Sr No.	MSc Computer Science
1	Find the missing term in the following series: 3,10,29,66,127…?
Alt1	164
Alt2	187
Alt3	216
Alt4	218

2	Choose word from the given options which bears the same relationship to the third word, as the first two bears: Flower : Butterfly :: Dirt :?
Alt1	Rats
Alt2	Fly
Alt3	Bugs
Alt4	Sweeper

3	Tiff is to Battle as Frugal is to …….?.....
Alt1	Sprint
Alt2	Vague
Alt3	Miserly
Alt4	Vital

4	Select the lettered pair that has the same relationship as the original pair of words: Expend: Replenish
Alt1	Exhort: Encourage
Alt2	Formant: Rebellion
Alt3	Defect: Rejoin
Alt4	Encroachment: Occupy

5	Choose the set that has the same relationship as in the original: Bone : Skeleton : Nerve
Alt1	House: Door: Window
Alt2	Spoke: Wheel: Handle
Alt3	Retina: Eye: Pupil
Alt4	Snow: Cloud: Ice

6	Spot the defective segment from the following:
Alt1	Only with your help
Alt2	I passed the test
Alt3	though you helped me
Alt4	at the last minute

7	The government proposes to ------- hanging.
Alt1	cancel
Alt2	nullify
Alt3	invalidate

Alt4	abolish

8	The burglar was hit ---------.
Alt1	on head
Alt2	on his head
Alt3	on the head
Alt4	in the head

9	Choose the option closest in meaning to the given word: COGENT
Alt1	consistent
Alt2	acceptable
Alt3	convincing
Alt4	weak

10	Choose the antonymous option you consider the best: PROVIDENT
Alt1	careful
Alt2	worldly
Alt3	prodigal
Alt4	frugal

11	Ravi's brother is 3 years senior to him. His father was 28 years of age when his sister was born while his mother was 26 years of age when he was born. If his sister was 4 years of age when his brother was born, what was the age of Ravi's father and mother respectively when his brother was born ?
Alt1	32 years, 23 years
Alt2	32 years, 29 years
Alt3	35 years, 29 years
Alt4	35 years, 33 years

12	In each of the following questions some statements are followed by two conclusions (i) and (ii). Read the statements carefully and then decide which of the conclsions follow beyond a reasonable doubt. Mark your answer as Statement: All my films are copies. I am happy to inform of the source when I copy – a producer Conclusions: (i) The producer does not make even a single film based on his own idea (ii) The producer copies domestic and foreign films
Alt1	If only conclusion (i) follows
Alt2	If only conclusion (ii) follows
Alt3	If neither conclusion (i) nor (ii) follows
Alt4	If both the conclusions follow

13	3. What value should come in place of question mark (?) in the following number series? 14, 28, 46, ?, 94, 124
Alt1	64
Alt2	68
Alt3	72
Alt4	76

14	In a certain code ADVENTURES is written as TDRESAUVEN. How is SURPRISINGwritten in that code ?
Alt1	IUIPGSRSNR
Alt2	IUINGSSRRP
Alt3	IUIPGSSRNR
Alt4	IRIPGSSNRR

15	Wax is related to Grease in the same way as Milk is related to
Alt1	Drink
Alt2	Ghee
Alt3	Curd
Alt4	Protein

16	The following information is given: Six persons A, B, C, D, E and F are sitting in two rows, three in each. E is not at the end of any row. D is second to the left of F. C, the neighbour of E, is sitting diagonally opposite to D. B is the neighbour of F. After interchanging seat with E, who will be the neighbours of D in the new position ?
Alt1	C and A
Alt2	F and B
Alt3	Only B
Alt4	Only A

17	If 30 students occupy 2/3 of the seats in a classroom, how many students would occupy 4/5 of the seats in the classroom?
Alt1	36
Alt2	32
Alt3	40
Alt4	48

18	Mean of the first 10 odd numbers is
Alt1	10
Alt2	13
Alt3	15
Alt4	9

19	Two numbers are in the ratio 2:3, If 4 be subtracted from each, they are in the ratio 3:5, Find the numbers.

Alt1	16,24
Alt2	20,30
Alt3	0.341666667
Alt4	None

20	It takes 30 seconds to cut the woodlock into 3 pieces.How much time does it takes to cut the same block into 4 pieces?
Alt1	40secs
Alt2	45secs
Alt3	50secs
Alt4	60secs

21	Which of the following is Java reserved words? 1. run 2. import 3. default 4. implement
Alt1	1 and 2
Alt2	2 and 3
Alt3	3 and 4
Alt4	2 and 4

22	Which of these keywords is not a part of exception handling?
Alt1	try
Alt2	finally
Alt3	thrown
Alt4	catch

23	void start() {
	A a = new A();
	B b = new B();
	a.s(b);
	b = null; /* Line 5 */
	a = null; /* Line 6 */
	System.out.println("start completed"); /* Line 7 */
	}
	When is the B object, created in line 3, eligible for garbage collection?

Alt1	after line 5
Alt2	after line 6
Alt3	after line 7
Alt4	There is no way to be absolutely certain.

24	publicclassX
	{
	publicstaticvoid main(String [] args)
	{
	X x = new X();
	X x2 = m1(x); /* Line 6 */
	X x4 = new X();
	x2 = x4; /* Line 8 */
	doComplexStuff();
	}
	static X m1(X mx)
	{
	mx = new X();
	return mx;
	}
	}
	After line 8 runs. how many objects are eligible for garbage collection?

