<b>Test</b>	Sum	mary
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No. of Sections: 4No. of Questions: 80

• Total Duration: 80 min

	Section 1 - Quantitative Aptitude
	Summary lestions: 20 20 min
<b>Additi</b> None	onal Instructions:
Q1.	Multiple Choice (Select 1 out of 4 options, fog the question below.) If 11a+11b=33, what is the average of a and b?
	3
	2
	4
	None of the above
Q2.	Odometer is to mileage as compass is to
	speed
	hiking
	needle
	direction
Q3.	A boys run 450m race in 60s. His speed is.
	6. 4m/s
	7.5m/s
	8.6m/s
	9.2

Q4. A train travels at 48krnthr low many metres will it travel In 15 min?

	850m
	900m
	12000m
	740m
Q5.	identify the missing number in the series. 11.19.?,41.55
	31
	29
	26
	39
Q6.	Find the compound interest on Rs. 600 for 2 Years at 5% p.a compunded annually
	Rs 56. 50
	Rs 61.50
	64
	56
Q7.	If the sum of the number and its square Is 132, then what is we number
	11
	10
	12
	13
Q8.	By selling 20 articles for a rupee a man loses 10%. How many for a rupee did ne buy?
	16
	18
	14

1033	
1111	
125	
None of these	
If the average of five consecutive numbers is 27, find the smallest number	
23	
24	
25	
28	
22% of 200 = ?	
42	
88	
40	
44	
What is the probability 0f getting a sum 9 from two throws of a dice?	
1/6	
1/8	
1/9	
1/12	

12

1/3

	3/4	
	7/19	
	8/21	
Q14.	A ratio equivalent to 3 :7?	
	3:9	
	6:10	
	9:21	
	18:49	
Q15.	Identity the missing number in the series 33.?.19.12.5	
	31	
	26	
	29	
	27	
Q16.	Multiple Choice Se ect 1 out of 4 options. tor the question below.) Identify the missing number in the series. 11,19,?.41.55	
	31	
	29	
	26	
	39	
Q17.	The average of 20 numbers is zero. Of them. at the most, hard many may be greater the	nan zero?
	0	
	1	
	10	
	19	

Q18.	A man walks 5 km toward south and then turns to the right. After walking 3 km he t direction Is he from the starting place?	urns to the left and walks 5 km. Now in which
	west	
	south	
	north-East	
	south-west	
Q19.	45% Of 500 =?	
	210	
	225	
	205	
	240	
Q20.	what least number must be added 1056, so that the sum is completely divisible by	23?
	2	
	3	
	6	
	19	
	Section 2 - Verbal	
	Summary uestions: 20 : 20 min	
<b>Addit</b> None	ional Instructions:	
Q1.	Pen Is to poet as needle is to	
	a. Thread	
	b. Button	
	c.Carpenter	

Q2.	which of the following should be the fourth sentence .Rearrange the following 4 sentences meaning full 1.Its current was very powerful and could take big tree trunks 2.There wine some children, pawing on the bank of vasenvay 3.In the forest madhubani there is big take 4.The excess water staled flowing lerciehrly through the waterer 5.Once there was a very heavy Min Weave or mirth the lake sae overflowing 6.A poor man noticed It and maned to save them
	a.5
	b.4
	c.3
	d.2
Q3.	Careful is to cautious as boastful is to
	a.Arrogant
	b.Humble
	c. Joyful
	d. Suspcious
Q4.	Statement. It is desirable to put the child in school at the age of 5 or so.  Assumptions I. At that age the child reaches appropriate level of development and is ready to learn. II. The Schools do not admit children after six years of age.
	a.Only assumption I is impicit
	b. Only assumption II is impicit
	c.either I or II impicit
	d.neither I nor II impicit
Q5.	Select the word, which corresponds to the correctly spelled word
	a.occasionialy
	b.occasionally
	c.ocationly
	d.occasionaly

d. Tailor

	a.committee	
	b.comite	
	c.commitee	
	d.comtee	
Q7.	To take secretly small quantities	
	a.robbery	
	b.Pilferage	
	d.deflection	
	c.theft	
Q8.	She exclaimed with sorrow that was a very miserable plight.	
	She said with sorrow, "What a pity it is."	
	She said with sorrow, "What a pity it is."	
	She said, "What a miserable sight it is."	
	She said, "What a miserable plight it is."	
Q9.	Which of the following should be the first sentence? Rearrange the following six sentences in proper sequence to form a meaningful par 1. Its current was very powerful and could take away big tree trunks 2. There were some children, playing on the bank of waterway 3. In the forest of Manhunt, there Is big lake 4. The excess water staled flowing forcefully through the waterway 5. Once there was a very heavy rain because of which the lake started overflowing 6. A poor man noticed it and rushed to save them.	agraph, then answer the questions given below
	a.6	
	b.5	
	c.4	
	d.3	

Q6.

