B.Sc.	**CIA:**	**III**
Date:	17.11.2022	**Part:**	IV	**Semester:**	**I**
Duration:	2 Hours	**Academic Year:**	2022 - 23	**Max.Marks:**	**50**
Study Component:		Generic Elective Course			
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 9) 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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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10SB51	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	21.11.2022	**Part:**	IV	**Semester:**	**V**
Duration:	1 Hour	**Academic Year:**	2022 - 23	**Max. Marks:**	**50**
Study Component:		Skill Based			
Course Title:	**COMPETITIVE EXAMINATION FOR IT**				

SECTION – A

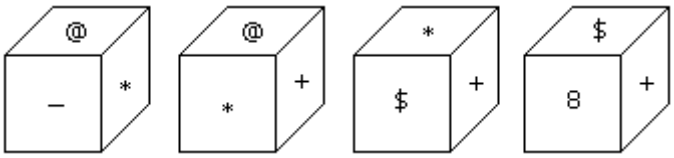
Answer **ALL** the Questions: **(50 X 1 = 50 Marks)**

1 Find odd man out a) oracle b) basic c) pascal d) cobol **CO5**

2 Which of the following Computer language is written in binary Codes only? **CO5**

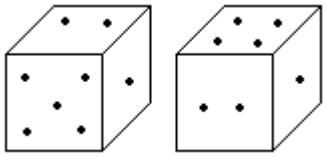
a) pascal b) machine language c) C d) C#

3 Which symbol will be on the face opposite to the face with symbol * ? **CO5**



a) @ b) $ c) 8 d) +

4 Two positions of dice are shown below. How many points will appear on the opposite to the face CO5ntaining 5 points? **CO5**



a) 3 b) 1 c) 2 d) 4

5 He always……to prove that the earth revolves round the sun. **CO5**

a) tried b) tries c) was trying d) is trying

6 He saw me by chance and…….the car. **CO5**

a) stop b) stopped c) stops d) was stopping

7 Read the passage carefully then answer the following questions **CO5**

Harry who is a professional had a fearful dream. He found himself in a land where he saw some slug-like animals with tentacles living on human bodies. The people tolerated these creatures because after many years they would grow into bulls which then be used for transportation. Harry noticed that he himself was covered with these creatures and he woke up screaming.

In the dream, Harry found the creatures

a) in his office b)in a different land c) in his kitchen d) in a different planet

8 what did the creatures look like? **CO5**

a)slug-like animals with horns b)insects with wings c) insects with tentacles

d) slug-like animals with tentacles

9 Harry's dream was fearful because **CO5**

a) It brought him face to face with elephants
b) He found himself on a land full of snakes
c) He forgets the way home
d) He saw creatures feeding on human bodies