Alt1	0
Alt2	1
Alt3	2
Alt4	3

25	In the HTTP Request method which is non-idempotent?
Alt1	GET
Alt2	POST
Alt3	BOTH A & B
Alt4	None of these

26	Which packages represent interfaces and classes for servlet API?
Alt1	javax.servlet
Alt2	javax.servlet.http
Alt3	Both A&B
Alt4	None of these

27	Which is a perfect example of runtime polymorphism?
Alt1	Method overloading
Alt2	Method overriding

Alt3	Constructor overloading
Alt4	None of these

28	The class string belongs to ..... package.
Alt1	java.awt
Alt2	java.lang
Alt3	java.applet
Alt4	java.string

29	Which of these methods is a part of Abstract Window Toolkit (AWT)?
Alt1	display()
Alt2	print()
Alt3	drawString()
Alt4	transient()

30	Which Of the Following attributes of the test box control allow to limit the maximum character?
Alt1	Size
Alt2	Len
Alt3	Max Length
Alt4	All of these

31	The first network that planned the seeds of internet was
Alt1	ARPANET
Alt2	NSFNET
Alt3	VNET
Alt4	Both A and B

32	IPV6 addressed have a size of
Alt1	32 bits
Alt2	64 bits
Alt3	128 bits
Alt4	265 bits

33	Markup tags tell the web browser
Alt1	How to organize the page
Alt2	How to display the page
Alt3	How to display message box on page
Alt4	None of these

34	Which of these standard collection classes implements a dynamic array?
Alt1	AbstractList
Alt2	Linked ist
Alt3	Arraylist
Alt4	Abstractset

35	The tags elements in XML are
Alt1	Case-insensitive

Alt2	Case-sensitive
Alt3	Browser dependent
Alt4	None of these

36	What does derived class does not inherit from the base class?
Alt1	constructor and destructor
Alt2	friends
Alt3	operator = () members
Alt4	All of these

37	Which design patterns benefit from the multiple inheritance?
Alt1	Adapter and observer pattern
Alt2	Code pattern
Alt3	Glue pattern
Alt4	None of these

38	If a constructor function is defined in private section of a class, then
Alt1	The object cannot be created
Alt2	Only member functions and friends may declare objects of the class
Alt3	Both (A) & (B)
Alt4	None of these

39	The following operators cannot be overloaded
Alt1	Unary operator
Alt2	Binary operator
Alt3	Ternary operator
Alt4	None of these

40	What is garbage collection in the context of Java?
Alt1	The operating system periodically deletes all of the java files available on the system.
Alt2	Any package imported in a program and not used is automatically deleted.
Alt3	When all references to an object are gone, the memory used by the object is automatically reclaimed.
Alt4	The JVM checks the output of any java program and deletes anything that does not make sense.

41	Which method is used to display text on the applet?
Alt1	println()
Alt2	showString()
Alt3	drawString()
Alt4	printString()

42	Which of these is not abstract?
Alt1	Thread
Alt2	AbstractList
Alt3	List
Alt4	None of these

43	Which of the following is the most commonly used http methods?

Alt1	PRE and POST
Alt2	GET and SET
Alt3	ASK and REPLY
Alt4	GET and POST

44	What is the correct HTML for inserting a background image?
Alt1	<imgsrc="background.gif" background />
Alt2	<body background="background.gif">
Alt3	<background img="background.gif">
Alt4	None of these

45	Microsoft XML Schema Data types for Hexadecimal digits representing octates
Alt1	UID
Alt2	UXID
Alt3	UUID
Alt4	XXID

46	What is the return type of Constructors?
Alt1	int
Alt2	float
Alt3	void
Alt4	None of these

47	Which of these keywords is used to refer to member of base class from a sub class?
Alt1	Upper
Alt2	super
Alt3	this
Alt4	None of these

48	Which of these operators is used to allocate memory for an object?
Alt1	Malloc
Alt2	alloc
Alt3	new
Alt4	give

49	Which of these is correct way of inheriting class A by class B?
Alt1	Class B + class A {}
Alt2	class B inherits class A {}
Alt3	class B extends A {}
Alt4	class B extends class A {}

50	What is the error in the following code?
	class Test
	{
	abstract void display( );
	}

Alt1	no error
Alt2	method display( ) should be declared as static
Alt3	test class should be declared as abstract
Alt4	test class should be declared as public

51	AppletSViewer tool is available in which of the folder of JDK :
Alt1	Bin
Alt2	Lib
Alt3	Source
Alt4	Class

52	Dynamic interception of requests and responses to transform the information is done by
Alt1	Servlet container
Alt2	servletconfig
Alt3	servlet context
Alt4	servlet filter

53	Which of these methods can be used to obtain a static array from a ArrayList object()?
Alt1	Array()
Alt2	convertArray()
Alt3	toArray()
Alt4	converttoArray()

54	Consider a simple connected graph G with n vertices and n-edges (n>2).Then, which of the following statement is true?
Alt1	G has no cycles.
Alt2	The graph obtained by removing any edge from G is not connected.
Alt3	The graph obtained by removing any two edges from G is not connected.
Alt4	G is connected

55	Suppose the numbers 7,5,1,8,3,6,0,9,4,2 are inserted in that order into an initially empty binary search tree. The binary search tree uses the usual ordering on natural numbers. What is the in-order traversal sequence of the resultant tree
Alt1	7 5 1 0 3 2 4 6 8 9
Alt2	0 2 4 3 1 6 5 9 8 7
Alt3	1 2 3 4 5 6 7 8 9
Alt4	9 8 6 4 2 3 0 1 5 7

