DI Test 3

SET 1. Study the following data carefully and answer the questions:
Data given below is related to the number of mobiles, number of watches and number of laptops sold by a shopkeeper in five different months Jan, Feb, Mar, Apr and May.
Table given below shows the no. of mobiles sold as % of total no. of mobiles sold in all the 5 months together, no. of watches sold as % of no. of mobiles sold and the average no. of mobiles and laptops sold.

Month	No. of mobiles sold as % of total no. of mobiles sold in all the 5 months together	No. of watches sold as % of no. of mobiles sold	Average no. of mobiles and laptops sold
Jan	(X + Y + Z)%	3Z%	70
Feb	X%	-	-
Mar	-	80%	2Z + 8
Apr	Y%	160%	-
May	-	-	7X + 7

Note: 1: Some data in the table is missing, which needs to be calculated in the question and missing data can be different for each question. **2:** Total number of mobiles sold in all the 5 months together is 300.
3: Ratio between X, Y and Z is 2: 1: 4 respectively. **4:** Number of laptops sold in Jan is 35.

1. If the number of mobiles sold in Mar is double than that sold in Feb and the number of laptops sold in Apr is 7 less than that sold in Mar, then find the average of number of mobiles and laptops sold in Apr. 1.22 2.24 3.14 4.20 5.18

2. If the number of laptops sold in May is neither more than 64 nor less than 48, then which of the following can't be the number of mobiles sold in Mar? A: 42 **B:** 50 **C:** 58
1.Only B and C 2.Only A 3.Only A and B 4.Only B 5.Only C

3. If the number of watches sold in Jan is 40% more than that sold in Feb and the ratio of the number of watches sold in Feb to the number of laptops sold in Feb is 15: 8, then find the average of the number of mobiles and laptops sold in Feb? 1.21 2.30 3.27 4.24 5.Can't be determined

4. If the ratio of the number of mobiles sold in Jan to that sold in May is 7: 6, the number of watches sold in May is 120% of the number of mobiles sold in May and the ratio of the number of watches sold in May to the number of laptops sold in May is M: N, then find the relation between M and N? 1.$3\sqrt{M} = 2\sqrt{N+1}$ 2.$3\sqrt{M} = 2\sqrt{N-3}$ 3.$3\sqrt{M} = 2\sqrt{N}$ 4.$3\sqrt{M} = 2\sqrt{N+3}$ 5.$3\sqrt{M} = {}^{2}\sqrt{N-1}$

SET 2. Study the following information carefully and answer the questions given below.
In a tank, there are four inlet pipes [A, B, C, and D] and three outlet pipes [M, N, and O]. The efficiency ratio of pipes A and B is 3:5. The efficiency of pipe C is double that of pipe D. Pipes A and M fill the tank in 60 minutes. Pipes B and C fill the tank in 20/3 minutes. Pipes M and N together empty the tank in 12 minutes. The time taken by pipe C to fill the tank is half of the time taken by pipe M to empty the tank. Pipe B fills the tank in t minutes. The efficiency of pipe N is 20% higher than that of pipe O. The ratio of time taken to empty the full tank by M and N is 3:2.

