

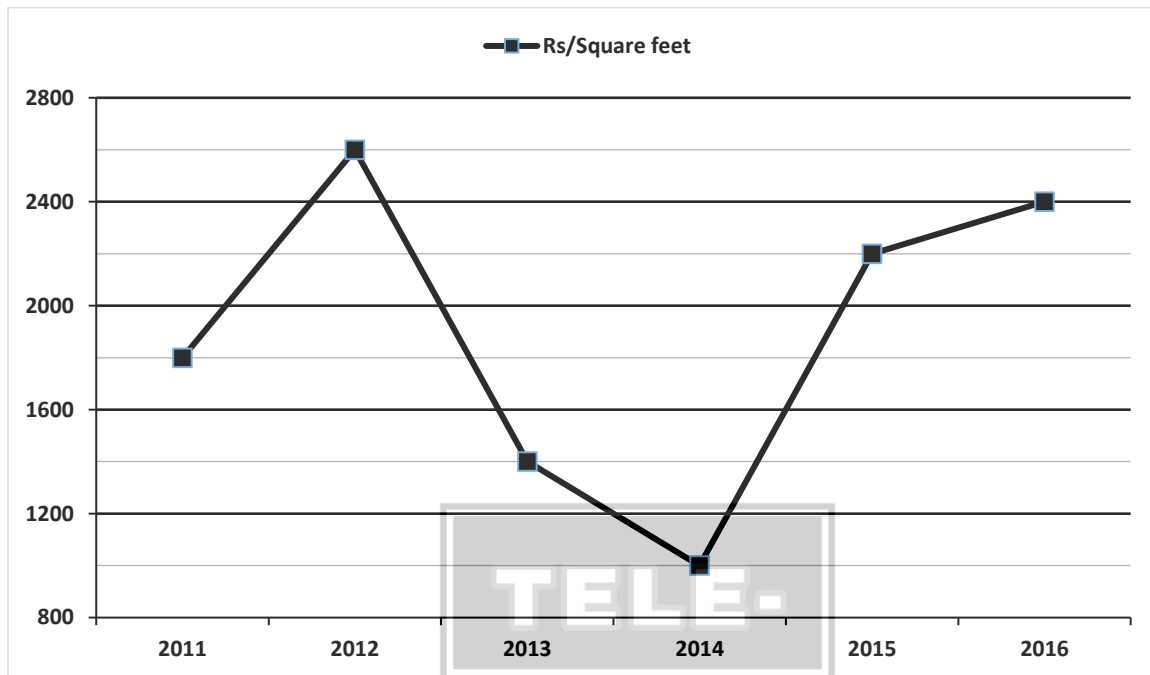
**SECTION - E: QUANTITATIVE TECHNIQUES**

**Directions (Q.136–Q.140):** Study the following information carefully and answer the given questions. There are two trains, Train P and Train Q. Both the trains have four different types of coaches, viz Sleeper, AC Tier III, Tier II and Tier I. In train P, there are total of 3000 passengers. Train Q has 40 % more passengers than Train P. 30 % of the passengers in Train P are in sleeper coaches. One - third of the total number of passengers in Train P are in AC Tier I. 18 % of the passengers in Train P are in AC Tier II and the remaining are in AC Tier III. 40 % of the total number of passengers of Train Q are in Sleeper coaches. In Train Q, the ratio of the passengers of AC Tier III, Tier II and Tier I is 4: 3: 2.

136. The total number of passengers in Sleeper class in both the trains together is what percentage of total number of passengers in Train Q?  
(a) 44 %                      (b) 28 %                      (c) 75 %                      (d) 61 %
137. The costs per ticket of train P for AC tier III and Tier I are Rs. 1800 and Rs. 3000 respectively. Then find the total amount generated by both the coaches in Train P?  
(a) Rs. 4008000              (b) Rs. 5156000              (c) Rs. 4524000              (d) Rs. 4872000
138. Find the difference between the average number of passengers in AC Tier I, II and III together in train Q to that of total number of passengers in AC tier II and III together in train P?  
(a) 380                      (b) 450                      (c) 260                      (d) 320
139. Find the ratio between the total number of passengers in Sleeper and AC tier I together in train P to that of total number of passengers in AC tier II and tier III together in train Q?  
(a) 52: 59                      (b) 95: 98                      (c) 43: 51                      (d) 29: 33
140. Total number of passengers in AC tier II in both the trains together is approximately what percentage more/less than the total number of passengers in AC tier III in both the trains together?  
(a) 18 % less                      (b) 32 % more                      (c) 18 % more                      (d) 32 % less

**USE FOR ROUGH WORK**

**Directions (Q.141-Q.145):** Study the given line graph carefully & answer the questions.  
Line – graph given below shows the price per squares feet of land in different years.



141. In 2015, if Rahul bought a plot of 1800 sq. feet. Then how much plot he has bought with the same amount in 2016? (sq.feet.)  
(a) 1650 sq.feet      (b) 1720 sq.feet      (c) 1825 sq.feet      (d) None of these
142. In 2016 if veer bought a plot 800 sq. feet & want to sell it in 2017 to earn profit of 20%. Then find the price per sq. feet in 2017 for same plot?  
(a) Rs. 2250      (b) None of these      (c) Rs. 2730      (d) Rs. 2880
143. If Satish bought 1840 sq. feet land in 2012 and Sandy bought 1640 sq.feet aldn in 2014. Then find ratio of amount spent by satish in 2012 to amount spent by sandy in 2014?  
(a) 3 : 5      (b) 205 : 598      (c) 598 : 205      (d) 538 : 207
144. If Ayush bought a plot in 2010 at a price  $\frac{3}{4}$  th of the price in 2013. Then, find difference of amount paid by Ayush to buy plot of 2240 sq. feet in 2010 and 2013.  
(a) Rs. 8.28 lakh      (b) Rs. 4.84 lakh      (c) Rs. 7.84 lakh      (d) Rs. 6.28 lakh
145. If plot bought by Abhi in 2016 is 2420 sq. feet and plot bought by Roly in 2011 is 1640 sq.feet. Then find average of money spent by Abhi and Roly?  
(a) Rs. 58.6 lakh      (b) Rs. 53.4 lakh      (c) None of these      (d) Rs. 43.8 lakh

**Directions (Q.146-Q.150):** study the passage and answer the following questions.

The age of Anhishek is one third of present age of his father & 5 years ago he was **(A)** of his father's age & his age will be 50 years after 5 years. Abhishek & his father invested in a business in ratio 2 : 3, Respectively, Abhishek invested for 4 months & his father for **(B)** monts. Out of total profit of Rs. 27200, profit share of Abhishek's father was Rs. 1600 more than profit share of Abhishek profit which Abhishek got, he invested half at SI For two years & half at CI for same period at **(C)%** and difference of interest obtained is Rs. 64. The amount which Abhishek's father obtained as profit he started manufacturing cycles, The labor cost manufacturing is  $\frac{1}{3}$  rd of profit & excluding labor cost there are two other cost i.e., raw material and transportation cost which is in 3 : 2. With that amount he manufactured 10 cycles. If he wants 20% profit on selling all the cycles that he manufactured then selling price of single unit is **(D)**. The cost of raw material of six cycle is **(E)**.

146. Find the value of place of A?

- (a)  $\frac{4}{11}$  (b)  $\frac{3}{13}$  (c)  $\frac{2}{13}$  (d)  $\frac{4}{13}$

147. Find the value in place of B?

- (a) 5 (b) 3 (c) 4 (d) 7

148. Find the value of place of C?

- (a) 10% (b) 20% (c) 25% (d) 40%

149. Find the value in place of D?

- (a) 2448 Rs. (b) None of these (c) 1224 Rs. (d) 1728 Rs.

150. Find the value in place of E?

- (a) 3624 (b) 3456 (c) 3648 (d) 3424

**USE FOR ROUGH WORK**

A and D belongs to Bhutan and the other one to Mangolia. Since no two persons have the same combination of country and language, R does not belong to Bhutan. Hence, R belongs to Mangolia and A belongs to Bhutan. From (vii), as U knows Dutch, it has to be A. This implies that the person who belongs to tribe P is either B or F. But from (ii), F is the one who belongs to tribe P and knows the language Swedish. Now it can be concluded that B belongs to tribe S and 2 knows Spanish.

