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# *Data Interpretation Workbook v3*

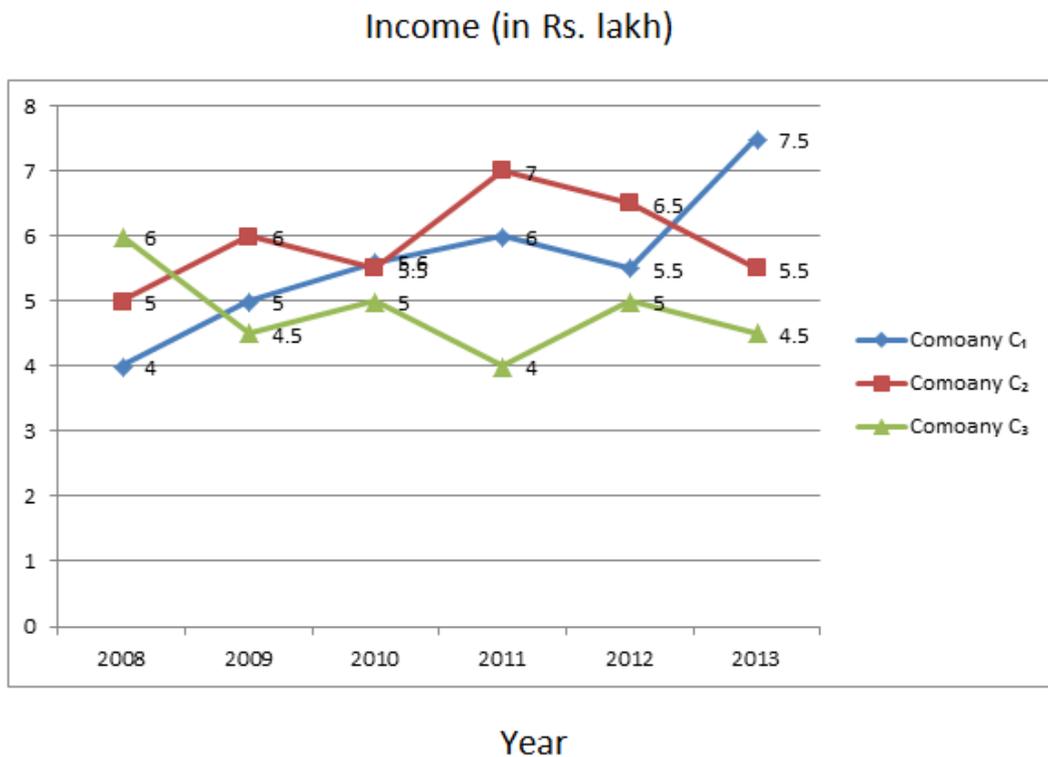
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**Directions (1-5):** Study the following line graph carefully and answer the questions given below:

$$\text{Profit \%} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$



1. The percentage increase or decrease in the income of company C<sub>2</sub> is highest in which of the following years?

1. 2013
2. 2012
3. 2011
4. 2009
5. 2010

2. If the expenditure of company C<sub>1</sub> in the year 2009 was Rs. 2.25 lakh, then what was the profit percentage of C<sub>1</sub> in that year?

1. 124%
2. 112%
3. 122%
4. 108%
5. 118%

3. If the profit percentage of company  $C_2$  in the year 2011 is 20%, what was its expenditure in that year? (in Rs, lakh)

1. 5.83
2. 4.58
3. 4.12
4. 6.83
5. 3.45

4. What is the average income of company  $C_3$  over all the years? (in Rs. lakh)

1. 4.63
2. 3.83
3. 4.83
4. 4.23
5. 4.18

5. What was the approximate percentage increase in the income of company  $C_1$  in the year 2010 as compared with the year 2008?

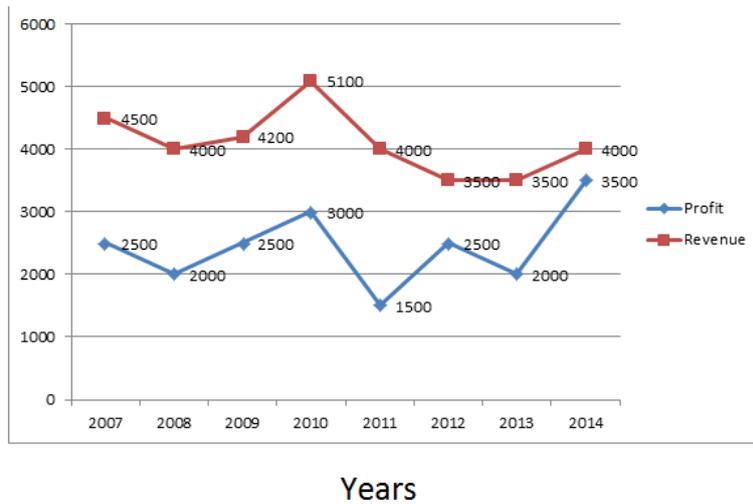
1. 40%
2. 36%
3. 32.5%
4. 34.75%
5. 31%

**Directions (6-11): Study the following line graph carefully and answer the questions given below:**

Assuming that there is no fixed component and all the units produced are sold in the same year.



(Value in Rs.)



6. In which of the following years is per unit cost the maximum?

1. 2009
2. 2010
3. 2007
4. 2011
5. 2013



7. What is the average cost during the period 2007 to 2014?

1. Rs. 1600.5
2. Rs. 1862.5
3. Rs. 1962.5
4. Rs. 1752.5
5. Rs. 1662.5

8. If the SP per unit decreases by 20% during 2007 to 2010 and the cost per unit increases by 20% during 2011 to 2014. then during how many years is there no profit or loss?

1. None
2. One
3. Two
4. Four

5. Three

9. What is the average of quantities sold during the period 2008 to 2012?

1. 146

2. 144

3. 154

4. 150

5. 158

10. if the SP per unit decreased by 25% during 2007 to 2010 and the CP per unit increased by 25% during 2011 to 2014 then the cumulative profit for the entire period 2007 to 2014 decreased by:

1. Rs. 5725

2. Rs. 5125

3. Rs. 5225

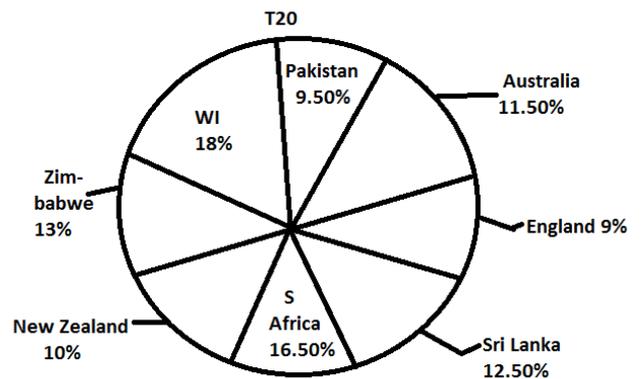
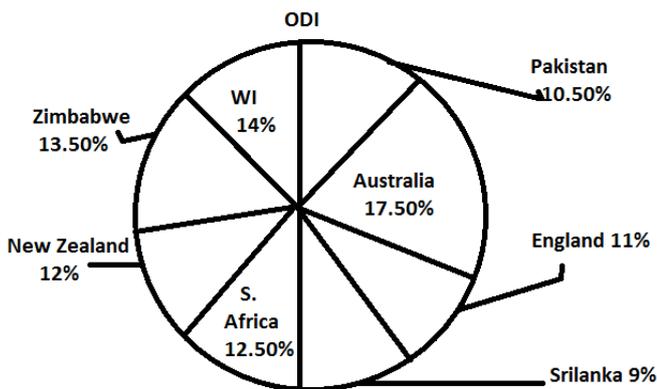
4. Rs. 5600

5. Rs. 5825



**Directions (11-15): Study the pie-charts carefully and answer the questions given below:**

The following pie-charts show the run scored by a batsman against different countries in one-day internationals (ODI) and Twenty (T20) world cup matches. Runs scored by the batsman in ODI and T20 are 2800 and 2000 respectively.



11. If the batsman played 14 innings against Sri Lanka in ODI and remained not out in 5 innings. Find his average runs scored against Sri Lanka.

1. 28

2. 24

3. 26

4. Other than the given options

5. 22

**12. Runs scored by the batsman against New Zealand in T20 matches are approximately what percent of the runs scored against Pakistan in ODI?**

1. 64%

2. 66%

3. 62%

4. Other than the given options

5. 68%

**13. In case of which of the following countries, the difference between the runs scored in ODI and T20 is the second lowest?**

1. Sri Lanka

2. Pakistan

3. South Africa

4. WI

5. Other than the given options

**14. The runs scored by the batsman against WI in T20 is approximately what percent of the runs scored against Australia in ODI?**

1. Other than the given options

2. 71%

3. 75%

4. 73%

5. 69%

**15. If the batsman had scored 280 runs against Pakistan in T20 matches, What would have been its percentage in the T20 match, if the total runs scored in T20 remains the same?**

1. Other than the given options

2. 12%

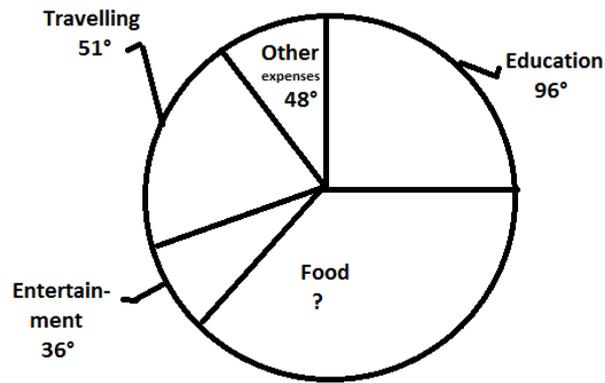
3. 16%

4. 14%

5. 10%

**Directions (16-20): Study the following the pie-chart and table carefully to answer the questions given below:**

The following pie-chart shows the distribution of the monthly family budget of a person.



The following table shows the further distribution (in percent) of the above-mentioned items among the five family members i.e P (the person himself), W (his wife), Rahul (son), Rohit (son), and Preeti (his daughter). His monthly family budget is Rs. 1,20,000

	Education	Food	Entertainment	Travelling	Other expenses
P	10	30	10	40	20
W	15	25	30	10	25
Rahul	40	20	20	25	20
Rohit	25	15	25	10	10
Preeti	10	10	15	15	25

16. What is the average expenses of P?

1. Rs. 5620
2. Other than the given options
3. Rs. 5640
4. Rs. 5460
5. Rs. 5480

17. What is the approximate percentage increase in the amount Which Rahul enjoys for entertainment as compared to Preeti for the same?

1. 33%
2. 31%
3. Other than the given options
4. 37%
5. 35%

18. The average expenses of Rohit is approximately what percent of the average expenses of W (Wife)?

1. 76.4%

2. 81.5%
3. 79.5%
4. 83.5%
5. Other than the given options

19. Find the difference (in percentage of the budget) between the average expenses of Education and the average expenses on Entertainment of the couple?

1. 1.3%
2. 0.9%
3. 2%
4. Other than the given options
5. 2.5%

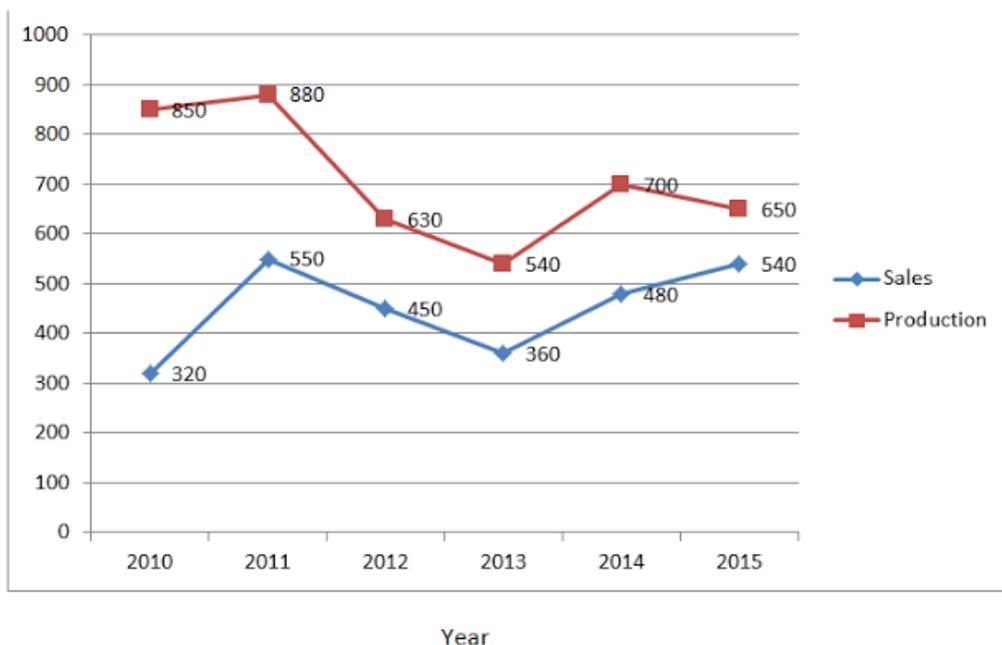
20. The total amount spent by Rahul on Travelling and Food is approximately what percent of the total amount spent by Preeti on Education and Food?

1. Other than the given options
2. 168%
3. 171%
4. 175%
5. 174%



**Directions (21-25): Study the line graph carefully and answer the following questions:**

The graph given below represents the production (in tonnes) and sales (in tonnes) of a company 'A' from 2010-15.



The table given below shows the ratio of the production (in tonnes) of company A to the production (in tonnes) of company B, and the ratio of the sales (in tonnes) of company A to the sales (in tonnes) of company B.

