

Aptitude Questions

1 Mark Questions (1-4):

1. Find the word opposite in meaning of "MAGNANIMOUS" from the choices given below:-
- (1) Small
 - (2) Selfish
 - (3) Naive
 - (4) Generous

Ans:- (2)

2. In a family there are two brothers, two sisters, two husbands, two brother-in-law and two sisters-in-law. What is the minimum possible number of people in the family?
- (1) 8
 - (2) 6
 - (3) 4
 - (4) 3

Ans :- (3)

Let us assume that A and B are siblings, C and D are siblings. B is married to C while A is married to D.

Hence with these four people all the above given conditions are satisfied.

3. On glancing through your morning newspaper you notice that four pages are missing. One of the missing pages is page 8. The back page of the paper is 28. What are the other three missing pages?
- (1) 9,21,22
 - (2) 7,21,22
 - (3) 7,23 24
 - (4) 9,23,24

Ans: - (2)

Each paper in a newspaper has 4 pages in it the cover page for example we will have 1,2,28,27 likewise second page will be 3, 4, 26, 25,So the missing pages will be 7,8,22,21.

4. Let $f(x) = \max(2x + 1, 3 - 4x)$, where x is any real no. then the minimum possible value of $f(x)$ is:
- (1) $1/2$
 - (2) $2/3$
 - (3) $4/3$
 - (4) $5/3$

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Ans: - (4)

$$\text{As } f(x) = \max(2x + 1, 3 - 4x)$$

We know that $f(x)$ would be minimum at the point of intersection of these curves.

$$\text{i.e. } 2x + 1 = 3 - 4x$$

$$\text{i.e. } 6x = 2$$

$$\Rightarrow x = 1/3$$

Hence, minimum value of $f(x)$ is $5/3$.

2 Marks Questions (5-9):

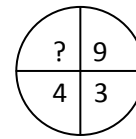
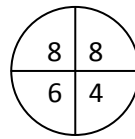
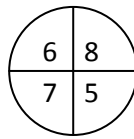
5. What number should replace the question mark?

(1) 6

(2) 7

(3) 8

(4) 9



Ans: (1)

$$7 \times 8 = 56$$

$$8 \times 6 = 48$$

$$9 \times 4 = 36$$

6. A train T_1 crosses a telephone pole in 10 seconds. What is the time (in seconds) taken by T_1 to cross another train T_2 , 25% longer than T_1 and travelling in the opposite direction, on parallel tracks, at the same speed as T_1 ?

(1) $31/2$

(2) $45/4$

(3) 10

(4) 8

Ans : (2)

Let the length of train T_1 be x meters.

Distance to be travelled by train T_1 to cross the pole = x meters

Time taken = 10 seconds.

Distance to be travelled by train T_1 to cross train T_2 of length $5x/4$ coming in opposite direction = $x + 5x/4 = 9x/4$

Relative speed, when the trains are moving in opposite directions

$$= x/5 [x/10 + x/10]$$

Required time = $9x/4 = x/5 = 45/4$ seconds.

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7. Let 'T' be the set of integers {3, 11, 19, 27, ..., 451, 459, 467} and 'S' be a subset of T such that the sum of no two elements of S is 470. The maximum possible number of elements in S is?

- (1) 28
- (2) 29
- (3) 30
- (4) 1

Ans: -(3)

Total no. of terms in T = 59 ... (n)

say $[t_n = a + (n - 1)d = 3 + (n - 1)8]$

Since, S is the subset of T we have following pairs of terms whose addition is equals to 470.

467	459	451	443	243	235
3	11	19	27	227	x

Total 29 terms

S = {maximum possible no. of elements such that sum of no two elements is 470}

$$\Rightarrow (29 + 1) = 30$$

8. The radii of three concentric circles are in the ratio 1:2:3. The ratio of the area between the two inner circles to that between the two outer circles is

- (1) 5 : 3
- (2) 4 : 5
- (3) 5 : 4
- (4) 3 : 5

Ans: - (4)

Let the radii of three concentric circles be R, 2R and 3R.

$$\text{So, required ratio} = \frac{\text{Area between the two inner circles}}{\text{Area between two outer circles}}$$

$$= \frac{[\pi(2R)^2 - \pi(R)^2]}{[\pi(3R)^2 - \pi(2R)^2]}$$

$$= 3: 5$$

9. Choose the correct words for each blank that best suits the meaning of the given sentences:

"While the disease is in -----state it is almost impossible to determine its existence by -----."

- (1) A critical, examination
- (2) An acute, analysis
- (3) A latent, observation
- (4) A suspended, estimation

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Ans: - (3)

Latent= hidden