56	Which of the following addressing modes permits relocation without any change whatsoever in the code
Alt1	Indirect addressing.
Alt2	indexed addressing.
Alt3	Base registers addressing
Alt4	PC relative addressing

57	The number of full and half adders required to add 16-bit numbers is
Alt1	8 half address, 8 full address
Alt2	1 half address, 15 full address
Alt3	16 half address, 0 full address
Alt4	4half address, 12 full address

58	A 48 bit instruction stored in byte organized memory which of the following decimal address is valid with respect to program counter.
Alt1	100
Alt2	200
Alt3	300
Alt4	400

59	Consider a disk pack with 16 surfaces, 128 tracks per surface and 256 sectors per track. 512 bytes of data are stored in a bit serial manner in a sector. The capacity of the disk pack and the no of bits required to specify a particular sector in the disk are respectively
Alt1	256MB, 19bits
Alt2	256MB, 28bits
Alt3	512MB,20bits
Alt4	64GB,28bits

60	A ROM is used to store the table for multiplication of two 8-bit unsigned integers. The size of ROM required is
Alt1	256 x 16
Alt2	64K x 8
Alt3	4K x 16
Alt4	64K x16

61	A memory page containing a heavily used variable that was initialized very early and is in constant use is removed when
Alt1	LRU page replacement algorithm is used
Alt2	FIFO page replacement algorithm is used
Alt3	LFU page replacement algorithm is used
Alt4	LFG used

62	A counting semaphore was initialized to 10. Then 6 P(wait) operations and 4 V(signal) operations were completed on this semaphore. The resulting value of the semaphore is
Alt1	0
Alt2	8
Alt3	10
Alt4	12

63	In a paged segment scheme of memory management, the segment table itself must have a page table because
Alt1	the segment table is often too large to fit in one page
Alt2	each segment is spread over a number of pages
Alt3	segment tables point to page table and not to the physical locations of the segment
Alt4	the processor's description base register points to a page table

64	For the daisy chain scheme of connecting I/O devices, which of the following statements is true?
Alt1	It gives non-uniform priority to various devices
Alt2	It gives uniform priority to all devices
Alt3	It is only useful for connecting slow devices to a processor device
Alt4	It requires a separate interrupt pin on the processor for each device

65	In a resident –OS computer, which of the following systems must reside in the main memory under all situations?
Alt1	Assembler
Alt2	Linker
Alt3	Loader
Alt4	Compiler

66	A linker is given object modules for a set of programs that were complied separately.What information need not be included in an object module?
Alt1	Object modules.

Alt2	Relocation bits.
Alt3	Names and location of all external symbols defined in the object modules.
Alt4	Absolute addresses of internal symbols.

67	The pass number for each of the following activities (i) object code generation (ii) literal added to literal table (iii) listing printed (iv) address resolution of local symbols that occur in a two pass assembler are
Alt1	1,2,1,2
Alt2	2,1,2,1
Alt3	2,1,1,2
Alt4	1,2,2,2

68	Let r be a relation instance with schema R=(A,B,C,D). We define r1=∏A,B,C (r) and r2=∏A,D(r) .Let s=r1*r2 where * denotes natural join .Given that the decomposition of r into r1and r2 is lossy, which one of the following is true ?
Alt1	s C r
Alt2	r U s = r
Alt3	r C s
Alt4	r*s=s

69	Given the relations employee(name, salary, deptno), and department(deptno, deptname, address) which of the following queries cannot be expressed using the basic relational algebra operations(6,Π,X,|X|, U, ∩, -)?
Alt1	Departmental address of every employee
Alt2	Employees whose name is the same as their department name
Alt3	The sum of all employee salaries
Alt4	All employees of a given department

70	Consider a schema R(A,B,C,D) and functional dependencies A->B and C->D, then the decomposition of R into R1(AB) and R2(CD) is
Alt1	Dependency preserving and lossless join
Alt2	lossless join but not Dependency preserving
Alt3	Dependency preserving but not lossless join
Alt4	not Dependency preserving and not lossless join

71	The situation where a transaction updates a database item and then later fails before completion is referred as the
Alt1	Temporary Update
Alt2	Incorrect Update
Alt3	Information for all
Alt4	Incorrect Summary

72	Which of the following is NOT true with respect to a transparent bridge and a router?
Alt1	Both bridge and router selectively forward data packets
Alt2	A bridge uses IP addresses while a router uses MAC addresses
Alt3	A bridge builds up its routing table by inspecting incoming packets
Alt4	A router can connect between a LAN and a WAN

73	The maximum window size for data transmission using the selective reject protocol with n-bit frame sequence numbers is
Alt1	2 power n
Alt2	2 power n-1
Alt3	(2 power n)-1
Alt4	2 power n-2

74	An organization has a class B network and wishes to form subnets for 64 departments. The subnet mask would be
Alt1	255.255.0.0
Alt2	255.255.64.0
Alt3	255.255.128.0
Alt4	255.255.252.0

75	In Ethernet when Manchester encoding is used, the bit rate is
Alt1	half the baud rate
Alt2	twice the baud rate
Alt3	same as the baud rate
Alt4	thrice the baud rate

76	What is the maximum size of data that the application layer can pass on to the TCP layer below?
Alt1	any size
Alt2	216 bytes – size of TCP header
Alt3	216 bytes
Alt4	1500 bytes

77	Which of the following is the most powerful parsing method?
Alt1	LL(1)
Alt2	Canonical LR
Alt3	SLR
Alt4	LALR

78	The formal model used for Lexical Analyzer is
Alt1	Finite Automata
Alt2	Push Down Automata
Alt3	two push down tape machine
Alt4	Turing Machine

79	In a bottom-up evaluation of a syntax directed definition, inherited attributes can
Alt1	always be evaluated
Alt2	be evaluated only if the definition is L-attributed
Alt3	be evaluated only if the definition has synthesized attributes
Alt4	never be evaluated

80	Given an arbitrary non-deterministic finite automaton (NFA) with N states, the maximum number of states in an equivalent minimized DFA is atleast
Alt1	N power 2
Alt2	2 power N
Alt3	2N
Alt4	N!