Year	Production	Sales
2010	17:16	4:5
2011	8:7	11:12
2012	9:10	9:14
2013	18:19	5:6
2014	7:6	12:11
2015	13:14	9:10

**21. In which of the following year is the percentage increase/ decrease in the production of company A from the previous year the second highest?**

1. 2012
2. 2011
3. 2014
4. 2010
5. 2015

**22. The total sale of company A in all the years together is approximately what percent of the total production of company A?**

1. 61.5%
2. Other than the given options
3. 63.5%
4. 65%
5. 67%

**23. What is the average production of company B in all the years together?**

1. 675 tonnes
2. 680 tonnes
3. 690 tonnes
4. 655 tonnes
5. other than the given options

**24. What is the total sale of company B in all the years together?**

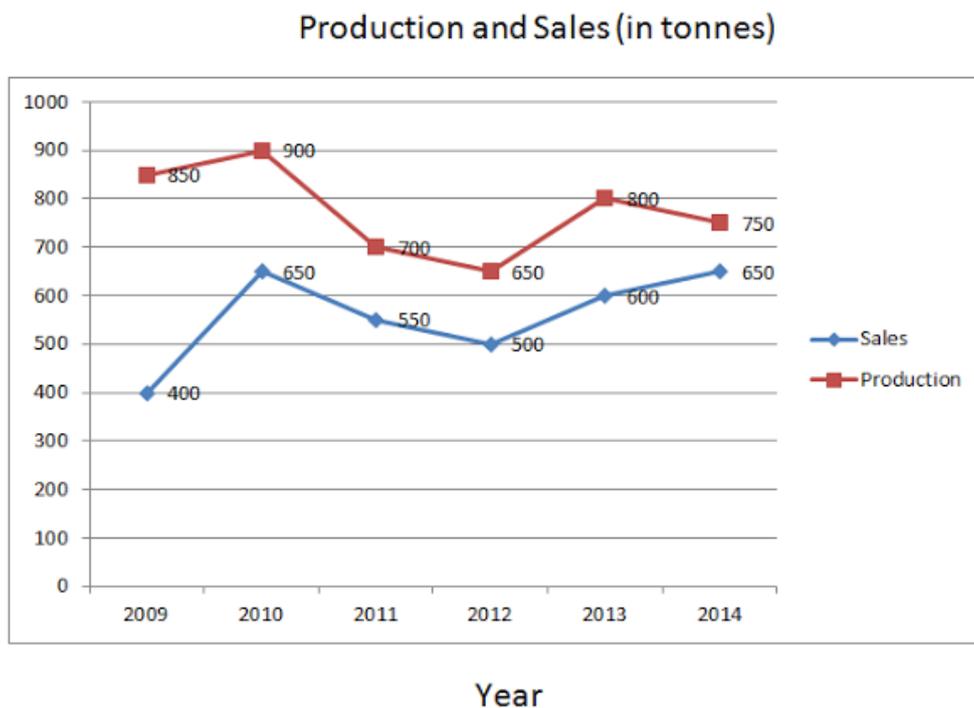
1. 3182 tonnes
2. 3072 tonnes
3. Other than the given options
4. 3192 tonnes
5. 3172 tonnes

**25. What is the ratio of production of company B in 2010 to the production of company A in 2012?**

1. 77:62
2. 80:79
3. 80:61
4. 80:63
5. 79:63

**Directions (26-32: Study the graph carefully and answer the following questions:**

The graph given below represents the production (in tonnes) and sales ( in tonnes) of a company from 2009-2014



The table given below represents the ratio of the production (in tonnes) by company A to the production (in tonnes) by company B; and the ratio of the sales ( in tonnes) by company A to the sales (in tonnes) by company B.

Year	Production	Sales
2009	9:8	2:3
2010	8:7	11:15
2011	5:9	4:7
2012	15:11	3:7
2013	5:3	7:5
2014	12:13	1:1

**26) What is the approximate percentage increase in the production of company A from the year 2012 to the production of company A in the year 2013?**

1. 33%
2. 30%
3. 36%
4. 26%
5. 28%

**27) What is the average production of company B (in tonnes) from the year 2009 to the year 2014?**

1. 368
2. 362.5
3. 378.5
4. 372.5
5. 376

**28) The sales of company A in the year 2012 was approximately what percent of the production of company A in the same year?**

1. 44%
2. 40%
3. 36%
4. 38%
5. 42%

**29) What is the ratio of the total production (in tonnes) of company A to the total sales (in tonnes) of company B in all the years together?**

1. 161:126
2. 161:125
3. 161:123
4. 169: 126
5. 158: 126

**30) What is the average sales of company A from the year 2009 to the year 2014?**

1. 254
2. 243
3. 234
4. 256
5. 248

**31) What is the ratio of production of company B in the year 2009 to the production of company B in the year 2011?**

1. 9:10

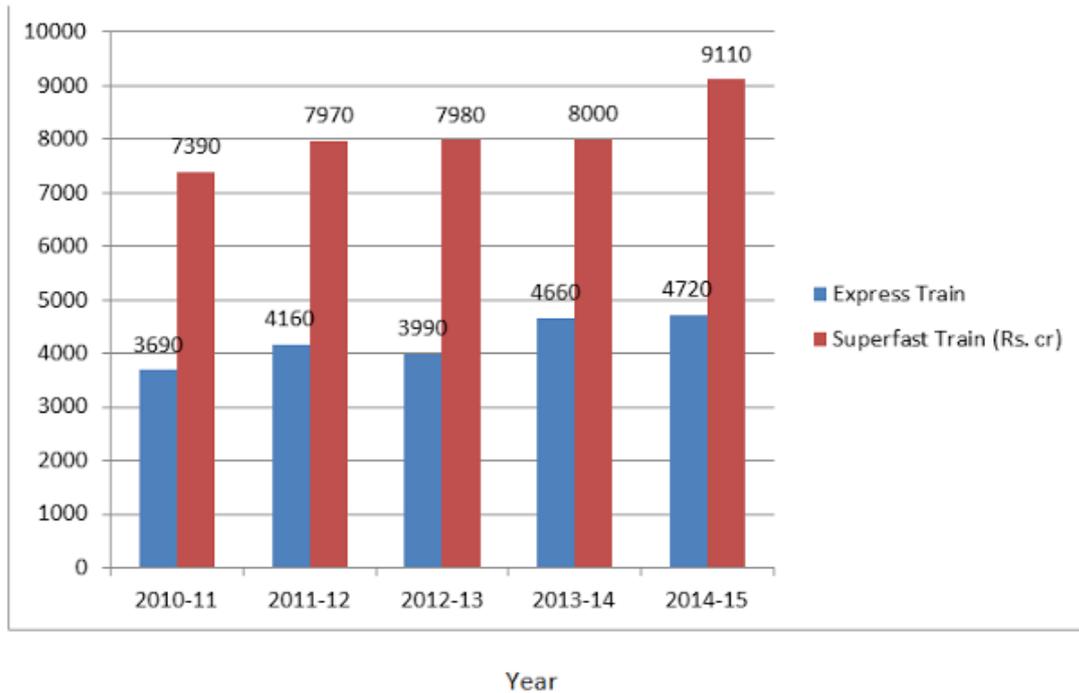
- 2. 6:7
- 3. 7:8
- 4. 5:6
- 5. 8:9

32) What was the approximate percentage more in the production of company B in the year 2014 as compared with the production of Company A in the year 2014?

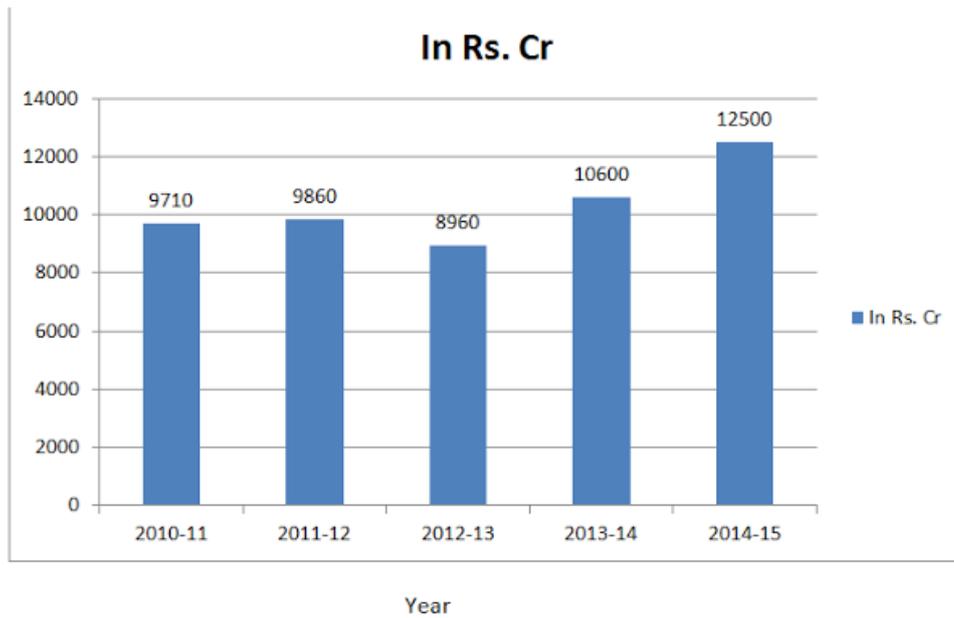
- 1. 6%
- 2. 7%
- 3. 8%
- 4. 10%
- 5. 12%

**Directions (33-37): Study the following bar graphs to answer the questions given below:**

**Income of railways from the Super fast trains and Express trains**



**Total Expenditure of the Railway on both (Super fast trains and Express trains ) [Profit = Income - Expenditure]**



**33. In which of the following years is the percentage increase/ decrease in the percentage increase/decrease in the total income of the Railways the maximum in comparison to its previous year?**

1. 2012 - 13
2. 2014 -15
3. 2011-12
4. 2013-14
5. Both 1) and 3)

**34. In which of the following years is the profit of the Railways the maximum?**

1. 2011-12
2. 2012-13
3. 2013-14
4. Other than the given options
5. 2010- 11

**35. In how many years is the income from Express trains less than the average income the Express trains in all the given years together?**

1. 3
2. 1
3. None
4. Other than the given options
5. 2

**36. What is the approximate percentage income from Super fast train in 2011-12 in comparison to the total income from Super fast trains for all the given years?**

1. Other than the given options
2. 24%

3. 28%
4. 20%
5. 29%

37. The total expenditure of the Railways on both the trains is approximately what percent of the total income of the Railway from both the trains for all the given years together?

1. 83.7%
2. 81.6%
3. Other than the given options
4. 78.9%
5. 86.7%

**Directions (38-42): Study the table carefully answer the questions given below.**

Following table shows the percentage population of six states below poverty line and the proportion of males and females?

State	Percentage population below poverty line	Proportion of male and female	
		Below poverty line M: F	Above poverty line M: F
$S_1$	16	4:3	3:2
$S_2$	18	3:4	5:7
$S_3$	26	2:3	4:5
$S_4$	28	5:6	1:2
$S_5$	12.5	3:2	6:5
$S_6$	36	4:5	2:3

38. If the total population of state  $S_1$  is 4400, then what is the approximate number of females above the poverty line in state  $S_1$ ?

1. 1478
2. Other than the given options
3. 1578
4. 1484
5. 1487

39. If the total population of state  $S_3$  and  $S_4$  together is 17000, then what is the total number of females below the poverty line in the above-mentioned states?

1. 1320
2. 6820
3. 4850
4. Data inadequate
5. Other than the given options

**40. If the population of males below the poverty line in state  $S_1$  is 18000 and that in state  $S_5$  is 24000, then what is the ratio of the total population of state  $S_1$  to that of state  $S_5$ ?**

1. 315:512
2. 316:513
3. Other than the given options
4. 315:513
5. 319:512

**41. If the population of males above the poverty line in state  $S_2$  is 4100 then what is the total population of that state?**

1. Other than the given options
2. 12500
3. 13000
4. 14000
5. 12000

**42. If in state  $S_6$  the population of females above the poverty line is 4800 then what is the population of males below the poverty line in that state?**

1. 2400
2. 2000
3. 2500
4. Other than the given options
5. 2800

**Directions (43-47): Study the following information carefully and answer the questions given below:**

On the occasion of a cultural program in a stadium, there are 400 artists in all who are participating in four different events viz- Drama, Dance, Skit, and Singing.

The ratio of male to female artists is 2:3. 25% of the female artists are participating in Drama. 40% of the female artists are participating in Dance. The remaining female artists are participating in Skit and Singing in the ratio of 4:3. The ratio of male artists who are participating in Drama and other events together is 1:7. 25% of those male artists who are not participating in Drama are participating in Singing. The remaining male artists are participating in Dance and Skit in the ratio of 3:4.

**43. What is the total number of female artists who are participating in Drama and Skit together?**

1. 106

2. 104
3. 108
4. 112
5. 110

**44. What is the difference between the male artists participating in Skit and the female artists participating in Singing?**

1. 20
2. 24
3. 22
4. 25
5. 21

**45. What is the ratio of the female artists participating in Singing to those male artists participating in Dance?**

1. 2:3
2. 5:6
3. 3:4
4. 6:7
5. 4:5

**46. What is the total number of artists participating in Dance and Drama together?**

1. 221
2. 222
3. 208
4. 228
5. 218

**47. What is the ratio of the male artists participating in Singing to the female artists participating in Skit?**

1. 39:47
2. 38:47
3. 36:47
4. 35:48
5. 35:47

**Directions (48-52): Study the table carefully answer the questions given below.**

In six years, the number of students taking admissions and leaving from the five different colleges which were founded in 2010 is given below.

	A	B	C	D	E
--	---	---	---	---	---

College Years	A	L	A	L	A	L	A	L	A	L
2010	1125	---	1050	---	1200	---	1600	---	1550	---
2011	330	220	450	250	420	230	440	250	350	225
2012	290	210	325	215	400	250	400	260	380	230
2013	345	200	285	210	360	225	395	220	410	220
2014	380	250	300	190	340	240	420	225	440	210
2015	350	230	340	220	410	280	460	240	425	215

**Note:**

A - admitted

L - Leaving

**48. What is the average number of students studying in all the five colleges in 2012?**

1. Other than the given options
2. 1594
3. 1694
4. 1574
5. 1584

**49. What was the number of students studying in college B in 2014?**

1. 1555
2. Other than the given options
3. 1445
4. 1545
5. 1645

**50. The number of students leaving college from the year 2010 to 2015 is approximately what per cent of the number of students taking admission in the same college and during the same year?**

1. 37%
2. 43%
3. 39%
4. 41%
5. Other than the given options

**51. What is the difference behaviour the number of students taking admission between 2011 and 2015 in college D and B?**

1. 415
2. 395

3. 435
4. Other than the given options
5. 385

**52. In which of the following colleges, is the percentage increase in the number of students from the year 2010 to 2015 the maximum?**

1. D
2. A
3. B
4. E
5. C

**Directions (53-57): Study the following information carefully and answer the questions given below:**

In a college there are 1400 students who are doing graduation in any one of the subjects, out of the five different subjects viz. zoology, Botany, Mathematics, Physics and Statistics. The ratio of the number of boys and girls among them is 6:8.30% of the total girls are doing graduation in Zoology and 20% of the total girls are doing graduation in Statistics. The total number of students doing graduation in Botany is 220. 250 students are doing graduation in Mathematics. The ratio of the number of girls and the number of boys doing graduation in Statistics is 2:1.20% of the total number of boys are doing graduation in Botany. The ratio of the number of girls and that of boys doing graduation in Mathematics is 2:3. There are an equal number of boys and girls doing graduation in Physics. 290 students are doing graduation in Zoology.

**53. What is the total number of students doing graduation in physics and Statistics together?**

1. 510
2. 540
3. 640
4. 620
5. 660

**54. What is the ratio of the number of boys doing graduation in Mathematics and to a number of girls doing graduation in Botany?**

1. 1:2
2. 3:1
3. 3:4
4. 3:2
5. 2:1

**55. What is the difference between the number of boys doing graduations in Zoology and the number of girls doing graduation in Mathematics?**

1. 50
2. 75
3. 60
4. 45
5. 55

56. In which of the following graduation courses, the number of the girls the highest and in which course is the number of boys is second lowest respectively?