10 The creatures will grow into bulls which then will be used for **CO5**

a) digging b) hunting c) transportation d) flying

11 Harry woke up **CO5**

a) dancing b) screaming c) thinking d) singing

12 ..... Indus River is the longest river in India. **CO5**

a) The b) An c)A d) None of the above

13 . Peter went to.... United States to spend holidays. **CO5**

a) the b) a c) either A or B d)no article

14 The car travelled 150 kilometers ..... hour. **CO5**

a)the b)an c)a d)no article

15 I saw a _____ of Cows in the field. **CO5**

A) group B) herd C) swarm D) flock

16 The Earth moves round the Sun. **CO5**

A. simple past B. past perfect C. simple present D. past future perfect

17 Rain falls from the cloud. **CO5**

A. past CO5ntinuous B. future CO5ntinuous C. simple present D. present CO5ntinuous

18 The train had left. **CO5**

A. past perfect B. past CO5ntinuous C. past future D. simple present

19 It will rain soon. **CO5**

A. simple past B. simple present C. past future D. simple future

20 Suganya is typing. **CO5**

A. simple past B. simple present C. present Continuous D. past perfect

21 I shall visit the book fair tomorrow. **CO5**

A. simple past B. simple present C. simple future D. future Continuous

22 It is very hot today? **CO5**

A. isn't it? B. wasn't? C. was it? D. is it?

23 Suganya will not come today? **CO5**

A. shall she? B. will she? C. won't she? D. none of these

24 Indian team has beaten the Australian team. **CO5**

A. does it? B. hasn't it? C. has it? D. is it?

25 None of the food was wasted. **CO5**

A. wasn't it? B. isn't it? C. was it? D. is it?

26 Let us play. **CO5**

A. can we? B. do we? C. shall we? D. shalln?t we?

27 Alfred buys an old sCO5oter for Rs. 4700 and spends Rs. 800 on its repairs. If he sells the sCO5oter for Rs. 5800, his gain percent is: **CO5**

A. $4\frac{4}{7}\%$

B. $5\frac{5}{11}\%$

C. 10%

D. 12%

28 The CO5st 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 **CO5**

29 If an article sold for Rs 100 then there is a gain of Rs 20, which of the following is the gain percent? **CO5**

a. 25% b. 22% c. 20% d. 16 . %

30 Incest: disease::war:? **CO5**

a)Army b)defeat c)destruction d)none

31 Book:Cover::painting: ? **CO5**

a) page b) wall c) Color d) painting

32 Water:dam::Trade”:? **CO5**

a) money b) commerce c)economy d) trade policy

33 12 is related to 36 in same way 17 is **CO5**

a) 34 b)51 c)21 d) 71

34 Travels related to journey in the same way sailor related to **CO5**

a) crew b)ship c)water d) voyage

35 TALE:LATE::CAFÉ:? **CO5**

a) FACE b) CEFA c)FAEC d)EFAC

36 Odometer is related to speed Compass is **CO5**

a) direction b) drawing c) picture d) moon

37 Arrange in ascending order the units of memory TB, KB, GB, MB **CO5**

A.TB>MB>GB>KB B.MB>GB>TB>KB C.TB>GB>MB>KB D.GB>MB>KB>TB

38 Eight Bits make up a **CO5**

A.byte B.megabyte C.kilobyte D.None

39 Which one of these is also known as read/write memory? **CO5**

A.ROM B.RAM C.DVD D.Hard Disk

40 The printed output from a CO5mputer is called **CO5**

A.CO5py B.Soft CO5py C.Hard copy D.Paper

41 Which device is required for the Internet connection? **CO5**

(A) Joystick B) Modem C) CD Drive d) NIC Card

42 Which of the following of the TCP/IP protocols is used for transferring files from one machine to another? **CO5**

A) FTP B) SMTP C) SNMP D) RPE

43 Which one of these stores more data than a DVD? **CO5**

A.CD Rom B.Floppy C.Blue Ray Disk D.Red Ray Disk

44 Suppose X and Y are two numbers such that, X + Y = 36 and X * Y = 248. Find the sum of 1/x + 1/y **CO5**

a)9/62 b)65/248 c)248/36 d) 212

45 Five CO5nsecutive numbers add up to 335. What will be the sum of largest and smallest number? **CO5**

a. 134 b. 150 c. 174 d. 226

46 A farm rears geese and dogs. The head count in the farm is 84 and the leg CO5unt is 282. How many geese are there? **CO5**

a. 27 b. 30 c. 54 d. 57

47 Find average of natural numbers from 1 to 67? **CO5**

a. 33.5 b. 34 c. 50 d. 67

48 Which OOPS concept means exposing only necessary information to the calling functions? **CO5**

a. Polymorphism b. Encapsualtion c. Inheritence d. Abstraction

49 Which oops concept is used as reuse mechanism? **CO5**

a. Abstraction b. Dynamic binding c. Inheritance d. Encapsulation

50 Which constructor has no parameters? **CO5**

a. Null constructor b. Parametric constructor c. copy constructor

d. Default constructor

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DEPARTMENT OF COMPUTER SCIENCE					
Course Code:	10SE31	**Programme:**	B.Sc. Computer Science	**CIA:**	**III**
Date:	21.11.2022	**Part:**	IV	**Semester:**	**III**
Duration:	1 Hour	**Academic Year:**	2022 - 23	**Max. Marks:**	**25**
Study Component:		Skill Enhancement Course			
Course Title:	**OPERATING SYSTEMS**				

