

## **Tech Mahindra Aptitude Questions**

**1. Raja buys some apples at the rate of four for a rupee and same numbers of oranges at three for a rupee. To make a profit of 25%, Raja should sell 6 apples for.**

- A. 5.75
- B. 6.75
- C. 3.75
- D. 4.75

**Answer – D. 4.75**

**Explanation:**

let Raja buys 'x' apples at rate four for a rupee and 'x' apples at three for a rupee.

So, cost price =  $x/4 + x/3$

Question is asking about 6 apples

Then, CP =  $6/4 + 6/3 = 3.5$

Now SP =  $(125/100) \times 3.5 = 4.75$

Therefore, Raja should sell 6 apples for 4.75

**2. Prasanth bought an article at a 25 percent discount on the labeled price. He again sells the article at 20 percent on labeled price. Find the percent profit earned by Prasanth in the whole transaction**

- A. 50%
- B. 60%
- C. 30%
- D. 40%

**Answer – B. 60%**

**Explanation:**

Let the labeled price is 100. Prasanth bought it for 75 after getting a 25% discount.

Now he sells the article at  $(120/100) \times 100 = 120$ . So % profit he earns =  $(45/75) \times 100 = 60$

**3. A train running at 45 km/hr takes 36 sec to pass a platform. Next, the train takes 12 sec to pass a man walking at the speed of 15 km/hr in the same direction. Find the length of the platform.**

- A. 250 m
- B. 300 m
- C. 350 m
- D. 400m

**Answer – C. 350m**

**Explanation:**

Let us assume 'T' and 'P' are the length of train and platform respectively

$$T = 12 \times 30 \times 5 / 18 = 100 \text{ meter}$$

$$P + 100 = 45 \times 5 / 18 \times 36$$

$$P = 350$$

**4. The sum of the present ages of a Suresh and his son is 60 years. Five years ago, Suresh's age was four times the age of his son. What will be the age of Suresh's son?**

- A. 17
- B. 18
- C. 19
- D. 15

**Answer – D. 15**

**Explanation:**

Let, Present age of son be x

And then, Suresh age is (60 - x) years respectively.

$$(60 - x) - 5 = 4(x - 5)$$

$$55 - x = 4x - 20$$

$$5x = 75$$

$$x = 15$$

**5. A can finish a work in 27 days, B in 9 days and C in 12 days. B & C start the work but are forced to leave after 4 days. The remaining work was done by A in:**

- A. 6 days
- B. 9 days
- C. 10 days
- D. 12 days

**Answer - A. 6 days**

**Explanation:**

$$(B+C) \text{ it's one day's work} = 1/9 + 1/12 = 7/36$$

$$B \ \& \ C \text{ in 3 days} = 4 \times 7/36 = 7/9$$

$$\text{Remaining work} = 1 - (7/9) = 2/9$$

$$1/27 \text{ work is done by A in 1 day.}$$

$$2/9 \text{ work is done by A in } 27 \times 2/9 = 6 \text{ days}$$

**6. A sum of money invested at CI to Rs.800 in 3 years and to Rs.840 in 4 years. Find the rate of interest in PA?**

- A. 2%
- B. 4%
- C. 5%
- D. 6%

**Answer - C. 5%**

**Explanation:**

CI for 3 yr = 800

CI for 4 yr = 840

CI for 1 yr = 40

$$R = (100 \times 40)/(800 \times 1) = 10/2 = 5\%$$

**7. Two vessels contain milk and water in the ratio of 7:3 and 2:3 respectively. Find the ratio in which the contents of both the vessels must be mixed to get a new mixture containing milk and water in the ratio 3:2.**

- A. 2:1
- B. 2:3
- C. 3:1
- D. 3:5

**Answer – A. 2:1**

**Explanation:**

Let the ratio be k:1

then in the first mixture, milk =  $7k/10$  and water =  $3k/10$

and in the second mixture, milk =  $2/5$  and water =  $3/5$

$$(7k/10 + 2/5)/(3k/10 + 3/5) = 3/2$$

$K = 2$ , so the ratio will be 2:1

**8. A container filled with a liquid containing 4 parts of water and 6 parts of milk. How much of mixture must be drawn off and filled with water so that the mixture contains half milk and half water?**

- A.  $1/3$
- B.  $1/4$
- C.  $1/5$
- D.  $1/6$

**Answer – D.  $1/6$**

**Explanation:**

Let water = 40 liters and milk are 60 liters.