81	Turing machine made up of how many tuples.
Alt1	3
Alt2	2
Alt3	6
Alt4	7

82	Which of the following four regular expressions are equivalent? (i) (00)* (ε+0) (ii) (00)* (iii) 0* (iv) 0(00)*
Alt1	(i) and (ii)
Alt2	(ii) and (iii)

Alt3	(i) and (iii)
Alt4	(iii) and (iv)

83	The languages of primes in unary is
Alt1	regular
Alt2	CFL
Alt3	DCFL
Alt4	context sensitive

84	Which of the following set can be recognized by a Deterministic Finite-state Automaton?
Alt1	The numbers 1,2,4,8,…, 2n,… written in binary
Alt2	The numbers 1,2,4,8,…, 2n,… written in unary
Alt3	The set of binary string in which the number of zeros is the same as the number of ones
Alt4	The set {1, 101, 11011, 1110111,…}

85	Choose the function which is not continuous at some $x \in \mathcal{R}$. A. $f(x) = \sin x + \cos x$ B. $f(x) = \sin x - \cos x$ C. $f(x) = \sin x \cos x$ D. $f(x) = \cot x$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

86	The local maximum value of the function $f(x) = x^3 - 12x + 6$ is A. 11 B. 22 C. -10 D. 17
Alt1	A
Alt2	B
Alt3	C
Alt4	D

87	If $u = sin^{-1}\left(\frac{x-y}{x^2+y^2}\right)$ then $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} =$ A. $-\tan u$ B. $\tan u$ C. $\cot u$ D. $2\tan u$

Alt1	A
Alt2	B
Alt3	C
Alt4	D

88	The function $f: R \to R$ is not one-one for $f(x) =$ A. x B. $x + 1$ C. $\|x\|$ D. x^3
Alt1	A
Alt2	B
Alt3	C
Alt4	D

89	Consider the function $f(x) = 9x^2 + 6x - 5$ defined on R_+. The range of f is A. $[-5, \infty)$ B. $[5, \infty)$ C. $(5, \infty)$ D. $(-\infty, -5)$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

90	If $f: R \to R$ and $g: R \to R$ are given by $f(x) = \cos x$ and $g(x) = \frac{\pi}{2} + x$ then $(f \circ g)(x) =$ A. $-\sin x$ B. $-\cos x$ C. $\sin x$ D. $\frac{\pi}{2} + \cos x$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

91	Consider the following statements: S1. Any onto function $f: \{1,2,3\} \to \{a,b,c\}$ is always one-one. S2. Any one-one function $f: \{1,2,3\} \to \{a,b,c\}$ is always onto. Then the statements S1 and S2 are A. Both False B. Both True C. True and False, respectively D. False and True, respectively.
Alt1	A
Alt2	B
Alt3	C
Alt4	D

92	The function $f(x) = \begin{cases} cx(1-x)^3, & 0 < x < 1 \\ 0 & elsewhere \end{cases}$ is a p.d.f. for the constant $c =$ A. 10 B. 20 C. 30 D. 40
Alt1	A
Alt2	B
Alt3	C
Alt4	D

93	If the two mutually exclusive events A and B are such that $P(A) = \frac{1}{2}$, $P(A \cup B) = \frac{3}{5}$ and $P(B) = p$, then the value of p is A. $\frac{1}{5}$ B. $\frac{2}{5}$ C. $\frac{1}{10}$ D. $\frac{3}{10}$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

94	The points $(3,1,-2), (6,4,-5)$ and $(k,2,-3)$ are collinear if $k =$ A. -6 B. 6 C. -4 D. 4
Alt1	A

Alt2	B
Alt3	C
Alt4	D

95	The equation of the line parallel to the x-axis and passing through the origin is A. $x = y = z$ B. $\frac{x}{1} = \frac{y}{0} = \frac{z}{0}$ C. $\frac{x}{0} = \frac{y}{1} = \frac{z}{0}$ D. $\frac{x}{0} = \frac{y}{0} = \frac{z}{1}$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

96	The system of equations $x + y + 2z = 0, 2x + y - z = 0,$ and $2x + 2y + \lambda z = 0$ has an unique solution for the value $\lambda \neq$ A. 1 B. 2 C. 3 D. 4
Alt1	A
Alt2	B
Alt3	C
Alt4	D

97	The interval in which the function $f(x) = 2x^3 + 3x^2 - 12x + 6$ is strictly decreasing is A. $(-\infty, -2)$ B. $(-2,1)$ C. $(1, \infty)$ D. $(-\infty, 1)$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

98	Let $A = \{1,2,3\}$. Then the number of equivalence relations containing (2,3) is A. 1 B. 2 C. 3 D. 4
Alt1	A
Alt2	B

Alt3	C
Alt4	D

99	If X is the number obtained on a throw of an unbiased die, then $E(X^2) =$ A. $\frac{83}{6}$ B. $\frac{87}{4}$ C. $\frac{89}{4}$ D. $\frac{91}{6}$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