The final arrangement as follows:

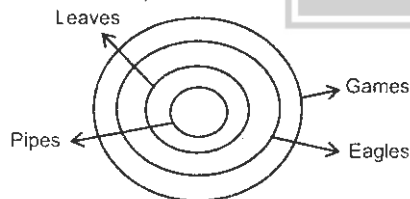
Name of the person	Tribe	Country	Language
A	U	Bhutan	Dutch
B	S	Bhutan	French
C	Q	Pakistan	Dutch
D	R	Mangolia	French
E	T	China	Spanish
F	P	Pakistan	Swedish

They both belong to the same country.

135. (d) The basic diagram for the given statements is,



From the above basic diagram, conclusion I, negative, does not follow. Conclusion II, affirmative, follows. The possible diagram for the given statements is,



From, conclusion III, "All leaves being eagles" is possible in the above diagram.

Hence conclusion III follows.

∴ Only II and III follow. Choice (D)

## SECTION - E : QUANTITATIVE TECHNIQUES

**Hint [(Q.136–Q.140):**

Total passengers in train P = 3000

Total passengers in train Q =  $3000 \times (140/100) = 4200$

Total passengers in Sleeper coaches in train P =  $3000 \times (30/100) = 900$

Total passengers in AC Tier I in train P =  $3000 \times (1/3) = 1000$

Total passengers in AC Tier II in train P =  $3000 \times (18/100) = 540$

Total passengers in AC Tier III in train P  $\Rightarrow 3000 - (900 + 1000 + 540) = 560$

Total passengers in Sleeper coaches in train Q =  $4200 \times (40/100) = 1680$

Total passengers in AC Tier I in train Q =  $2520 \times (2/9) = 560$

Total passengers in AC Tier II in train Q =  $2520 \times (3/9) = 840$

Total passengers in AC Tier III in train Q =  $2520 \times (4/9) = 1120$

Coaches	Train P	Train Q
Sleeper	900	1680
AC Tier I	1000	560
AC Tier II	540	840
AC Tier III	560	1120

136. (d) The total number of passengers in Sleeper class in both the trains together  
 $\Rightarrow 900 + 1680 = 2580$   
 The total number of passengers in Train Q = 4200  
 Required % =  $(2580 / 4200) \times 100 = 61.428\% = 61\%$
137. (a) The total number of passengers in AC Tier III in train P = 560  
 The total number of passengers in AC Tier I in train P = 1000  
 The total amount generated by both the coaches in Train P  
 $\Rightarrow 560 \times 1800 + 1000 \times 3000$   
 $\Rightarrow 1008000 + 3000000 = \text{Rs. } 4008000$
138. (c) The average number of passengers in AC Tier I, II and III together in train Q  
 $\Rightarrow (560 + 840 + 1120)/3$   
 $\Rightarrow 2520/3 = 840$   
 The total number of passengers in AC tier II and III together in train P  
 $\Rightarrow 540 + 560 = 1100$   
 Required difference =  $1100 - 840 = 260$
139. (b) The total number of passengers in Sleeper and AC tier I together in train P  
 $\Rightarrow 900 + 1000 = 1900$   
 The total number of passengers in AC tier II and tier III together in train Q  
 $\Rightarrow 840 + 1120 = 1960$   
 Required ratio =  $1900 : 1960 = 95 : 98$
140. (a) Total number of passengers in AC tier II in both the trains together  
 $\Rightarrow 540 + 840 = 1380$   
 Total number of passengers in AC tier III in both the trains together  
 $\Rightarrow 560 + 1120 = 1680$   
 Required % =  $[(1680 - 1380) / 1680] \times 100 = 17.85\% = 18\% \text{ less}$
141. (a) Required plot =  $\frac{1800 \times 2200}{2400} = 1650 \text{ sq. feet}$
142. (d) Required price per sq. feet in 2017 =  $2400 \times \frac{120}{100} = \text{Rs. } 2880$
143. (c) Required ratio =  $\frac{1840 \times 2600}{1640 \times 1000} = 598:205$
144. (c) Required difference  
 $= 2240 \times 1400 - 2240 \times 1400 \times \frac{3}{4}$   
 $= 2240 \times 1400 \left[ 1 - \frac{3}{4} \right] = \text{Rs. } 784000$
145. (d) Required average =  $\frac{2420 \times 2400 + 1640 \times 1800}{2} = 4380000$   
 = Rs. 43.8 lakh
146. (d) Let present age of Abhishek father be x  
 ∴ Present age of Abhishek - ?  
 $\therefore \frac{x}{3} + 5 = 50$   
 $\therefore x = 135$   
 ∴ age of father 5 yrs ago = 130  
 ∴ age of Abhishek 5 year ago =  $\frac{135}{3} - 5 = 40$

147. (b)  $\therefore A = \frac{4}{13}$   
 Let, Abhishek's share of profit be Rs.  $x$   
 Then, his father's share of profit is Rs.  $x+1600$   
 ATQ,  $x + x + 1600 = 27200$   
 $\Rightarrow x = 12800$   
 Hence, Abhishek's share of profit = Rs. 12800  
 And his father's share of profit = Rs. 14400  
 Now,  
 $\frac{2 \times 4}{3 \times B} = \frac{12800}{14400}$   
 $\Rightarrow B = 3$
148. (a)  $\therefore$  Profit of Abhishek = 12800

- $D = \frac{PR^2}{100^2}$   
 $64 = \frac{12800 \times R^2}{2 \times 100^2}$   
 $\therefore R = 10\%$
149. (d) Profit share of Abhishek's father = Rs. 14400  
 Cost price of 10 cycles = 14400  
 Cost price of 1 cycle =  $\frac{14400}{10}$  = Rs. 1440  
 Required selling price =  $1440 \times \frac{120}{100}$  = 1728 Rs.
150. (b) Cost of raw material of 10 cycles  
 $= 14400 \times \frac{2}{3} \times \frac{3}{5} = 5760$   
 Cost of raw material of 6 cycles =  $\frac{5760}{10} \times 6 = 3456$



## SECTION - E: QUANTITATIVE TECHNIQUES

**Directions (Q.136-Q.140):** This question is based on the data given below. Study it carefully and answer the question.

There are two trains. Krishna Express and Godavari Express. Both trains have four different types of coaches viz. general coaches, sleeper coaches, first-class coaches. In Krishna Express, there are a total of 1000 passengers. Godavari Express has 20% more passengers than Krishna Express. 27% of the passengers of Krishna Express are in general coaches. 17.5% of the total number of passengers of Krishna Express are in AC coaches. 33.5% of the passengers of Krishna Express are in sleeper class coaches. The remaining passengers of Krishna Express are in first-class coaches. The total number of passengers in AC coaches on both the trains together is 410. 33.75% of the number of passengers of Godavari Express is in sleeper class coaches, 125/6% of the total passengers of Godavari Express are in first-class coaches. The remaining passengers of Godavari Express are in general class coaches.