Select the word. which corresponds to the correctly spelled word

	a.crude
	b.cursory
	c.critical
	d.curious
Q11.	Please do not an otter made by the Chairman :
	a.deny
	b.refuse
	c.relrain
	d.none of these
Q12.	Tanya is older than Eric. Cliff is alder than Tanya. Eric is rider than Cliff. If the first two statements are true, the third statement is
	a.True statements
	b.false statements
	c.uncertan
Q13.	Either he or I am going.
	a. he or are going
	b. he is going or I am
	c.i or he is going
	d. no improvement
Q14.	All the trees in me park are following trees. Some of the trees in the park are dogwoods. All dogwoods in the park are flowering trees. If the first two statements are true, the third statement is

a.true statement

Q10.

Even a ----- glance will reveal the mystery.

	false statement	
	uncertan	
Q15.	Marathon is to race as hibernation is to?	
	a.winter	
	b.bear	
	c.dream	
	d.sleep	
Q16.	Which Of the following should be the third sentence? Rearrange the following six sentences In proper sequence Io form a meaningful par 1. Its current was very powerful and could take away big tree hunks. 2. There were some children, playing on the bank of waterway 3. In the forest of Madhubani, there is big lake. 4. The excess water started flowing forcefully through the waterway 5. Once there was a very heavy rain because of which the lake started overflowing. 6. A poor man noticed it and rushed to save them.	agraph, then answer the questions given below.
	a.6	
	b.5	
	c.4	
	d.3	
Q17.	Choose the word which is least like the other words in the group	
	a.BOY	
	b. CHILD	
	c.MAN	
	d.LADY	
Q18.	other countries have eradicated this disease ten years ago	
	a.eradicated	
	b.had eradicated	
	c.did eradicated	

Q19.	A disease of mind causing an uncontrollable desire to steal	
	a.Schizophrenia	
	b.claustrophobia	
	c.Kleptomania	
	D.magolomania	
Q20.	Which word does not have a similar meaning to <b>amiss</b>	
	a.improper	
	b.unsutable	
	c.avoid	
	d.incorrect	
	Section 3 - Reasoning	
	Summary uestions: 20 20 min	
<b>Addit</b> i None	ional Instructions:	
Q1.	Find out from amongst the four alternatives as to how the pattern would appear wh	en the transparent Sheet rs lobed at the dotted
	(A) (B) (C) (D)	
	a.A	
	b.B	
	c.C	
	d.D	

d.improvement

Q2.

Odometer is to mileage as compass is to

	a.speeu	
	b.hiking	
	c.needle	
	d.direction	
Q3.	A girl Introduced a boy as the son of the daughter of the father of her uncle. The boy	ls girl's?
	a.BROTHER	
	b. SON	
	c. SON.IN LAW	
	d. NEPHEW	
Q4.	The Sawing show a sheet of paper which has been folded. The dashed lines indicate single fold. The black square shows where a hole was punched. Where do the holes	
	a.3A,2A.6D	
	b.3B,5A,6D	
	c.3A,5A,3D	
	d. 3A,2A	
Q5.	Find out horn amongst the four alternatives as to how the pattern would appear who line.	en the transparent sheet is folded at the dotted
	a.A	
	b.B	
	c.C	
	d.D	
Q6.	identify the missing number in the series. 11.19.?,41.55	

a.31

b. 29	
c.26	
d.39	
In a box. there are 8 red. 7 blue and 6 green baits One bal Is picked up redomly .wha green?	at is the probability that it Is neither red no
a.1/3	
b.3/4	
c.7/19	
d.8/21	
Which pattern can be folded to make the cube shown?	
a.A	
b.B	
c.C	
d.D	
Identity the missing number in the series 33.?.19.12.5	
a.31	
b.26	
c.29	
d.27	
Which group or shapes can be assembled to make the shape shown,	

Q7.

Q8.

Q9.