100	If A and B are two independent events, then the probability of occurrence of at least one of A and B is given by A. $P(A')P(B')$ B. $1 - P(A')P(B')$ C. $P(A') - P(B')$ D. $(1 - P(A'))(1 - P(B'))$
Alt1	A
Alt2	B
Alt3	C
Alt4	D

Examination: **M.Sc. Computer Science**

Section 1 - Section 1

Question No.1 4.00

Bookmark

In the bakery algorithm to solve the critical section problem :

- Each process receives a number (may or may not be unique) and the one with the lowest number is served next
- Each process gets a unique number and the one with the highest number is served next
- Each process gets a unique number and the one with the lowest number is served next
- Each process is put into a queue and picked up in an ordered manner

Question No.2 4.00

Bookmark

RAD Model has

- 3 phase
- 6 phases
- 2 phases
- 5 phases

Question No.3 4.00

Bookmark

In a two digit number, the digit in the unit's place is two more than the three times of the digit in ten's place. If the sum of the two digits is 6, the number is _____

- 42
- 15
- 24
- 51

Question No.4 4.00

Bookmark

…… is rearranging pairs of elements which are out of order, until no such pairs remain.

- Distribution
- Selection
- Exchange
- Insertion

Question No.5 4.00

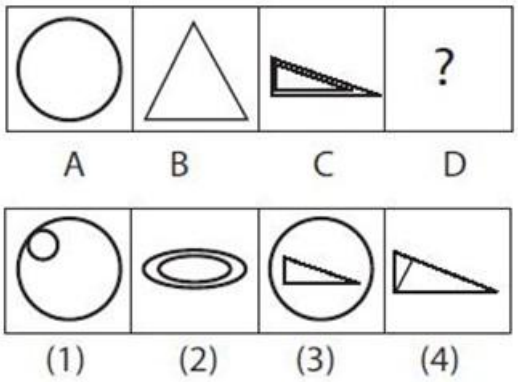
Bookmark

The usefulness of signals as a general inter process communication mechanism is limited because :

- They are system generated
- They do not work between processes
- They are user generated
- They cannot carry information directly

Question No.6 4.00

Bookmark



- 4
- 1
- 3
- 2

Question No.7 4.00

Bookmark

To avoid the race condition, the number of processes that may be simultaneously inside their critical section is _____

- 0
- 2
- 1
- 4

Question No.8 4.00

Bookmark

Which of the following is true regarding referential integrity?

- Every primary-key value must match a primary-key value in an associated table
- Every foreign-key value must match a primary-key value in an associated table
- Every primary-key value must match a foreign-key value in an associated table
- Every foreign-key value must match a foreign-key value in an associated table

Question No.9 4.00

Bookmark

The goal of hashing is to produce a search that takes _____

- O(log n) time
- $O(n^2)$ time
- O(1) time
- O(nlog n) time

Question No.10 4.00

Bookmark

Which of the following IP address class is multicast?

- Class C
- Class A
- Class B
- Class D

Question No.11 4.00

Bookmark

What is the best case complexity of QuickSort?

- O(n)
- $O(n^2)$
- O(logn)
- O(nlogn)

Question No.12 4.00

Bookmark

Which of the following is not the required condition for binary search algorithm?

- Number values should only be present
- The list must be sorted
- There should be the direct access to the middle element in any sub list
- There must be mechanism to delete and/or insert elements in list.

Question No.13 4.00

Bookmark

If 5 boys take 7 hours to pack 35 cartoons, then how many boys can pack 66 cartoons in 3 hours?

- 22
- 39
- 26
- 45

Question No.14 4.00

Bookmark

A process is _____

- Contents of main memory
- A job in secondary memory
- A program in execution
- A program in high language kept on disk

Question No.15 4.00

Bookmark

A binary search tree whose left subtree and right subtree differ in height by utmost 1 unit is called _____

- Lemma tree
- Red-black tree
- AVL tree
- B-tree

Question No.16 4.00

Bookmark

In an entity-relationship diagram “Diamonds” represents

- Relationship sets
- Attributes
- Weak entity set
- Multi-valued attributes

Question No.17 4.00

Bookmark

Under multiprogramming, turnaround time for short jobs is usually _____ and that for long jobs is slightly _____.

- Lengthened; Shortened
- Shortened; Unchanged
- Shortened; Shortened
- Shortened; Lengthened

Question No.18 4.00

Bookmark

If the number of records to be sorted is small, then …… sorting can be efficient.

- Merge
- Heap
- Bubble
- Selection

Question No.19 4.00

Bookmark

Which form has a relation that possesses data about an individual entity:

- 2NF
- 5NF
- 4NF
- 3NF

Question No.20 4.00

Bookmark

Let P be a quicksort program to sort numbers in ascending order using the first element as pivot. Let t1 and t2 be the number of comparisons made by P for the inputs {1, 2, 3, 4, 5} and {4, 1, 5, 3, 2} respectively. Which one of the following holds?

- t1 > t2
- t1 = 5
- t1 = t2
- t1 < t2

Question No.21 4.00

Bookmark

Daisy chain is a device for _____

- Connecting a number of controller to devices
- Connecting a number of devices to controller
- Interconnecting a number of devices to number of controllers
- Connecting a number of drivers to a controller

Question No.22 4.00

Bookmark

Study the following information carefully and answer the question below it (i) There is a group of five persons- A, B, C, D and E (ii) One of them is manual scavenger, one is sweeper, one is watchman, one is human scarecrow and one is grave-digger (iii) Three of them – A, C and grave-digger prefer tea to coffee and two of them – B and the watchman prefer coffee to tea (iv) The human scarecrow and D and A are friends to one another but two of these prefer coffee to tea. (v) The manual scavenger is C's brother Which of the following groups includes a person who likes tea but is not a grave-digger?