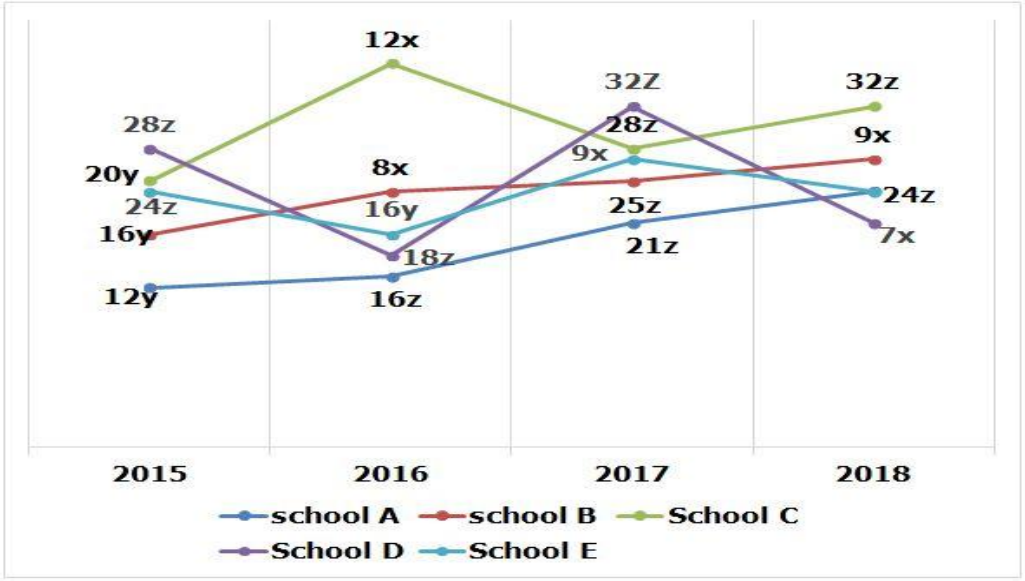
5. Inlet pipes A and B are open with outlet pipes N and O. After some time, all pipes are closed, and pipe C is open, and fill the remaining tank in 5 minutes. Find the difference between the percentage of tank filling by pipe C and the percentage of tank emptying by pipe N?
1.26.67% 2.36.67% 3.46.67% 4.56.67% 5.66.67%

6. Pipe A and pipe B are open for some time and fill 40% of the tank, after that, one inlet pipe and one outlet pipe are open for some time, and the total tank fills in K minutes. Find which of the following is true? I). K= 21 and pipes C and M are open. **II).** K= 9 and pipes D and O are open. **III).** K=39 and pipes C and N open. 1.Only I 2.Only II and III 3.Only I and II 4.Only I and III 5.All true

7. Pipe D and pipe M are open and fill the tank in s minutes when pipe D is working at double efficiency. Find the percentage of the full tank empty by pipe O if it opens for [s+t]/2 minutes?
1.82.3% 2.87.5% 3.92.5% 4.98.3% 5.None of these

8. Pipe A, M, B, and O open in alternative minutes in the same sequence and fill the tank in k minutes, and pipe A, B, and C open in alternative minutes in the same sequence and fill the tank in l minutes. Find the value of 2l+ 7k=?
1.507.12 2.558.32 3.154.32 4.158.32 5.None of these

SET 3. Study the following information carefully and answer the questions given below.
The given below line graph shows the number of students in five different schools A, B, C, D and E from the year 2015 to 2018.



Note: I). The number of students in School B in the year 2016 is 20% more than the number of students in School B in the year 2015. The total number of students in school B in the years 2017 and 2018 together is 18.18% more than the total number of students in school B in the years 2015 and 2016.
II). The number of students in schools A and D together in 2018 is 25% less than the number of students in schools B and C together in 2016. The total number of students in School E in 2018 is 60 more than the total number of students in School D in the same year.

9. The ratio of the number of boys and girls in school B in 2018 is m:n. The ratio of the number of boys in school A in 2017 and 2018 is (m-3) : (n-1). The ratio of the number of girls in school A in 2017 and 2018 is 11:9. The value of m is 20 less than y and the value of n is 1/5th of z. Find the possible difference between the total number of boys in schools A and B together in 2018 and the total number of girls in schools A and B together in 2018? I). 2x+60 **II).** 8y-20 **III).** 9z
1.all false 2.only I and II true 3.All true 4.only II and III true 5.all false

