

#### (Booklet Number)

4060005381

Duration: 2 Hours No. of MCQ: 100 Full Marks: 120

#### INSTRUCTIONS

- All questions are of objective type having four answer options for each.
- 2. Category-1: Carries 1 mark each and only one option is correct. In case of incorrect answer or any combination of more than one answer, ¼ mark will be deducted.
- 3. Category-2: Carries 2 marks each and one or more option(s) is/are correct. If all correct answers are not marked and no incorrect answer is marked, then score = 2 × number of correct answers marked ÷ actual number of correct answers. If any wrong option is marked or if any combination including a wrong option is marked, the answer will be considered wrong, but there is no negative marking for the same and zero mark will be awarded.
- 4. Questions must be answered on OMR sheet by darkening the appropriate bubble marked A, B, C, or D.
- 5. Use only Black/Blue ink ball point pen to mark the answer by filling up of the respective bubbles completely.
- 6. Write question booklet number and your roll number carefully in the specified locations of the OMR Sheet. Also fill appropriate bubbles.
- 7. Write your name (in block letters), name of the examination center and put your signature (as is appeared in Admit Card) in appropriate boxes in the OMR Sheet.
- 8. The OMR sheet is liable to become invalid if there is any mistake in filling the correct bubbles for question booklet number/roll number or if there is any discrepancy in the name/signature of the candidate, name of the examination center. The OMR Sheet may also become invalid due to folding or putting stray marks on it or any damage to it. The consequence of such invalidation due to incorrect marking or careless handling by the candidate will be the sole responsibility of candidate.
- 9. Candidates are not allowed to carry any written or printed material, calculator, pen, log-table, wristwatch, any communication device like mobile phones, bluetooth device etc. inside the examination hall. Any candidate found with such prohibited items will be reported against and his/her candidature will be summarily cancelled.
- 10. Rough work must be done on the question booklet itself. Additional blank pages are given in the question booklet for rough work.
- 11. Hand over the OMR Sheet to the invigilator before leaving the Examination Hall.

Signature of the Candidate:	tonia principa	
(as in Admit Card)		The second secon
Signature of the Invigilator :		JECN 2023
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### SPACE FOR ROUGH WORK



Category I of Carries I may be easily one opined as convect. In case of mourned antewer or any combinesion of more than one cowers to court will be deducted. Caregoryes, Correct S marks cach and capture applicates and are arrest. If all correct ersayers are not confeed and no facorroot subsystem wheel, then score = 2 x number of New Francis and the State of Courses Servers to the servers of the considered when the cost in the cost of the cost of the some and some state because will be

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Signature of the Candidate:



### Category-1 (Q. 1 to 80)

(Carry 1 mark each. Only one option is correct. Negative marks: - 1/4)