- BD
- DE
- BCE
- None of the above

Question No.23 4.00

Bookmark

In dynamic programming, the technique of storing the previously calculated values is called _____

- Saving value property
- Memoization
- Storing value property
- Mapping

Question No.24 4.00

Bookmark

Study the following information carefully and answer the question below it

In a family, Isha is the granddaughter of Asha. Deepa is the mother of Hansa. Charan is the son of Anand. Radha is the mother ofIsha. Deepa is the sister of Vinod and Charan. Nagesh has two children, Gita and Hansa. Emesh is the only grandson in the family. Charan is not married. Radha is the daughter-in-law of Anand.

Who is married to Radha?

- Charan
- Anand
- Nagesh
- Vinod

Question No.25 4.00

Bookmark

In the following question, the first two words (given in italics) have a definite relationship. Choose one word out of the given four alternatives which will fill the blank space and showthe same relationship with the third word as between the first two.

Latex is to *Rubber* as *Flax* is to ……?…….

- Silk
- Jute
- Cotton
- Linen

Question No.26 4.00

Bookmark

Which of the following operation is used if we are interested in only certain columns of a table.

- JOIN
- SELECTION
- CREATE
- UNION

Question No.27 4.00

Bookmark

A tree of n nodes will have _____ number of edges.

- n(n-1)
- n-1
- n(n-1)/2
- 1

Question No.28 4.00

Bookmark

The method of mining silver varies from place to place, _____?

- does it?
- isn't it?
- is it?
- doesn't it?

Question No.29 4.00

Bookmark

In a two pass assembler the object code generation is done during the _____

- Not done by the assembler
- First pass
- Zeroeth pass
- Second pass

Question No.30 4.00

Bookmark

Don't care conditions can be used for simplifying Boolean expressions in _____

- Examples
- K-maps
- Latches
- Terms

Question No.31 4.00

Bookmark

_____ provides a connection-oriented reliable service for sending messages.

- TCP
- IP
- DHCP
- UDP

Question No.32 4.00

Bookmark

Build & Fix Model is suitable for programming exercises of _____ LOC (Line of Code).

- 100-200
- 400-1000
- above 1000
- 200-400

Question No.33 4.00

Bookmark

What does FAT stands for?

- File attribute type
- Format All Tabs settings
- File allocation table
- File for all type

Question No.34 4.00

Bookmark

Identify the data structure which allows deletions at both ends of the list but insertion at only one end.

- Priority Queues
- Stack
- Output restricted dequeue
- Input restricted dequeue

Question No.35 4.00

Bookmark

Choose the synonym of the italicized word.
Some people are extremely *fastidious* in their choice of dress.

- pompous
- discriminating
- fussy
- careless

Question No.36 4.00

Bookmark

In a J-K Flip flop the function K=J' is used to realize _____

- T-Flip-Flop
- D-Flip-Flop
- M/S J-K Flip-Flop
- S-R Flip-Flop

Question No.37 4.00

Bookmark

Statements: Buses are cars. Cycles are cars
Conclusion:
I. Cars are buses
II. Buses are Cycles

- If only conclusion I follows
- If only conclusion II follows
- If neither I nor II follows
- If either I or II follows

Question No.38 4.00

Bookmark

Statement: Be humble even after being victorious.
Assumptions:
I. Many people are humble after being victorious
II. Generally People are not humble

- If both I and II are implicit
- If neither I nor II is implicit
- If only assumption I is implicit
- If only assumption II is implicit

Question No.39 4.00

Bookmark

Which one of the following will give the sum of full address as output?

- Three point majority circuit
- Three bit counter
- Three bit parity checker
- Three bit odd counter

Question No.40 4.00

Bookmark

The size of IP address in IPv6 is

- 128bits
- 100bits
- 4bytes
- 8bytes

Question No.41 4.00

Bookmark

A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

- 5/7
- 10/21
- 2/7
- 11/21

Question No.42 4.00

Bookmark

If 9 men working 6 hours a day can do a work in 88 days. Then 6 men working 8 hours a day can do it in how many days?

- 99
- 89
- 95
- 97

Question No.43 4.00

Bookmark

Bridge works in which layer of the OSI model?

- Application Layer
- Datalink Layer
- Network Layer
- Transport layer

Question No.44 4.00

Bookmark

Predictive parsers can be _____

- Constructive
- Recursive and constructive
- Non-recursive
- Recursive

Question No.45 4.00

Bookmark

Routing tables of a router keeps track of

- Routes to use for forwarding data to its destination
- MAC address assignment
- Port assignment to network devices
- Distribute IP address to network devices

Question No.46 4.00

Bookmark

Choose the correct meaning of the italicized idiom.
The police *cordoned off* the area after the explosion.

- checked everyone in the area
- filled the whole area
- did not allow anyone to leave the area
- isolated the area

Question No.47 4.00

Bookmark

Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is :

- 3:04
- 3:02
- 1:03
- 3:05

Question No.48 4.00

Bookmark

How many bricks, each measuring 25 cm X 11.25 cm X 6 cm, will be needed to build a wall of 8 m X 6 m X 22.5 cm?

- 7200
- 6000
- 5600
- 6400

Question No.49 4.00

Bookmark

Which of the following is NOT an aggregate function?