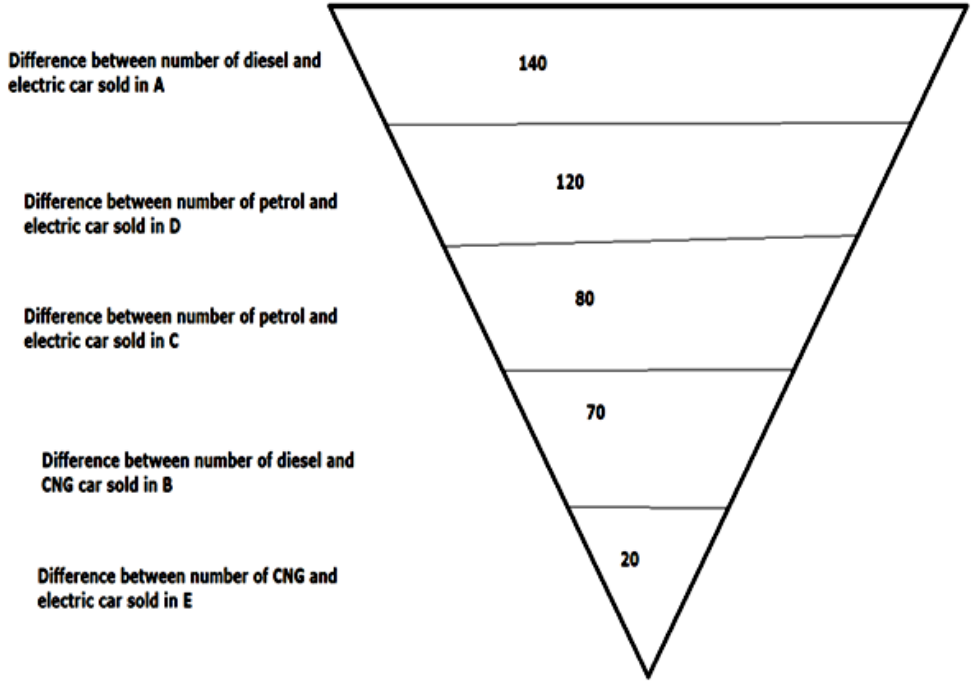
10. The number of students in each school in the year 2015 is (y-5)% more than the number of students in school in 2014. The number of students in each school in the year 2019 is (5*125/25)% more than the number of students in the year 2018. Find which following combination values are the maximum and minimum? I). The number of students in school A in 2014 and 2019 together.
II). The number of students in school B in 2017 and 2019 together. **III).**The number of students in school E in 2014 and 2019 together. **IV).**The number of students in school D in 2017 and 2019 together.
1.II minimum, III maximum 2.IV minimum, II maximum 3.III minimum, II maximum 4.I minimum, II maximum 5.I minimum, IV maximum

11. The total number of students in schools A, C and E in the year 2016 is approximately _____ % more or less than the total number of students in school in schools B, D and E in the year 2015 and the total number of students in school A, C and E in the year 2017 is approximately _____ % more or less than the total number of students in school in school B, D and E in the year 2018. Find which of the following is the sum of the blank? 1.4.68% 2.5.55% 3.7.58% 4.8.95% 5.None

12. The total number of students in schools G and F in the year 2018 is 850. The difference of the number of students in schools E and F in 2018 is 20. The number of students in school F is more than the number of students in school E. The ratio of boys and girls in G in 2018 is 4:3. The number of girls in G in 2018 what percent of the total number of students in school E in 2018?
1.14.35% 2.31.25% 3.45.35% 4.75.35% 5.None of these

SET 4. Study the following information carefully and answer the questions given below.
There are five showrooms [A, B, C, D, and E]. In each showroom different numbers of diesel, petrol, CNG and electric cars sold. The given charts show the difference between the number of diesel and electric,

diesel and CNG, petrol and electric, petrol and electric, and CNG and electric cars sold in showrooms A, B, C, D, and E respectively. The number of diesel cars sold in each shop is the maximum and the number of electric cars sold in each shop is the minimum.



NOTE: I). The total number of cars sold in A is 420. The number of CNG cars sold in A is double the number of electric cars sold in A. The number of petrol cars sold in A is 50% more than the number of CNG cars sold in A. **II).** The number of Petrol cars sold in A is 20% more than the number of petrol cars sold in B. The number of diesel cars sold in B is 22.22% less than the number of diesel cars sold in A. The ratio of the number of CNG and Electric cars sold in B is 7:5. **III).** The total number of petrol and electric cars sold in C is 200. The number of CNG cars sold in C is 3/2 of the number of electric cars sold in C. The number of Diesel cars sold in C is 166.66% more than the number of electric cars sold in C.
IV). Difference between the number of diesel and CNG cars sold in D is 120, the sum of CNG and electric cars sold in D is 120. The ratio of petrol and diesel cars sold in D is 4:5 respectively.