Water =  $40 - x \cdot (2/5) + x$  and milk =  $60 - x \cdot (3/5)$  ( $x$  is the amount of mixture taken out)

Equate both the equation, we get  $x = 50/3$ .

Now, mixture drawn off =  $(50/3)/100 = 1/6$

**9. Two cans M and N contains milk and water in the ratio of 3:2 and 7:3 respectively. The ratio in which these two cans be mixed so as to get a new mixture containing milk and water in the ratio 7:4.**

- A. 4:7
- B. 7:3
- C. 7:4
- D. 7:5

**Answer – C. 7:4**

**Explanation:**

Milk in 1st can =  $3/5$  and water =  $2/5$ . Similarly in second can milk =  $7/10$  and water =  $3/10$ .

Take the ratio =  $k:1$

$$(3k/5 + 7/10)/(2k/5 + 3/10) = 7/4$$

Solve for  $k$ , we get  $k = 7/4$ . So the ratio is 7: 4

**10. In a hostel, there are 30 students and if the number of students increased by 5 then the expense is increased by 40 per day. But the average expenditure diminishes by 3. Find the original expenditure.**

- A. 810
- B. 870
- C. 910
- D. 950

**Answer – B. 870**

**Explanation:**

Let the average expenditure be  $P$ .

$$(30 \cdot P + 40)/35 = P - 3$$

$P = 29$ . So expenditure =  $29 \cdot 30 = 870$

**11. The average of 10 reading is 25.5. In this, the average of the first three is 20 and the next four is 26. If the eight reading is 5 less than the ninth one and also 8 less than the tenth one, then find the eighth reading?**

- A. 28
- B. 26
- C. 24

D. 22

**Answer – B. 26**

**Explanation:**

the sum of all ten reading = 255

the sum of the first three = 60 and the sum of next 4 = 104.

Sum of 8th, 9th and 10th reading =  $91 = 3 \times x + 13 \times x =$

26.

## Set – 2

**Question 1)** Two years ago the average age of a family of 8 members was 18 years. After the addition of a baby, the average age of family remains the same today. What is the age of the baby?

1. 1 year
2. 2 years
3. 4 years
4. 5 years

**Ans: B**

**Question 2)** An article when sold at a gain of 5% yields Rs. 15 more than when sold at a loss of 5%. The cost price of the article is:

1. 200
2. 150
3. 80
4. 64

**Ans: B**

**Question 3)** If X gets 25% more than Y and Y gets 20% more than Z, the share of Z out of Rs. 740 will be:

1. 300
2. 200
3. 240
4. 350

**Ans: B**

**Question 4)** In a mixture of 35 litres the ratio of milk and water is 4 : 1. If 7 litres of water is added to the mixture, the ratio of milk to water in the resultant mixture will become :

1. 2 : 3
2. 3 : 2
3. 2 : 1
4. 1 : 2

**Ans: C**

**Question 5)** A works twice as fast as B. If B can complete a work in 12 days independently, the number of days in which A and B can together finish the work in:

1. 4 days
2. 6 days
3. 8 days
4. 18 days

**Ans: A**

**Question 6)** 10 Men can finish a piece of work in 10 days whereas it takes 12 women to finish it in 10 days. If 15 men and 6 women undertake to complete the work, how many days will they take to complete the work?