136. What is the ratio of the number of passengers in first-class coaches of Krishna Express to the number of passengers in sleeper class coaches of Godavari Express?  
 (a) 13 : 7                      (b) 7 : 13                      (c) 32 : 39                      (d) 44:81
137. What is the total number of passengers in the general coaches of Krishna Express and the AC coaches of Godavari Express together?  
 (a) 449                      (b) 495                      (c) 505                      (d) 445
138. What is the difference between the number of passengers in the AC coaches of Krishna Express and the total number of passengers in sleeper class coaches and first-class coaches together of Godavari Express?  
 (a) 478                      (b) 480                      (c) 487                      (d) 479
139. If the cost per ticket of a first-class coach ticket is Rs.550, what total amount will be generated from first-class coaches of Krishna Express?  
 (a) 120000                      (b) 122000                      (c) 121000                      (d) 124000
140. If the cost per ticket of a first-class coach ticket is Rs.450 and an AC class coach ticket is Rs.950, what total amount will be generated from the First and AC class coaches of Godavari Express?  
 (a) 350000                      (b) 375750                      (c) 335750                      (d) 345000

**Direction (Q.141-Q.145):** Study the information carefully to answer the questions that follow:

A building consists of men and women who spend their leisure time in watching movies, learning dance and learning singing 8 men, who form ten percent of the total number of men in the building learn to dance. The total number of women in the building is 62.5 per cent of the total number of men in the building. Twenty-four per cent of the total number of women learns to sing. One –fifth of the total numbers of women watch movies. The ratio of the number of men watching movies to the number of men watching movies to the number of men watching movies to the number of women doing the same is 13: 2 respectively

141. What is the respective ratio of the number of men learning dance to the number of women doing the same?  
 (a) 8 : 11                      (b) 5 : 9                      (c) 2 : 7                      (d) 3 : 5
142. The total number of women in the building is approximately what percent to the total number of members (men and women together) in the building?  
 (a) 45%                      (b) 33%                      (c) 42%                      (d) 38%
143. What is the number of women learning dance?  
 (a) 28                      (b) 22                      (c) 30                      (d) 24

144. The number of men who like watching movies is what percent of the total number of men in the building?  
(a) 79.75% (b) 83.45% (c) 81.25% (d) 72.15%
145. What is the total number of members (men and women together) learning signing?  
(a) 21 (b) 13 (c) 18 (d) None of these

**Direction (Q.146-Q.150):** Study the given information carefully to answer the questions. Every year, a survey of 1000 people is conducted by the World Health Organization (WHO). WHO found that in the year 2005, 2006, 2007, 2008 and 2009 the percentage of people affected by malaria were 30%, 40%, 30%, 20% and 45% respectively. WHO also found that every year out of the affected people 60% were students, 10% were house-wives and 30% were drivers. The number of house-wives, students and drivers were in the ratio 20 : 11 : 9, every year.

146. In the year 2007, find the number of house-wives affected by malaria?  
(a) 60 (b) 30 (c) 50 (d) 110
147. In the year 2009, find the number of drivers who were not affected by malaria?  
(a) 110 (b) 125 (c) 415 (d) 90
148. What is the difference in the number of students affected and not affected by malaria in the year 2006?  
(a) 205 (b) 35 (c) 200 (d) 240
149. Find the ratio of the number of house-wives affected by malaria in the year 2005 to that affected by malaria in the year 2008.  
(a) 5 : 3 (b) 9 : 4 (c) 3 : 2 (d) 2 : 1
150. Which year had the maximum number of students not affected by malaria?  
(a) 2005 (b) 2006 (c) 2007 (d) 2008

**USE FOR ROUGH WORK**



**SECTION - E : QUANTITATIVE TECHNIQUES**
**Hint [Q.136-Q.140]:**
**Krishna Express:-**

Krishna Express total passengers = 1000

27% of total passengers General Class Coach

 $= (27 \times 1000)/100 = 270$ 

17.5% of total passengers AC Class Coach

 $= (17.5 \times 1000)/100 = 175$ 

3(c)5% of total passengers Sleeper Class Coach

 $= (33.5 \times 1000)/100 = 335$ 

 Remaining are First Class =  $1000 - (175 + 335 + 270) = 220$ 
**Godavari Express:-**

Total passengers 20% more than Krishna Express =

 $(120 \times 1000)/100 = 1200$ 

Total Number of passengers in AC coaches in both the trains together is 410

 AC passengers in Godavari = 410- AC passengers in Krishna =  $410 - 175 = 235$ 

 33.75% of total passengers Sleeper Class Coach =  $(33.75 \times 1200)/100 = 405$ 

 (125/6)% of total passengers First Class =  $(125/6) \times 1200/100 = 250$ 

 Remaining passengers in General =  $1200 - (235 + 250 + 405) = 310$ 

136. (d) The ratio of the number of passengers in first-class coaches of Krishna Express to the number of passengers in sleeper class coaches of Godavari Express =  $220:405 = 44:81$
137. (c) total number of passengers in the general coaches of Krishna Express and the AC coaches of Godavari Express together =  $270 + 235 = 505$
138. (b) difference between the number of passengers in the AC coaches of Krishna Express and the total number of passengers in sleeper class coaches and first-class coaches together of Godavari Express =  $(405 + 250) - 175 = 480$
139. (c) The total amount will be generated from first-class coaches of Krishna Express =  $550 \times 220 = 121000$
140. (c) The total amount will be generated from First and AC class coaches of Godavari Express =  $(450 \times 250) + (950 \times 235) = 335750$

**Hint [Q.141-Q.145]:**

Number of men in the building = 80

(10% is 8 so 100% = 80)

 Number of women =  $80 \times 62.5/100 = 50$ 

Men who learn to dance = 8

 Women who learn to sing =  $50 \times 24/100 = 12$ 

 Women who watch movies =  $50 \times 1/5 = 10$ 

 Men who watch movies =  $13 \times 10/2 = 65$ 

 Men who learn to sing =  $80 - 65 - 8 = 7$ 

 Men who learn to dance =  $50 - 10 - 12 = 28$ 

141. (c) Required ratio =  $8:28 = 2:7$
142. (d) Required percentage =  $50 \times 100/80 + 50 = 38\%$
143. (a) Number of women who learn to dance = 8
144. (c) Required percentage =  $65 \times 100/80 = 81.25\%$
145. (d) Number of members who learn to sing =  $12 + 7 = 19$
146. (b) In the year 2007, 30% of the population was affected by malaria out of which 10% were house-wives.

 $\therefore$  The number of house-wives affected by malaria in the year 2007 = 10% of 30% of 1000 =  $0.1 \times 0.3 \times 1000 = 30$ 

Hence, option B is correct.

147. (d) The number of house-wives, students and drivers were in the ratio 20 : 11 : 9 in each year.

Let the common factor be x.

Also, every year 1000 people were surveyed.

 $\therefore 20x + 11x + 9x = 1000$ 
 $\therefore x = 25$ 
 $\therefore$  The total number of house-wives, students and drivers was 500, 275 and 225 respectively.

Now, in the year 2009, 45% of the total population was affected by malaria.

45% of 1000 = 450

Out of the 450 affected people, 30% were drivers.

30% of 450 = 135

 Hence, the numbers of drivers who were not affected by malaria in the year 2009 =  $225 - 135 = 90$ 

Hence, option D is correct.

148. (a) Total population of students for each year = 275  
 In the year 2006, the numbers of students affected by malaria = 60% of 40% of 1000 =  $0.6 \times 0.4 \times 1000 = 240$  students  
 $\therefore$  The number of students not affected by malaria =  $275 - 240 = 35$   
 $\therefore$  Difference between the two =  $240 - 35 = 205$   
 Hence, option A is correct.

149. (c) The number of house-wives affected by malaria in the year 2005 = 10% of 30% of 1000 =  $0.1 \times 0.3 \times 1000 = 30$   
 The number of house-wives affected by malaria in the year 2008 = 10% of 20% of 1000 =  $0.1 \times 0.2 \times 1000 = 20$   
 The required ratio =  $30 : 20 = 3 : 2$   
 Hence, option C is correct.

150. (d) Total number of students = 275  
 The number of students affected by malaria in the year 2005 = 60% of 30% of 1000 = 180  
 $\therefore$  The number of students not affected by malaria =  $275 - 180 = 95$   
 The number of students affected by malaria in the year 2006 = 60% of 40% of 1000 = 240  
 $\therefore$  The number of students not affected by malaria =  $275 - 240 = 35$   
 The number of students affected by malaria in the year 2007 = 60% of 30% of 1000 = 180  
 $\therefore$  The number of students not affected by malaria =  $275 - 180 = 95$   
 The number of students affected by malaria in the year 2008 = 60% of 20% of 1000 = 120  
 $\therefore$  The number of students not affected by malaria =  $275 - 120 = 155$   
 The number of students affected by malaria in the year 2009 = 60% of 45% of 1000 = 270  
 $\therefore$  The number of students not affected by malaria =  $275 - 270 = 5$   
 Thus, 2008 had the maximum number of students not affected by malaria.  
 Hence, option D is correct.