1. Statistics and Zoology
2. Zoology and Botany
3. Physics and Statistics
4. Zoology and Statistics
5. Physics and Zoology

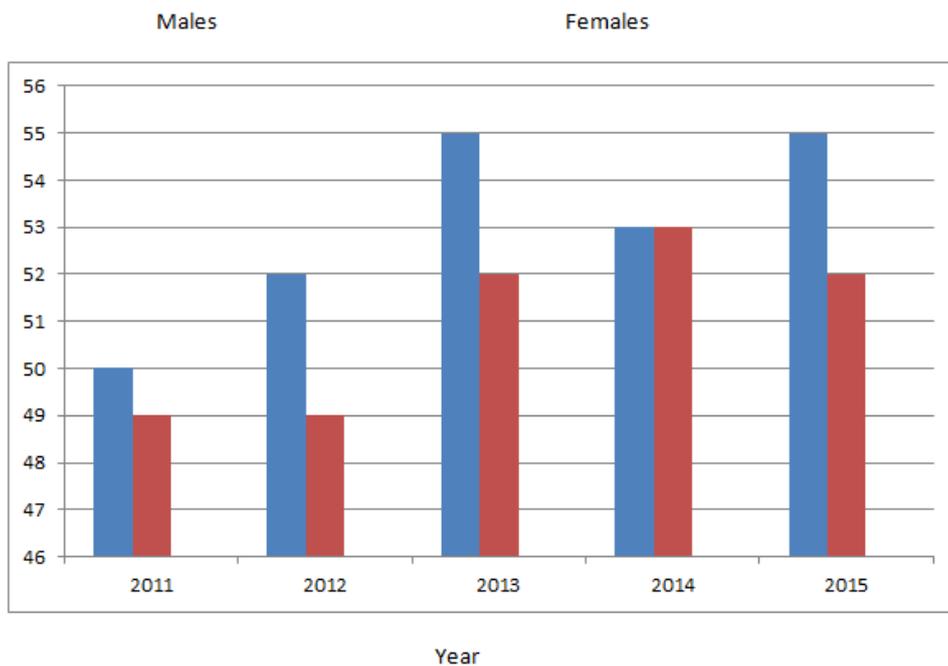
57. The number of girls doing graduation in Statistics is what percent of the number of boys doing graduation in physics?

1. 76%
2. 75%
3. 80%
4. 81%
5. 78%



**Direction (58-62): Study the bar graph and line graph carefully to answer the questions given below.**

The bar graph shows the number of males and females (in thousand) in town X during the given years.



The line graph shows the number of males and females (in thousand) in town Y during the given years.



1. One, Two
2. Two, Two
3. None
4. Three, Two
5. Other than the given options

62. In which of the following pairs of years in the difference in the number of males and females the maximum for town Y and minimum for town Y and minimum for town X respectively?

1. 2011 and 2014
2. 2015 and 2011
3. 2015 and 2014
4. 2013 and 2015
5. Other than the given options

**Direction (63-68): Study the table carefully and answer the questions given below:**

Details of employees deployed at different levels by a company in different departments.

Department	Manager		Officer	
	Number	M : F	Number	M : F
Operations	2200	7 : 4	2800	6 : 8
Public relations	1800	5 : 4	2500	9 : 11
Finance	2500	14 : 11	3200	17 : 15
Advertising	2900	12 : 17	1600	9 : 7
Sales	2400	9 : 7	2600	8 : 5
Procurement	2700	5 : 4	2200	9 : 13

63. The total number of female employees (Managers and Officers) in Procurement department is approximately by what per cent more than their male counterparts?

1. 2%
2. 6%
3. 4%
4. 8%
5. 9%

64. The number of female managers in Finance department is what per cent of the total number of male managers in Sales department?

1. 77%
2. 82%
3. 78%
4. 84%
5. 81%

**65. What is the ratio of the total number of female managers in Operations and Finance departments to that of male officers in these two departments?**

1. 25:29
2. 19:26
3. 19:25
4. 19:29
5. 22:29

**66. The total number of male officers in Advertising and Sales departments is approximately what per cent the total number of officers in these two departments?**

1. 55.8%
2. 56%
3. 57.5%
4. 54%
5. 59.5%

**67. What is the difference between the total number of female officers in Advertising and Public Relations department and the total number of female managers in these two departments?**

1. 405
2. 415
3. 425
4. 435
5. 395

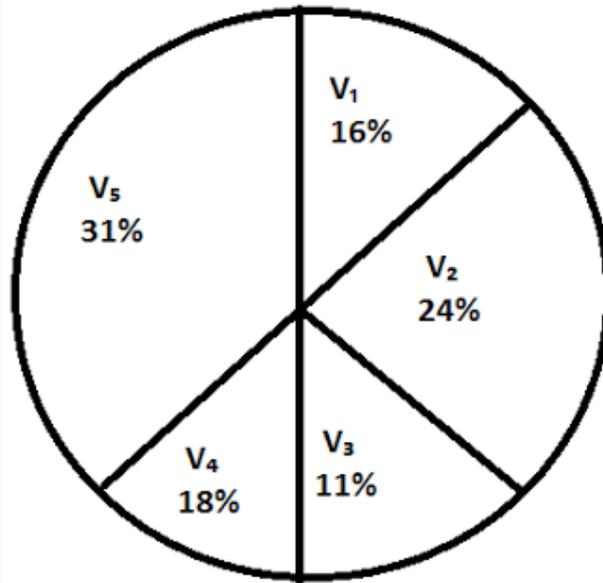
**68. What is the ratio of the total number of managers in Public relations, Finance, Sales and Operations department to the total number of officers in Finance, Advertising, Sales and procurement department?**

1. 89:95
2. 87:96
3. 87:89
4. 93:95
5. 89:96

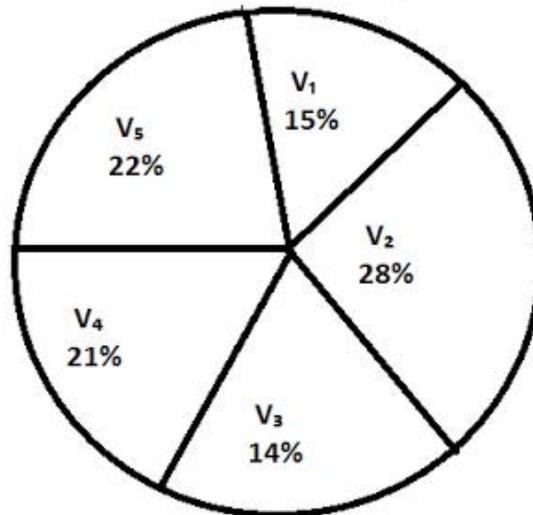
**Directions (69-73): Study the following pie - charts carefully and answer the questions given below:**

Percentage break up of the number of children in five different villages and break up of children Attending school from those villages

Total number of children = 5800



Total number of children attending schools = 3600



69. What is the total number of children not attending school from village V<sub>2</sub> and V<sub>3</sub> together?

1. 528
2. 508
3. 518
4. 618
5. 628

70. The number of children attending school from village  $V_1$  is approximate, what percent of the number of children from that village?

1. 54%
2. 56%
3. 60%
4. 53%
5. 58%

71. What is the approximate average number of children not attending school from village  $V_2$ ,  $V_3$  and  $V_4$  together?

1. 269
2. 258
3. 264
4. 270
5. 266

72. The number of children not attending school from village  $V_4$  and  $V_5$  is approximately what percent of the total number of children from village  $V_4$  and  $V_5$  together?

1. 43.65%
2. 42.5%
3. 48%
4. 46%
5. 49.45%

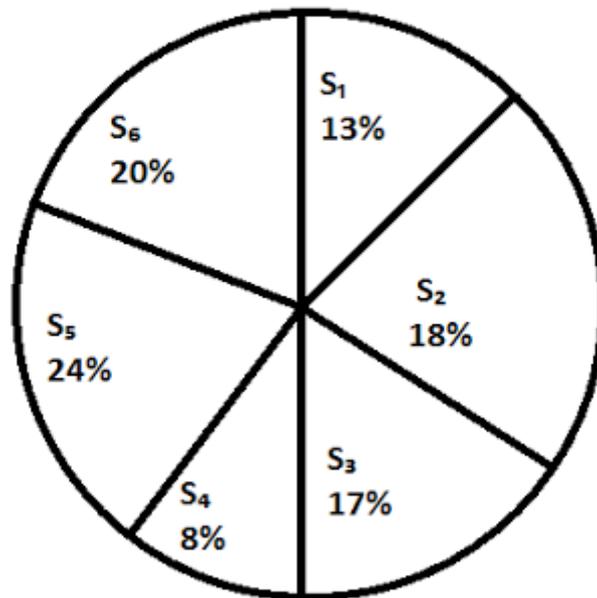
73. What is the ratio of the total number of children from village  $V_4$  to the number fo children attending school from the same village?

1. 22:21
2. 29:28
3. 29:21
4. 29:27
5. 23:21

**Directions (74-78): Study the following pie- charts and table carefully and answer the questions given below:**

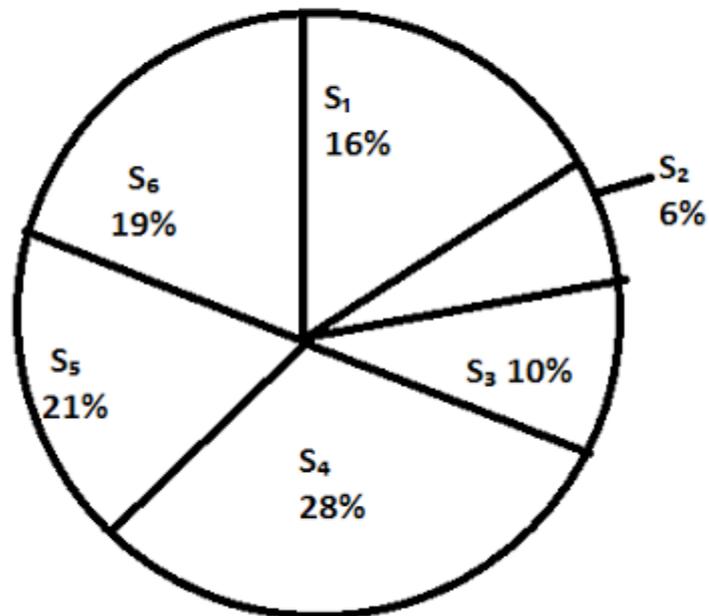
Details of students who scored from six schools of Delhi in Class XII the result:

95 per cent and above:



Total number of students = 6000

Score between 90-95 per cent



Total number of students = 10000

Ratio of Girls to Boys

School	95 per cent and above	Between 90-95 percent
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$S_1$	11:5	3:2
$S_2$	5:7	1:4
$S_3$	3:5	5:3
$S_4$	7:1	2:3
$S_5$	5:4	9:5
$S_6$	5:3	3:4

74. What is the difference between the no. of boys who scored 95 percent and above from schools  $S_5$  and the no. of boys who scored between 90-95 per cent from school  $S_5$ ?

1. 115
2. 120
3. 100
4. 110
5. 125

75. The number of girls of school  $S_2$  who scored between 90-95 percent is approximately what percent of the no. of girls of school  $S_4$  who scored 95 percent and above?

1. 28.57%
2. 22.46%
3. 29.95%
4. 35.48%
5. 32.46%

76. The number of boys of school  $S_5$  and  $S_6$  together who scored 95 percent and above is approximately what percent more or less than the number of girls of school  $S_2$  and  $S_5$  together who scored between 90-95 percent?

1. 26% more
2. 22% more
3. 26% less
4. 24% more
5. 32% less

77. The average number of girls who scored 95 percent and above from all the schools together is

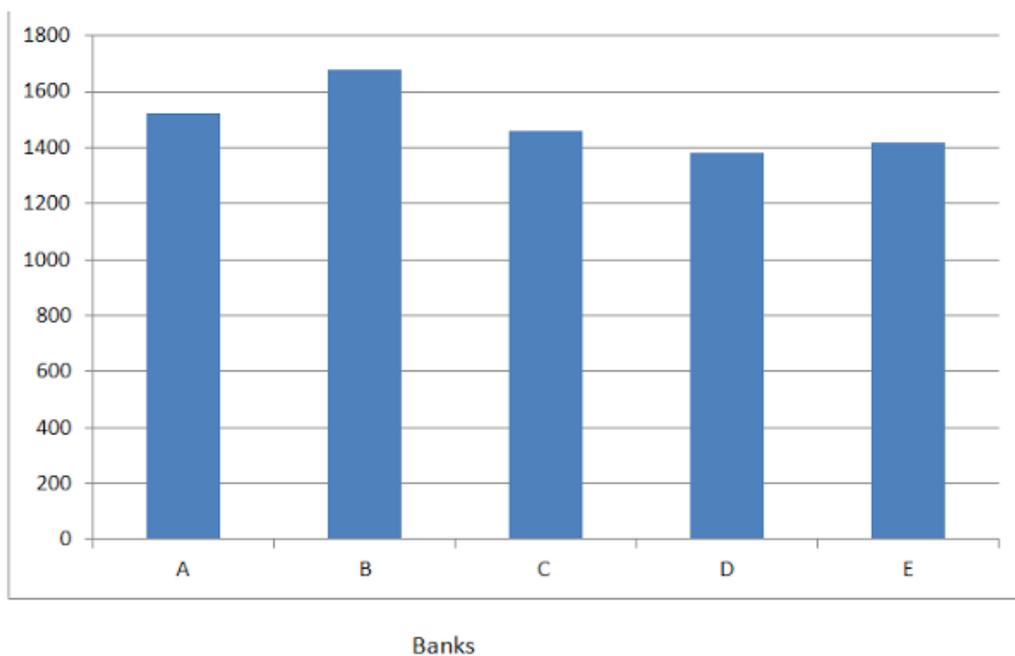
1. 503
2. 506
3. 518
4. 545
5. 556

78. What was the ratio of the number of boys of school  $S_3$  who scored between 90-95 percent to the number of boys, who scored 95 percent and above in the same school?

1. 5:9
2. 10:17
3. 10:13
4. 8:9
5. 12:17

**Directions (79-83): Study the following line graph and table carefully and answer the questions given below.**

Numbers of employees working in five different banks A, B, C, D and E.



