Sr No.	MTECH Network and internet engg
1	Find the missing term in the series: 3, 20, 63, 144, 275,?
Alt1	354
Alt2	468
Alt3	548
Alt4	554

2	Choose word from the given options which bears the same relationship to the third word, as the first two bears: Anaemia: Blood :: Anarchy:?
Alt1	Lawlesness
Alt2	Government
Alt3	Monarchy
Alt4	Disorder

3	Teeth is related to Grit in the same way as Fist is related to…….?.....
Alt1	Blow
Alt2	Hand
Alt3	Open
Alt4	Clench

4	Select the lettered pair that has the same relationship as the original pair of words: Reproof: Scold
Alt1	Respite: Spite
Alt2	Romantic: Strong
Alt3	Salient: Prominent
Alt4	Chastise: Erring

5	Choose the alternative, which is similar to the given words: Bleat : Bray : Grunt
Alt1	Bark
Alt2	Croak
Alt3	Cry
Alt4	Scream

6	Spot the defective segment from the following:
Alt1	I wish
Alt2	I have a car
Alt3	to go shopping
Alt4	in the rain

7	Choose the meaning of the idiom/phrase from among the options given: Out of sorts
Alt1	unwell
Alt2	irrelevant
Alt3	in disorder
Alt4	out of love

8	The rowdy was at last done -------.
Alt1	over
Alt2	off
Alt3	away
Alt4	away with

9	Choose the option closest in meaning to the given word: BUCOLIC
Alt1	rustic
Alt2	utopian
Alt3	peaceful
Alt4	noisy

10	Choose the antonymous option you consider the best: CALLOW
Alt1	immature
Alt2	green
Alt3	clumsy
Alt4	veteran

11	If the seventh day of a month is three days earlier than Friday, what day will it be on the nineteenth day of the month ?
Alt1	Sunday
Alt2	Monday
Alt3	Wednesday
Alt4	Friday

12	Water is related to Ocean in the same way as Snow is related to ……
Alt1	Peaks
Alt2	Hail
Alt3	Glacier
Alt4	Mountain

13	A's father's brother's father is D. how is D related to A ?
Alt1	Father
Alt2	Grandfather
Alt3	Uncle
Alt4	Son

14	Find the odd man out:
Alt1	Squash
Alt2	football
Alt3	hockey
Alt4	Cricket

15	In a certain code language, if CRICKET is coded as 3923564, ROCKET is coded as 913564 and KETTLE is coded as 564406, then how is LITTLE coded in that language ?
Alt1	024406
Alt2	240406
Alt3	20446
Alt4	200446

16	At what angles are he hands of a clock inclined at 20 minutes past 7 ?
Alt1	80 degrees
Alt2	90 degrees
Alt3	100 degrees
Alt4	120 degrees

17	Odd one out: 2,4,6,8
Alt1	2
Alt2	4
Alt3	6
Alt4	8

18	Which is smallest:
Alt1	Quarter of 140
Alt2	Double of 4*4
Alt3	7*5
Alt4	Half of 72

19	What is the next alphabet in the following series Z D X H V L T ?
Alt1	Q
Alt2	N
Alt3	P
Alt4	O

20	How many times is the abbrevations FB shorter than the word FACEBOOK?
Alt1	4times
Alt2	3times
Alt3	5times
Alt4	Many

21	The value of the postfix expression 5 6 3 * + 2 4 * + is _____.
Alt1	31
Alt2	26
Alt3	120
Alt4	40

22	Which of the following sorting method is suitable for applications where the input is too large to fit into memory?
Alt1	Shell sort

Alt2	Quick sort
Alt3	Bubble sort
Alt4	Polyphase merge

23	The type of algorithm in which a decision is made that appears to be good, without regard for future consequences is called _____.
Alt1	Greedy algorithm
Alt2	Pre emptive algorithm
Alt3	Non-Pre emptive algorithm
Alt4	Branch and bound algorithm

24	Rapid Application Development is an_____ software process model.
Alt1	Incremental
Alt2	Universal Prescriptive
Alt3	Initial classical
Alt4	Evolutionary

25	_____is qualitative measures of degree to which classes are connected to each other.
Alt1	Abstraction
Alt2	Cohesion
Alt3	Coupling
Alt4	Elicitation