1. What is the output of the follo	owing code snippet?	
#include <stdio.h></stdio.h>	An artifidially intelligent on additionals has	
main(){	the nor in front of it. Which method is used	
int $x = 65$ , $*p = &x$ ;		
void *q=p;		4
char *r=q;	god (C) topseergest respict (C)	
printf("%c",*r);		
}	The keywood frond door not appear in	
(A) A	alo destreda os saecos garvasta eralo edi. (A)	
(C) 65	FOR THE PARTY OF SESSOR DEPTHOS GRAIN AND THE	
	(D) None of the above	
2. ROM is a	(D) the public section of a class.	
(A) Combinational Circuit	THE THE WANTED SAN PROPERTY (SEE 3)	
(C) Sequential Circuit	(B) Static Circuit	
(9) Sequential Circuit	(D) Magnetic Circuit	
3. A computer with a 32 bit wide chips. The smallest memory this	e data bus uses 4 k × 8 static RAM memo	ry
(A) 8 kb	(B) 16 kb	
(C) 24 kb	(D) 32 kb	
	(D) 62 kg	
4. Each stage in pipelining should	be completed with:	
(A) 1	(B) 2 cycle(s).	
(C) 3	(D) 4	
	(D) 4	
5. Relational calculus is a	K-means cleated inclined is an example	
(A) Procedural language		
(C) Data definition language	(B) Non-procedural language	
avianion language	(D) High-level language	
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How many parameters does a d	default constructor require?
	(B) 2 (B) 2 (B)
(A) 1 Tram e videge / Joewin	(D) 3
(C) 0	L. What is the output of the following code said
3000	decreases its speed based on its distance from
. An artificially intelligent car the car in front of it. Which me	ethou is used.
(A) Naive – Bayes	(R) Decision Tree
(C) Linear Regression	(D) Logistic Regression
	As As A Straing
3. The keyword friend does not a	appear in
(A) the class allowing access	s to another class.
(B) the class desiring access	to another class.
(D) the spoots and to 9	class.
(C) the private section of a c	
(C) the private section of a c	
(D) the public section of a cl	lass.
(D) the public section of a cl	nber of level-2 DFD possible if the number of
<ul><li>(D) the public section of a cl</li><li>9. What is the maximum nur processes in level-1 DFD is n</li></ul>	lass.  nber of level-2 DFD possible if the number of
(D) the public section of a close of the public section of the public sectio	nber of level-2 DFD possible if the number of
<ul><li>(D) the public section of a cl</li><li>9. What is the maximum nur processes in level-1 DFD is n</li></ul>	lass.  mber of level-2 DFD possible if the number of a?  (B) 2
(D) the public section of a close of the public section of the pu	nber of level-2 DFD possible if the number of a?  (B) 2  (D) n
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n<sup>2</sup></li> <li>10. The small extremely fast RA</li> </ul>	hass.  The number of level-2 DFD possible if the number of n?  (B) 2  (D) n  AM's are termed as
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n<sup>2</sup></li> <li>10. The small extremely fast RAMA (A) Heaps</li> </ul>	nber of level-2 DFD possible if the number of a?  (B) 2  (D) n  AM's are termed as  (B) Accumulators
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n<sup>2</sup></li> <li>10. The small extremely fast RA</li> </ul>	hass.  The number of level-2 DFD possible if the number of n?  (B) 2  (D) n  AM's are termed as
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n<sup>2</sup></li> <li>10. The small extremely fast RAMA (A) Heaps</li> <li>(C) Stacks</li> </ul>	nber of level-2 DFD possible if the number of a?  (B) 2  (D) n  AM's are termed as  (B) Accumulators  (D) Cache
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n²</li> <li>10. The small extremely fast RAMAN (A) Heaps</li> <li>(C) Stacks</li> <li>11. K-means clustering method</li> </ul>	nber of level-2 DFD possible if the number of a?  (B) 2  (D) n  AM's are termed as  (B) Accumulators  (D) Cache  It is an example of which type of clustering method.
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n<sup>2</sup></li> <li>10. The small extremely fast RAMA (A) Heaps</li> <li>(C) Stacks</li> </ul>	mber of level-2 DFD possible if the number of a?  (B) 2  (D) n  AM's are termed as  (B) Accumulators  (D) Cache  It is an example of which type of clustering method (B) Random
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n²</li> <li>10. The small extremely fast RAMAN (A) Heaps</li> <li>(C) Stacks</li> <li>11. K-means clustering method</li> </ul>	hber of level-2 DFD possible if the number of a?  (B) 2  (D) n  AM's are termed as  (B) Accumulators  (D) Cache  It is an example of which type of clustering method:
<ul> <li>(D) the public section of a classification.</li> <li>9. What is the maximum numprocesses in level-1 DFD is not a classification.</li> <li>(A) n/2</li> <li>(C) n²</li> <li>10. The small extremely fast RA (A) Heaps</li> <li>(C) Stacks</li> <li>11. K-means clustering method (A) Hierarchical</li> </ul>	mber of level-2 DFD possible if the number of a?  (B) 2  (D) n  AM's are termed as  (B) Accumulators  (D) Cache  It is an example of which type of clustering method's (B) Random

JEC	A-202	4	5		
	(C)	Reinforcement learning	(D)	None of the above	<i>(</i> 0)
	(A)	Supervised learning	(B)	Unsupervised learning	(A)
17.	Regr	ression is a type of:	na elac	o son elegiorine MA translera, the required sin	Tal in
	(0)	Inira normal form	(D)	Fourth normal form	(0)
	(C)	Third normal form	(B)	Second normal form	
10.	(A)	First normal form			
16	Whi	ch of the following should no		To visualize the distribution	
	(0)			auto o ell'in enograp ell'al a	II.W III
	(A) (C)	extern	(B)	extends	
15.		ch C keyword is used to exte			((1)
18	387L:	-1 Ol		Mono-alphabetic substitution	(3)
	(C)	ls –a med med and area	(D)	All of these	(8)
	(A)	find all	(B)	find –a ASA	(A)
14.		can you display a list of all			9. The
		Static member functions			
	(C)	Compilation Error	(D)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(0)
	(A)	11	(B)	10	(A)
	}			281	Y Y
		return 0;		10 minior	1
		printf("%d", ++a);		printf("%d, %d\n", a, b);	
	{	const int a=10;		a = CUBE(b+t);	
		main()			0.01
		elude <stdio.h></stdio.h>	O PI	ogium.	1.)
13.	Wha	at is the output of the follow	ing C-nr	noram ?	i.dni
	(0)	circuit switching.	(D)	data gram switching.	
	(A) (C)	packet switching.	(B)	message switching.	
12.			PART BLOW	Surveyer and no medine and sect	skily a
12.	The	store and forward mechanis	sm is us	ed in	1