- Avg
- Select
- Min
- Max

Question No.50 4.00

Bookmark

The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4 % per annum is Re. 1. The sum (in Rs.) is :

- 640
- 650
- 630
- 625

Question No.51 4.00

Bookmark

Who was first to propose the Cleanroom philosophy in software engineering?

- Mills, Dyer
- Mills and Linger
- Mills, Dyer and Linger
- Dim Berners Lee

Question No.52 4.00

Bookmark

What is the number of moves required in the Tower of Hanoi problem for k disks?

- 2k + 1
- $2^k - 1$
- 2k – 1
- $2^k + 1$

Question No.53 4.00

Bookmark

The main difference between a register and a counter is _____

- A counter has capability to store one bit of information but register has n-bits
- A counter has no specific sequence of states
- A register has capability to store one bit of information but counter has n-bits
- A register has no specific sequence of states

Question No.54 4.00

Bookmark

What is the asymptotic runtime for traversing all nodes in a binary search tree with n nodes and printing them in order?

- O(log n)
- $O(n^2)$
- O(n)
- O(nlog(n))

Question No.55 4.00

Bookmark

In which one of the following page replacement policies, Belady's anomaly may occur?

- FIFO
- MRU
- LRU
- Optimal

Question No.56 4.00

Bookmark

Annual income of A is 10% more than of B whereas income of B is 20% more than that of C. If monthly income of C is Rs.2000 then what is the sum of monthly incomes of A, B and C?

- 6872
- 7040
- 7772
- 7046

Question No.57 4.00

Bookmark

A right triangle with sides 3 cm, 4 cm and 5 cm is rotated the side of 3 cm to form a cone. The volume of the cone so formed is :

- $15\pi cm^3$
- $12\pi cm^3$
- $16\pi cm^3$
- $20\pi cm^3$

Question No.58 4.00

Bookmark

Page stealing is _____

- A sign of an efficient system
- A Abstract Data Structure
- Taking larger spaces for pages paged out
- Taking page frames from other working sets

Question No.59 4.00

Bookmark

Based on the information given answer the following question.
1. In a family of six persons, there are people from three generations. Each has separate professions and they like different colours. There are two couples.
2. Shyam is an Engineer and his wife is not a doctor and she does not like Red colour.
3. Chartered Accountant likes green colour and his wife is a teacher.
4. Manisha is the mother-in-law of Sunita and she likes orange colour.
5. Vimal is the grand father of Tarun and tarun is the Principal and likes black colour.
6. Nyna is the grand daughter of Manisha and she likes blue colour. Nyna's Mother likes white colour.

Which Colour is liked by the Sunita?

- Cannot be determined
- Black
- Green
- White

Question No.60 4.00

Bookmark

The rule that a value of a foreign key must appear as a value of some specific table is called a _____

- Index
- Referential constraint
- Integrity constraint
- Functional dependency

Question No.61 4.00

Bookmark

Study the following information carefully and answer the question below it:

Aasha, Bhuvnesh,Charan, Danesh, Ekta, Farhan, Ganesh and Himesh are sitting around a circle, facing the centre. Aasha sits fourth to the right of Himesh while second to the left of Farhan. Charan is not the neighbour of Farhan and Bhuvnesh. Danesh sits third to the right of Charan. Himesh never sits next to Ganesh.

Which is the position of Farhan with respect to Ekta?

- Fourth to the right
- Third to the left
- Second to the right
- Sixth to the left

Question No.62 4.00

Bookmark

_____ is very useful in situation when data have to be stored and then retrieved in reverse order.

- List
- Stack
- Linked List
- Queue

Question No.63 4.00

Bookmark

Which-one of the following statement about normal forms is FALSE?

- Any relation with two attributes is BCNF
- Loss less, dependency – preserving decomposition into BCNF is always possible
- BCNF is stricter than 3 NF
- Lossless, dependency -preserving decomposition into 3 NF is always possible

Question No.64 4.00

Bookmark

Parsing is also known as _____

- Semantic analysis
- Syntax analysis
- Lexical analysis
- Code generation

Question No.65 4.00

Bookmark

If every non-key attribute is functionally dependent on the primary key, the relation will be in _____

- First normal form
- Fourth normal form
- Third normal form
- Second normal form

Question No.66 4.00

Bookmark

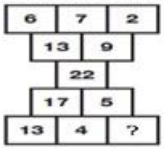
Choose the best antonym of the italicized word.
The principal *deprecated* the attitude of some student-leaders.

- appreciated
- tolerated
- derided
- ignored

Question No.67 4.00

Bookmark

Which number replaces the question mark?



- 3
- 1
- 2
- 4

Question No.68 4.00

Bookmark

Three bells toll at the intervals of 10, 15 and 24 minutes. All the three begin to toll together at 8 A.M. At what time they will again toll together

- 10AM
- 8.50AM
- 10.45AM
- 9.25AM

Question No.69 4.00

Bookmark

Fill in the blank with the correct form of the verb.
The International Women's Day _____ with great enthusiasm by our university last month.

- celebrated
- has celebrated
- was celebrated
- is celebrated

Question No.70 4.00

Bookmark

1, 4, 27, 16, ?, 36, 343

- 25
- 132
- 125
- 72

Question No.71 4.00

Bookmark

Which data structure can be used to test a palindrome?

- Priority queue
- Heap
- Tree
- Stack

Question No.72 4.00

Bookmark

Which of the following problems is NOT solved using dynamic programming?