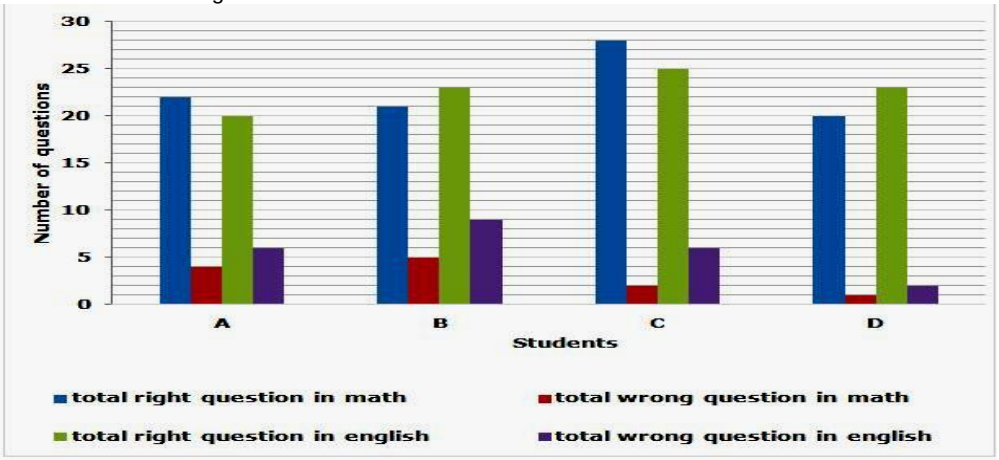
13. The number of diesel cars sold in E is 10% less than the same in D. The sum of Diesel and CNG cars sold in E is 240 and the difference between the number of diesel and petrol cars sold in E is 60. The ratio of the Top model and the base model of all type's cars sold in E is 5:3. The average price of the Top model car and Base model car sold in E is 15 lakh and 12 lakhs respectively. Find the total revenue (in lakhs) earn by E? 1.2540 2.8520 3.5550 4.6500 5.7500

14. Find which of the following is/are true? I). k is the difference between the number of diesel and petrol cars sold in C and l is the difference between the number of CNG and Electric cars sold in C. So $k^2+k*l+l^2=2900$. **II).** Sum of electric cars sold in A, B and C together is 150. **III).** Difference between the total number of cars sold in C and D is 40. 1.all false 2.all true 3.only II and III 4.only II 5.only III

15. Difference between the number of petrol cars and CNG cars sold in A is _____ % of the difference between the number of petrol cars and electric cars sold in D and the Difference between the number of petrol cars and CNG cars sold in B is _____ % of the difference between the number of petrol cars and electric cars sold in C. Find which of the following satisfies the blank? 1.37.5%, 33.33% 2.33.33%, 37.5% 3.62.5%, 37.5% 4.66.66%, 33.33% 5.None

16. The number of XUV sold in C and D is more than the number of sedan cars sold in C and D out of the total number of diesel and petrol cars sold in C and D respectively. The difference between the number of XUV and sedan petrol cars and diesel cars out of total diesel and petrol cars sold in C is 40 respectively and Difference between the number of XUV and sedan petrol cars and diesel cars out of total diesel and petrol cars sold in D is 40 respectively. The number of XUVs sold in C and D together is what percent of the number of sedan cars sold in C and D together? 1.164% 2.154% 3.157% 4.132% 5.None of these

SET 5. Study the following information carefully and answer the questions given below.
Bar graph shows the number of right questions and number of wrong questions of four students in an exam of math and English sections.



Note: I). Total number of questions in Math and English section is 35 and 30 respectively.
II). For each right answer in math a student gets 4 marks and 2 marks deducted for wrong answer.
III). For each right answer in English a student gets 3 marks and 1 mark deducted for wrong answer.