Ratio of males to females employees

Bank	M : F
A	13:6
B	4:3
C	9:11
D	10:13
E	13:7

79. What is the total number of male employees taking all the banks together?

1. Other than the given options
2. 4060
3. 4120
4. 4180
5. 4280

**80. What is the average number of female employees taking all the banks together?**

1. 656
2. 686
3. 668
4. Other than the given options
5. 646

**81. Approximately by what percent is the number of male employees working in banks A and C together more than that of the total number of female employees working in bank B and D?**

1. Other than the given options
2. 9%
3. 15%
4. 11%
5. 13%

**82. What is the ratio of female employees working in bank D to that in E?**

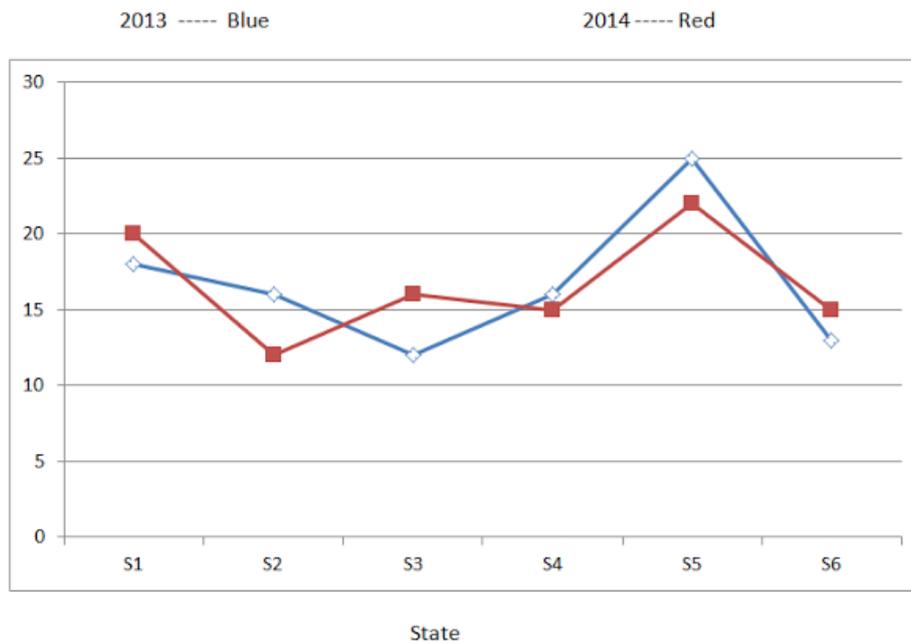
1. 7:4
2. Other than the given options
3. 8:5
4. 7:3
5. 9:5

**83. Approximately by what per cent is the number of total employees o bank C more than that of bank D?**

1. 8%
2. 6%
3. Other than the given options
4. 4%
5. 10%

**Directions (84-91): Study the following graph carefully and answer the questions given below:**

The line graph represents the percentage candidates qualifies in a competitive examination from 6 states during the given two years.



The table given below represents the total number of candidates appeared, percentage of candidates qualified in all the six states together in the year 2013 and 2014.

Year	Appeared	Qualified
2013	1,42,000	45%
2014	1,80,000	52%

Ratio of male to the female candidates qualified from different states in both the years.

State	2013	2014
S <sub>1</sub>	5:4	28:17
S <sub>2</sub>	3:1	5:3
S <sub>3</sub>	7:5	11:5
S <sub>4</sub>	13:11	15:11
S <sub>5</sub>	13:12	15:9
S <sub>6</sub>	8:1	11:9

84. The number of female candidates qualified from state S<sub>2</sub> in 2013 is approximately what per cent of the male candidates qualified from S<sub>1</sub> in 2014?

1. 16%
2. 22%
3. 20%

4. 14%

5. 18%

**85. If in 2014 in state  $S_1$  four female candidates qualified are not eligible then what is the average number of female candidates qualified from all the states together in the year 2014?**

1. 5990

2. 5900

3. 5920

4. 5940

5. 5960

**86. What is the ratio of the number of female candidates qualified from states  $S_1$  and  $S_3$  together in 2013 to the number of male candidates qualified from the same states in the year 2014?**

1. 8307:21844

2. 8407:21944

3. 8307:21944

4. 8307:20894

5. 8037:29144

**87. What is the average number of candidates qualified from states  $S_2$ ,  $S_3$ ,  $S_4$  and  $S_6$  together in the year 2013?**

1. 9405.75

2. 9005.75

3. 9105.75

4. 9505.75

5. 9205.75

**88. What is the approximate average number of male candidates qualified from all the states together in the year 2013?**

1. 6427

2. 6267

3. 6672

4. 6607

5. 6627

**89. The number of male candidates qualified from state  $S_5$  in 2014 is what per cent more or less than the number of male candidates qualified from state  $S_6$  in 2013?**

1. 72% less

2. 74% more

3. 70% less

4. 76% more

5. 78% more

90. From which of the following states in the year 2013, is the number of female candidates qualified the maximum?

1.  $S_5$
2.  $S_6$
3.  $S_4$
4.  $S_1$
5.  $S_2$

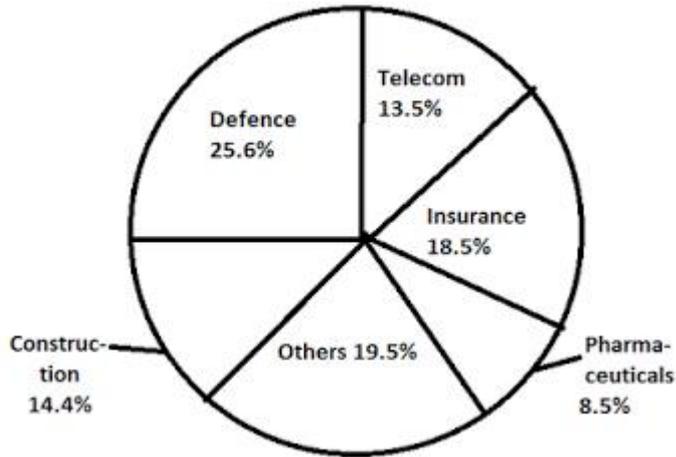
91. From which of the following states in the year 2014, the number of male candidates qualified is minimum?

1.  $S_4$
2.  $S_1$
3.  $S_5$
4.  $S_2$
5.  $S_3$

**Direction (92-96): Study the following table and pie- chart carefully to answer the questions given below:**

The table shows the state - wise foreign investments and the pie- chart shows the percentage distribution of investments in different sectors in 2014-2015 for each states.

State	Foreign investments ( in Rs. crore)
Rajasthan	1560
MP	1780
Gujarat	1970
TN	690
AP	730
Delhi	830
Maharashtra	1940



92. What is the total foreign investment in Other sectors by all the given states together? (in Rs. Crore)

1. 1648.5
2. 1752.5
3. 1852.5
4. 1438.5
5. 1952.5

93. The foreign investment in Insurance sector in Rajasthan is approximately what percent of the foreign investment in Construction sector in Maharashtra?

1. Other than the given options
2. 101%
3. 108%
4. 107%
5. 103%

94. The foreign investment in Pharmaceutical sector in AP is approximately what percent less than the foreign investment in Telecom sector in delhi?

1. 47.6%
2. 44.6%
3. Other than the given options
4. 49.6%
5. 45.8%

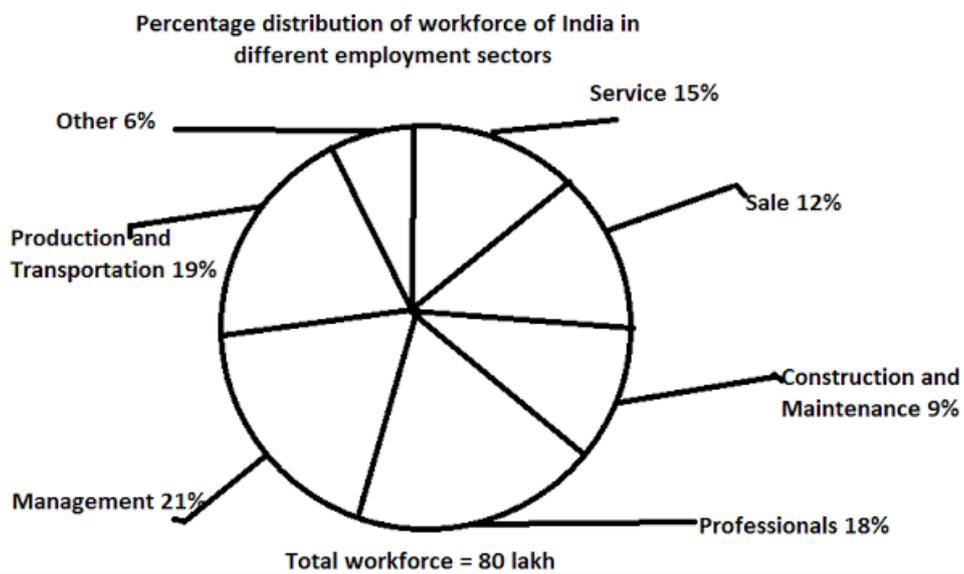
95. For which of the following pairs of states, the ratio of foreign investment in Defence sector is 52:23?

1. Rajasthan, TN
2. Maharashtra, TN
3. MP, AP
4. MP, TN
5. Gujarat, Delhi

96. What is the ratio of the foreign investment in Defence sector in Gujarat to that in Construction and Insurance sector together in MP?

1. 27246:27284
2. 25216:29381
3. 25316:28391
4. 25216:29281
5. Other than the given options

**Direction (97-101): Study the following pie-chart and table carefully and answer the question given below:**



Ratio of male to female workforce in different employment sectors.

Sector	M:F
Service	3:2
Sales	5:3
Construction and Maintenance	5:4
Professionals	5:7
Management	3:4
Production and Transport	5:3
Others	3:5

97. What is the average number of male workforce (in lakh) in all the sectors together? (rounded off to two decimal places)

1. 6.39
2. Other than the given options
3. 4.69
4. 5.96
5. 7.48

**98. The number of female workforce in Service and Professional sectors together is what per cent of the number of male workforce in Construction and Maintenance sector?**

1. 330%
2. 318%
3. 320%
4. 328%
5. Other than the given options

**99. The number of male workforce in Sales and Management Sectors is approximately what per cent of the total number of workforce in Production and transport sector?**

1. Other than the given options
2. 82%
3. 87%
4. 89%
- 85%

**100. The number of female workforce in Sales and Management sectors is approximately by what per cent more than the number of female workforce in Production and Transport Sector?**

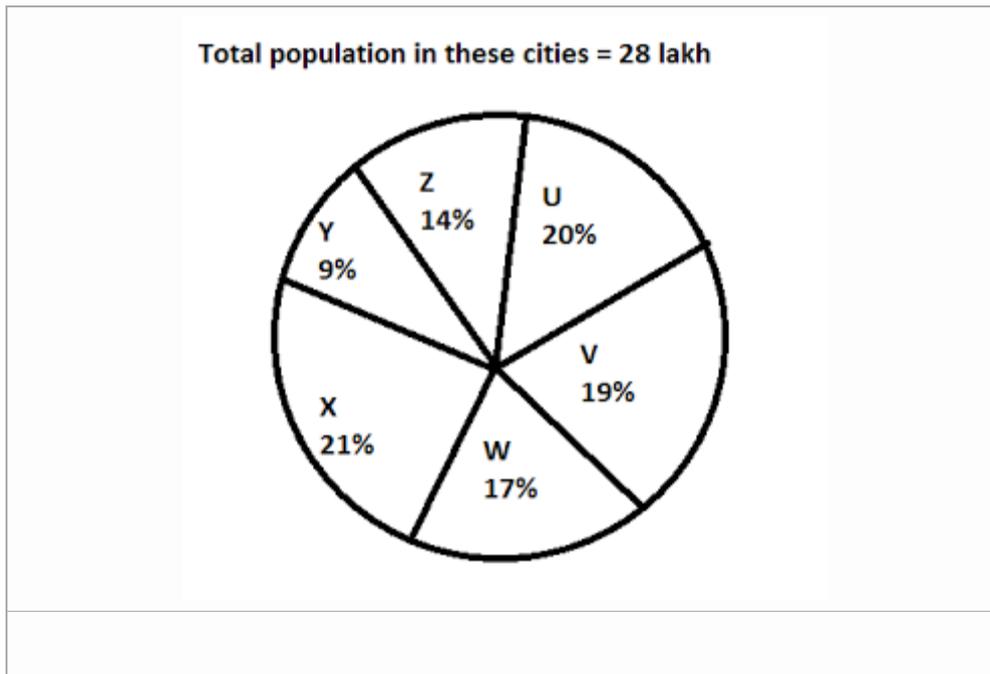
1. 128.8%
2. 131.6%
3. Other than the given options
4. 126.5%
5. 134.7%

**101. What is the ratio of the number of female workforce in constructions and Maintenance sector to the number of male workforce in Professionals and other sectors?**

1. 17:39
2. 16:37
3. 16:35
4. Other than the given options
5. 16:39

**Direction (102-106): Study the following pie-chart and table carefully and answer the question given below:**

The pie-chart given below shows the percentage distribution of population of 6 cities. The table given below shows the ratio of males to females and the percentage of adult population in these cities.



City	Male: Female	% Adult
U	6:5	55%
V	11:8	60%
W	9:8	68%
X	3:4	66%
Y	2:1	72%
Z	4:3	70%

102. The number of adults in city Y is approximately what per cent of the number of males in city X?

1. 70%
2. 72%
3. 66%
4. 68%
5. 74%

103. What is the difference the total number of males and the total number of females in city V?

1. 79000
2. 80000
3. 84000
4. 76000
5. 81000

104. What is the number of females in city U who are Adult?

1. 1,25,000

2. 1,30,000
3. 1,40,000
4. 1,28,000
5. Cannot be determined

105. What is the total number of male population in city Z?

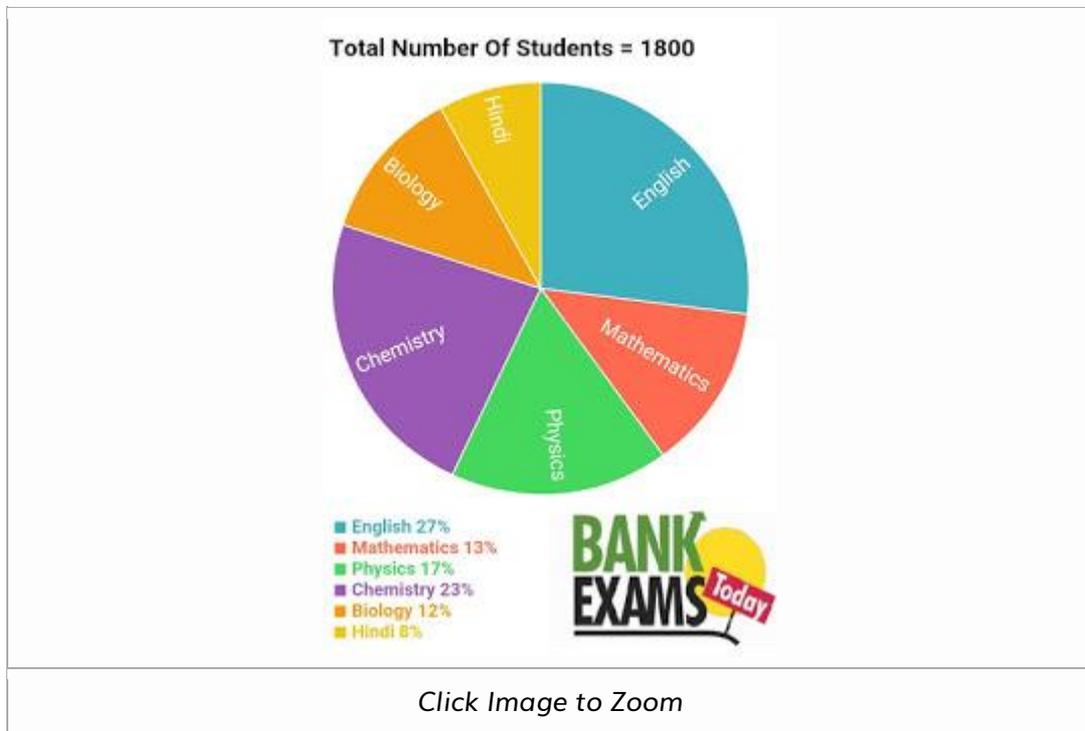
1. 2,40,000
2. 2,12,000
3. 2,36,000
4. 2,18,000
5. 2,24,000

106. What is the number of persons in city W who are not adult?

1. 152230
2. 152320
3. 151320
4. 153220
5. 154320

**Directions: (107-111): Study the following Pie-chart carefully and Answer the questions given below :**

In school total number of students passed in different subjects were as per given pie-chart .