26	Equivalence partitioning is a _____ testing method.
Alt1	White Box
Alt2	Green Box
Alt3	Black Box
Alt4	Basic path

27	Which of the following statement is true?
Alt1	If a language is context free it can always be accepted by a deterministic push-down automaton
Alt2	The complement of a context free language is context free
Alt3	The union of two context free languages is context free
Alt4	The intersection of two context free languages is context free

28	Correct hierarchical relationship among context- free, right-linear, and context-sensitive language is _____.
Alt1	context-free $\subset$ right-linear $\subset$ context-sensitive
Alt2	context-free $\subset$ context-sensitive $\subset$ right-linear
Alt3	context-sensitive $\subset$ right-linear $\subset$ context-free
Alt4	right-linear $\subset$ context-free $\subset$ context-sensitive

29	Let Σ = {a, b, c, d, e}. The number of strings in Σ^* of length 4 such that no symbol is used more than once in a string is _____.
Alt1	360
Alt2	120
Alt3	35

Alt4	36

30	The following CFG is in _____. S → aBB B → bAA A → a B → b
Alt1	Chomsky normal form but not strong Chomsky normal form
Alt2	Weak Chomsky normal form but not Chomsky normal form
Alt3	Strong Chomsky normal form
Alt4	Greibach normal form

31	Which of the following is the most powerful parser?
Alt1	SLR
Alt2	LALR
Alt3	Canonical LR
Alt4	operator-precedence

32	In a compiler, keywords of a language are recognized during _____.
Alt1	Data flow analysis
Alt2	parsing of the program written
Alt3	the lexical analysis of the program
Alt4	the code generation

33	Consider the grammar: E ::= E+E |E*E | (E) | a The number of right most derivation for the sentence (a) is _____.
Alt1	2
Alt2	4
Alt3	1
Alt4	3

34	Which of the following intermediate best suited for derivation of common sub-expression?
Alt1	triples
Alt2	trees
Alt3	qudraples
Alt4	postfix code

35	DVST stands for _____.
Alt1	Digital View Storing Table
Alt2	Direct Visual Storage Tube
Alt3	Direct View Storage Tube
Alt4	Digital View Storage Tube

36	Resources are allocated to the process on non-sharable basis is called _____.
Alt1	Non Pre-Emption

Alt2	Mutual exclusion
Alt3	Hold and wait
Alt4	Pre-Emption

37	In Round Robin CPU scheduling, as time quantum is increased the average turn-around time _____.
Alt1	Remains constant
Alt2	Decreases
Alt3	Varies irregularly
Alt4	Increases

38	A system has n resources of same type. These resources are shared by 3 processes P1, P2, and P3 which have peak demands 3, 4, and 5 respectively. For what value of n deadlock will not occur?
Alt1	7 Resources
Alt2	9 Resources
Alt3	10 Resources
Alt4	13 Resources

39	Banker's algorithm for resource allocation deals with _____.
Alt1	Mutual exclusion
Alt2	Deadlock recovery
Alt3	Deadlock prevention
Alt4	Compiler Optimization

40	Distributed OS works on the _____ principle.
Alt1	File Foundation
Alt2	Multi system image
Alt3	Single System image
Alt4	Networking image

41	Signals that run from 0 up to a maximum frequency are called _____.
Alt1	Pause band signals
Alt2	Radio Signals
Alt3	Maximum frequency Signals
Alt4	Base band signals

42	A computer on a 6-Mbps network is regulated by a token bucket. The token bucket is filled at the rate of 1 Mbps. It is initially filled to capacity with 10 megabits. How long can the computer transmit at the full 6 Mbps?
Alt1	2 seconds
Alt2	5 seconds
Alt3	8 seconds
Alt4	10 seconds

43	The language accepted by a Push Down Automata is _____.
Alt1	Type 0
Alt2	Type 1

Alt3	Type 4
Alt4	Type 2

44	Non-modifiable procedures are called _____.
Alt1	Concurrent procedures
Alt2	Serially usable procedures
Alt3	Re-entrant procedures
Alt4	Top-down procedures

45	DBMS provides the facility of accessing data from a database through _____.
Alt1	DDL
Alt2	DML
Alt3	DBA
Alt4	Schema

46	A weak entity type always has _____.
Alt1	Partial participation constraint
Alt2	No participation constraint
Alt3	Total participation constraint
Alt4	Either partial or total participation constraint