17. Find which of the following is true. I). Total marks scored by A and B in Math section is 150. **II).** Difference between the marks of math and English section by student C is 38. **III).** Total marks of D is 143. 1.All false 2.only I false 3.only I true 4.all true 5.None of these

18. Find which of the following is false?
1.Total marks of B and C together is 311 2.Total negative marks of B is 19 3.Difference of math marks of A and B is 8 4.Total marks in English of C and D is 136 5.None of these

SET 6. Study the following data carefully and answer the questions:
The data given below is related to the total number of available candidates, the number of eligible candidates (out of total available candidates) and the number of selected candidates (out of total eligible candidates) for three different posts A, B and C in a company.
The number of candidates available for posts A and Care 5x and 4y respectively and the number of candidates available for post B is 10 more than 125% of those available for post C. The number of candidates eligible for posts B and C are (x + y – 2) and (x + 2) respectively. The number of candidates eligible for post A is 15, out of which 33 (1/3)% candidates were selected for post A which is equal to z. The number of candidates selected for post B is 2 more than those selected for post A and the total number of candidates selected for posts A, B and C together is 19. The number of candidates selected for post C is 12.5% of those available for post C and the total number of candidates available for posts A, B and C together is 196.

19. If the ratio of male to female candidates available for post C is 15: 13 and the ratio of male to female candidates eligible for post C is 3: 4, then find that what per cent of total male candidates, who are available for post C, are eligible for post C?
1.(x + 8)% 2.4z% 3.(y + 5)% 4.Both (a) and (b) 5.All (a), (b) and (c)

20. If the ratio of male to female candidates available for post A is x/4: y/7, the ratio of male to female candidate available for post B is (2y – 1): (x + 1) and the ratio of male to female candidates available for post C is (x – 3): z, then find the average of the number of male candidates available for posts A, B and C? 1.41 2.45 3.42 4.43 5.44

21. The ratio of male to female candidates eligible for post B is 1: 2 and the ratio of male to female candidates selected for post B is 3: 4. If the number of male candidates selected for post B is M% of those eligible for post B and the number of female candidates selected for post B is N% of those eligible for post B, then find the value of $[(M – N) * 10]^{1/3}$? 1.4 2.7 3.3 4.6 5.5

22. The average of the number of candidates available for posts B, C and D is 72. If 30% of total available candidates for post D are eligible for post D and 41 2/3% of total eligible candidates for post D are selected for post D, then find the average of the number of candidates selected for posts B, C and D? 1.8 2.9 3.6 4.10 5.7

{1 – 4}

Solution

Since, ratio between X, Y and Z is 2: 1: 4.

So,

X = Z/2 and Y = Z/4

Since, the number of laptops sold in Jan = 35

So, the number of mobiles sold in Jan = 2 * 70 – 35 = 105

And,

(X + Y + Z)% of 300 = 105

$$\frac{Z}{2}+\frac{Z}{4}+Z=35$$

Z = 20, X = 10 and Y = 5

Month	No. of mobiles sold as % of total no. of mobiles sold in all the 5 months together	No. of watches sold as % of no. of mobiles sold	Average no. of mobiles and laptops sold
Jan	35%	60%	70
Feb	10%	-	-
Mar	-	80%	48
Apr	5%	160%	-
May	-	-	77

1. Answer: A

Number of mobiles sold in Feb = 10% of 300 = 30

Number of mobiles sold in Mar = 2 * 30 = 60

Number of laptops sold in Mar = 2 * 48 – 60 = 36

Number of laptops sold in Apr = 36 – 7 = 29

Number of mobiles sold in Apr = 5% of 300 = 15

Required average = $\frac{29+15}{2}=22$

2. Answer: B

Minimum possible number of laptops sold in May = 48

Maximum possible number of laptops sold in May = 64

When the number of laptops sold in May is 48.

So, the number of mobiles sold in May = 2 * 77 – 48 = 106

And the number of mobiles sold in Mar = 300 – (35 + 10 + 5)% of 300 – 106 = 44

When the number of laptops sold in May is 64.

So, the number of mobiles sold in May = 2 * 77 – 64 = 90

And the number of mobiles sold on Mar = 300 – (35 + 10 + 5)% of 300 – 90 = 60

The range of the number of mobiles sold in Mar will be 44 to 60.

Hence, only B and C can be the number of mobiles sold in Mar.