- Matrix chain multiplication problem
- 0/1 knapsack problem
- Edit distance problem
- Fractional knapsack problem

Question No.73 4.00

Bookmark

Page fault frequency in an operating system is reduced when the ____

- Locality of reference is applicable to the process
- Processes tend to be CPU-bound
- Size of pages is increased
- Processes tend to be of an equal ratio of the I/O-bound and CPU-bound

Question No.74 4.00

Bookmark

The cube root of 1331 is _____

- 17
- 11
- 13
- 19

Question No.75 4.00

Bookmark

Choose the most appropriate preposition to fill the blank:
The mathematics exam will be held between 2____4pm.

- and
- from
- to
- at

Question No.76 4.00

Bookmark

Bottom parsing involves _____

- Shift reduce and handle pruning
- Shift reduce
- Operator check
- Handle pruning

Question No.77 4.00

Bookmark

For an undirected graph with n vertices and e edges, the sum of the degree of each vertex is equal to _____

- 2e
- (2n-1)/2
- 2n
- $(e^2 + 1)/2$

Question No.78 4.00

Bookmark

How many bits are there in the Ethernet address?

- 64 bits
- 32 bits
- 16 bits
- 48 bits

Question No.79 4.00

Bookmark

66 cubic centimeters of silver is drawn into a wire 1 mm in diameter. The length of the wire in metres will be :

- 84
- 90
- 336
- 168

Question No.80 4.00

Bookmark

The processes that are residing in main memory and are ready and waiting to execute are kept on a list called:

- execution queue
- job queue
- process queue
- ready queue

Question No.81 4.00

Bookmark

Which of the following is not an information domain required for determining function point in FPA ?

- Number of external Interfaces
- Number of user Input
- Number of errors
- Number of user Inquiries

Question No.82 4.00

Bookmark

The number of tuples in a relation is called its ……. While the number of attributes in a relation is called it's …….

- Degree, Cardinality
- Cardinality, Degree
- Columns, Rows
- Rows, Columns

Question No.83 4.00

Bookmark

In a full binary tree if number of internal nodes is I, then number of leaves L are?

- L = I + 1
- L = I – 1
- L = 2I
- L = 2I – 1

Question No.84 4.00

Bookmark

What is storage class of variable A in below code?

```
void main()
{
int A;
A = 10;
printf("%d", A);
}
```

- Register
- static
- Auto
- Extern

Question No.85 4.00

Bookmark

The recurrence relation capturing the optimal execution time of the Towers of Hanoi problem with n discs is _____

- T(n) = 2T(n-1) + 1
- T(n) = 2T(n/2) + 1
- T(n) = 2T(n-1) + n
- T(n) = 2T(n-2) + 2

Question No.86 4.00

Bookmark

The number of full and half-adders required to add 16-bit numbers is

- 8 half-adders, 8 full-adders
- 1 half-adder, 15 full-adders
- 4 half-adders, 12 full-adders
- 16 half-adders, 0 full-adders

Question No.87 4.00

Bookmark

You wouldn't tell them what happened, _____

- would you?
- won't you?
- wouldn't you?
- isn't it?

Question No.88 4.00

Bookmark

How many two-input "AND" and "OR" gates are required to realize Y = CD + EF + G?

- 3, 3
- 3, 2
- 2, 3
- 2, 2

Question No.89 4.00

Bookmark

Which three situations might require multiple routing protocols in a network?
a) When a new Layer 2-only switch is added to the network
b) When you are migrating from one routing protocol to another
c) When you are using routers from multiple vendors
d) When there are host-based routers from multiple vendors

- B,C,D
- A,B,C
- A,C,D
- A,B,D

Question No.90 4.00

Bookmark

A fraction which bears the same ratio to 1/27 as 3/11 bear to 5/9 is equal to _____

- 3/11
- 1/11
- 1/55
- 55

Question No.91 4.00

Bookmark

A graphical technique for finding if changes and variation in metrics data are meaningful is known as_____

- Function points analysis
- Control Chart
- DRE (Defect Removal Efficiency)
- Control Flow Chart Inspection

Question No.92 4.00

Bookmark

DHCP server provides _____ to the client

- IP Address
- Protocol
- MAC Address
- Network Address

Question No.93 4.00

Bookmark

What is the maximum number of edges in a bipartite graph having 10 vertices?

- 24
- 21
- 16
- 25

Question No.94 4.00

Bookmark

…… is known as a greedy algorithm, because it chooses at each step the cheapest edge to add to subgraph S.

- Kruskal's algorithm
- Prim's algorithm
- Bellman ford algorithm
- Dijkstra algorithm

Question No.95 4.00

Bookmark

If black is called white, white is called red, red is called pink, pink is called green, green is called blue, what would be the colour of human blood?

- Pink
- Blue
- Green
- White

Question No.96 4.00

Bookmark

The average of first 50 natural numbers is _____

- 12.25
- 25
- 25.5
- 25.3

Question No.97 4.00

Bookmark

The curved surface area of a cylindrical pillar is 264 m^2 and its volume is 924 m^3. Find the ratio of its diameter to its height.

- 7:03
- 3:07
- 7:06
- 6:07

Question No.98 4.00

Bookmark

Before proceeding with its execution, each process must acquire all the resources it needs is called as _____

- Circular wait
- Pre-emption
- Hold and wait
- Deadlock

Question No.99 4.00

Bookmark

The linker is _____

- A part of loader
- Required to create a load module
- Always used before programs are executed
- same as the loader

Question No.100 4.00

Bookmark

Sunil likes chocolates very much, _____?

- isn't it?
- does he
- doesn't he?
- is it?