**SECTION - E: QUANTITATIVE TECHNIQUES**

**Direction (Q.136-Q.140):** Study the following information carefully to answer that follow.

A bank has five different types of accounts, viz A Type, B Type, C Type, D Type and E Type. The total number of account holders is 2050. 24% of the total accounts are A Types. One-fifth of the total number of accounts is D Type. 16% of the total accounts are C Types. Remaining accounts are either E Types or B Types. The number of B Types is 182 more than the number of E Types.

136. What is the ratio of the total number of D Type to the total number of E Type and B Types together?  
(a) 2 : 1                      (b) 1 : 2                      (c) 3 : 4                      (d) 7 : 6
137. If 20% of D Type are non-operative, what is the number of D Type which are operative?  
(a) 382                      (b) 164                      (c) 328                      (d) 428
138. The number of C Types is approximately what per cent of the total number of A Types and D Type together?  
(a) 63%                      (b) 26%                      (c) 46%                      (d) 36%
139. What is the total number of E Type, C Type and D Type together?  
(a) 1027                      (b) 1157                      (c) 1057                      (d) 957
140. What is the difference between the total number of E Type and A Types together and the number of B Types?  
(a) 310                      (b) 410                      (c) 210                      (d) 390

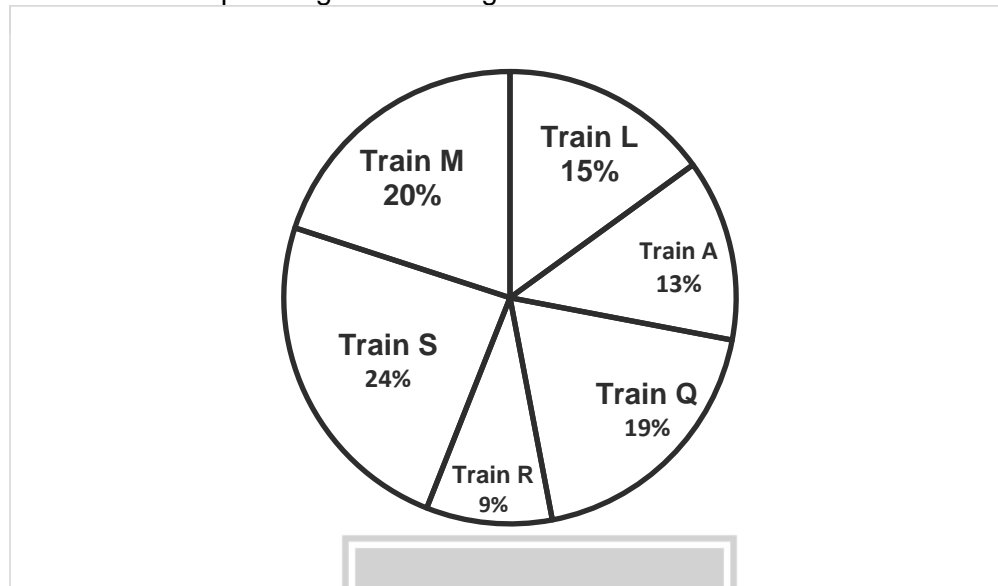
**USE FOR ROUGH WORK****CLATMAFIA**

**Direction (Q.141-Q.145):** Study the following information carefully answer the questions given below:  
In an examination (consisting of two papers Legal and English) total 300 students appeared. Out of that the ratio of boys to girls is 3 : 2. The number of boys who passed only in Legal is 25% of the total number of boys and this number is  $\frac{3}{2}$  of the number of girls who passed only in English. The number of girls who passed in both the papers is 40/3% of the total number of students and the number of boys who passed in both the papers is 180% of the number of girls who passed in both the papers. None of the candidate failed in both the papers.

141. How many girls are there who passed only in Legal paper?  
(a) 35 (b) 40 (c) 45 (d) 50
142. The number of boys who passed only in English is what percentage of the total number of students who appeared in the examination?  
(a) 21% (b) 36% (c) 48% (d) 72%
143. How many students passed in Legal?  
(a) 192 (b) 197 (c) 201 (d) 207
144. What is the ratio of the number of boys who passed in English to the number of girls who passed only in Legal?  
(a) 23 : 8 (b) 25 : 11 (c) 27 : 10 (d) 29 : 15
145. How many students are there who passed at most in one subject?  
(a) 172 (b) 178 (c) 181 (d) 188

USE FOR ROUGH WORK

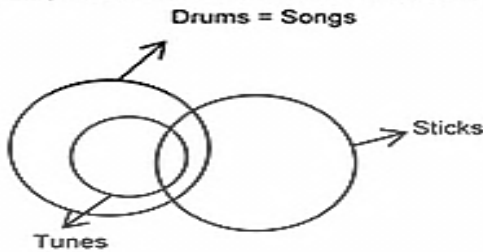
**Direction (Q.146-Q.150):** Study the given pie chart carefully to answer the questions that follow.  
Percent wise distribution of passengers travelling in different trains



**Total Number of Passenger's = 10000**

146. What was the approximate average number of passengers in the train S, train M and train L together?  
(a) 5121 (b) 5900 (c) 1651 (d) 1966
147. If in train R, 34% of the passengers are females and 26% are children, what is the number of males in that train?  
(a) 360 (b) 306 (c) 308 (d) 318
148. Number of passengers in the train Q is approximately what per cent of the total number of passengers in train A and Train R?  
(a) 90% (b) 70% (c) 75% (d) 86%
149. Which train has second highest number of passengers?  
(a) A (b) Q (c) S (d) M
150. How much more per cent (approximately) is number of passengers there in train M as compare to number of passengers in train L?  
(a) 29% (b) 49% (c) 43% (d) 33%

**USE FOR ROUGH WORK**

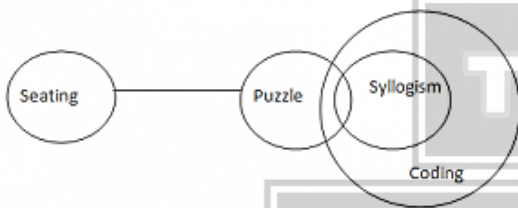


Hence, both I and II follow.

**Hint (Q.132-Q.134)** We have finally reached in the position of completing our tree diagram by incorporating the final information which is about F who is a female since her husband had died. And B is her daughter-in-law. Therefore, she's the mother of A and C.

132. (a) is the correct answer.  
133. (a) is the correct answer.  
134. (b) is the correct answer.  
135. (d) is the correct answer.

I. True II. True III. True



## SECTION - E : QUANTITATIVE TECHNIQUES

**Explanation (Q.136-Q.140):**

Number of Savings Accounts

$$= 24 \times 2050 / 100 = 492$$

$$\text{Number of D Type} = 2050 \times 1 / 5 = 410$$

$$\text{Number of C Types} = 16 \times 2050 / 100 = 328$$

$$\text{Number of E Type and B Types} = 820.$$

$$\text{Number of B Types} = \text{No. of E Type} + 182$$

$$\text{E Type} + \text{B Types} = 820$$

$$\text{or E Type} + \text{E Type} + 182 = 820$$

$$\text{or, } 2 \text{ E Type} = 820 - 182 = 638$$

$$\text{E Type} = 638 / 2 = 319$$

$$\text{B Type} = 319 + 182 = 501$$

136. (b) Reqd ratio =  $410 / 820 = 1:2$

137. (c) Number of non-operative accounts =  $410 \times 20 / 100 = 82$   
Number of accounts which are operative =  $410 - 82 = 328$

138. (d) Reqd% =  $328 \times 100 / 902 = 36.36 \approx 36\%$

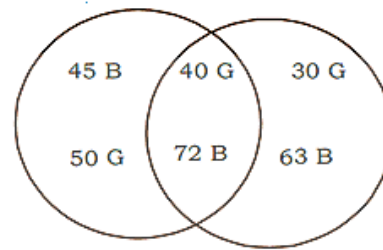
139. (c) Total number of E Type, C Type and D Type =  $328 + 319 + 410 = 1057$