107. If students passed in Chemistry increased 26 and Physics students decreased 26. Find the students passed in Physics approximately what percentage in Chemistry ?

1. 64%
2. 72%

3.76%

4.56%

5.68%

**108. What is the difference between the total number of students who passed in English and Physics together and the total number of students passed in Hindi , Biology and Chemistry . After few days 20 students from English and 35 students from Biology declared failed due to malpractice in exams ?**

1.36

2.72

3.33

4.56

5.42

**109. Find ratio between students passed in English and Chemistry , If students passed in Chemistry Increased 69 ?**

1. 81:63

2. 91:101

3. 81:85

4. 14 : 27

5. 11:24

**110. If the percentage of Mathematics students passed in Exam is increased by 50% and percentage of Students passed in Hindi is decreased by 25% , then what will be the total number of students passed in Mathematics and Hindi together?**

1. 406

2. 459

3. 457

4. 471

5. 432

**111. If  $\frac{2}{9}$  th of students who passed in Physics are female , then number of male Students passed in Physics is approximately what per cent of total number of students passed in Chemistry?**

1. 58

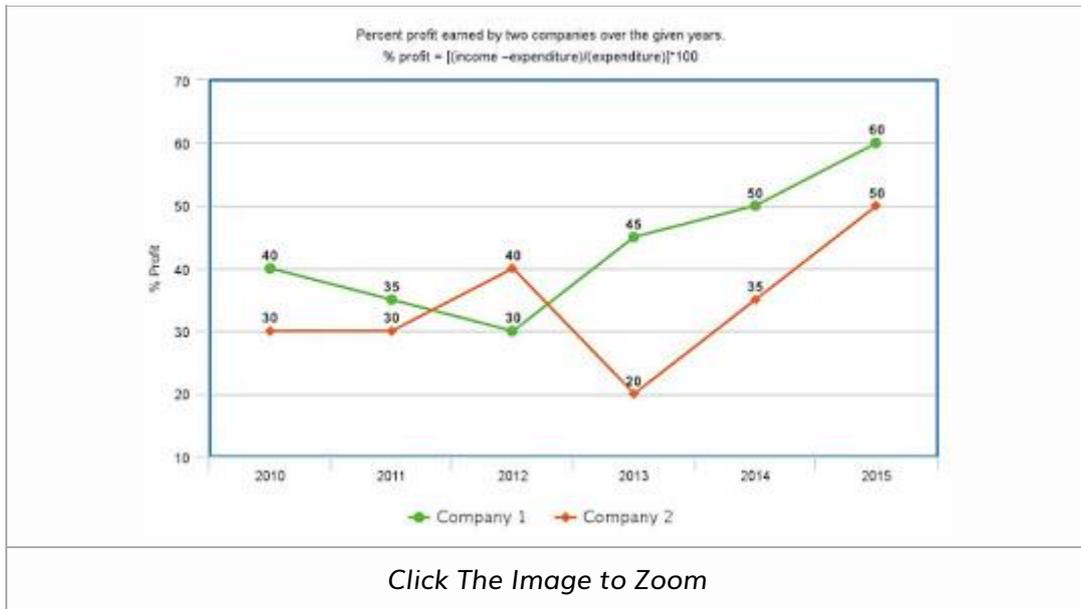
2. 61

3. 73

4. 53

5. 51

**Directions (112-116): Study the following graph to answer the given questions:**



112. If the expenditure of company 1 in 2010 was Rs. 400 crores, what was its income?

- a) 500
- b) 520
- c) 560
- d) 580
- e) None of these

113. If the income of company 2 in 2014 was Rs. 300 crores, what was its expenditure?

- a) 222
- b) 240
- c) 280
- d) 284
- e) None of these

114. If the incomes of two companies are equal in 2011, what was the ratio of their expenditures?

- a) 25:27
- b) 27:26
- c) 26:27
- d) 30:31
- e) None of these

115. What is the percent increase in the percent profit for company 2 from year 2010 to 2012?

- a) 20%
- b) 25%
- c) 33.33%
- d) 46.67%
- e) None of these

116. If the expenditure of both the companies are equal in 2015, find the ratio of their income?

- a) 14:15
- b) 16:15
- c) 15:16
- d) 15:14
- e) None of these

**Directions (117-121): Study the following information carefully and answer the questions given below :**

Name	Total Salary	Expenditure	Savings
A	45,000	37,500	----
B	38,000	29,500	----
C	27,000	----	----
D	----	----	4,200
E	----	22,000	----
F	32,000	----	5,500

117. If E Spends 88% of his salary , What is ratio between his total salary and savings ?

- 1. 24:3
- 2. 23:4
- 3. 26:3
- 4. 25:3
- 5. 27:5

118. F spends 20% of his Expenditure on education . Find what amount he spends on Education ?

- 1. 5,500
- 2. 5,600
- 3. 5,300
- 4. 5,400
- 5. 5,200

119. C saves 12% of his monthly salary , and he spends 10% of expenditure on House rent . How much amount he spent on house rent ?

- 1. 2,375
- 2. 2,376
- 3. 2,377
- 4. 2,378
- 5. 2,379

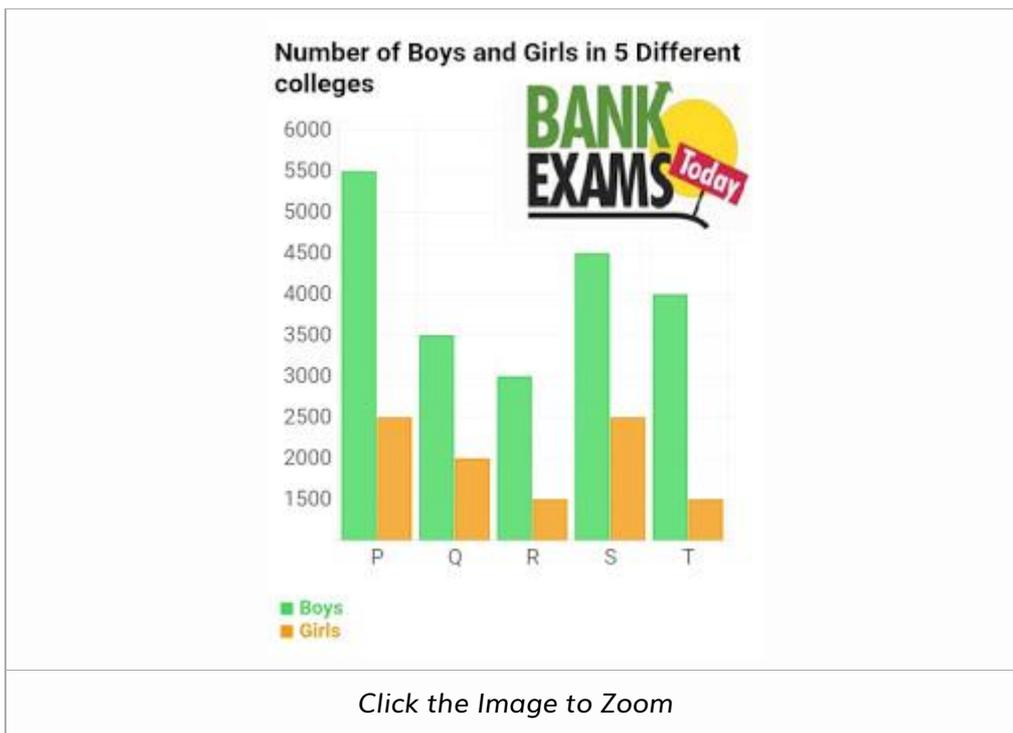
120. What is the average salary of A,B,D and F persons , If D's expenditure is 25,800 ?

1. 36,500
2. 36,250
3. 36,750
4. 36,000
5. 36,550

121. A's salary is increased 20% and his expenditure also increased 10% . Find the difference between his new savings and present savings ?

1. 5,000
2. 5,250
3. 5,500
4. 5,750
5. 5,550

**Directions ( 122-126): Study the following Bar chart and Answers the questions given below.**



122. What is respective ratio between Girls in T school and total number of students in School Q ?

1. 3:10
2. 4:15
3. 5:16
4. 11:15
5. 3:11

123. Number of boys in college S forms approximately what percent of number of boys in college Q ?

1. 75
2. 116
3. 124
4. 129
5. 135

124. What is the average number of boys from all the colleges together ?

1. 4100
2. 4000
3. 3800
4. 3750
5. 3600

125. If 100 students increased in every school , find the ratio between Girls and boys ratio after increasing in School P ?

1. 5:7
2. 6:7
3. 7:9
4. 4:7
5. Data insufficient



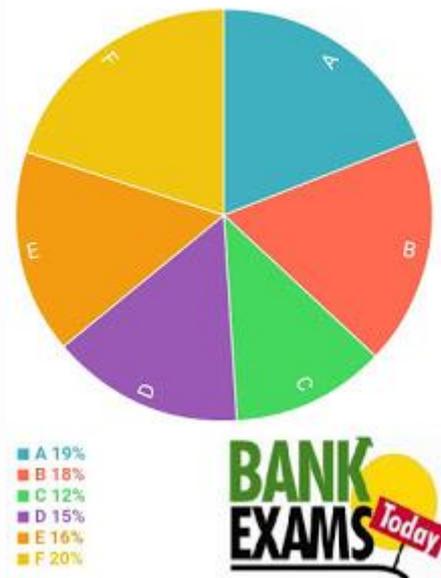
126. Find the ratio between total number of girls in P, Q and R to total number of boys in R, S and T ?

1. 12 :21
2. 12:23
3. 12:25
4. 12:27
5. 13:25

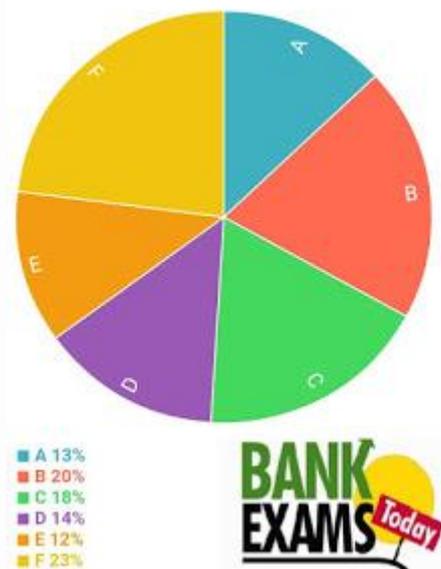
**Directions (127-131): Study the following pie-charts carefully and answer the following questions**

The following pie-chart show the number of students appearing GATE Examination From different states .

2015 year : 2,50,000 Students Appeared



2016 year : 2,40,000 Students Appeared



127. Number of students appearing from B state in 2016 was , What per cent of that from F state F in 2015 ?

- 1.94
- 2.95
- 3.96
- 4.97
- 5.98

128. The total number of students appearing from B & C together in 2015 is approximately equal to that from which of the following pairs of states in 2016 ?

1.A&F

2.C&D

3.A&C

4.D&F

5.E&B

129.If there were 30000 students appearing in the examination from Hyderabad in 2016,and 35000 students appearing from Chennai in 2016, find the percentage of students students not from the Hyderabad and Chennai in 2016.

1.70.87

2.79.56

3.76.09

4.72.91

5.76.85

130.What is the per cent students appearing from state A,C and F in 2015 , same states in 2016 ?

1.98.37

2.96.89

3.92.78

4.91.56

5.89.78

131. If number of students appearing examination in 2014 is 20% more than students appearing in 2015 , Find the number of students appearing examination from state B in 2014 ?

1.56%

2.67%

3.76%

4.Data Insufficient

5.None of the above

**Directions (132-136): Study the following Line chart and the following questions carefully :**



132. If the profit earned in 2011 by Company Y was Rs. 8,12,500, what was the total income of the Company in that year?

1. Rs. 12, 50, 000
2. Rs. 20, 62, 500
3. Rs. 16, 50, 000
4. Rs. 18, 25, 000
5. Rs. 17,78,000

133. If the amount invested by the two Companies in 2010 was equal, what the ratio between total income in 2010 of the Companies X and Y respectively?

1. 31 : 33
2. 33 : 31
3. 34 : 31
4. 14 : 11
5. None of these

134. If the total amount invested by the two Companies in 2014 was Rs. 27 lakhs, while the amount invested by Company Y was 50% of the amount invested by company X, what was the total profit earned by the two Companies together?

1. Rs. 21. 15 lakhs
2. Rs. 20. 70 lakhs
3. Rs. 18. 70 lakhs
4. Rs. 20. 15 lakhs

5. None of these

135. If the investments of Company X in 2012 and 2013 were equal. What is the difference between profit earned in two years if the income in 2013 was Rs. 24 lakhs?

1. Rs. 2.25 lakhs
2. Rs. 3.6 lakhs
3. Rs. 1.8 lakhs
4. Rs. 2.6 lakhs
5. none of these

136. If each of the Companies X and Y invested Rs. 25 lakhs in 2015, what was the average profit earned by the two companies?

1. Rs. 18 lakhs
2. Rs. 22.5 lakhs
3. Rs. 17.5 lakhs
4. Rs. 20 lakhs
5. none of these

**Directions (137-141): Study the Instructions and table carefully to answer the given question :Note**

(1) Few data are missing (indicated by --) in the table and you are expected to calculate them from the available data if required.

(2) There are in total 8 destinations (I, II, III, IV, V, VI, VII and VIII). If a car has to go from one destination to another destination it will have to travel through in between destinations. For ex. If car A travels from destination I to IV. it will have to travel through destinations II and III

(3) Time required column depicts time required by a car mentioned in the same row to cover the distance between destinations mentioned in the same row.