1. 2
2. 4
3. 5
4. 11

**Ans: C**

**Question 7)** Two, trains, one from Howrah to Patna and the other from Patna to Howrah, start simultaneously. After they meet, the trains reach their destinations after 9 hours and 16 hours respectively. The ratio of their speeds is:

1. 2 : 3
2. 4 : 3
3. 6 : 7
4. 9 : 16

**Ans: B**

**Question 8)** A merchant marks his wares 40% more than the real price and allows 20% discount. His profit is:

1. 20%
2. 18%
3. 16%
4. 12%

**Ans: D**

**Question 9)** In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the

selling price remains constant, approximately what percentage of the selling price is the profit?

1. 30%
2. 70%
3. 100%
4. 250%

**Ans: B**

**Question 10)** A train 280 metres long is moving at 60 kms per hour. The time taken by the train to cross a platform 220 metres long is:

1. 20 seconds
2. 25 seconds
3. 30 seconds
4. 35 seconds

**Ans: D**

**Question 11)** A grocer has a sale of Rs. 6435, Rs. 6927, Rs. 6855, Rs. 7230 and Rs. 6562 for 5 consecutive months. How much sale must he have in the sixth month so that he gets an average sale of Rs. 6500?

1. Rs. 4991
2. Rs. 5991
3. Rs. 6001
4. Rs. 6991

**Ans: A**

**Question 12)** A person spends 40% of his salary on food, 25% on house rent, 15% on entertainment and 5% on conveyance. If his savings at the end of the month is Rs. 1200, then his salary per month in rupees is:

1. 4000
2. 6000
3. 8000
4. 10000

**Ans: C**

**Question 13)** In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?

1. 810
2. 1440
3. 2880
4. 50400

**Ans: D**

**Question 14)** The average of 7 consecutive numbers is 33. The highest of these numbers is:

1. 28
2. 30
3. 33
4. 36

**Ans: B**

**Question 15)** The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

1. 276
2. 299
3. 322
4. 345

**Ans: C**

**Question 16)** Running at the same constant rate, 6 identical machines can produce a total of 270 bottles per minute. At this rate, how many bottles could 10 such machines produce in 4 minutes?

1. 648
2. 1800
3. 2700
4. 10800

**Ans: B**

**Question 17)** Robert is travelling on his cycle and has calculated to reach point A at 2 P.M. if he travels at 10 kmph, he will reach there at 12 noon if he travels at 15 kmph. At what speed must he travel to reach A at 1 P.M.?

1. 8 kmph
2. 11 kmph
3. 12 kmph
4. 14 kmph

**Ans: C**

**Question 18)** A man took loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was:

1. Rs. 2000
2. Rs. 10,000
3. Rs. 15,000
4. Rs. 20,000



Ans: C

**Question 19)** A, B, C subscribe Rs. 50,000 for a business. A subscribes Rs. 4000 more than B and B Rs. 5000 more than C. Out of a total profit of Rs. 35,000, A receives:

1. Rs. 8400
2. Rs. 11,900
3. Rs. 13,600
4. Rs. 14,700

Ans: D

**Question 20)** An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?

1.  $144^\circ$
2.  $150^\circ$
3.  $168^\circ$
4.  $180^\circ$

## Set - 4

1. If a boat is moving in upstream with velocity of 14km/hr and goes downstream with a velocity of 40km/hr. then what is the speed of the stream?

- (a) 13km/hr
- (b) 26km/hr
- (c) 34km/hr
- (d) none of these

Ans: A

2. find the value of  $(0.75 \times 0.75 \times 0.75 - 0.001) / (0.75 \times 0.75 - 0.75 + 0.01)$

- (a) 0.845
- (b) 1.908
- (c) 2.312
- (d) 0.001

Ans: A

3. A man buys 12 lts of liquid which contain 20% of the liquid and the rest is water. He then mixes it with 10lts of another mixture with 30% of liquid. What is the % of water in the new mixture?

4. A certain number of men can finish a piece of work in 10 days. If however there were 10 men less it will take 10 days more for the work to be finished. How many men were there originally?