3. Answer: C

Number of watches sold in Jan = 60% of 35% of 300 = 63

Number of watches sold in Feb = $63\times\frac{100}{140}=45$

Number of laptops sold in Feb = $45\times\frac{8}{15}=24$

Number of mobiles sold in Feb = 10% of 300 = 30

Required average = $\frac{30+24}{2}=27$

4. Answer: E

Number of mobiles sold in Jan = 105

Number of mobiles sold in May = $105\times\frac{6}{7}=90$

Number of watches sold in May = 120% of 90 = 108

Number of laptops sold in May = 77*2 – 90 = 64

Ratio of the number of watches sold in May to the number of laptops sold in May:

M: N = 108: 64 = 27: 16

Relation between M and N:

$\sqrt[3]{M}=\sqrt[2]{N}-1$

{5 – 8}

Solution

Let, pipes M and N take 3x and 2x minutes to empty.

So, (1/3x) + (1/2x) = 1/12

Or, 5/6x=1/12

Or, x=12*5/6=10

So, pipes M and N take 3* 10 = 30 and 2* 10 = 20 minutes to empty the tank.

The time taken by the pipe O to empty the tank is (20 * 120)/100 = 24 minutes.

Pipe A fill the tank = [1/(1/60)+(1/30)}]

=[1/{3/60}]=20

So, Pipe A fill the tank in 20 minutes.

Pipe B fills the tank in 20* 3/5 = 12 minutes=t.

Pipe C fill the tank in [1/(3/20)-(1/12)}]

=[1/{(9-5)/60}]=15 minutes.

Pipe D takes 15 * 2 = 30 minutes to fill the tank.

Total capacity of tank = LCM 20,15,12,30,30,20,24 = 120

So, the efficiency of pipes A,B,C, D, M, N, and O is = 6,10, 8, 4 , 4 , 6, and 5 respectively.

5. Answer: C

In 5 minutes, pipe C fill 8* 5 = 40 units.

Rest amount is 120-40=80

So, four pipes are open for = [80/(6+10-6-5)] = 80/5 = 16 minutes.

In 16 minutes, Pipe N is empty (16*6)= 96 units

So, percentage difference is = [96/120]*100 – [40/120]*100 =80%-33.33%=46.67%

6. Answer: D

Pipes A and B are open for = [(40*120/100)/(6+10)] = 3 minutes

So, for I, pipe C and M open for 21-3=18 minutes.

In 18 minutes, they fill = [8-4]*18 = 72 units.

72+40*120/100=72+48=120

So, it is true

Similarly, we can check others values as well. Only I and III are true

7. Answer: B

In total efficiency of D and M is = 2*4-4=4

So, they fill the tank in = 120/4=30 minutes = s.

So, in [30+12]/2 = 21 minutes, pipe O empty = 21*5 = 105 unit tank.

So, percentage = [105/120]*100 = 87.5%

8. Answer: A

Four minutes of pipe A, M, B, and O fill = [6-4+10-5] = 7 units.

After 68 minutes, total 7* 17 = 119 units of tank will be filled.
So, k=68+1/6=68.16
A, B, and C fill in 3 minutes is = [6+10+8] = 24 units.
After 15 minutes, 24 * 5 = 120 units of tank will fill
So, l=15
So, 2*15+7*68.16=507.12

{9 – 12}

Solution

So, 8x = 16y*[120/100]=16y*6/5=96y/5
Or, 40x=96y
Or, 10x=24y
Or, x=2.4y
Now, [25z+9x]=13*[16y+8x]/11
Or, [25z+9x]*11= [16* [x/2.4] +8x]*13
Or, 275*3z+99*3x=20*13x+104*3x
Or, 825z=572x-297x=275x
ATQ, 24z-7x=60
So, 24z- 7*3z = 60
Or, 24z-21z=60
Or, z=60/3=20
So, x=825*20/275=3*20=60
So, y=60/2.4=25

School	Number of students in 2015	Number of students in 2016	Number of students in 2017	Number of students in 2018
A	12*25=300	16*20=320	21*20=420	24*20=480
B	400	480	500	9*60=540
C	500	720	560	640
D	560	360	640	420
E	480	400	540	480