Name of the Car	Speed of the Car (In Kmph)	Distance between destinations (In Km)	Time Required (In hours)
A	77	Between I and II = 188	--
B	--	Between II and III = 254	5 $\frac{12}{23}$
C	--	Between III and IV = 228	5 $\frac{1}{3}$
D	--	Between IV and V = 162	6
E	36	Between V and VI = --	8 $\frac{2}{3}$
F	22	Between VI and VII = --	6 $\frac{7}{11}$
G	42	Between VII and VIII = --	4 $\frac{1}{3}$

137. What is the respective ratio of the distance between destinations IV and VII and the distance between

destinations V and VIII ? a. 19 : 22

- b. 29 : 34
- c. 33 : 38
- d. 31 : 32
- e. 29 : 30

138. Car H covered distance between destination IV and V at a speed of 18kmph and the distance between destination V and VI at a speed of 60 kmph. What was its average speed in the journey ? ( approx inkmph)

- a. 39
- b. 58
- c. 32
- d. 29
- e. 27

139. Car A started from Destination I towards Destination V at 5 00 am. Car D started from Destination V towards Destination I at the same time At what time will they meet ?

- a.11 am
- b.1 pm
- c.1.45 pm
- d.10.30 am
- e.12.30 am

140. How much time will Car B take to cover the distance between destinations I and VIII ? (in hours)

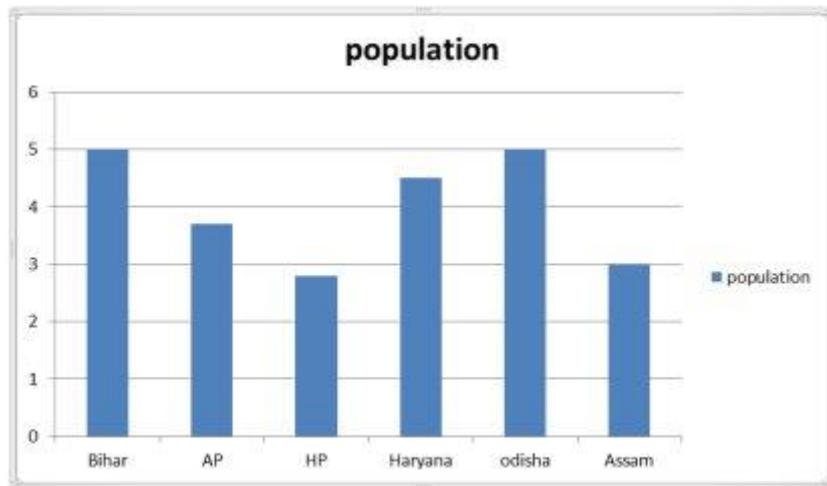
- a. 35
- b. 37
- c. 26
- d. 32
- e. 28

141. If H ' s speed 10 more than than A.how many hours early than to reach a destination from I to VIII( approximately) ?

- a .4 hrs
- b. 2 hrs
- c. 5 hrs
- d. 1 hrs
- e. 6 hrs

**Directions (142-146): Study the following bar graph and table carefully to answer the questions given below (1-5):**

The following bar graph shows data related to population of different states(in lakhs) in the year 1992



The following table shows the ratio b/w male, female and literacy, illiterate and also graduates and under graduates.

Different states	Male and female	Literacy and illiterate	Graduates and undergraduates
Bihar	3 : 2	1 : 4	4 : 7
AP	4 : 6	4 : 1	6 : 7
HP	3 : 4	2 : 1	3 : 2
Haryana	5 : 4	3 : 2	7 : 8
Odisha	2 : 3	2 : 3	4 : 5
Assam	2 : 1	7 : 2	6 : 7

142. If in the year 1993 there was an increase of 10% population of AP. and 12% of Bihar compared to the previous year, than what was the ratio of the population of AP. to Bihar?

- a. 521:540
- b. 405:530
- c. 408:505
- d. 407:560
- e. None

143. What was the approximate percentage of women of Andhra Pradesh to the women of HP?

- a.90%
- b.110%
- c.120%
- d.126%
- e.95%

144. if 70% of total no of literate population in Assam are graduate what is the total no of under graduates

in the Assam in the year 1992?

- a. 65300
- b. 70000
- c. 62021
- d. 82120
- e. None

145. In Haryana, if 70% of the females are literate and 75% of the males are literate, what is the total number of illiterates in the state?

- a. 12,2500
- b. 85,000
- c. 84,000
- d. 81,000
- e. None

146. What is the ratio of literates in Assam to the literates in Bihar?

- a. 2 : 5
- b. 3 : 5
- c. 7 : 15
- d. 2 : 3
- e. None



Directions (147-151): The given table gave information about number of employees in different banks, and ratio between Men (M) and Women (W) employees.

Bank	Clerks (M:W)	PO (M:W)	Mangers (M:W)	Regional Managers (M:W)	Total Employees
Andhra Bank	325 (7:6)	126(4:5)	85(8:9)	A(5:3)	568
Canara Bank	427(5:2)	B(11:16)	76(8:11)	45(3:2)	683
Dena Bank	288(7:5)	128(7:9)	C(6:7)	38(12:7)	545
Indian Bank	D(5:3)	156(5:8)	87(13:16)	54(13:5)	657
Syndicate Bank	465(17:14)	144(7:9)	E(11:15)	48(7:5)	735

147. Find total women employees in Dena Bank ?

- 1.245
- 2.235
- 3.247
- 4.451
- 5.256

148. What is approximate percentage of the Men PO's in Canara Bank to Total employees in Canara Bank ?

- 1.8%
- 2.9%
- 3.7%
- 4.5%
- 5.6%

149. Find total Men employees working as Clerk in all banks ?

- 1.1234
- 2.1256
- 3.2134
- 4.2345
- 5.1128



150. Find Sum of E,A and B ?

- 1.249
- 2.245
- 3.234
- 4.223
- 5.238

151. What approximate percentage E and C in A,B and C ?

- 1.32%
- 2.30%
- 3.29%
- 4.39%
- 5.37%

**Directions (152-156): Study the following Table and Answers carefully :**

**Total number of college seats : 1400**

College	No.of Graduates	No.of Post Graduates
---------	-----------------	----------------------

W	360	30
X	210	72
Y	420	92
Z	120	96
<b>Total</b>	<b>1110</b>	<b>290</b>

<b>Sex</b>	<b>No.of Graduates</b>	<b>No.of Post Graduates</b>
Male	820	200
Female	290	90

<b>Subject</b>	<b>No.of Graduates</b>	<b>No.of Post Graduates</b>
Chemistry	620	128
Physics	82	46
Biology	134	70
Zoology	94	46

<b>City</b>	<b>No.of Graduates</b>	<b>No.of Post Graduates</b>
Kolkata	580	112
Hyderabad	84	52
Bangalore	162	54
Chennai	104	72

**152. What is the percentage of Biology seats in Post Graduation ?**

1.20.13%

2.26.46%

3.25.23%

4.26.12%

5.24.13%

**153 .What is percentage of Hyderabad students in the total seats ?**

1.9.71%

- 2.15%
- 3.16%
- 4.25%
- 5.27%

154. If 20 males are replaced by 20 females in the Graduates, What would be the ratio of males to females in the total College seats ?

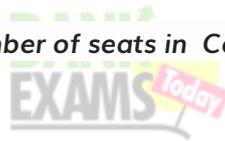
- 1.28:7
- 2.27:6
- 3.80:31
- 4.28:3
- 5.50:11

155. Out of Total students of college Z in total seats, What is the percentage of students Post Graduates ?

- 1.33.33%
- 2.44.44%
- 3.66.66%
- 4.55.55%
- 5.77.77%

156. What is the difference between the number of seats in College W and that of College X ?

- 1.134
- 2.108
- 3.186
- 4.54
- 5.None of these



**Directions (157-161): Study the give table carefully to answer the following questions.**

Percentage of marks obtained by 6 students in 6 Subjects .

Subject / Student	Chemistry (Out of 150)	Maths (Out of 100)	Telugu (Out of 50)	English (Out of 100)	Physics (Out of 125)	Hindi (Out of 50)
A	85	62	72	68	70	70
B	65	68	66	69	80	80

C	70	72	68	78	60	66
D	80	78	76	82	90	58
E	90	80	72	66	70	76
F	60	74	62	54	60	64

**157. What is the average marks obtained by all students in Hindi ?**

1. 34.5
2. 32.3
3. 34
4. 36
5. 33.6

**158. What is the total marks obtained by B in all subjects together ?**

1. 407.5
2. 390.5
3. 508.5
4. 408.75
5. 404.5

**159. What is F's overall percentage of marks in all subjects together ?**

1. 64.2%
2. 60%
3. 65.2%
4. 62.33%
5. 61.91%

**160. If, to pass the examination , the minimum marks required in Chemistry is 120 and Physics is 95, then how many students will pass in both the subjects ?**

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

161. Who among the following scored the highest marks in all subjects together ?

1. B
2. E
3. D
4. F
5. A

Directions (162-166): Study the following table carefully and answer the given questions

Mobile	Cost Price	Selling Price	% of Profit	Profit
Samsung	35,000	----	----	3,500
Apple	53,000	----	14%	----
Micromax	----	22,000	----	----
LG	28,000	----	----	----
HTC	----	33,000	10%	----
Sony	32,000	----	----	4,000

162. What is the selling price and % of Profit of Sony Mobile ?

1. 36,000 and 12.5%
2. 36,00 and 15%
3. 36,000 and 18%
4. 36,000 and 20%
5. 36,000 and 23%

163. What is the % of Profit Micromax, If Cost Price of Micromax is  $\frac{3}{5}$  of Cost Price of HTC mobile ?

1.  $33\frac{1}{3}\%$
2.  $26\frac{4}{9}\%$
3.  $22\frac{2}{9}\%$
4.  $24\frac{5}{9}\%$
5.  $25\frac{7}{9}\%$

**164. What is the selling price and % of profit of LG mobile?. If profit is 500 more than the profit of Samsung mobile .**

1.32,000 and 14  $\frac{1}{7}$ %

2.34,000 and 14  $\frac{4}{7}$ %

3.32,000 and 15  $\frac{2}{7}$ %

4.34,000 and 17  $\frac{5}{7}$ %

5.32,000 and 14  $\frac{2}{7}$ %

**165. What is the profit earned on Apple mobile ?**

1.7360

2.7450

3.7420

4.7560

5.7620

**166. What is the ratio between Cost Price and Selling price of Samsung ?**

1.14:15

2.10:13

3.10:14

4.14:15

5.10:11

**Directions (167-171): Refer to the following data to answer the questions that follow:**

The result of an exam is given below:

Out of 2000 students who appeared

(i) 1316 failed in Telugu

(ii) 332 failed in Telugu and Punjabi

(iii) 744 failed in Punjabi, 868 failed in Telugu and Bengali

(iv) 1180 failed in Bengali, 252 failed in Bengali and Punjabi

**167. The number of students who failed in all the three subjects is**

1) 356

2) 146

3) 212

4) 252

**168. The number of students who failed in Bengali but not in Punjabi is**

1) 928

2) 784

3) 774

4) 944

**169. The number of students who failed in Telugu but not in Bengali is**

1) 448

2) 896

3) 1512

4) 928

**170. The number of students who failed in Punjabi but not in Telugu is**

1) 318

2) 198

3) 213

4) 412

**171. The number of students who failed in Telugu or Bengali but not in Punjabi is**

1) 1234

2) 1432

3) 1256

4) 1342

**Directions (172-176): 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 total 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. Remaining passengers of Krishna Express are in first class coaches. Total Number of passengers in AC coaches in 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. Remaining passengers of Godavari Express are in general class coaches.

**172. 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?**

1.13 : 7

2.7 : 13

3.32 : 39

4.44:81

5.None

**173. What is the total number of passengers in the general coaches of Krishna Express and the AC coaches of Godavari Express together?**

1.449

2.495

3.505

4.445

5.None

**174. What is the difference between the number of passengers in the AC coaches of Krishna Express and total number of passengers in sleeper class coaches and first class coaches together of Godavari Express ?**

1.478

2.480

3.487

4.479

5.None

**175. If cost of per ticket of first class coach ticket is Rs.550, what total amount will be generated from first class coaches of Krishna Express ?**

1.120000

2.122000

3.121000

4.124000

5.none

**176. If cost of per ticket of first class coach ticket is Rs.450 and AC class coach ticket is Rs.950, what total amount will be generated from First and AC class coaches of Godavari Express?**

1.350000

2.375750

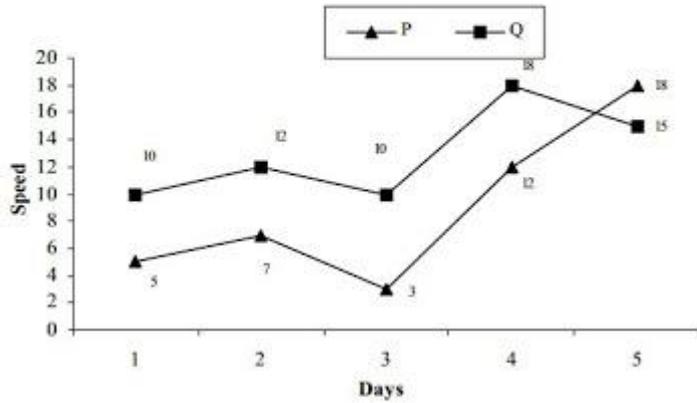
3.335750

4.345000

5.335870

**Directions (177-181): . Study the following graph carefully to answer the questions that follow:**

Speed in (km/hr) of truck P and Q on five different days



Distance travelled in Kms.		
Days	P	Q
1	10	20
2	14	12
3	15	16
4	12	18
5	9	18

[Click on Image to Zoom](#)

177. How much time did P take to complete his journey on day 5?

- 1) 1 hr.
- 2) 30 min.
- 3) 2 hrs.
- 4) 20 min.
- 5) 3 hrs.

178. What was the time taken by Q on day 3?

- 1) 2 hrs.
- 2) 30 min.
- 3) 1 hr. 36 min.
- 4) 2 hrs. 45 min.
- 5) 3 hrs.

179. What was the average distance travelled by P in all 5 days?

- 1) 10 km.
- 2) 11 km.

- 3) 15 km.
- 4) 12 km.
- 5) 20 km.