0.3 0.11	in a Concorram?
18. What is the output of the folio	owing C-program?
#inaludo <etdin h=""></etdin>	the state of the s
#define CUBE(x) (x*x*x)	
int main()	13. What is the output of the following C-program
7. { artificially intelligent car	Functure stdio.h>
int a, b=3;	(B) Decision Tree (Inise ini
a = CUBE(b++);	const int a=10.
printf("%d, %d\n", a, b)	); (a++ ,"b)?"/tining
return 0;	The second of th
S. The Laymond Makes Well Toll	a Property of the second of th
(A) 9, 4	(B) 27, 4
(C) 27, 6	(D) Error total notations (19)
(7) It a Green section WA	
19. The is an asymmetr	ric key cryptographic algorithm.
	- briti (3) Hs briti (4)
(D) Huffman code	in the (d)
a 1 1 -1 -4 a guber	titution
(D) Steganography	dilidiary out postra of pash at min fine visiting
	hmetra (E)
20. What is the purpose of the	confusion matrix in machine learning?
m : 1: the digtri	ibution of the data in a dataset
- the newfor	rmance of different models
- 1 - the north	rmance of a classification model
(D) To evaluate the perfo	rmance of a regression model
24 I. DWA transfers the red	uired signals and addresses are given by the
	(B) Device drivers
(A) Processor (C) DMA controllers	(D) The program itself
(C) DMA controllers	WZIW sone A 1971

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22.	Wh	nat is the output of following C	code	?	Harnetta			o d'Ul	
	int	main()				d.oibas			
	{	Backet							
		int $x = 2$ , $y = 1$ ;							
		x * = x + y;	oles			i kaj			
		printf("%d", x);			794 (144 ) 1/2 %	Month of a			
	}				ou Astro	ati annu sen			
	(A)	Compilation error		(B)	Varios	on Compli	- 4		
	(C)	5	(B)			on Compile	er		
	(0)	at as the our burst use C pale.	((1)	(D)	6		03		
23.	Wh	ich among the following can't l	oe us	ed for p	oolymorp	hism ?		7 /: Y	
	(A)	Static member functions	·(8)					(A)	
	(B)	Member functions overloading	(d) ng	perior	laem evo	da oda to a			
	(C)	Predefined operator overload							
	(D)	Constructor overloading	(A)	issards		or acissin	errog erro	odT .8	
		State Wasair				i de la composition della comp		101	
24.	If the	here are 32 segments each o uld have	of size	e 1K l	oytes, the	en the log	ical	address	
	(A)	12 bits	(B)	13 bi	ts		ebuk alam	DIEPH.	
	(C)	14 bits	(D)	15 bi	ts	Taked loop		(#).  #].	
			d tr						
25.	In so	oftware engineering the tester ware application in case of	does	not k	now the	internal de	esign	s of the	
	(A)	White Box	(B)	Black		d'ésis		niad Secondo	
	(C)	Beta Total Total	(D)			i i i i i i i i i i i i i i i i i i i	MT.	140	
*******	(-)	dugaro old	(D)	Accep	tance	esta'i et	ref.	Y (3)	
ECA	A-202	4	7			8			

```
What is the output of the following code snippet?
26.
    #include <stdio.h>
         int main()
              int x;
              x = 5 > 8 ? 10 : 1 != 2 < 5 ? 20 : 30;
               printf("%d",x);
               return 0;
                                            10
     (A)
                                            30
          20
      (C)
               is a measure of the degree of interdependence between modules.
 27.
                                        (B) Coupling A section of the (A)
           Cohesion
      (A)
          None of the above mentioned (D) Both (A) and (B)
      (C)
      The permission -rwx r--r-- represented in octal expression will be
  28.
                                             744 mibrolavo resembano): (0)
                                        (B)
      (A) 777
                                             711
                                        (D)
      (C)
           666
      What will be the output of the C code?
  29.
       #include <stdio.h>
       int main()
       { int a=1;
       if(a--)
       printf("True");
       if(a++)
        print("False");
        }
                                              False
                                          (B)
        (A) True
                                             No output
                                          (D)
             True False
```