9. Answer: C

So, m= 25-20=5 and n=20/5=4
So, boys in school B in 2018 is = 540*5/9=300
Girls in school B in 2018 is = 540-300=240
Let the number of boys in school A in 2017 be 2i and boys in school A in 2018 is 3i.
number of girls in school A in 2017 is 11j and girls in school A in 2018 is 9j.
so, 2i+11j=420 and 3i+9j=480
by solving the above equations, we get i= 100 and j=20
so, the number of boys in school A in 2018 is = 3*100=300
The number of girls in school A in 2018 is = 9*20=180
so, required difference = [300+300] – [220+180]=600-420=180
= 2x+60 , 8y-20 , 9z

10. Answer: D

I). Number of students in school A in 2014 and 2019 together.
= [300*100/120]+[480*125/100] =850
II). Number of students in school B in 2017 and 2019 together.
= 500+[540*125/100]=1175
III). Number of students in school E in 2014 and 2019 together.
= 480*5/6 + 480*125/100=1000
IV). Number of students in school D in 2017 and 2019 together.
= 640 + 420*125/100=1165

11. Answer: B

Value for 1st blank
= [(320+720+400)-(400+560+480)]*100/(400+560+480)] =0%
Value for 2nd blank
= [(420+560+540)-(540+420+480)]*100/(540+420+480)] = [80/1440]*100 = 5.55%

12. Answer: B

Number of students in school G is = 850-[480+20]=350
Number of girls in school G in 2018 = 350*3/7=150
So, required percentage = [150/480]*100=31.25%

{13 – 16}

Solution

Let the number of petrol and diesel cars sold in D be 4y and 5y respectively.
The number of CNG cars sold in D is 5Y-120.
The number of Electric cars sold in D is 120-5y+120=240-5y.
The number of electric cars sold in D is 4Y-120.
So, 240-5y=4y-120
Or, 9y = 360, y = 40.
The number of petrol and diesel cars sold in D is 4* 40 = 160 and 5* 40 = 200, respectively.
The number of CNG cars sold in D is 5y-120 = 200-120 = 80.
The number of electric cars sold in D is 4y-120=160-120=40.
Let the number of electric cars sold in A be x and the number of CNG cars sold in A be 2x.
The number of diesel cars sold in A is x+140.
The number of petrol cars sold in A is 2x*150/100 = 3x.
Or, x+x+140+3x+2x=420
Or, 7x = 420-140 = 280, and x = 40.
So, the number of electric cars sold in A is 40, and the number of CNG cars sold in A is 2* 40 = 80.
The number of diesel cars sold in A is x + 140 = 40 + 140 = 180.
The number of petrol cars sold in A = 3x = 3*40 = 120.
The number of petrol cars sold in B is 120 * 100/120 = 100.
The number of diesel cars sold in B is 180 * [100-22.22]/100 = 180* [100-22.22]/100 = 140.
The Number of CNG cars sold in B is 140-70=70.
The number of electric cars sold in B is 70*5/7 = 50.
The number of petrol cars sold in C = [200+80]/2 = 140.
The Number of electric cars sold in C = 140-80=60
The Number of CNG cars sold in C is 60*3/2 = 90.
The Number of Diesel cars sold in C is 60 * 266.66 / 100=160

13. Answer: C

The Number of diesel cars sold in E is 200*90/100=180
The Number of CNG cars sold in E is = 240-180=60
The Number of Petrol cars sold in E is = 180-60=120
The Number of electric cars sold in E is = 60-20=40
Total cars sold in E is = 180+120+60+40=400
So, total revenue is
= [400*5/8]*15 + [400*3/8]*12=250*15+150*12=5550 lakh

14. Answer: D

k is the difference between the number of diesel and petrol sold in C, so k= 160-140=20,
l is the difference between the number of CNG and Electric cars sold in C, so l= 90-60=30
So, $20^2+20*30+30^2=1900$.
So, I is false
II. Sum of the number of electric cars sold in A, B and C together is =40+50+60= 150.
So, II is true.
III. Difference between the total cars sold in C and D is
= [200+160+80+40] – [160+140+90+60]=30.
So, III is false
15. Answer: B
Value for first blank = [40/120] *100=33.33%
Value of for second blank = [30/80]*100=37.5%
16. Answer: A
Number of XUV sold in C = [160+40]/2 + [140+40]/2 =100+90=190
Number of XUV sold in D = [200+40]/2 + [160+40]/2 = 120+100=220
Total number of sedan cars sold in C and D = [300-190]+ [360-220] =110+140=250
So, required percentage = [410/250] *100=164%
{17 – 18}
Solution

