**Answers and Explanations :**

**Quantitative Ability :**

Ans 1 : Option b

Relative speed = 100-64 = 36 kmph = 10 m/sec

Let the length of the train be x.

Therefore as per the problem, 40 = x/10

Therefore, x = 400 m

Ans 2 : Option c

Initial average of the 7 members = 18 kgs

Therefore, total weight = 18 x 7 = 126 kg

If the head is not considered, the average weight of the others = 13 kgs

Total weight = 6 x 13 = 78 kgs.

Weight of the head of the family = 126-78 = 48 kgs.

Ans 3 : Option c

Ram completes 60 % of the task in 15 days.

Therefore Ram will complete the remaining 40 % of the task in (15/60)\*40 = 10 days.

Rahim will complete the task alone in 20 days while Rachel will do so in 40 days.

40 units

Ram : 10 days 4 units

Rahim : 20 days 2 units

Rachel : 40 days 1 unit

Total 7 units in 1 day and so 40 units will get completed in 40/7 days.

Ans 4 : Option b

Let the initial amount be P. It will become 3P in 5 years.

If 3P is again invested it will become 9P in the next 5 years.

Total time required = 10 years.

Ans 5 : Option d

Amit : 1000 Bahadur : 900

Bahadur : 1000 Chandra : 800

Amit : 10 Bahadur : 9

Bahadur : 10 Chandra : 8

We need to equate and make Bahadur equal

Amit : 100 Bahadur : 90 Chandra : 72

In a 100 m race, Amit will beat Chandra by 28 m and so in a km race Amit will beat Chandra by 280 m.

Ans 6 : Option a

Let the initial amount be x. 50% is sold and so the remaining amount is 0.5x.

10% of this gets rotten and so the rotten amount = 10% x 0.5x = 0.05x

As per the problem, 0.05x = 190

or, x = 3800.

The amount sold is 50% of 3800 = 1900.

Ans 7 : Option b

Let the principal be P. As per the problem, the amount at the end of 10 years is 7P/3.

Interest earned = 7P/3 – P = 4P/3

4P/3 = PxRx10/100

Or, R=40/3 %

Ans 8 : Option d

The given expression is (a^3 + b^3) / (a^2-ab+b^2)

On simplification it will become = a+b

Ans 9 : Option c

In the initial quantity Milk is 21 litres and Water is 9 litres.

As per the problem,

21/(9+x) = 1/2

9+x = 42

or, x=33 litres

Ans 10 : Option d

CP of CD – 150 = 1/16 of CP

15/16 of CP = 150

CP of CD = 160

Ans 11 : Option a

SP of 250 cycles – CP of 250 cycles = SP of 50 cycles.

SP of 200 cycles = CP of 250 cycles

Profit = (50/200)\*100 = 25%

Ans 12 : Option d

Ans 13 : Option a

Let Q do x units per day and so P will do 2x units per day.

P and Q together will do 3x units per day and so from the conditions given R will do x units per day.

P , Q and R will do 2x,x and x units respectively per day.

Required ratio is 2:1:1.

Ans 14 : Option b

Since the rates are in the ratio 5:4 and the interest earned in both the cases is the same, the amount invested must be in the ratio 4:5.

Ans 15 : Option a

Let the initial price per Kg be x Rs.

The new price will be 120x/100 or 6x/5 Rs.

If price changes from x to 6x/5 and the expenditure is constant, the quantity must change from 6q/5 to q.

Reduction in quantity is q/5.

Also, q/5 = 4 or q=20 kgs.

Original quantity is 24 kgs and original price is Rs.5/Kg.

Ans 16 : Option d

Let the list price be x Rs.

Therefore, CP=0.75 x and SP=1.5x

Profit = ((1.5x-0.75x)/0.75x)\*100 = 100%

Ans 17 : Option b

Let the 2 solutions be mixed in the ratio x:y

x/y = (100-56)/(56-35)

x/y = 44/21

Ans 18 : Option c

x/7.2 + x/4.8 = 20

solving for x we get x=57.6 Km.

Ans 19 : Option b

As per the problem (x/100) \* 2000 + (y/100) \* 2000 = 700

20x + 20y = 700

or, x+y = 35------------(1)

Also, (x/100) \* 2000 + (y/100) \* 3000 = 900

20x + 30y = 900

2x + 3y = 90------------(2)

Solving we get y=20 % and x=15 %

Ans 20 : Option d

The number can be written as 15Q + 7

Then, thrice the number can be written as 45Q + 21

When 45Q + 21 is divided by 5, the reminder will be 1.

**Reasoning :**

Ans 1 : Option d

We can check using the options.

Ans 2 : Option a

Ans 3 : Option a

Ans 4 : Option b

From the information given, we can find by comparing the different values.

hee : flowers

pee : are

Therefore, Red will be written as sik

Ans 5 : Option d

Ans 6 : Option b

It is a combination of 2 different series. The first one with a consistent difference of 2 and the second one with increasing differences of 2.

Ans 7 : Option d

W and X cannot be in the same group and so the group must have Y and Z

Ans 8 : Option c

Ans 9 : Option c

Ans 10 : Option a

General Explanation for Qs 11-14 :

Wed Thu Fri Sat Sun Mon Tue

NA NA Street

Play

Wed

Group song was neither conducted on Wednesday nor on Saturday. Also, Group song cannot be conducted on Friday since there has to be a gap of 2 days between group song and debate.

Therefore, the only possible day when group song can be conducted is Tuesday and so debate has to be conducted on Saturday and Fash-P on Friday.

Rock band was conducted on the opening day and folk dance on the closing day.

Rock band NA Fash-P Debate NA Street Play Group song

Folk Dance

Ans 11 : Option d

Ans 12 : Option d

Ans 13 : Option c

Ans 14 : Option c

Ans 15 : Option b

The girl must be Abhishek’s daughter.