Q10.

b.B	
c.C	
d.D	
which pattern can be folded to make the cube shown?	
a.A	
b.B	
c.C	
d.D	
Find out from amongst the four alternatives as to how the pattern would appear who line.  (C) (D)	en the transparent sheet is folded at the dotted
a.A	
b.B	
c.C	
d.D	
In the figures shown below. one of the shapes (A-D) is identical to the first figure but the first?	t has been rotated. Which figure is Idenbcal to
a.A	
b.B	
c.C	

a.A

Q11.

Q12.

Q13.

	d.D	
Q14.	Identify the missing number in the series. 11,19,?.41.55	
	a.31	
	b.29	
	c.26	
	d.39	
Q15.	Find out from amongst the four alternatives as to how the pattern would appear wh line  (A)  (B)  (C)  (D)	en the transparent sheet is folded at the dotted
	a.A	
	b.B	
	c.C	
	d.D	
Q16.	In the figures shown below. one of the shapes (A-D) is identical to the first figure but the first,	t has been rotated Which figure Is identical to
	A	
	В	
	С	
	D	
Q17.	Find the odd one out. 6,9, 15, 21, 24, 28, 30	
	a.28	
	b.15	
	c.21	

Q18. Which group of shapes can be assembled to make the shape shown?

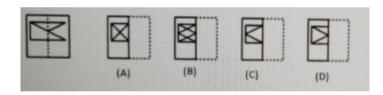


a.A			
b.B			
c.C			
d.D			

Q19. Find the odd one out. 8, 27, 64, 100, 125, 216, 343

a.27			
b. 100			
c.125			
d.216			

Q20. Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line



a.A		
b.B		
c.C		
d.D		

## **Section 4 - Coding**

## **Section Summary**

• No. of Questions: 20

• Duration: 20 min

Q1. What is the output of this C code?

```
int main()
{
    int i = 5;
    int l = i / -4;
    int k = i % -4;
    printf("%d %d\n", l, k);
    return 0;
}
```

Compile time error

-1 1

1 -1

Run time error

Q2. What is the output of this C code?

```
int main()
{
int i = 11;
int *p = &i;
foo(&p);
printf("%d ", *p);
}
void foo(int *const *p)
{
int j = 10;
*p = &j;
printf("%d ", **p);
}
```

Compile time error

10 10

Undefined behaviour

10 11

Q3. What is the output of this C code? int main() { int x = 1; short int i = 2; float f = 3; if (sizeof((x = 2)? f : i) == sizeof(float)) printf("float\n"); else if (sizeof((x = 2)? f : i) == sizeof(short int)) printf("short int\n");

float short int Undefined behaviour Compile time error What is the output of this C code? void main() int  $a[3] = \{1, 2, 3\};$ int \*p = a; int \*\*r = &p; printf("%p %p", \*r, a); Different address is printed 1 2 Same address is printed. 1 1 Comment on the output of this C code? void main() int k = 8; int m = 7; int z = k < m ? k = m : m++;printf("%d", z); Run time error 7 8 Depends on compiler Which of the following function declaration is illegal? double func(); int main(){}
double func(){}

Q4.

Q5.

Q6.

```
int main(){}
 int main()
double func();
double func(){//statements}
 None of the mentioned
What will be the data type of the expression (a < 50)? var1: var2; provided a = int, var1 = double, var2 = float
 float
 int
 double
 Cannot be determined
Value of c after the following expression (initializations a = 1, b = 2, c = 1): c += (-c)? a : b;
 syntax error
 c = 1
 c = 2
 c = 3
Which of the following structure declaration will throw an error?
struct temp{}s;
main(){}
struct temp{};
struct temp s;
main(){}
 struct temp s;
struct temp{};
main(){}
```

double func(){};

Q7.

Q8.

Q9.