Students	Total marks in Math	Total marks in English	Total marks
A	22*4-4*2=80	20*3-6*1=54	134
B	21*4-5*2=74	23*3-9*1=60	134
C	28*4-2*2=108	25*3-6*1=69	177
D	20*4-1*2=78	23*3-2*1=67	145

17. Answer: A
I). Total marks scored by A and B in Math section is 154.
II). Difference of marks of math and English section C of is 39.
III). Total marks of D is 145.
18. Answer: C
So, option C is false.
Difference of math marks of A and B is 6.
{19 – 22}
Solution
Since, the number of candidates eligible for post A is 15, out of which 33 (1/3)% candidates were selected for post A.
So, the number of candidates selected for post A = 33 (1/3)% of 15 = 5 = z
Since, the number of candidates selected for post B is 2 more than those selected for post A.
So, the number of candidates selected for post B = 5 + 2 = 7
Since, the total number of candidates selected for posts A, B and C together is 19.
So, the number of candidates selected for post C = 19 – 5 – 7 = 7
Since, the number of candidates selected for post C is 12.5% of those available for post C.
And the number of candidates available for post C = 4y
So,
12.5% of 4y = 7
y = 14
The number of candidates available for post C = 4 * 14 = 56
The number of candidates available for post B = 125% of 56 + 10 = 80
Since, the total number of candidates available for posts A, B and C together is 196.
So, the number of candidates available for post A = 196 – (56 + 80) = 60
Since,
5x = 60
So, x = 12

Post	No. of candidates available	No. of candidates eligible	No. of candidates selected
A	60	15	5
B	80	12 + 14 – 2 = 24	7
C	56	12 + 2 = 14	7

19. Answer: D
The number of candidates available for post C = 56
So, the number of male candidates available for post C = 56 × (15/(15+13)) = 30
The number of candidates eligible for post C = 14
So, the number of male candidates eligible for post C = 14 × (3/(3+4)) = 6
Required percentage = (6/30) ×100 = 20% = (x + 8)% = 4z%
20. Answer: C
Since, the ratio of male to female candidates available for post A
(x/4) : (y/7)= (12/4) : (14/7)=3:2
So, the number of male candidates available for post A = 60 × (3/5) = 36
Since, the ratio of male to female candidates available for post B:
(2y – 1): (x + 1) = 27: 13
So, the number of male candidates available for post B = 80 × (27/40) = 54
Since, the ratio of male to female candidates available for post C:
(x – 3): z = (12 – 3): 5 = 9: 5
So, the number of male candidates available for post C = 56 × (9/14) = 36
Required average = (36 + 54 + 36)/3 = 42
21. Answer: E
Since, the ratio of male to female candidates eligible for post B is 1: 2.
So, the number of male candidates eligible for post B = 24 × (1/3) = 8
And the number of female candidates eligible for post B = 24 – 8 = 16
Since, the ratio of male to female candidates selected for post B is 3: 4.
So, the number of male candidates selected for post B = 7 × (3/7) = 3
And the number of female candidates selected for post B = 7 – 3 = 4
Now, M = (3/8) ×100 = 37.5%
And, N = (4/16) ×100 = 25%
So, the value of $[(M – N) * 10]^{1/3} = [(37.5 – 25) * 10]^{1/3} = 5$
22. Answer: A
Since, the average of the number of candidates available for posts B, C and D is 72.
So, the number of candidates available for post D = (3 * 72) – (80 + 56) = 80
The number of candidates eligible for post D = 30% of 80 = 24
And the number of candidates selected for post D = 41 (2/3)% of 24 = 10
Since, the number of candidates selected for post B = 7
And the number of candidates selected for post C = 7
So, the required average = (7 + 7 + 10)/3 = 8