140. (a) Difference =  $319 + 492 - 501 = 811 - 501 = 310$

**Explanation (Q.141-Q.145):**

**LEGAL**

**ENGLISH**



$$\text{Total} = 300$$

$$\text{Boys : Girls} = 3 : 2$$

$$\text{Boys} = 180, \text{Girls} = 120$$

141. (d) Girls who passed only in Legal paper: 50

142. (a) Reqd % =  $63 \times 100 / 300 = 21\%$

143. (d) Total students who passed in Legal =  $45 + 50 + 40 + 72 = 207$

144. (c) ratio =  $72 + 63 / 50 = 135 / 50 = 27 / 10 = 27:10$

145. (d) Students who passed at most in one subject =  $45 + 50 + 30 + 63 = 188$

**Explanation (Q.146-Q.150):**

146. (d) Number of passengers in train S = 24% of 10000

Number of passengers in train M = 20% of 10000

Number of passengers in train L = 15% of 10000

$$\therefore \text{Required average} = \frac{(24\% + 20\% + 15\%) \text{ of } 10000}{3}$$

$$= \frac{59\% \text{ of } 10000}{3} = 1966.66 = 1966$$

147. (a) Number of Passenger's in train

$$R = 10000 \times \frac{9}{100} = 900$$

$$\therefore \text{number of males} = 900 \times \frac{100 - 34 - 26}{100} = \frac{900 \times 40}{100} = 360$$

148. (d) Percentage of people in train Q = 19%

Percentage of people in trains A and R together

$$= (13 + 9)\% = 22\%$$

$$\therefore \text{Required percentage} = \left( \frac{19}{22} \times 100 \right) \% = 86\%$$

Note: As we have already discussed, we don't need to take actual values here. We can find the required percentage by taking only their percent terms also.

149. (d) Train M has second highest number of passengers as it has second highest percentage.

150. (d) Percentage of passengers in train M = 20%

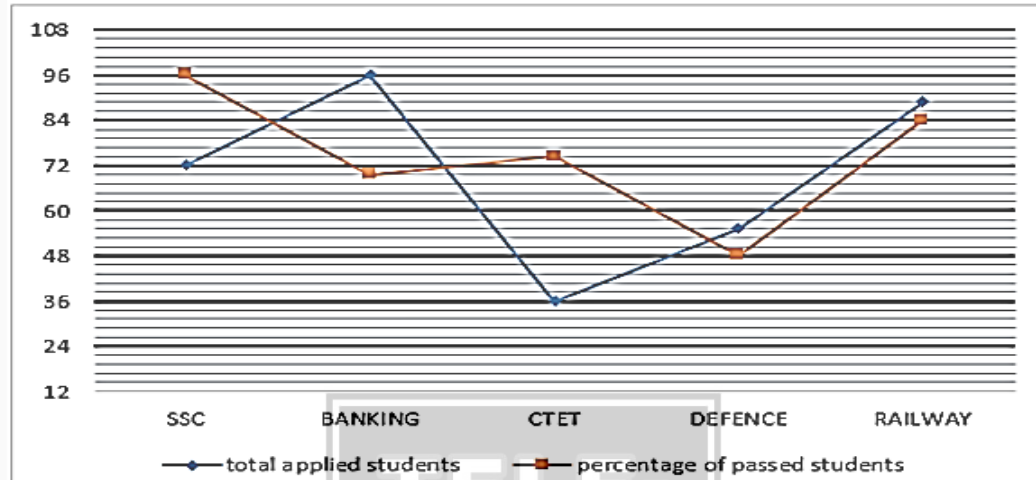
Percentage of Passengers in train L = 15%

$$\therefore \text{Required percentage} = \left( \frac{20 - 15}{15} \times 100 \right) \%$$

$$= \frac{500}{15} \% \approx 33\%$$

**SECTION - E: QUANTITATIVE TECHNIQUES**

**Directions (Q.136-Q.140):** Line chart given below gives information about total no. of students (in '00) applied for various exams in a city and percentage of students who passed exam out of total appeared students.



136. If in RAILWAY exams non-appeared students are 40/7 % of total appeared students, then find total students who passed in RAILWAY exams.  
(a) 7046 (b) 3000 (c) 8400 (d) 7056
137. In SSC exam, out of total applied students 720 students were not able to reach the exam center and another 1080 students didn't take the exam. Find percentage of passed students out of total applied students.  
(a) 72% (b) 75% (c) 84% (d) 48%
138. In BANKING exam 250/3% of total applied students appeared in exam. Find total students who passed BANKING exam.  
(a) 5184 (b) 8008 (c) 5000 (d) 5568
139. In DEFENCE exam total 2400 students passed the examination, then find total appeared students in DEFENCE exam is what percent of total no. of applied students in DEFENCE exam. (approx.)  
(a) 95% (b) 91% (c) 96% (d) 92%
140. In CTET exam, 83.2% of appeared boys and 70% of appeared girls passed the exam. If ratio of appeared girls to appeared boys is 2:1 and total 2232 students passed in CTET exam, then find ratio of total applied students to total appeared girls in CTET exam.  
(a) 9:5 (b) 18:1 (c) 6:5 (d) 18:5

**Directions (Q.141-Q.145):** Read the data carefully and answer the questions.

A company is the producer of bottles and it used to sell bottles through distributor on a condition that on selling the stock of every 50 bottles, he will get Rs. 1000 as commission. The distributor is responsible to sell all those bottles to retailers. If he marks the bottles at the price which is 30% above the production cost (cost price) and allows a discount of Y%. He sells total of 'X' bottles which is 40 less than total received stock by him. Total production price of whole stock of bottles received by him to sell to retailers is Rs. 7.8 lakhs. The commission received by distributor is Rs. 7000 and he made a profit of Rs 1.4 lakhs on selling the bottles

141. What is value 'Y'?  
 (a) 126/13%                      (b) 100/13%                      (c) 74/13%                      (d) 113/13%
142. What will be ratio of Y : (X + 40)?  
 (a) 10 : 511                      (b) 10 : 503                      (c) 10 : 513                      (d) 10 : 507
143. Instead of 'Y' employee allow 10% discount on one bottle, then percentage profit of distributor?  
 (a) 17%                      (b) 15%                      (c) 12%                      (d) 10%
144. If company added given commission in cost price and he give stock of (X + 450) bottles to another distributor who sold all stock, then find new cost price of one bottle?  
 (a) 2200 Rs.                      (b) 2020 Rs.                      (c) 2040 Rs.                      (d) 2060 Rs.
145. If distributor allowed two successive discounts of 5% and 12.5% on marked price, then find the profit made by distributor on selling of one bottle?  
 (a) 161.25 Rs.                      (b) 162.25 Rs.                      (c) 172.25 Rs.                      (d) 176.25 Rs.

**Directions (Q.146-Q.150)** Study the passage given below carefully and answer the following questions. In a school, there are total of 243 students in 5 classes (i.e. class – I, II, III, IV & V). Students in Class – IV are 50% more than students in Class – II and students in Class – III are 10 more than students in Class – II. Students in Class – V are 80% of students in Class – IV and ratio of students in Class – I to that of in Class – V is 15 : 16.