30	. 111	nich command ch	anges a file's gro	up	owner?	h of the followin	and White
	(A)			B)	group	Abstracslon	
	(C)	change	)) Inheritance	D)	chgrp	noitalang sond	
		lle teljet			due of the ab		
31.	Wh	ich of the followi					
	(A)		price of a house b				
	(B)	Predicting the	weight of a perso	n b	ased on their	height	
	(C)	Predicting whe	ther a customer	wil	l churn or not	a de la companya de	(2N)
	(D)	Predicting the	age of a person ba	ase	d on their inc	ome	
			a vd batasasa		n ontity set is	n ER disgram, s	e of n
32.		at is the output o	f the C-program	?			
	#in	clude <stdio.h></stdio.h>	. to caloria of				
9		int main()	·			Diamond box	
		{					
		int i=	0;		ogord-O ant r	t indino edif si ta	eW .T
		int x=	=i++;			<d.orbin>ehuli</d.orbin>	
		y=++i	;			()mam mi	
		printf	("%d %d", x, y);				**************************************
		}				i Ini	
	(A)	0, 2	(B	)	1, 2	lide.	
	(C)	1, 1	(D	)	compile error	und,	
					("ealsH n/")H	ping v na v	
33.	Wha	t is the difference	e between superv	rise	ed and unsupe	ervised learning	?
	(A)	Supervised learn does not.	ning requires lab	ell	ed data while	unsupervised le	arning
(6)	(B)	Unsupervised leadoes not.	arning requires l	ab	elled data wh	ile supervised le	arning
(0	(C)	Supervised learn does.	ning does not req				arning
	(D)	There is no differ				supervised learn	ing.

. Which of the following feature is sl	shown by function overriding !
(A) Abstraction	(B) Polymorphism
(C) Encapsulation	(D) Inheritance
The second of the second secon	
If a file has read and write p	permission for the owner, then the octal
representation of the permissions	s will be:
(A) 7	(B) 5
The second second second of the second secon	(D) 3
(C) 6	(D). Predicting the age of a person based
6. In an ER diagram, an entity set is	is represented by a
	(B) Ellipse
(A) Rectangle	(D) Circle
(C) Diamond box	(45) Clouds, Val
Cab - C mag	gram ?
37. What is the output of the C-programmer.	
#include <stdio.h></stdio.h>	content of the same
int main()	THE TANK THE
<b>{</b>	All A 's "Play people and
int i=0;	
while (i=0)	(中) (F) (F) (F) (F) (F) (F) (F) (F) (F) (F
printf("\n True")	<b>");</b> (0)
printf("\n False"	e");
sad unsupervised to make \$4.5	3. What is the difference between supervised being the constitution of the constitutio
(A) True (infinite time)	(B) Compiler dependent
(C) False	(D) True (1 time)
antiques posiviegue etidw alsh bot	Friedria in the Friedria of th
38. Identify the incorrect construct	ctor type:
38. Identify the incorrect constituet	(B) Copy Constructor
(A) Friend Constructor	(1)
(A) Friend Constructor (C) Default Constructor	(D) Parameterized Constructor

	Black-bo		03/0¥.	laam viba; (msl1t)		None of the above mentioned	
	at is the o			- (M3/H)	Contract of the		
	at is the o				2004710	A. Insert on Sore with steen coin	
mai		utput	of the	followir		snippet?	
	n(){					(C) Quick Sort with time oddings:  **Respond to the complex time complex times complex times complex times complex times complex times complex times	
	int i, k =	5;	setio			S. As constant. Depondent.	
	if(i	= k) {	Tioo	£ 161711	action	Which one of the following is a syr	
1		prir	tf ("Y	ES\n"):	(ig)	the difference secure cheard Took	
	1		018 or 1	Seclari		(C) Semaphore	
		olas	e de la companya de l			0.000=100	11
		CISE					
		818	print	:f("NO\r	ı");	(A) Terminated state	
		}	8168	Ready s		(1) Running state (C) Running state	
	}					we about pridary key in a detabl	
(A)	5				(B)	YES li gridamiti si seesotq A	
(C)	NO	t grain				Will give error	
						ings memit stone breds ii (8)	÷ #
Whic	h of the f	ollow	ng(s)	is/are no	t share		
(A)	Stack					(i)) - ver willen (film term and the control of the	
(B)	Program	count	er	llos estad	galiqu	Highword's patents don't are only on the	
			in the	er and st	ack	1990 in Chanciasoro, T. Lan enidal.	
			Article And			(A) PRODUCTED FEBRUARY (E) V	
(1)	140116				(U)	(C)	
	(A) (C) Whice (A) (B) (C) (D)	if(i } (A) 5 (C) NO Which of the f (A) Stack (B) Program (C) Both prog	else  (A) 5  (C) NO  Which of the following  (A) Stack  (B) Program count  (C) Both program  (D) None	if(i = k) {      printf ("Y) }  else {      print }  (A) 5  (C) NO  Which of the following(s)  (A) Stack  (B) Program counter  (C) Both program counte  (D) None	<pre>if(i = k) {</pre>	<pre>if(i = k) {</pre>	if(i = k) {  printf ("YES\n"); }  else {  printf("NO\n"); }  (A) 5 (B) YES  (C) NO (D) Will give error  Which of the following(s) is/are not shared by threads?  (A) Stack (B) Program counter (C) Both program counter and stack (D) None