180. What was the average distance travelled by P and Q on Day 4?

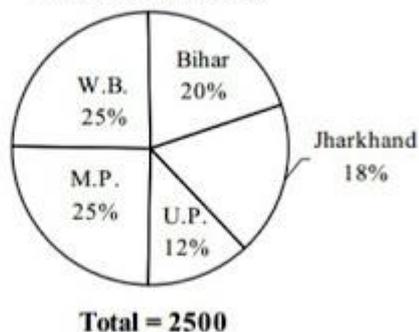
- 1) 12 km
- 2) 18 km
- 3) 30 km
- 4) 15 km
- 5) 20 km

181. What was the difference between time taken by Q on day 3 and that of P on day 5?

- 1) 30 min.
- 2) 1 hr.
- 3) 1 hr. 6 min.
- 4) 36 min

**Directions (182-186): Study the following pie-charts carefully to answer the questions that follow:**

**% of students in a particular College from different states**



**% of female students from each state**

State	% female
Bihar	18%
Jharkhand	16%
U.P.	18%
M.P.	24%
W.B.	24%

**182. What is the total number of boys studying from Bihar and Jharkhand together?**

- 1) 780
- 2) 680
- 3) 788
- 4) 980
- 5) 300

**183. What is the difference between number of girls from Bihar and that from U.P.?**

- 1) 18
- 2) 36
- 3) 10
- 4) 15
- 5) 40

**184. Number of boys from Jharkhand is what percent more than girls from U.P.?**

- 1) 60%
- 2) 600%
- 3) 50%
- 4) 500%
- 5) 200%

**185. Number of boys from M.P. is approximately what percent more than girls from West Bengal?**

- 1) 220%
- 2) 217%
- 3) 210%
- 4) 221%
- 5) 200%

186. What's the average number of girls in university from all the states together is? (approximate value)

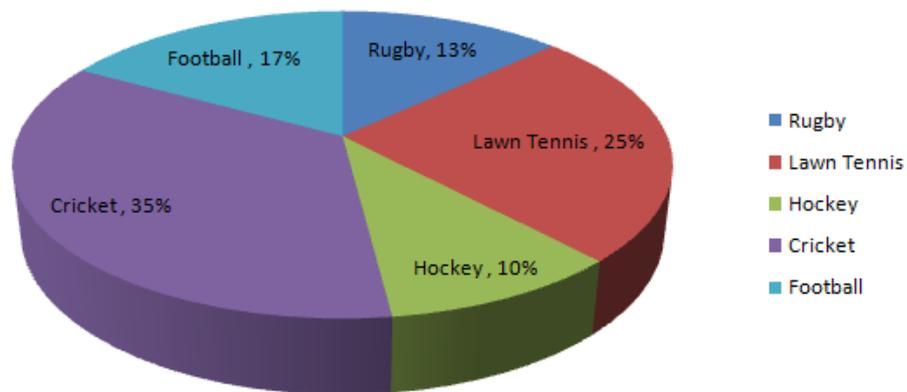
- 1) 100
- 2) 106
- 3) 103
- 4) 110
- 5) 99

**Directions (187 -191): Go through the data set given below and solve the questions based on it.**

The percentage wise break up of total players who play five different sports is shown in following pie chart.

Total Number of Players = 4200

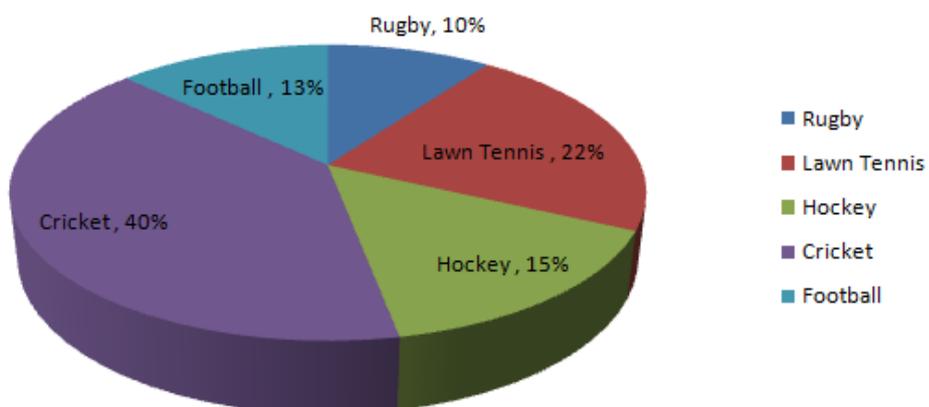
**Percentage of Players who play different sports**



Female players is equal to 2000, out of 4200 players.

Break up of female players playing these five sports is shown in following pie chart.

**Percentage of Female Players who play different sports**



**187. What is the number of total players who play football and rugby together?**

- a) 1080
- b) 1160
- c) 1260
- d) 1210
- e) None of The Above

**188. What is the difference between the number of the female players who play lawn tennis and the number of male players who play rugby?**

- a) 84
- b) 94
- c) 64
- d) 104
- e) None of The Above

**189. What is the respective ratio of the number of female players who play cricket and number of male players who play hockey?**

- a) 20 : 7
- b) 4 : 21
- c) 20 : 3
- d) 3 : 20
- e) None of The Above

**190. What is the total number of male players who play football, cricket and lawn tennis together?**

- a) 1720
- b) 1734
- c) 1700
- d) 1834
- e) None of The Above

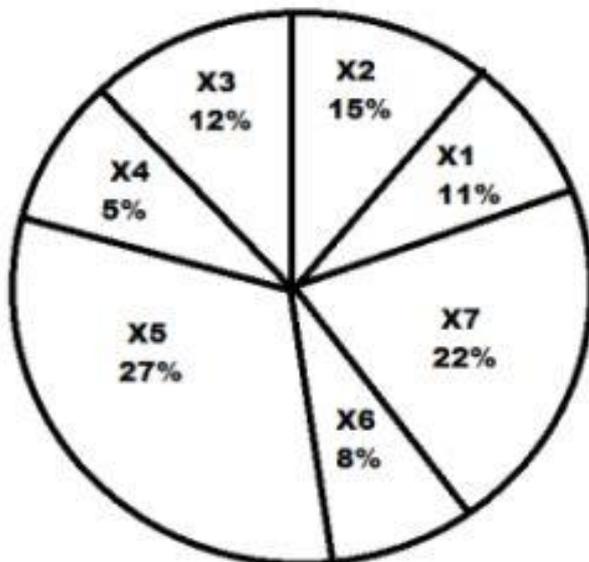
**191. Number of male players who play rugby is approximately what percentage of the total number of players who play lawn tennis?**

- a) 23
- b) 33
- c) 43
- d) 53
- e) None of The Above

**Directions (192-198):** Two types of medicines A and B are manufactured by seven different companies X1, X2, X3, X4, X5, X6 and X7. The production of each company (inclusive of both medicines A and B) is expressed as a percentage of total production and represented in the pie-chart given below. This pie-chart is

followed by a table which shows the ratio in which each company produces the two medicines and also the percent profit that each company earns in selling medicines A and B. Study the given information and answer the questions that follow.

**Percentage of the total production produced by the seven companies**



**Cost of the total production (both medicines together) by seven companies = 75 crores**

Ratio of production between medicines A and B and the percent profit earned for the two medicines.

COMPANY	RATIO OF PRODUCTION		PERCENT PROFIT EARNED	
	Medicine A	Medicine B	Medicine A	Medicine B
X1	3	2	32	35
X2	2	3	25	20
X3	1	2	30	24
X4	1	4	35	25
X5	5	3	28	30
X6	3	5	15	25
X7	4	1	20	22

192) Find the ratio of cost of production of medicine A by Company X2 to that by Company X6?

- a) 1:2
- b) 2:3
- c) 2:1
- d) 3:5
- e) None of these

193) The total cost of production of medicine A by company X2 and medicine B by X1?

- a) Rs. 6.6 crores
- b) Rs. 3.35 crores
- c) Rs. 8.12 crores
- d) Rs. 7.8 crores
- e) None of these

**194) What is the total cost of production of medicine B by Companies X3 and X4 together?**

- a) Rs. 7.45 crores
- b) Rs. 9 crores
- c) Rs. 8.50 crores
- d) Rs. 11 crores
- e) None of these

**195) The cost of production of both medicines together by Company X5 is equal to the total cost of production of both medicines together by which of the two companies?**

- a) X1 and X3
- b) X6 and X7
- c) X4 and X7
- d) X2 and X6
- e) None of these

**196) Find the amount of profit earned by Company X6 on medicine B.**

- a) Rs.9.375 crores
- b) Rs. 13.45 crores
- c) Rs. 75.15 crores
- d) Rs. 93.75 crores
- e) None of these

**197) What is the total profit earned by Company X3 for medicines A and B together?**

- a) Rs. 2.34 crores
- b) Rs. 4.86 crores
- c) Rs. 96.4 lakhs
- d) Rs. 1.44 crores
- e) None of these

**198) The profit earned by Company X5 on production of medicine A added to the profit earned by Company X7 on production of medicine B is approximately**

- a) Rs. 9.18 crores
- b) Rs. 5.19 crores
- c) Rs. 6.71 crores
- d) Rs. 4.27 crores
- e) None of these

**Directions (199-203): Study the following table chart carefully to answer the question given below:**

The table graph shows the monetary policy statement issued by the RBI in different quarters.

Quarters	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6
Rate						
Repo Rate	7.50%	6.25%	7.25%	7.75%	7.75%	8.50%
Reverse Repo Rate	6.50%	5.25%	6.25%	6.75%	6.75%	7.50%
CRR	4.25%	4.00%	4.50%	4.75%	4.25%	4.50%
SLR	22.50%	23.00%	22.50%	23.50%	22.00%	23.50%
MSF	9.50%	9.75%	8.25%	8.75%	8.25%	9.50%
Bank Rate	9.50%	9.75%	8.25%	8.75%	8.25%	9.50%

199. The difference between the average of the rates of the sixth quarter and that of the third quarter is

- a) 0.25
- b) 0.50
- c) 0.75
- d) 1.00
- e) None of these

200. What is the sum of the average of MSF and that of Reverse Repo Rate?

- a) 14.50
- b) 15.50
- c) 15.75
- d) 15.25
- e) None of these

201. The ratio of the sum of the Repo Rates in all the given quarters to that of the Reverse Repo Rates in all the given quarters is

- a) 17:13
- b) 17:15
- c) 15:13
- d) 13:15

e) None of these

202. The sum of the Repo Rates in all quarters is what per cent (approx) of the sum of SLR in all quarters?

a) 32.85

b) 32.25

c) 34.35

d) 33.75

e) None of these

203. The average of all the rates in the fourth quarters is what per cent (approx) of the average of all the rates of the first quarters?

a) 100.04

b) 100.48

c) 100.84

d) 100.44

e) None of these

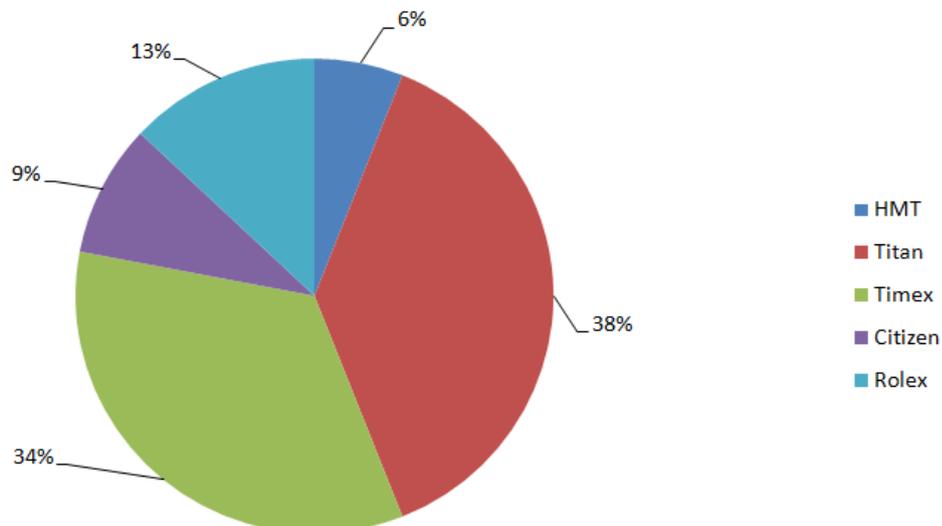
**Directions(204-207):** for Questions - Go through the data sets given below and solve the questions based on it.

Following data sets given below present the statistics related to the Indian watch industry.

There are five companies and their respective market share of the year 2010 is given in the pie chart given below.

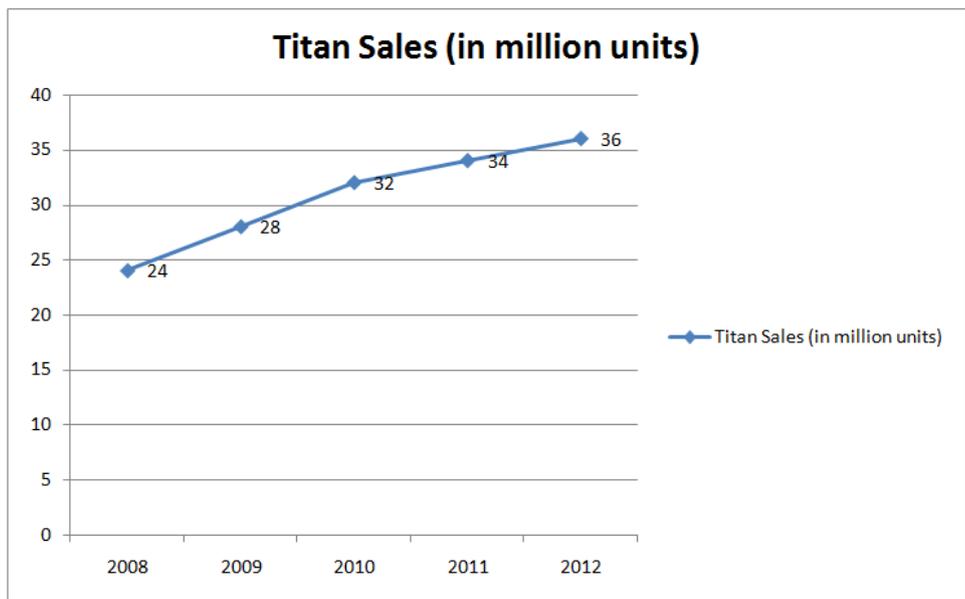
Chart 1

### Market Share in Sales Value (in 2010)



Following line chart presents the Titan Sales volume (in million units) for the years 2008 to 2012. All the values are even numbers.

Chart 2



Following bar chart presents the average selling price (in Rs.) of these companies in the year 2010:

Chart 3



(Assume there is no export or import)

204. For how many years, is it possible to calculate the size of domestic watch market (in Rs.)?

- a) 0
- b) 1
- c) 2

- d) 5
- e) None of The Above

205. Which company has the second lowest sales (in Rs. terms) in the year 2010?

- a) Citizen
- b) Rolex
- c) HMT
- d) Timex
- e) None of The Above

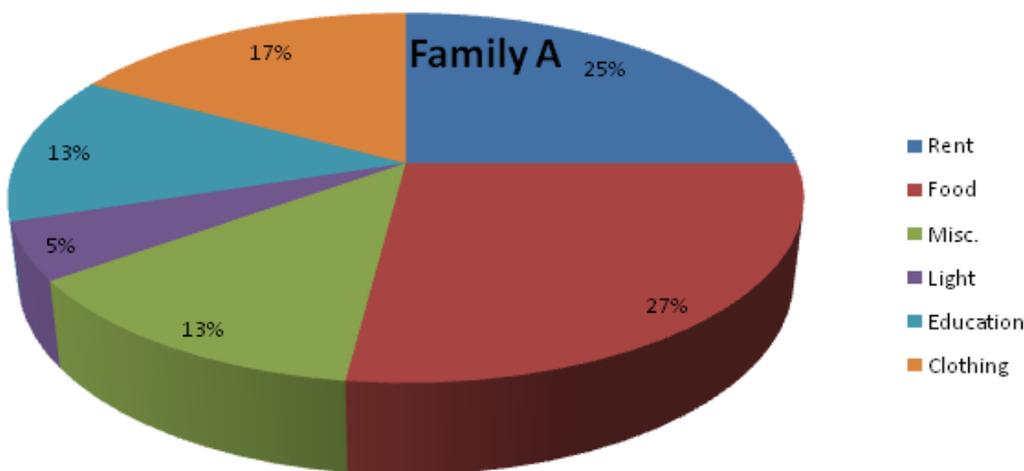
206. Which year saw the lowest growth rate in number of unit sold over the previous year for Titan?