47	Which of these is a characteristic of RAID 5?
Alt1	Dedicated parity
Alt2	Double parity
Alt3	Hamming code parity
Alt4	Distributed parity

48	_____ signal prevents the microprocessor from reading the same data more than one.
Alt1	Pipelining
Alt2	Handshaking
Alt3	Controlling
Alt4	Alert

49	The RST7 instruction in 8085 microprocessor is equal to _____
Alt1	CALL 0010 H
Alt2	CALL 0034 H
Alt3	CALL 0038 H
Alt4	CAL 003C H

50	What is the output of the program in C?
	#include<stdio.h>
	main( )
	{
	int a=10;
	int b=20;
	a= a+b;
	b= a-b;
	a= a-b;
	printf("%d%d", a, b);
	}

Alt1	20, 10
Alt2	10, 10
Alt3	10, 20
Alt4	20, 30

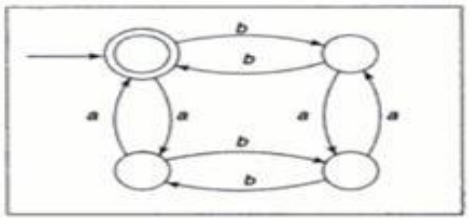
51	The number of edges in a regular graph of degree'd' and 'n' vertices is
Alt1	Maximum of n,d
Alt2	n+d
Alt3	nd
Alt4	nd/2

52	The number of possible binary tree with 4 nodes is
Alt1	12
Alt2	14
Alt3	16
Alt4	24

53	The following program fragment
	int a = 4, b = 6;
	printf("%d", a!=b);

	The following program fragment
	int a = 4, b = 6;
	printf("%d", a!=b);

Alt1	Outputs an error message
Alt2	Prints 0
Alt3	Prints 1
Alt4	Garbage value

54	The FSM pictured in the below figure recognize the
	
Alt1	Any string of odd number of a's
Alt2	Any string of odd number of a's and even number of b's
Alt3	Any string of even number of a's and even number of b's
Alt4	Any string of odd number of a's and odd number of b's

55	Shift-Reduce parsers are
Alt1	Top-down parser
Alt2	Bottom-up parser
Alt3	May be top-down or bottom-up parser
Alt4	None of the above

56	Consider six memory partitions of sizes 200KB, 400KB, 600KB, 500KB, 300KB and 250KB, where KB refers to Kilobyte. These partition needs to be allotted to four processes of sizes 357KB, 210KB, 468KB and 491KB in that order. If best fit algorithm is used, which partitions are not allotted to any process?
Alt1	200KB and 300KB
Alt2	200KB and 250KB
Alt3	250KB and 300KB
Alt4	300KB and 400KB

57	An optimizing compiler

Alt1	Is optimized to take less time for execution
Alt2	Is optimized to occupy less space
Alt3	Optimized the code
Alt4	None of the above

58	A resource-management platform responsible for managing computing resources in clusters and using them for scheduling of users' applications in hadoop environment
Alt1	Hadoop HDFS
Alt2	Hadoop MapReduce
Alt3	Hadoop Common
Alt4	Hadoop Yarn

59	In distributed systems, link and site failure is detected by
Alt1	Polling
Alt2	Handshaking
Alt3	token passing
Alt4	Token sharing

60	The potential overuse of a single parity disk is avoided in RAID level ____.
Alt1	5
Alt2	4
Alt3	3
Alt4	2

61	A system is in a safe state only if there exists a :
Alt1	safe allocation
Alt2	safe resource
Alt3	safe sequence
Alt4	All of these

62	A transformation that slants the shape of an object is called
Alt1	Reflection
Alt2	Shear
Alt3	Distortion
Alt4	Scaling

63	What is the natural mask for class-c network
Alt1	255.255.255.1
Alt2	255.255.255.0
Alt3	255.255.255.255
Alt4	255.255.255.254

64	A system has 6 identical resources and N processes competing for them. Each process can request at most 2 resources. Which one of the following values of N could lead to a deadlock?
Alt1	1
Alt2	2
Alt3	3

Alt4	4

65	Consider the following function written in C programming language
	void foo(char *a) {
	if(*a && *a != ' ') {
	foo(a+1);
	putchar(*a)
	}
	}
	The output of the above function on input "ABCD EFGH" is