	SILCIT 202
42.	Given an unsorted array. The array has this property that every element in the array is at most k distance from its position in a sorted array where k is a positive integer smaller than the size of an array. Which sorting algorithm can be easily modified for sorting this array and what is the obtainable time complexity?  (A) Insertion Sort with time complexity O(kn)  (B) Heap Sort with time complexity O(n log k)  (C) Quick Sort with time complexity O(k log k)  (D) Merge Sort with time complexity O(k log k)
	Which one of the following is a synchronization tool?
43.	Which one of the following is a synchronic (B) Pipe  (A) Thread  (C) Semaphore  (D) Socket
44	When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the
	<ul> <li>(A) it spends more time in oxecution</li> <li>(B) it spends more time in paging, rather than in execution</li> <li>(C) it has no memory allocated to it</li> <li>(D) it indefinitely waits for a resource</li> </ul>
\$ 484	is not among the eight principles followed by the Software Code of  Ethics and Professional Practice.  (A) PRODUCT  (B) ENVIRONMENT  (C) PUBLIC  (D) PROFESSION
	JECA-2024

TID O	A_202	mer mer	10-11-			
(4)	(C)	Binary Search Tree			Stack ovode ed. h	(D) · None o
	(A)	Queue Notation acres	g eest deel	(B)	Linked List	(C) Post-or
	expr	ession in infix form	o its equiva	lent	s required to conver postfix form?	t an anthmetic
51.	Whi	ch of the following				
, N	(D)	Primary keys are us			relationships between	
	(C)	Primary keys can co	ontain NUL	L va	lues.	causa (O):
	(B)	A primary key uniq	uely identif	ies e	ach record in a table.	(A) RAID I
	(A)	A table can have m		ary l		LETTER VAL
50.	Whi true		tatements		t primary key in a d	atabase table is
	(D)	T(n) = T(n-2) + O(n-2)	1) & T(1) =	T(0)	= O(1).	(0) 0, 1, 2,
	(C)	T(n) = T(n/2) + O(1)				(A) 7; 5, 1,
	(B)	T(n) = T(n-1) + O(n-1)	(1) & T(1) =	0(1)	= T(0).	ru ingiluga
	(A)	T(n) = 2T(n/2) + O(	1) & $T(1) =$			no arixabro
49.		ich of the given stat ary Search?	ement is th		rect recurrence for t	he worst case of
	(D)	Aggregate, Collecti	on, Inherita	ance,	Design	
	(C)				tion, Dependency	sal-nóil (A)
	(B)		Value of the second second		tabase missi ni rebni	
	(A)	Atomicity, Consist	ency, Integr	ity, l	Durability	
48.	Inε	a relational database	, what does	the	term "ACID" stand fo	r?04A (H)
	(C)	redundancy	vo esta ba	(D)	recursion	
	(A)	polymorphism	rofreve ud is	(B)	data hiding	
	of:	ilevitas viscentias	bahnoltevia		THE RESIDENCE OF A PARTY OF THE	OHO ST THILLY
47.	Ma	king class members	inaccessib	le to	nonmember function	ns is an example

52.	Whi	ch is the correct statement about operator overloading?
	(A)	Only arithmetic operators can be overloaded.
	(B)	Only non-arithmetic operators can be overloaded.
1	(C)	Precedence of operators are changed after overloading.
	(D)	Associativity and precedence of operators does not change.
		(A) Acomicity, Consistency, Integrity, Directify, 1008 98071 (D)
53.	A ch	ustering index is defined on the fields which are of types
	(A)	Non-key and ordering (B) Non-key and non-ordering
	(C)	Key and ordering (D) Key and non-ordering
		and a first program and the story with
54.	an i	pose the numbers 7, 5, 1, 8, 3, 6, 0, 9, 4, 2 are inserted in that order into initially empty binary search tree. The binary search tree uses usual ering on natural numbers. What is the in-order traversal sequence of the altant tree?
	(A)	7, 5, 1, 0, 3, 2, 4, 6, 8, 9 (B) 0, 2, 4, 3, 1, 6, 5, 9, 8, 7
	(C)	0, 1, 2, 3, 4, 5, 6, 7, 8, 9 (D) 9, 8, 6, 4, 2, 3, 0, 1, 5, 7
		50. Which of the following statements about namew test in a database
55.	Whi in a	ich of the following is popular for applications such as storage of log files database management system since it offers the best write performance?
	(A)	RAID level 0 (B) RAID level 1
	(C)	RAID level 2 (D) RAID level 3
		(D) Primary keys are used to establish relationables between to blas
56.	Wh	ich of the following statement is correct?
oi	(A)	Pre-order traversal of Binary search gives sorted list.
	(B)	In-order traversal of Binary search tree gives sorted list.
	(C)	Post-order traversal of Binary search tree gives sorted list.
	(D)	None of the above.
		A DESCRIPTION OF THE PROPERTY