SECTION – A

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

1 Which of the following condition is required for a deadlock to be possible? **CO4**
a) mutual exclusion
b) a process may hold allocated resources while awaiting assignment of other resources
c) no resource can be forcibly removed from a process holding it
d) all of the mentioned

2 Which one of the following is the deadlock avoidance algorithm? **CO4**
a) banker's algorithm
b) round-robin algorithm
c) elevator algorithm
d) karn's algorithm

3 To avoid deadlock _____ **CO4**
a) there must be a fixed number of resources to allocate
b) resource allocation must be done only once
c) all deadlocked processes must be aborted
d) inversion technique can be used

4 For non-sharable resources like a printer, mutual exclusion _____ **CO4**
a) must exist
b) must not exist
c) may exist
d) none of the mentioned

5 What is an operating system? **CO4**
a) interface between the hardware and application programs
b) collection of programs that manages hardware resources
c) system service provider to the application programs
d) all of the mentioned

SECTION – B

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

6 Define deadlock **CO4**
7 Define mutual exclusion **CO4**
8 List out reasons of occur deadlock **CO4**
9 Define process **CO4**

SECTION – C

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

10 Explain the process view point **CO4**
11 Explain the reasons can occur deadlock **CO4**

SECTION – D

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

12 Explain about avoid and recovery of deadlock **CO4**
13 Explain the procedure to prevent deadlock **CO4**

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

Course Code:	ESUG51	**Programme:**	B.A/B.Sc./B.Com. /B.Com CA	**CIA:**	**III**
Date:	17.11.2022	**Part:**	V	**Semester:**	**V**
Duration:	2 Hours	**Academic Year:**	2022-23	**Max. Marks:**	**50**
Study Component:		**EVS**			
Course Title:	**ENVIRONMENTAL STUDIES**				

SECTION – A (Remembering)

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

1 June 5 is celebrated as:
a. World environment day b. World water day
c. World forest day d. World ocean day

2 During photosynthesis plants are produced
a. Nitrogen b. Methane c. Oxygen d. Hydro carbons

3 The organisms, which feed on dead organisms, wastes of living organisms are called
a. Chemotrophes b. Carnivores c. Detritivores d. Decomposers

4 The over nourished lakes with 'algal blooms' are called
a. Eutrophic b. Oligotrophic c. Dystrophic d. Meromictic

5 Western Ghats are rich in endemic species of
a. Birds b. Lions c. Amphibians d. Turtles

6 Red Data Book giving the list of endangered species of plants and animals is published by…….
a. IUCN b. BNHS c. ZSI d. SACON

7 Oil in water affects fish by affecting
a. Gills b. Scales c. Eyes d. None of these

8 Bhopal gas tragedy occurred due to leakage of
a. MIC b. DDT c. SO_2 d. Dioxins

9 Which of the following gases has maximum contribution to enhanced greenhouse effect?
a. CFC's b. CH_4 c. CO_2 d. N_2O

10 The 3-R approach of resources use stands for Reduce, Reuse and ……..
a. Repair b. Recycle c. Recover d. Recommend

SECTION – B (Remembering)

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

11 Define the term "Environment"
12 Bring out the abiotic components of ecosystem.
13 What are herbivores?
14 Define the term "Biodiversity''
15 What are pollutants? Cite examples.
16 What do you meant by population explosion?
17 Expand: HIV.

SECTION – C (Understanding)

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

18 Summaries the benefits of environmental education.
19 Define and explain the term food web.
20 Write a brief account on biodiversity hotspots of India.
21 Discuss briefly the adverse effects and control of water pollution.
22 Give a short note on AIDS and its transmission.

SECTION – D (Applying)

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

23 Write an essay on renewable and non-renewable resources
24 Discuss your own contribution and perspectives to save the environment.

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