Alt1	ABCD EFGH
Alt2	ABCD
Alt3	HGFE DCBA
Alt4	DCBA

66	How many tuples does the result of the following relational algebra expression contain? Assume that the schema of AUB is the same as that of A. (AUB) ⋈ A.Id >40 Ú C.Id< 15 C
	Consider the following relations A, B and C: A ID Name Age 12 Arun 60 15 Shreya 24 99 Rohit 11 B ID Name Age 15 Shreya 24 25 Hari 40 98 Rohit 20 99 Rohit 11 C Id Phone Area 10 2200 02 99 2100 01
Alt1	7
Alt2	4
Alt3	5

Alt4	9

67	How many tuples does the result of the following SQL query contain? SELECT A.Id FROM A WHERE A.Age > ALL (SELECT B.Age FROM B WHERE B.Name = 'Arun')
	Consider the following relations A, B and C: A ID Name Age 12 Arun 60 15 Shreya 24 99 Rohit 11 B ID Name Age 15 Shreya 24 25 Hari 40 98 Rohit 20 99 Rohit 11 C Id Phone Area 10 2200 02 99 2100 01
Alt1	4
Alt2	3
Alt3	0
Alt4	1

68	A RAM chip has a capacity of 1024 words of 8 bits each (1K × 8). The number of 2 × 4 decoders with enable line needed to construct a 16K × 16 RAM from 1K × 8 RAM is
Alt1	4
Alt2	5
Alt3	6
Alt4	7

69	Determine the maximum length of the cable (in km) for transmitting data at a rate of 500 Mbps in an Ethernet LAN with frames of size 10,000 bits. Assume the signal speed in the cable to be 2,00,000 km/s.
Alt1	1
Alt2	2
Alt3	2.5
Alt4	5

70	1. Consider an instruction pipeline with five stages without any branch prediction: Fetch Instruction (FI), Decode Instruction (DI), Fetch Operand (FO), Execute Instruction (EI) and Write Operand (WO). The stage delays for FI, DI, FO, EI and WO are 5 ns, 7 ns, 10 ns, 8 ns and 6 ns, respectively. There are intermediate storage buffers after each stage and the delay of each buffer is 1 ns. A program consisting of 12 instructions I1, I2, I3, …, I12 is executed in this pipelined processor. Instruction I4 is the only branch instruction and its branch target is I9. If the branch is taken during the execution of this program, the time (in ns) needed to complete the program is

Alt1	132
Alt2	165
Alt3	176
Alt4	328

71	Match the following: 1) Waterfall model — a)Specifications can be developed incrementally 2) Evolutionary model — b) Requirements compromises are inevitable 3) Component-based software engineering — c) Explicit recognition of risk 4) Spiral development — d) Inflexible partitioning of the project into stages
Alt1	1-a, 2-b, 3-c, 4-d
Alt2	1-d, 2-a, 3-b, 4-c
Alt3	1-d, 2-b, 3-a, 4-c
Alt4	1-c, 2-a, 3-b, 4-d

72	In designing a computer's cache system, the cache block (or cache line) size is an important parameter. Which one of the following statements is correct in this context?
Alt1	A smaller block size implies better spatial locality
Alt2	A smaller block size implies a smaller cache tag and hence lower cache tag overhead
Alt3	A smaller block size implies a larger cache tag and hence lower cache hit time
Alt4	A smaller block size incurs a lower cache miss penalty

73	An IP router with a Maximum Transmission Unit (MTU) of 1500 bytes has received an IP packet of size 4404 bytes with an IP header of length 20 bytes. The values of the relevant fields in the header of the third IP fragment generated by the router for this packet are
Alt1	MF bit: 0, Datagram Length: 1444; Offset: 370
Alt2	MF bit: 1, Datagram Length: 1424; Offset: 185
Alt3	MF bit: 1, Datagram Length: 1500; Offset: 370
Alt4	MF bit: 0, Datagram Length: 1424; Offset: 2960

74	Which one of the following protocols is NOT used to resolve one form of address to another one?
Alt1	DNS
Alt2	ARP
Alt3	DHCP
Alt4	RARP

75	The minimum number of JK flip-flops required to construct a synchronous counter with the count sequence (0,0,1,1,2,2,3,3,0,0,..) is

Alt1	2
Alt2	3
Alt3	22
Alt4	32

76	Using Demorgan's theorem we can convert any AND-OR structure into
Alt1	NAND-NAND
Alt2	OR-NAND
Alt3	NAND –NOR
Alt4	NOR-NAND