57.	7. Which one of the following is deadlock avoidance algorithm?						
	(A)	Elevator algorithm	(B)	1 203 1020			
	(C)	LRU algorithm	(D)	SCAN algorithm			
58.	Wh	ich command is used to set egories of users of a file?	the	three permissions for all the three			
	(A)	chgrp	(B)	chown q( (A)			
	(C)	chmod	(D)	chusr (1)			
59.	Whi	ch command is used for printi	ng th	e current working directory?			
	(A)	dir	(B)	HOME			
	(C)	cd	(D)	pwd			
	(A) (C)	Race condition Virtual condition	(B) (D)	Critical condition Linear condition			
61.	Bau	d means		an or tilbertisti ab omte til med er. Da omensense er omest kultik e			
	(A) (B)	- I all all all all all all all all all a					
	(C)	있다. BEN MAN CONTROL CONTROL FOR SERVICE CONTROL CO					
	(D)	None of the above		A sastO <sub>n</sub> (A)			
62.	Whic	Which option will be used with sort command to start sorting after the $n^{th}$ column of the $(m + 1)^{th}$ field?					
		−m ·n	(B)	$+\mathbf{m}\cdot l\mathbf{n}$			
	(C)	+n ·m + 1	(D)	+(m + 1) · n			
TE O	A 500	fig.		<b>W</b> W			

67.	(A) (C) Wh	ich one of the following does n Class A Class C	(B) (D) et spec	cut		
	(A) (C) Wh	ich one of the following does n Class A Class C ich command is used to extra	(B) (D)	re a Net ID and Host Id?  Class B  Class D  cific columns from the file?		
	(A) (C)	ich one of the following does n Class A Class C	(B) (D)	re a Net ID and Host Id?  Class B  Class D		
	(A) (C)	ich one of the following does n Class A Class C	ot hav (B) (D)	re a Net ID and Host Id?  Class B  Class D		
67.	(A)	ich one of the following does n Class A	ot hav (B)	re a Net ID and Host Id?  Class B		
67.		ich one of the following does n	ot hav	re a Net ID and Host Id?		
0.5	3371-	omit ting does n	ot has	ve a Net ID and Host Id?		
				Percent and in the man will fill the		
	(C)	14		10 ans if and to tedmin ad I' (A)		
	(A)	16	(B)	12 anaem buch 19		
		ab*cd* + where a=2, b=2, c=	=3, d=4	<b>1.</b>		
66.	What is the result of the following postfix expression?					
Mar Ay		a, 1.0, a, 2, 4, 6, 8, 9 molithmon legitino.		(A) Rece condition		
	(C)	uses and chick of rest telt.	(D)	of the execution depends on the place is called		
en On		at the end.	(B)	69. When several physicason access 29		
	are	needed if the operating syst	em in	iplements a shortest remaining time ant the context switches at time zero		
65.	Cons	sider three CPU-intensive pr	ocesse l 6 res	es, which require 10, 20 and 30 time pectively. How many context switches		
	N	n-key and ordering 0				
	(C)	pr mades is defined to tail do	(D)	head bornifo (0)		
	(A)	lp gwoda	(B)	begin (A)		
64.	Whi	ch command is used for displa	ying t	he beginning of a file in Unix?		
	(C)	Data Link Layer (Layer 2)	(D)	ler overloading.		
	(A)	Network Layer (Layer 3)	(B)	Transport Layer (Layer 4) Physical Layer (Layer 1)		
	- 3-1	Libraria le de la	(1)			
(A)	pack	ets?		(A) Elevator alterithm said		