None of the mentioned State the complexity of algorithm given below Q10. int function(vector arr) int len=arr.length(); if(len==0) return; temp=arr[len-1]; arr.pop\_back(); return temp; o(n) O(logn) 0(1) O(n logn) Q11. What is the location of parent node for any arbitrary node i? (i/2) position (i+1)/ position floor(i/2) position ceil(i/2) position Q12. If row-major order is used, how is the following matrix stored in memory? abc def ghi ihgfedcba abcdefghi cfibehadg adgbehcfi Q13. Consider the following dynamic programming implementation of the Knapsack problem: #include int find\_max(int a, int b) if(a > b) return a; return b; int knapsack(int W, int \*wt, int \*val,int n) int ans[n + 1][W + 1];

int itm,w;

```
for(itm = 0; itm <= n; itm++)
ans[itm][0] = 0;
for(w = 0; w \le W; w++)
ans[0][w] = 0;
for(itm = 1; itm <= n; itm++)
for(w = 1; w \le W; w++)
if(wt[itm - 1] \le w)
ans[itm][w] = ____
ans[itm][w] = ans[itm - 1][w];
return ans[n][W];
int main()
int w[] = \{10,20,30\}, v[] = \{60, 100, 120\}, W = 50;
int ans = knapsack(W, w, v, 3);
printf("%d",ans);
return 0;
Which of the following lines completes the above code?
 find_max(ans[itm - 1][w - wt[itm - 1]] + val[itm - 1], ans[itm - 1][w])
 find_max(ans[itm - 1][w - wt[itm - 1]], ans[itm - 1][w])
 ans[itm][w] = ans[itm - 1][w];
 none of the mentioned
Consider the following code:
#include
int get_min(int a, int b)
if(a<b)< div="">
return a;
return b;
int minimum_time_required(int reach[[3],int spent[[4], int *entry, int *exit, int n)
int t1[n], t2[n],i;
t1[0] = entry[0] + spent[0][0];
t2[0] = entry[1] + spent[1][0];
for(i = 1; i < n; i++)
t1[i] = get_min(t1[i-1]+spent[0][i], t2[i-1]+reach[1][i-1]+spent[0][i]);
return get_min(t1[n-1]+exit[0], t2[n-1]+exit[1]);
Which of the following lines should be inserted to complete the above code?
t2[i] = get_min(t2[i-1]+spent[1][i], t1[i-1]+reach[0][i-1]+spent[1][i])
t2[i] = get_min(t2[i-1]+spent[1][i], t1[i-1]+spent[1][i])
t2[i] = get_min(t2[i-1]+spent[1][i], t1[i-1]+reach[0][i-1])
```

Q14.

Q15. What would be the asymptotic time complexity to find an element in the linked list?

none of the mentioned

```
0(1)
 O(n)
 O(n2)
 None of the mentioned
What is wrong with the following code of insertion in fibonacci heap. Choose the correct option
FIB-INSERT(H, x)
degree[x]= 0
p[x] = NIL
child[x] =NIL
left[x] =x
right[x] =x
mark[x] =FALSE
concatenate the root list containing x with root list H
if min[H] = NIL or key[x] > key[min[H]]
then min[H] = x
n[H] = n[H] + 1
 Line -11
 Line -3
 Line 9
 Line 7
What is the output of the following code?
#include
int cat_number(int n)
int i,j,arr[n],k;
arr[0] = 1;
for(i = 1; i < n; i++)
arr[i] = 0;
for(j = 0,k = i - 1; j < i; j++,k--)
arr[i] += arr[j] * arr[k];
return arr[n-1];
int main()
int ans, n = 8;
ans = cat_number(n);
printf("%d\n",ans);
return 0;
 42
 132
 429
```

Q16.

Q17.

1430

Q18. Consider the following recursive implementation used to convert a decimal number to its binary equivalent: #include int arr[31], len = 0; void recursive\_dec\_to\_bin(int n) if(n == 0 && len == 0)arr[len++] = 0;return; if(n == 0)return; recursive\_dec\_to\_bin(n/2); int main() int n = 100,i; recursive\_dec\_to\_bin(n); for(i=len-1; i>=0; i--) printf("%d",arr[i]); return 0; Which of the following lines should be inserted to complete the above code? arr[len] = narr[len] = n % 2 arr[len++] = n % 2arr[len++] = nThe following lines talks about deleting a node in a binary tree. (the tree property must not be violated after deletion) i) from root Q19. search for the node to be deleted ii)\_\_\_\_ iii) delete the node at \_\_\_\_\_ what must be statement ii) and fill up statement iii) ii)-find random node,replace with node to be deleted. iii)- delete the node ii)-find node to be deleted. iii)- delete the node at found location ii)-find deepest node,replace with node to be deleted. iii)- delete a node ii)-find deepest node,replace with node to be deleted. iii)- delete the deepest node What is the time complexity of level order traversal? 0(1) O(n) O(logn) O(nlogn)