77	Which group of instructions does not affect the flags?
Alt1	Arithmetic operations
Alt2	Logic operations
Alt3	Data transfer operations
Alt4	Branch operations

78	Consider a hash table with 100 slots. Collisions are resolved using chaining. Assuming simple uniform hashing, what is the probability that the first 3 slots are unfilled after the first 3 insertions?
Alt1	(97 × 97 × 97)/1003
Alt2	(99 × 98 × 97)/1003
Alt3	(97 × 96 × 95)/1003
Alt4	(97 × 96 × 95)/(3! × 1003)

79	The transport layer protocols used for real time multimedia, file transfer, DNS and email, respectively are
Alt1	TCP, UDP, UDP and TCP
Alt2	UDP, TCP, TCP and UDP
Alt3	UDP, TCP, UDP and TCP
Alt4	TCP, UDP, TCP and UDP

80	A computer uses 46-bit virtual address, 32-bit physical address, and a three-level paged page table organization. The page table base register stores the base address of the first-level table (T1), which occupies exactly one page. Each entry of T1 stores the base address of a page of the second-level table (T2). Each entry of T2 stores the base address of a page of the third-level table (T3). Each entry of T3 stores a page table entry (PTE). The PTE is 32 bits in size. The processor used in the computer has a 1 MB 16-way set associative virtually indexed physically tagged cache. The cache block size is 64 bytes What is the size of a page in KB in this computer?
Alt1	2
Alt2	4
Alt3	8
Alt4	16

81	A computer uses 46-bit virtual address, 32-bit physical address, and a three-level paged page table organization. The page table base register stores the base address of the first-level table (T1), which occupies exactly one page. Each entry of T1 stores the base address of a page of the second-level table (T2). Each entry of T2 stores the base address of a page of the third-level table (T3). Each entry of T3 stores a page table entry (PTE). The PTE is 32 bits in size. The processor used in the computer has a 1 MB 16-way set associative virtually indexed physically tagged cache. The cache block size is 64 bytes What is the minimum number of page colours needed to guarantee that no two synonyms map to different sets in the processor cache of this computer?
Alt1	2
Alt2	4
Alt3	8
Alt4	16

82	A bit-stuffing based framing protocol uses an 8-bit delimiter pattern of 01111110. If the output bit-string after stuffing is 01111100101, then the input bit-string is
Alt1	111110100
Alt2	111110101
Alt3	111111101
Alt4	111111111

83	What is the output of the following C code
	Assume that the address of x is 2000(in decimal) and an integer requires 4 bytes of memory
	int main() {
	unsigned int x[4][3]= { {1,2,3}, {4,5,6}, {7,8,9}, {10,11,12} };
	printf(" %u %u %u", x+3, *(x+3), *(x+2)+3);
	}

	What is the output of the following C code
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	printf(" %u %u %u", x+3, *(x+3), *(x+2)+3);
	}

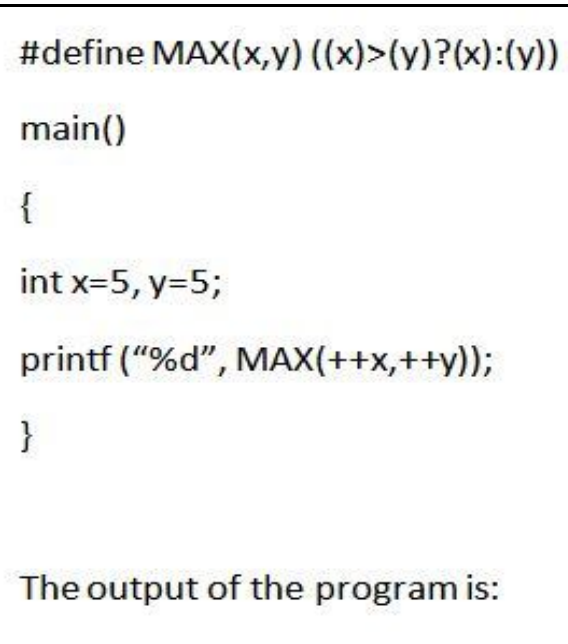
Alt1	2.0362E+11
Alt2	2012,4,2204
Alt3	2036, 10,10