146. If ratio of boys to girls in Class – I & IV is 3 : 2 and 8 : 7 respectively, then find number of girls in Class – I & IV together is what percent of total students in Class – II?  
 (a) 115%                      (b) 130%                      (c) 120%                      (d) 135%
147. If ratio of students who play basketball, football and cricket in Class – III & V is 2 : 1 : 2 and 2 : 3 : 3 respectively, then find ratio of students who play football in these 2 classes together to students who play cricket in these two classes together.  
 (a) 11 : 9                      (b) 1:1                      (c) 7:4                      (d) None of the above.
148. If ratio of girls to boys in Class – II is 2 : 3 and average weight of boys in Class - II is 40kg and average weight of girls in Class – II is 25kg, then find the average weight of Class – II.  
 (a) 33 kg                      (b) 34 kg                      (c) 37 kg                      (d) 36 kg
149. Find average number of students in Class – II, III & V.  
 (a) 52                      (b) 46                      (c) 45                      (d) 42
150. If total students in Class – VI are equal to 150% of average number of students in Class – II & V, then find difference between total students in Class – VI and total students in Class – IV.  
 (a) 18                      (b) 9                      (c) 12                      (d) 6

- they will be made aware about it has nothing to do with providing them a letter from the Railway Minister.
125. (b) Option (A) is neutral and it is insufficient to infer whether the situation is worsening or improving. Option (B) states about the worsening financial condition of the Indian Railways. Option (C) relates to the 'Give Up' scheme which is not consistent with the question. Option (D) is the contradictory statement.
126. (d) As the passage describes that marginalised need particular attention and care. Also, the author is time and again reiterating the fact that it is necessary to develop programs and plans for fundamental land reforms. While, nowhere in the passage does the author mention that the land reforms program should not be left to the states because of the local bodies interruption, hence option (A) will not be the correct answer. So, the correct answer will be option (D).
127. (c) As per the third paragraph, the author has mentioned two reasons of the persistence of poverty:  
 i. The absence of effective land reforms.  
 ii. The absence of equitable land reforms.  
 So from the above two options, we can say that our correct answer is option (C), and neither option (A) nor option B. because wages rate has not been mentioned anywhere hence it is out of the context and disempowered groups are not the reason of persistent penury as well. Option (D) is not mentioned in the passage.
128. (b) It has been mentioned the second last passage that the non-agricultural industry and activity that was rapidly expanding was absorbing growing numbers of rural residents. It was the setting for the implementation of the plan. Hence the correct answer will be option (B), all other options are eliminated as no farmer has been displaced or taken advantage of by the industries. So, both are incorrect. Since option (b) is correct, option (d) is ruled out.
129. (d) **Refer to the line**, 'The relevant criteria for land entitlement should have been employment and main source of income.'  
 By reading the last line of the second last passage we can understand that the author is in the favour of equity and fairness. He wants to set the clear benchmarks for the land obtainment rights. Hence, this statement makes the fact clear that there should have been some necessary conditions for obtaining land rights, this makes option (D) correct. The rest of the options do not echo author's views.
130. (b) Option A- The statement is incorrect because the given option is not supporting the above statement completely. According to this, the audiences are COMPARING the situation of the current scenario and the pandemics that happened earlier. Option B- The statement is the correct answer because here the author is telling the western audiences are looking for theories of pandemic happened and not just trying to compare all but to understand the situation and consequences better.

- Option C- clearly this is the incorrect answer because the author nowhere talked about the time of the revelation of the civilizations.
131. (d) D is the correct answer, it can be easily inferred from the following excerpt:  
 The COVID-19 pandemic revived old theories about the role that diseases played in regime collapse, and we were reminded that plagues had laid low the Roman Empire and destroyed European feudalism. Ancient traditions of end times blamed spiritual causes for the collapse of civilisations, we, being the moderns that we are, opted for what we imagined to be a 'scientific' discourse – the so-called genre of collapsology. Although some modern scholars, such as Edward Gibbon, Oswald Spengler and Arnold Toynbee, retained essentially spiritual explanations for civilisation decline. More recently, Jared Diamond wrote of the role that environmental depletion and diseases played in the fall of civilisations, and his theory that the collapse of Easter Island resulted from overexploitation of the natural environment has enjoyed particular resonance.
132. (d) Option A- The given statement talks about the current situation and how everything went from just fine to worse that people must remain at home to be safe. Option B- The statement comparing the old time when the era of black death happened due to which almost 1/3rd of the population died. Option C- It is incorrect, the statement is talking about one of the possible reasons for this kind of pandemic and destruction. Option D- the correct answer is option D that means A and B both together strengthening the given statement.
133. (d) It is given that,  
 $5C22B175A95$   
 $5 \times 22 - 175 + 95 = 110 - 175 + 95 = 110 - 80 = 30$ .  
 From option (d),  
 $= 600 \div 20 = 30$ .  
 Hence,  $5C22B175A95E600D20$
134. (a) Three letters are changed in each step starting from the left end of each word. GLA DIA TOR  
 $G + 1 = H, L + 1 = M, A + 1 = B$ : HMBDIATOR  
 $D + 2 = F, I + 2 = K, A + 2 = C$ : GLAFKCTOR  
 $T + 3 = W, O + 3 = R, R + 3 = U$ : GLADIAWRU  
 $G + 4 = K, L + 4 = P, A + 4 = E$ : KPEDIATOR  
 So, the missing word is KPEDIATOR.
135. (b) The analysts attribute the drop in foreign passengers to an increase in price of the ticket. If analysts are correct, reducing these prices should halt the drop in the number of foreign passengers. B offers a plan for reducing these prices and so is the best answer. Thus, choice B is the correct answer.

### SECTION - E : QUANTITATIVE TECHNIQUES

136. (d) Total applied students in RAILWAY exam = 8880  
 Let no. of students who appeared in RAILWAY exam be  $70x$   
 Then no. of students who did not appeared in exam =  $70 \times 40/700 = 4x$   
 ATQ  
 $70x + 4x = 8880$



- $x = 120$   
 So,  $70x = 8400$   
 Total students who passed RAILWAY exam  
 $= 8400 \times 84 / 100 = 7056$
137. (a) Total students applied in SSC exam = 7200  
 Total no. of students who appeared in SSC exam =  
 $7200 - 720 - 1080 = 540$   
 Total students who passed SSC exam =  $5400 \times 96 / 100 = 54 \times 96$   
 Required percentage =  $(54 \times 96) \times 100 / 7200 = 72\%$
138. (d) Total no. of students applied in BANKING exam = 9600  
 Required no. of students =  $9600 \times 250 \times 69.6 / 300 \times 100 = 5568$
139. (b) Total students who applied in DEFENCE exam = 5520  
 Total appeared students in DEFENCE exam =  
 $2400 \times 100 / 48 = 5000$   
 Required percentage =  $5000 \times 100 / 5520 = 90\%$
140. (a) total no. of students applied in CTET exam = 3600  
 Let total no. of girls who appeared in CTET exam be  $2x$   
 Then total no. of boys who appeared in CTET exam =  $x$   
 ATQ  
 $2x \times 70 / 100 + x \times 83.2 / 100 = 2232$   
 $2232x = 2232000$   
 $x = 1000$   
 Required ratio =  $3600 / 2x \times 100 = 3600 / 2000 = 9:5$
- Hints [Q.141-Q.145]:**  
 Given, Commission received by the distributor = 7000 Rs.  
 So, the number of bottles sold by distributor =  $7000 \times 50 / 1000 = 350$   
 Total number of bottles received by him in the whole stock to sell =  $350 + 40 = 390$   
 Production cost of each bottle =  $7,80,000 / 390 = 2000$  Rs.  
 Marked price of each bottle =  $2000 \times 1.3 = 2600$  Rs.  
 Total selling price of 350 bottles =  $350 \times 2000 + 140000 = 840000$  Rs.  
 Selling price of each bottles =  $8,40,000 / 350 = 2400$  Rs.  
 Discount allow by employee (y) =  $2600 - 2400 \times 100 / 2600 = 200 \times 100 / 2600 = 100 / 13\%$
141. (b)  $Y = 100 / 13\%$
142. (d) Required ratio  
 $100 / 13 / 390 = 100 / 13 \times 390 = 10:507$
143. (a) New selling price of one bottle =  $2600 \times 90 / 100 = 2340$   
 Required profit % =  $2340 - 2000 \times 100 / 2000 = 17\%$