- (a) 110 men

- (b) 130 men
- (c) 100 men
- (d) none of these

ans:- A

5. In simple interest what sum amount of Rs. 1120/- in 4 years and Rs.1200/- in 5 years?

- (a) Rs.500
- (b) Rs.600
- (c) Rs.800
- (d) Rs.900

6.  $x\%$  of  $y$  is  $y\%$  of?

- (a)  $x/y$
- (b)  $2y$
- (c)  $x$
- (d) can't be determined

ans: C

7. The population of a city increases @ 4%p.a. there is an additional annual increases of 4% of the population due to the influx of job seekers. Find the % increase in population after 2 years?

8. The ratio of the number of boys and girls in a school is 3:2. Out of these 10% the boys and 25% of girls are scholarship holders. % of students who are not scholarship holders?

9. A rectangular plank  $(2)^{1/2}$  meters wide can be placed so that it is on either side of the diagonal of a square shown below. (Figure is available). what is the area of the Plank?

ans:  $7 \cdot (2)^{1/2}$ .

Logical Reasoning:

1. a,c,e,g..

- (a) h
- (b) i
- (c) d
- (d) j

Ans: b

2. a,e,i,m,q,u\_,\_

- (a) y,e

- (b) b,f
- (c) g,i
- (d) none

3. 1,2,3,5,7,11....

- (a) 15
- (b) 9
- (c) 13
- (d) 12

ans: c(Series of prime no)

4. 1,3,4,8,15,27,...

- (a) 60
- (b) 59
- (c) 43
- (d) 50

5. All pens are elephants. some elephants are cats.

- (a) Some pens are cats
- (b) No pens are cats
- (c) All pens are cats
- (d) None of the above

6. Some green are blue. No blue are white.

- (a) No green are white
- (b) Some green are white
- (c) No green are white
- (d) None of

the above

ans: b

## Set – 4

1. two clocks meet at 12. Next time they meet again

after Ans 65.45

2. Soldiers form a square .Initially 32 soldiers left. Then 8 .After they could not form a square. Total at the

beginning options

100,81,49,67

3. Age of Grandfather is the ages of 4 grandchildren where their ages are in consecutive. Find the age of GF.

Ans. 72

4. 3 person waiting for the train Some conditions given. Finally they ask the time.

Ans is 4.37

5. Some Squirrel qs where it covers  $\frac{1}{4}$  th distance then  $\frac{1}{2}$  i couldn't remember

6. if  $m^{\frac{1}{p+1}} = 121$ . Then  $m^{\frac{1}{p+1} + 1}$  is 1000

7. if speed in the ratio 5:4:3 then the time taken to cover the same distance is
8. 20men construct a wall 56m in some days similar one ans 49

#### Technical

9. `char *p=(char *)10 op=?`
10. Running time of  $8T(n/2)+q$  is ncube Scope of static and automatic var 2qs nodes in binary tree of length 4 is  $15(2^{\text{pown}} - 1)$  how to convert 2d array to single dimension options are
11. converging a row 2 column 3 or both in to o's comments-for documentaion or it increases file size like that. u have to i choose the correct one

#### H R Interview

1. Tell me about your self ? Family background ?
2. Why do u want to join MBT?
3. What qualities do u have to be selected today ?
4. What technical skills have u acquired? hobbies/interests ?
5. what do u know abt MBT
6. will u have any problems relocating to Mumbai/Pune ?
7. Any plans of higher studies ? ( Again a solid NO!)
8. which was the last book u read?what did u like in it ?
9. Tell me about the ups and downs that u have seen in ur life
10. would you marry a pop star?
11. Are you interested in politics? did u vote this time ? do u think we should vote
12. Do you read newspaper? tell me 2 recent incidents in news that have affected You?
13. If u r standing on the roof with ur 4-5 yr old bro/sis and looking at the moon and suddenly the moon is

enveloped by clouds and ur bro asks u what happened ? then how will u explain the hiding of moon behind the clouds to him ?

14. In the end they asked if there was something that I wanted to ask them ?