Alt4	2012,4,6

84	A link has a transmission speed of 106 bits/sec. It uses data packets of size 1000 bytes each. Assume that the acknowledgement has negligible transmission delay, and that its propagation delay is same as the data propagation delay. Also assume that the processing delays at nodes are negligible. The efficiency of stop and wait protocol in this setup is exactly 25%. The value of the one way propagation delay (in milliseconds) is
Alt1	24
Alt2	12
Alt3	4
Alt4	32

85	The number of states in the minimal deterministic finite automation corresponding to the regular expression (0+1)* (10) is
Alt1	2
Alt2	3
Alt3	4
Alt4	5

86	Consider a paging hardware with a TLB. Assume that the entire page table and all the pages are in the physical memory. It takes 10 milliseconds to search the TLB and 80 milliseconds to access the physical memory. If the TLB hit ratio is 0.6, the effective memory access time (in milliseconds) is
Alt1	122
Alt2	244
Alt3	124
Alt4	248

87	
Alt1	7
Alt2	5
Alt3	6

Alt4	99

88	Given the following definitions, what will be the value of r?
	int *p, *q, r;
	int values[30];
	p=&values[0];
	q=values+29;
	r=++q-p;

Alt1	address of q minus p
Alt2	number of elements in the array
Alt3	(value pointed by q)+1-(value pointed by p)
Alt4	qp

89	What will be the output of the program?
	#include <stdio.h>
	static int =5;
	main()
	{
	int sum=0;
	do
	{
	sum+=(1/i);
	}while(0<i--);
	printf (“%d”, sum);
	}

Alt1	sum of the series is printed
Alt2	compilation error
Alt3	runtime error

Alt4	typo error

90	#include <stdio.h>
	enum mode={green, red, orange, blue, white};
	main()
	{
	green = green+1;
	printf ("%d"%d",green,red);
	}
	The output of the program will be:

Alt1	1,1
Alt2	0,1
Alt3	no output, error in compilation
Alt4	1,2

91	What is the size of ptr1 and ptr2? Struct x{
	Int j;
	Char k[100];
	Unsigned l;
	};
	int *ptr1;
	struct x *ptr2;

Alt1	same
Alt2	2, 104
Alt3	2, undefined for memory is not allowed
Alt4	2, 4

92	What is the output of the following program?#include <stdio.h>
	main(0
	{
	int i=0;
	switch(i)
	{
	case 0: i++;
	case 1: i++2;
	case 2: ++i;
	}
	printf ("%d", i++);
	}
	The output of the program is:

Alt1	1
Alt2	3
Alt3	4
Alt4	5

93	If i=5, what is the output for printf ("%d%d%d", ++i,i,i++)?
Alt1	5,6,7
Alt2	6,6,7
Alt3	7,6,5
Alt4	6,5,6

94	For the following code, how many times is the printf function executed?
	int i,j;
	for (i=0;i<=10;i++);
	for (j=0;j<=10;j++);
	printf("i=%d,j=%d\n",i,j);

Alt1	121

Alt2	11
Alt3	10
Alt4	129

95	What is the output generated for the following code? #define square (a) (a*a) printf("%d",square(4+5));
Alt1	81
Alt2	4
Alt3	29
Alt4	18

96	For the following statement, find the values generated for p and q.
	int p=0, q=1;
	p=q++;
	p=++q;
	p=q--;
	p=--q;

Alt1	1,1
Alt2	0,0
Alt3	3,2
Alt4	1,2

97	What is the output generated by the following program? #include <stdio.h>
	main()
	{
	int a, count;
	int func(int);
	for(count=1;count<=5;++count)
	{
	a=func(count);
	printf("%d",a);
	}}
	int func(int x)
	{
	int y;
	y=x*x;
	return (y);
	}

Alt1	1234567
Alt2	2516941
Alt3	9162514
Alt4	1491625

98	How many X's are printed? for (i=0;j=10;i<j;i++,j--) printf("X");
Alt1	10
Alt2	5
Alt3	4
Alt4	45

99	In a signed magnitude notation, what is the minimum value that can be represented with 8 bits?
Alt1	-128
Alt2	-255
Alt3	-127
Alt4	0

100	Write one statement equivalent to the following two statements: x=sqr(a); return(x);
Alt1	return(sqr(a));

Alt2	printf(“sqr(a)”);
Alt3	return(a*a*a);
Alt4	printf(“%d”,sqr(a));