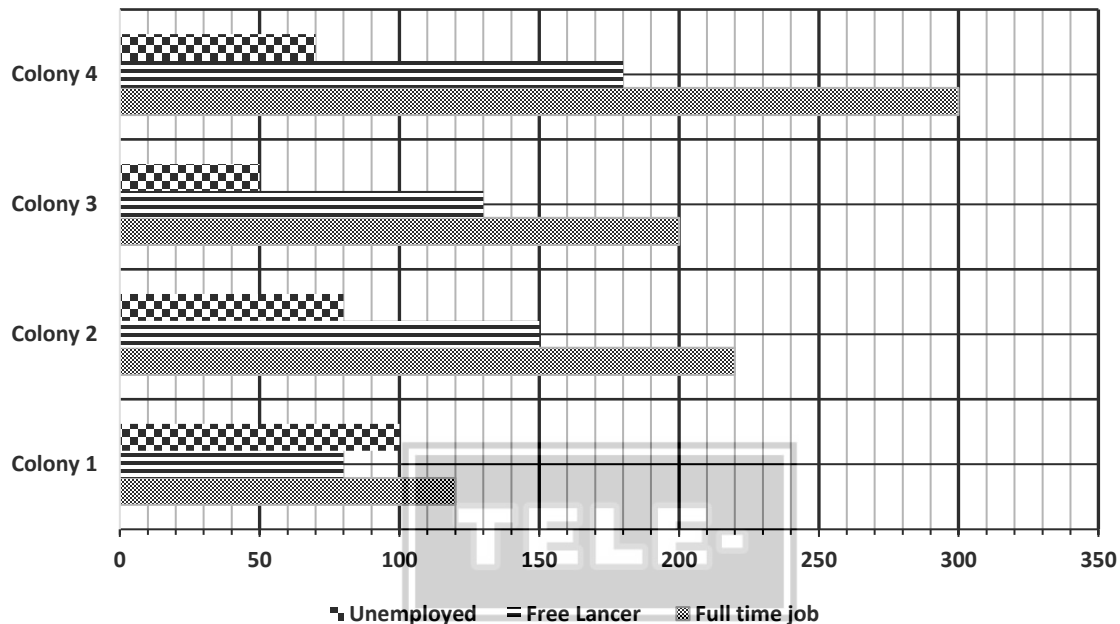
144. (b) Total stock which another distributor sold =  $(350 + 450) = 800$   
 Total commission received by another distributor =  
 $800 \times 1000 / 50 = 16000$  Rs.  
 New cost price of one bottle =  $2000 + 16000 / 800 = 2020$  Rs.
145. (a) Selling price =  $2600 \times 95 \times 7 / 100 \times 8 = 2161.25$  Rs.  
 Required profit =  $2161.25 - 2000 = 161.25$  Rs.
- Hints [Q.146-Q.150]:**  
 Let Students in Class – II be  $2x$ .  
 So, students in Class – IV =  $\frac{150}{100} \times 2x = 3x$   
 Students in Class – III =  $(10 + 2x)$   
 Students in Class – V =  $\frac{80}{100} \times 3x = 2.4x$   
 Students in Class – I =  $2.4x \times \frac{15}{16} = 2.25x$   
 ATQ,  
 $2.25x + 12x + (10 + 2x) + 3x + 2.4x = 243$   
 $11.65x = 233$   
 $x = 20$

Class	Total Students
I	45
II	40
III	50
IV	60
V	48

146. (a) Girls in Class – I & IV together =  $(45 \times \frac{2}{5}) + (60 \times \frac{7}{15}) = 18 + 28 = 46$   
 Required % =  $\frac{46}{40} \times 100 = 115\%$
147. (d) Students who play football in Class – III & V together =  $(50 \times \frac{1}{5}) + (48 \times \frac{3}{8}) = 10 + 18 = 28$   
 Students who play cricket in Class = III & V together =  $(50 \times \frac{2}{5}) + (48 \times \frac{3}{8}) = 20 + 18 = 38$   
 Required ratio =  $\frac{28}{38} = 14:19$
148. (b) Number of boys in Class – II =  $40 \times \frac{3}{5} = 24$   
 Number of girls in Class – II =  $40 - 24 = 16$   
 Required average weight =  $\frac{(24 \times 40) + (16 \times 25)}{24 + 16} = \frac{960 + 400}{40} = 34kg$
149. (b) Required average =  $\frac{40 + 50 + 48}{3} = 46$
150. (d) Total Students in Class – VI =  $\frac{150}{100} \times (\frac{40 + 48}{2}) = 66$   
 Required difference =  $66 - 60 = 6$

**SECTION - E: QUANTITATIVE TECHNIQUES**

**Directions (Q.136-Q.140):** Given bar graph shows the only three types of people i.e Full time employed, freelancer and unemployed in colony 1, colony 2, colony 3 and colony 4.



136. If 15% of freelancers of colony 1 are shifted to colony 3, then find the total number of people in colony 3?  
(a) 390 (b) 382 (c) 392 (d) 422
137. Find the average number of unemployed people in all the colonies together?  
(a) 75 (b) 125 (c) 65 (d) 50
138. If 20% of unemployed people in colony 4 get fulltime job, then what is the difference between number of fulltime people in colony 4 and fulltime employee in colony 2?  
(a) 99 (b) 94 (c) 86 (d) 104
139. Number of fulltime employees in colony 3 is what percentage less than the total people in colony 1?  
(a) 20% (b) 25% (c)  $33\frac{1}{3}\%$  (d) 15%
140. What is the ratio of total people in colony 2 to total people in colony 4 respectively?  
(a) 10:11 (b) 9:11 (c) 9:13 (d) 4:7

**USE FOR ROUGH WORK**

**Directions (Q.141-Q.145):** Study the following information carefully and answer the questions given beside.

In a CLAT examination consisting only three subjects, Legal, GK and English 400 students appeared from a college. 400 students had passed in GK, 360 students had passed in Legal, and 375 students had passed in English. 80% of the total number of students had passed in all the three subjects. All those except 40 students, who had passed in English also passed in Legal and all those except 30 students, who had passed in Legal also passed in GK. 85% of the total number of students who had passed in GK also passed in English.

141. How many of students had passed only in GK?  
(a) 20 (b) 50 (c) 60 (d) 100
142. Find the sum of all the students who had passed in only two subjects?  
(a) 55 (b) 50 (c) 45 (d) 60
143. The number of students who had passed only in English is what percent of the number of students who had passed only in Legal and GK?  
(a) 200% (b) 50% (c) 150% (d) 250%
144. Find the ratio of the number of students who had passed in GK to the number of students who had passed in Legal and English both?  
(a) 5 : 4.4 (b) 80 : 67 (c) 100 : 97 (d) 5 : 4
145. The number of students who had passed in all the three subjects is how many times of the sum of all the students who had passed in exactly two subjects?  
(a)  $7\frac{1}{9}$  times (b)  $8\frac{2}{9}$  times (c)  $7\frac{2}{9}$  times (d)  $7\frac{4}{9}$  times

**USE FOR ROUGH WORK**

**Directions (Q.146-Q.150):** Study the information carefully and answer the questions given below.

Flipkart have employees in three department's i.e IT, HR and Technical. If HR employees in company is 20% more than IT department employee. Technical employees in company are 800 and total employees in company is 3000.