## **Answer Key & Solution**

	Section 1 - Quantitative Aptitude	
Q1	None of the above	
	Solution	
	No Solution	
Q2	direction	
	Solution	
	No Solution	
Q3	7.5m/s	
	Solution	
	No Solution	
Q4	12000m	
	Solution	
	No Solution	
Q5	29	
	Solution	
	No Solution	
Q6	Rs 61.50	
	Solution	
	No Solution	
Q7	11	
	Solution	
	No Solution	
Q8	18	
	Solution	

No Solution

None of these Solution No Solution Q10 25 Solution No Solution Q11 44 **Solution** No Solution Q12 1/9 **Solution** No Solution Q13 1/3 Solution No Solution Q14 9:21 Solution No Solution Q15 26 **Solution** No Solution Q16 29 **Solution** No Solution Q17 19 Solution

	No Solution		
Q18	north-East		
	Solution		
	No Solution		
Q19	225		
	Solution		
	No Solution		
Q20	19		
	Solution		
	No Solution		
	Section 2 - Verbal		
Q1	d. Tailor		
	Solution		
	No Solution		
Q2	d.2		
	Solution		
	No Solution		
Q3	a.Arrogant		
	Solution		
	No Solution		
Q4	a.Only assumption I is impicit		
	Solution		
	No Solution		
Q5	b.occasionally		
	Solution		
	No Solution		

No Solution

Q6 a.committee **Solution** No Solution Q7 b.Pilferage **Solution** No Solution Q8 She said, "What a miserable plight it is." **Solution** No Solution Q9 d.3 **Solution** No Solution Q10 b.cursory **Solution** No Solution Q11 d.none of these **Solution** No Solution Q12 b.false statements **Solution** No Solution Q13 b. he is going or I am **Solution** No Solution Q14 a.true statement

**Solution** No Solution Q15 d.sleep Solution No Solution Q16 d.3 **Solution** No Solution Q17  $\mathsf{d}.\mathsf{LADY}$ **Solution** No Solution Q18 a.eradicated **Solution** No Solution Q19 c.Kleptomania **Solution** No Solution Q20 c.avoid **Solution** No Solution **Section 3 - Reasoning** Q1 b.B **Solution** No Solution Q2 d.direction Solution

Q3  $a.\mathsf{BROTHER}$ Solution No Solution Q4 b.3B,5A,6D Solution No Solution Q5 b.B **Solution** No Solution Q6 b. 29 **Solution** No Solution Q7 a.1/3 **Solution** No Solution Q8  $\mathsf{d}.\mathsf{D}$ **Solution** No Solution Q9 b.26 Solution No Solution Q10 d.D Solution No Solution

No Solution

Q11

Solution No Solution Q12 c.C Solution No Solution Q13  $\mathsf{d}.\mathsf{D}$ **Solution** No Solution Q14 b.29 **Solution** No Solution Q15 a.A Solution No Solution Q16 С Solution No Solution Q17 a.28 **Solution** No Solution Q18 d.D Solution No Solution Q19 b. 100 Solution

d.D

Q20	d.D
	Solution
	No Solution
	Section 4 - Coding
Q1	-1 1
	Solution
	No Solution
Q2	Compile time error
	Solution
	No Solution
Q3	float
	Solution
	No Solution
Q4	Same address is printed.
	Solution
	No Solution
Q5	7
	Solution
	No Solution
Q6	None of the mentioned

No Solution

Solution

No Solution

```
double
         Solution
          No Solution
Q8
          c = 2
         Solution
          No Solution
Q9
          None of the mentioned
         Solution
          No Solution
Q10
          0(1)
         Solution
          No Solution
Q11
          floor(i/2) position
         Solution
          No Solution
Q12
          abcdefghi
         Solution
          No Solution
Q13
         find_{-}max(ans[itm-1][w-wt[itm-1]] + val[itm-1], ans[itm-1][w])
         Solution
          No Solution
Q14
         t2[i] = get_min(t2[i-1]+spent[1][i], t1[i-1]+reach[0][i-1]+spent[1][i])
         Solution
          No Solution
Q15
          O(n)
         Solution
```

	No Solution
Q16	Line 9
	Solution
	No Solution
Q17	429
	Solution
	No Solution
Q18	arr[len++] = n % 2
	Solution
	No Solution
Q19	ii)-find deepest node,replace with node to be deleted. iii)- delete the deepest node
	Solution
	No Solution
Q20	O(n)
	Solution
	No Solution