69.	In the OSI model, encryption and decryption are functions of the						
	(A)	Transport Layer	(B)	Session Layer			
	(C)	Presentation Layer	(D)	Application Layer			
70.	Which of the following is not a communication command?						
		write	(B)	meen			
	(C)	mail	(D)	gren			
. 84		P. Arabitros IP addresses as a	nven b ebodea	(i) All of the above mentioned m			
71.	A deadlock avoidance algorithm dynamically examines the to ensure that a circular wait condition can never exist.						
	(A)	Operating system	(B)	Resources described and analysis			
	(C)	System Storage State	(D)	Resource Allocation State			
72.	A Port address in TCP/IP is bits long.						
	(A)	32 godošenos lemmas e	(B)	48 sto of hour er victore			
	(C)	16 Yay	(D)				
73.	emp	t is the worst case time co ty linear linked list, if it ne y insertion?	mplexi eds to	ty of inserting an elements into an be maintained in sorted order after			
	(A)	$\theta(n)$	(B)	$\theta(n \log n)$			
	(C)	$\theta(n^2)$	(D)	θ(1)			
74.	In IPV4 network ID and host ID in class A						
84.	(A)	8 bits. network ID, 24 bits he	ost ID.	(A) Egrae detection			
		24 bits. network ID, 8 bits ho		* (B) Exict correction			
		14 bits. network ID, 16 bits l		(C) france encapsulation			
		16 bits. network ID, 14 bits l		White Research and Annual Control of the Control of			
JECA-2024		17					

What is the worst case complexity of	inserting a node in doubly linked list?
75. What is the worst case solution (A) $O(\log n)$	B) O(n)
	D) O(1)
76. Virtual memory is normally implementation	ented by  unique a four as sort welled entried dord W . of eller w . (A)
(A) Demand Paging	S) eters (A)
(R) Buses	(C) Hant (D)
(C) Virtualization	
(D) All of the above mentioned me	thods wh audinosis commisors isolbash A. IV
elements are already in sorted order	gorithm will be the most efficient if the er?  (B) Selection sort
(A) Bubble sort	
(C) Insertion sort	(D) Merge sort
(A) Radius	a secure tunnel connection.  (B) VPN  (D) DNS
(C) Proxy	(D) DNS g expression A-B/(C*D^E)?  (B) -A/BC*^DE
AN A/R*CADE	(1)/0 (1)/0
(C) -ABCD*^DE	(D) -/*^ACBDE
80. Hamming code is used for	74. In IPV4 network ID and host ID in class
(A) Error detection	(A) 8 bits, network ID, 24 bits host ID;
(B) Error correction	(B) 24 bits, network ID, 8 bits host ID.
(C) Error encapsulation	. (C) 14 bits network ID, 16 bits host ID.
(D) Both Error detection and co	orrection
TECA 2024	18 COS-AD 40

### Category-2 (Q. 81 to 100)

# (Carry 2 marks each. One or more options are correct. No negative marks)

81.	Which of the following(s) are not type of inheritance?					
	(A)	Hierarchical Inheritance	(B)	Linear Inheritance		
	(C)	Multilevel Inheritance	(D)	Distributed Inheritance (A)		
82.	The	re are three IP addresses a	as given b	elow: (0)		
	(C)	X = 202.23.14.150		28. What are the valid shells in linux		
		Y = 168.19.200.12	6 Th 1971			
		Z = 72.192.52.210		(A) Kernel shell more our war		
	Whi	ich of the following statem	ents is cor	rect?		
	(A)	X is Class A, Y is class B,	Z is class	C What are the valid levers of OS C		
	(B)	X is Class C, Y is class A,	Z is class	В		
	(C)	X is Class A, Y is class C,	Z is class	$\mathbf{B}$		
	(D)	X is Class C, Y is class B,	(D) See	(C) Data Link laver		
83.	A pr	cocess refers to 5 pages nar	tomologica	C, D and E in the order:  If the page replacement algorithm is		
98.	FIF			h an empty internal store of 3 frames		
	is		(D) 12	bode these these twogs 1939 of		
	(A)	8	(B)	10 1 10 10 10 10 10 10 10 10 10 10 10 10		
	(C)	9 Cycle) Lie Cycle)	(D)	7 83. [dentify the incorrect place of STI		
84.	What are non-linear data structure?					
	(A)	Graph management of	(B)	Linked List		
	(C)	Queue	(D)	Tree		
JEC	A-202	<b>4</b>	19	.292:ADST		

85.	Relation R has eight attributes ABCDEFGH. Field of R contain only atomi	C
	values.	

 $X = \{CH \rightarrow G, A \rightarrow BC, B \rightarrow CFH, E \rightarrow A, F \rightarrow EG\}$ 

is a set of Functional Dependencies (FD's) so that F<sup>+</sup> is exactly the set of FD's that hold for R.

How many candidate keys does the relation R have?