146. Find the ratio of the employees in HR department to Technical department?  
(a) 3 : 2                      (b) 2 : 3                      (c) 3 : 4                      (d) 4 : 9
147. If in another company Myntra employees in IT department are 25% less than IT department employees in company Flipkart. Find number of employees in company Myntra in IT department?  
(a) 600                      (b) 500                      (c) 900                      (d) 750
148. Ratio of male to female in HR department is 5:1, find females employees in HR department?  
(a) 220                      (b) 200                      (c) 350                      (d) 400
149. Number of employees in technical department is what percentage more/less than the number of employees in IT department?  
(a) 20%                      (b) 25%                      (c) 15%                      (d) 10%
150. If in IT department 20% employees left the job for higher studies and 25% of the remaining employee left the job for another company. Find the employees remained in company?  
(a) 2800                      (b) 2200                      (c) 2600                      (d) 2000

USE FOR ROUGH WORK

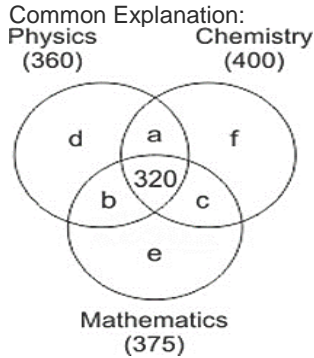
**CLATMAFIA**

128. (d) The correct answer is (D). All of the above can be considered as a logical course of action, according to the author. I: The author is concerned about the high LNG prices for the middle class. Therefore, the author would want the government to take measures to keep those prices under control. II: The author has clearly mentioned in the last sentence of the first paragraph that a move away from coal as a whole is necessary. III: This one would also be a welcome decision since the author wants the policymakers to avoid making populist decisions. All of the following are the course of action that are concurrent with the author's line of thought.
129. (a) The correct answer is (a). This question is easy. As stated in the explanation of a previous question, the author has mentioned in the last sentence of the first paragraph that a move away from coal as a whole is necessary. But option (a) draws an incorrect inference. Refer to the lines, 'To meet the 2030 emissions goal committed at the Paris Pact, India would need to reduce coal capacity in and around its C40 cities by about 22 per cent.' Option (b), (c) and (d) can be inferred to be the supporting ideas of the passage. Option (b) comes from the first part of the second paragraph. Policies are made on some unfounded assumptions and therefore this option makes sense. Option (c) is a supporting idea as well, coming from this part of the passage: 'Yet, going by the current coal plans, it is expected to increase by 20 per cent instead. To bridge this gap, which is unlikely, policymakers need to look beyond populist steps.' Option (d): 'In spite of much-lauded efforts in clean energy, the carbon footprint of India's coal-processing industry remains stark.'
130. (a) The author has made an argument for shifting away from coal and moving towards cleaner energy. This piece of evidence gives an incentive towards making a change to cleaner and greener energy sources. Hence, this option supports the author's arguments. Therefore, the correct option is (a). Option (b) is incorrect as it does not negate but strengthens the author's contention. Option (c) is not true as it does support the author's argument as a 100 percent cleaner and greener energy translates into a clean environment which means robust health yielding more productivity. Option (d) is not an assumption as it is a furtherance to author's argument.
131. (a) The correct answer is A. This option is best suited among the four options to be the main idea of the passage. It talks about the main concern of the passage which is the implication of the snub by the ASEAN of the Myanmar Military rule. All the other three options do not cover the general main idea of the passage but only cover some specific parts.
132. (b) The correct answer is B. This can be inferred from the fact that none of the requests or the directions given by the ASEAN were followed by the military junta in Myanmar. A is incorrect since the stance of NLD on the military junta has changed from calling for nonviolent protests to a 'revolution'. C is incorrect since the situation both at the cities and the jungles is grave. D is incorrect inference as Aung San Suu Kyi may have hold on the people, but she has no control over the military junta. In fact, she is under arrest by them.
133. (d) Only IV can be inferred from the passage. Refer to the lines, 'If in the past the National League for Democracy (NLD), Ms. Suu Kyi's party, had upheld non-violence even in the face of repression, this time, NLD leaders have called for a "revolution". The remnants of the old regime have formed a National Unity Government, which claims to be the true representative of Myanmar. In cities, protests slid into armed fighting between pro-democracy protesters and security personnel, while in the jungles, anti-junta groups joined hands with rebels for military training.' Option (d) is the best choice as the answer. Both I and II are incorrect since they are extreme options. The author believes that the ASEAN snub would have some impact. But both I and II are extreme options. Statement III is beyond the scope as it cannot be inferred that the military crackdown is more brutal than before.
134. (b) The correct answer is B. Since the military has already killed 1000 people and brutally cracked down on its protesters, it can be safely said that it would suppress any resistance by the people to its military rule. A is clearly in contrast with B and hence, is incorrect. C is incorrect since no evidence is present in the passage that suggests this. D is incorrect as going by their inherent characteristics, military junta is least likely to show humane treatment of political prisoners.
135. (c) The author of this passage has clearly made a claim that violence is not sustainable. And he suggests that the way to bring the country out of the crisis is to for ASEAN to start put pressure on the junta for a reconciliation. The author attempts to make a suggestion towards the end. Therefore, Option (c) is the best choice. Option (a) is incorrect. The statement has to be significant to be put forth by the author. Why else would he make such a statement? Option (b) is not weakening the argument, but is more of a furtherance of his opinion. Option (d) is not an assumption. Assumption is not explicitly stated, but is implied by the author.

#### SECTION - E : QUANTITATIVE TECHNIQUES

136. (c) Total freelancers in colony 1 = 81  
 So, 15% shifted to colony 3,  
 Then, total number of people in colony 3 =  $200 + 130 + 50 + \frac{80 \times 15}{100} = 392$
137. (a) Total unemployed in all the colonies together =  $100 + 80 + 50 + 70 = 300$   
 Required average =  $\frac{300}{4} = 75$
138. (b) Total unemployed people in colony 4 = 70  
 After 20% get jobs, number of fulltime job employers in colony 4 =  $300 + \frac{70 \times 20}{100} = 314$   
 Required difference =  $314 - 220 = 94$
139. (c) Number of fulltime employees in colony 3 = 200  
 Total people in colony 1 = 300  
 Required percentage =  $\frac{(300-200)}{300} \times 100 = 33\frac{1}{3}\%$
140. (b) Total people in colony 2 = 450  
 Total people in colony 4 = 550  
 Req. ration =  $\frac{450}{550} = 9 : 11$

**Hint [141-145]:**



(\*Use Legal at Place of Physics, Use GK at Place of Chemistry, Use English at Place of Mathematics\*  
In Venn diagram)

$$\begin{aligned} b &= 375 - 320 - 40 = 15 = \text{Passed only in Legal and English} \\ c &= 85\% \text{ of } 400 - 320 = 340 - 320 = 20 \\ a &= 360 - 320 - 30 = 10 \\ d &= 360 - a - b - 320 = 360 - 10 - 15 - 320 = 15 \\ f &= 400 - a - c - 320 = 400 - 10 - 20 - 320 = 50 \\ e &= 375 - 320 - b - c = 375 - 320 - 15 - 20 = 20 \end{aligned}$$

141. (b) Students who had passed only in GK =  $f = 50$   
Hence, option B is correct.
142. (c)  $b + c + a = 15 + 20 + 10 = 45$
143. (a) The number of students who had passed only in English =  $e = 20$

the number of students who had passed only in Legal and GK =  $a = 10$

$$\text{Reqd. \%} = \frac{20 \times 100}{10} = 200\%$$

144. (b) The required ratio =  $400 : (15 + 320) = 400 : 335 = 80 : 67$
145. (a) The sum of all the students who had passed in exactly two subjects  
 $= b + c + a = 15 + 20 + 10 = 45$   
The number of students who had passed in all the three subjects = 320  
Required times =  $\frac{320}{45} = 7\frac{1}{9}$
146. (a) Let number of employees in IT department =  $5a$   
So, number of employees in HR department =  $6a$   
Now, total employees in Flipkart company = 3000  
Hence,  $5a + 6a + 800 = 3000$   
 $a = 200$   
Then, IT department employees = 1000  
HR department employees = 1200
- |              |      |      |           |
|--------------|------|------|-----------|
| Department → | IT   | HR   | Technical |
| Employees →  | 1000 | 1200 | 800       |
- Required ratio =  $1200 : 800 = 3 : 2$
147. (d) Employees in IT department in Myntra Company =  $\frac{75}{100} \times 1000 = 750$
148. (b) Female employees in HR department =  $\frac{1}{6} \times 1200 = 200$
149. (a) Difference between employees in technical to IT department =  $(1000 - 800) = 200$   
Req. percentage =  $\frac{200}{1000} \times 100 = 20\%$
150. (c) Initial no. of Employees in IT department = 1000  
Employees after 20% left the job =  $\frac{80}{100} \times 1000 = 800$   
Employees after remaining 25% left the job =  $\frac{75}{100} \times 800 = 600$   
Total employees in company Flipkart =  $600 + 1200 + 800 = 2600$