- (A) 3
- and a standard (B) 4
- (C) 5

- (D) 6
- 86. What are the valid shells in linux?
  - (A) Kernel shell

(B) C shell

(C) Vi shell

- (D) Korn shell
- 87. What are the valid layers of OSI model?
  - (A) Internet layer

- (B) Transport layer
- (C) Data Link layer
- (D) Session layer
- 88. A subnet has been assigned a subnet mask of 255.255.255.192. What is the maximum number of hosts that can belong to this subnet?
  - (A) 14
- FIFO, the number of page true 08 ; (B) then empty interc
- (C) 62

- (D) 126
- 89. Identify the incorrect phase of STLC (Software Testing Life Cycle).
  - (A) Test Closure

- (B) Coding and the same as the
- (C) Requirement Analysis
- (D) Test Planning

- 90. For which one of the following reasons does Internet Protocol (IP) use the time-to-live (TTL) field in the IP datagram header?
  - (A) Ensure packets reach destination within that time.
  - (B) Discard packets that reach later than that time.
  - (C) Prevent packets from looping indefinitely.
  - (D) Limit the time for which a packet gets queued in intermediate router.
- 91. Which of the following is not supervised learning?
  - (A) PCA

- (B) Naive Bayesian
- (C) Linear Regression
- (D) Decision Tree
- 92. Which of the following statements is not true about the pruning in the decision tree?
  - (A) When the decision tree is created, many of the branches will reflect anomalies in the training data due to noise.
  - (B) The over fitting happens when the learning algorithm continues to develop hypothesis that reduce training set error at the cost of increased test set errors.
  - (C) It optimizes the computational efficiency.
  - (D) It reduces the classification accuracy.
- 93. If 2 classes derive one base class and redefine a function of base class, also overload some operators inside class body. Among these two things of function and operator overloading, where is polymorphism used?
  - (A) Function overloading only
  - (B) Operator overloading only
  - (C) Both (A) and (B) are using polymorphism
  - (D) Either function overloading or operator overloading because polymorphism can be applied only once in a program



94. What is the output of the following C-program?

```
#include<stdio.h>
int main()
{    int a = 20;
    printf ("CINEMA");
    return 1;
    printf ("DINOSAUR");
    return 1;
```

- (A) CINEMA DINOSAUR
- (B) CINEMA

(C) DINOSAUR

- (D) Compilation error
- 95. A CPU generates 32-bit virtual addresses. The page size is 4 KB. The processor has a translation look-aside buffer (TLB) which can hold a total of 128 page table entries and is 4-way set associative. The minimum size of the TLB tag is:
  - (A) 11 bits

(B) 13 bits

(C) 15 bits

- (D) 20 bits
- 96. Which of the following statements about polymorphism in C++ are correct?
  - (A) Polymorphism allows a function to perform different tasks based on the object that invokes it.
  - (B) C++ supports compile-time polymorphism through function overloading and runtime polymorphism through virtual functions.
  - (C) Polymorphism is achieved by hiding the implementation details of a class.
  - (D) In C++, polymorphism can only be achieved through inheritance.



97. What is the return value of f(p, p), if the value of p is initialized to 5 before the call?

```
int f(int &x, int c) {
  c = c - 1;
  int (c==0) return 1;
  x = x+1;
  return f(x, c) * x;
}
```

(A) 3024

(B) 6561

(C) 55440

(D) 161051

98. What could ideally be the optimal page replacement algorithm?

- (A) Replace the page that has not been used for a long time.
- (B) Replace the page that has been used for a long time.
- (C) Replace the page that will not be used for a long time.
- (D) None of the above mentioned policies.
- 99. If memory access takes 20 ns with cache and 110 ns without cache, then the hit-ratio (cache uses a 10 ns memory) is:
  - (A) 87%

(B) 88%

(C) 90%

(D) 93%

100. What is the full form of PERT and CPM in Software Engineering?

- (A) Project Evaluation and Review Technique; Computer Program Management
- (B) Program Evaluation and Review Technique; Critical Path Method
- (C) Project Execution and Resource Tracking; Code Performance Monitoring
- (D) Program Execution and Regression Testing; Continuous Process Modeling



#### SPACE FOR ROUGH WORK

0 = 0 - 1; int (c==0) return 1;

recurn f(x, c) \* x:

(B) . 6561

1019(G) (D) 1610E

What could ideally be the optimal page replacement algorithm
(A) Replace the page that has not free used for a love time.

(B) Replace the page that has been used for a long time.

amit and a tof been ad tog liew ted teasing an energent (G).

If memory access takes 20 as with cache and 110 as without cache, then the

A) 87% (B) 88%

t. What is the full form of PLRT and CPM in Software sugmeeting

(A) Project Evaluation and Review Technique: Computer Program

(C) Proper Execution and Resource Tracking Code Performance Montoring

(D) Program Execution and Regression Testing: Communical Process Modeling.

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