- a) 2009
- b) 2010
- c) 2011
- d) 2012
- e) None of The Above

207. What is the size of the domestic market in the year 2010 (in Rs.)?

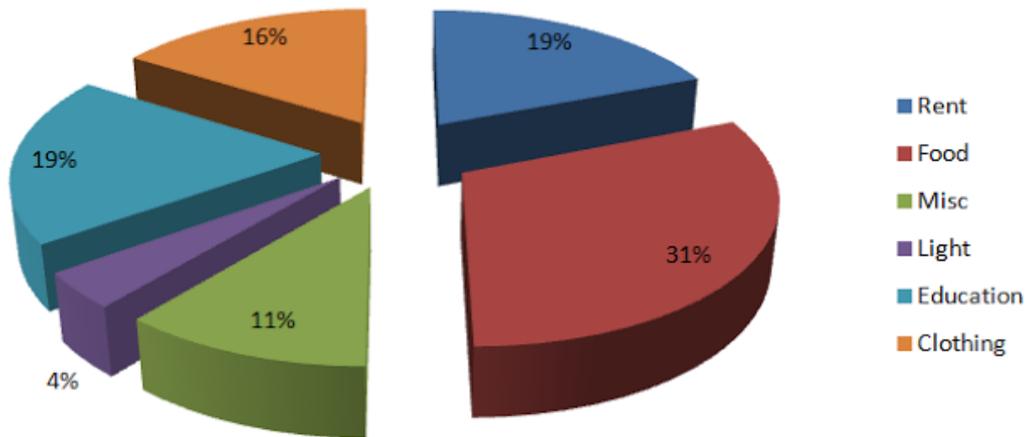
- a) Rs. 757 crores
- b) Rs. 7578 crores
- c) Rs. 75789 crores
- d) Can't be Determined
- e) None of The Above

**Directions (208-213): Refer to the following pie charts and solve the questions based on it.**



Total Expenses = Rs. 48,000

## Family B



Total Expenses = Rs. 72,000

208. Both the families decide to double the total expenditure keeping the pattern of spending the same as given above. What will be the new ratio of expenditure on food between family A and family B?

- a) 18 : 31
- b) 31 : 27
- c) 2 : 3
- d) 3 : 2
- e) None of The Above

209. If the total expenses of family B increases three - fold, keeping the expenses on education the same as given above, what will be the expense on education?

- a) 6.33%
- b) 57%
- c) 19%
- d) 18%
- e) None of The Above

210. What will be the expenses on light by family A, as a percentage of expense on light by family B?

- a) 120%
- b) 83.33%
- c) 62.5%
- d) 66.66%
- e) None of The Above

211. If family A and family B decide to combine their expenses, then which one of the following heads will be responsible for the highest expenses?

- a) Rent
- b) Miscellaneous
- c) Food

- d) Education
- e) None of The Above

**212. In the above question, how many heads will have a lower percentage share in the combined total expenses of both the families than the percentage share of family B under the same head?**

- a) 1
- b) 2
- c) 3
- d) 4
- e) None of The Above

**213. Under how many heads are the expenses of family B more than the expenses of family A?**

- a) Less than 3
- b) More than 3
- c) Equal to 3
- d) Can't be Determined
- e) None of The Above

**Directions ( 214-218):**

Management college consists of 7200 students.

The ratio of boys to girls is 7:5, respectively.

All the students are enrolled in six different specialization viz., MBA (Finance), MBA (IT), MBA (HR), MBA (Operations), MBA (Marketing) and MBA (Entrepreneur).

22% of the total students are in MBA (Marketing).

16% of the girls are in MBA (IT).

18% boys are in MBA (HR).

Girls in MBA (Entrepreneur) are 30% of the girls in MBA (IT).

15% of boys are in MBA (Finance).

Boys in MBA (IT) is 50% of the girls in the same.

15% of the girls are in MBA (Operations).

The ratio of the boys to girls in MBA (Entrepreneur) is 3:1 respectively.

24% of the total numbers of students are in MBA (Finance).

The ratio of boys to girls in MBA (Operations) is 12:5 respectively.

**214) What is the total number of students enrolled in MBA (HR)?**

- a) 1062
- b) 1530

- c) 1584
- d) 1728
- e) 1800

**215) Number of girls enrolled in MBA (Finance) forms approximately, what per cent of total number of students in college?**

- a) 7%
- b) 13%
- c) 15%
- d) 22%
- e) 24%

**216) What is the total number of girls enrolled in MBA (Marketing)?**

- a) 144
- b) 306
- c) 365
- d) 480
- e) 522

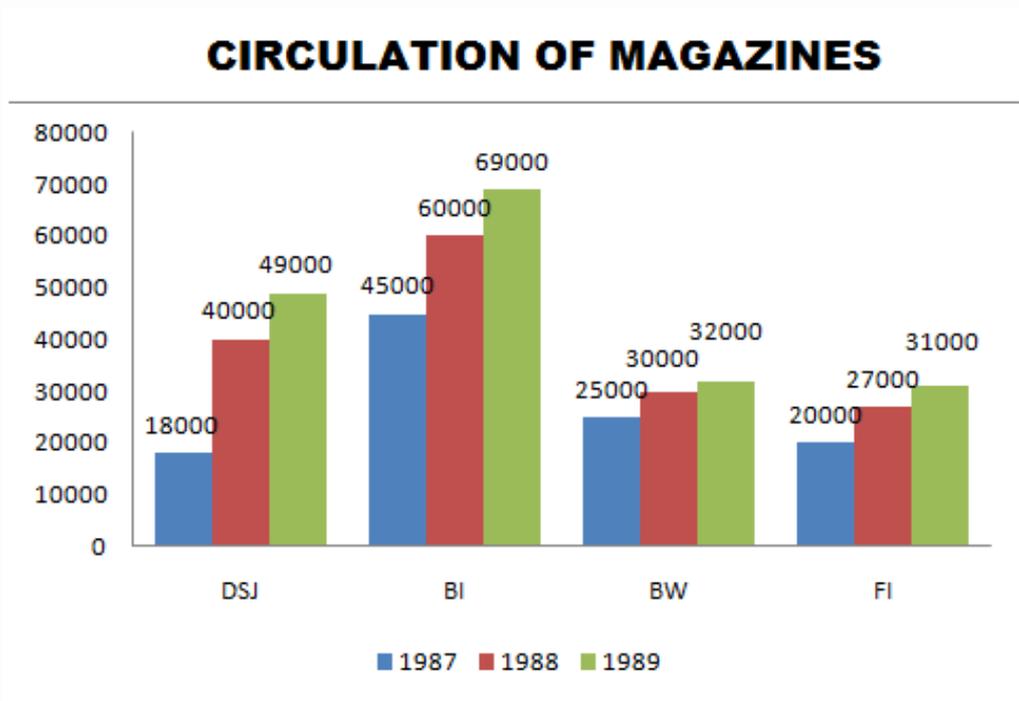
**217) Number of boys enrolled in MBA (Operations) forms, what per cent of the total number of girls enrolled in MBA (IT)?**

- a) 187.5%
- b) 200%
- c) 212.5%
- d) 225%
- e) 232.5%

**218) What is the total number of boys enrolled in MBA (Entrepreneur)?**

- a) 240
- b) 432
- c) 630
- d) 756
- e) 810

**Directions (219-223): Study the following graphs and answer the question based on them.**

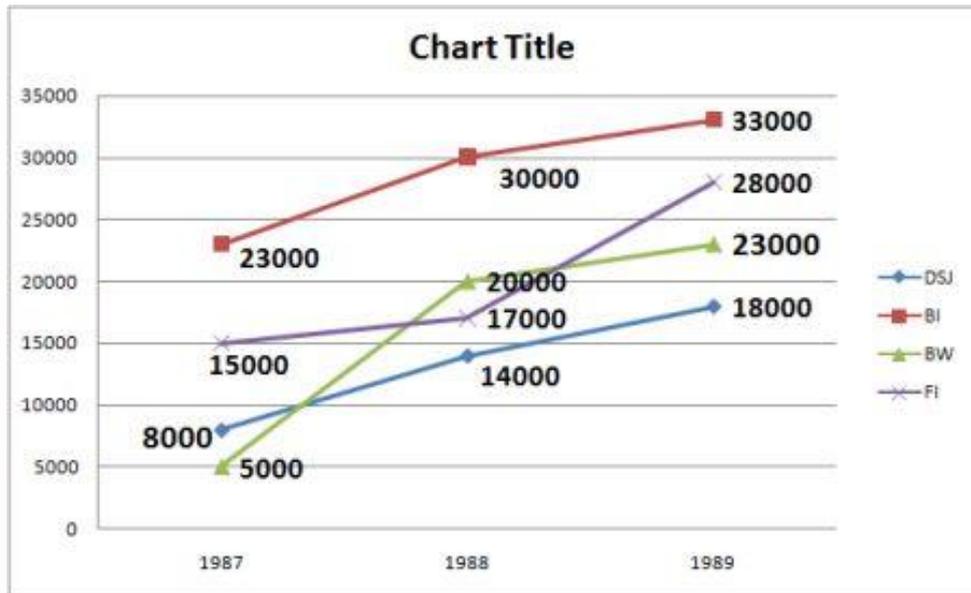


*DSJ = Dalal Street;*

*BI = Business India*

*BW = Business World*

*FI = Fortune India*



219) The total circulation of figures for the four magazines together in 1988 was approximately

- a) 108000
- b) 181000
- c) 157000
- d) 140000
- e) None of these

220) During the years 1987-89, the magazine that has shown maximum percentage growth in circulation has been

- a) Business India
- b) Dalal Street Journal
- c) Business World
- d) Fortune India
- e) None of these

221) In 1989, if Fortune India were to change the same rate to its advertiser on Dalal Street journal was charging a year ago, their cost of advertisement per thousand copies in Fortune India would

- a) decrease by 50 %
- b) increase by Rs. 140

- c) Decrease by Rs. 400
- d) Increase by 25 %
- e) None of these

222) In 1988, the advertisement cost of colour page per thousand, copies was lowest for

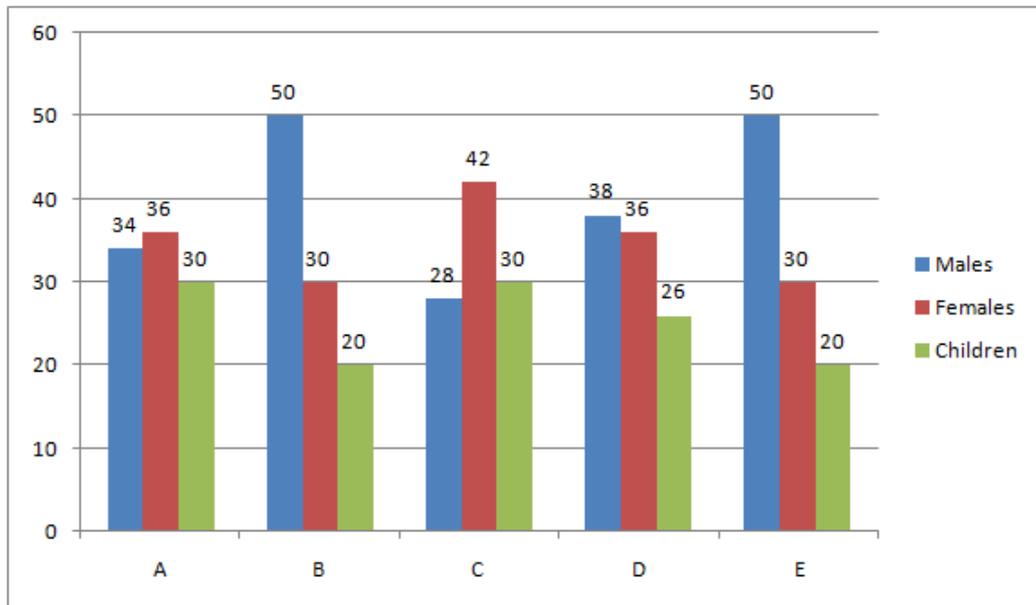
- a) Business India
- b) Dalal Street Journal
- c) Business World
- d) Fortune India
- e) None of these

223) The advertisement cost of page per thousand copies for business world has from 1987-88

- a) remained the same
- b) decreased by Rs 200
- c) increased by Rs 466
- d) Increased by Rs 200
- e) None of these

**Directions for questions (224-228): Go through the data set given below and solve the questions based on it.**

Following bar chart provides the percentage of Adult Males, Adult Females and Children out of total population in five colonies A, B, C, D and E:



Total number of Residents in these Colonies

Colonies	Residents
A	1250
B	2050
C	1800
D	1150
E	1620

224. What is the total number of adult females in colonies A, B and C together?

- a) 1785
- b) 1821
- c) 1479
- d) 1692
- e) None of The Above

225. The number of children in colony A are approximately what percent of the number of children in colony E?

- a) 121
- b) 116
- c) 75
- d) 101
- e) 98

226. What is the respective ratio of the number of adult males to the number of adult females in colony B?

- a) 3:5
- b) 7:5
- c) 8:7
- d) 5:7
- e) None of The Above

227. What is the average number of residents from all the colonies together?

- a) 1654
- b) 1600
- c) 1580
- d) 1574
- e) None of The Above

228. What is the difference between the number of adult males and the number of children in colony D?

- a) 138
- b) 126
- c) 136
- d) 135
- e) None of The Above

**Directions (229 -233): Go through the data set given below and solve the questions based on it.**

A rating company rates the performance of three companies producing shoes. The points are allotted according to their sales. The point Index (PI) of each of the companies = The number of lakh units sold during the month × points allotted.

The number of lakh units sold = $y$	Points Allotted
$y < 5$	3
$5 < y < 8$	4
$8 < y < 11$	5
$y > 11$	6

The following table show the number of

lakh units sold of each of the brands - Moon, Warle and Enivi - from Jan 07 to June 07.

Name of Month	Moon	Warle	Enivi	Rank of Months According to PI
Jan 07	7	4	-	4
Feb 07	-	13	-	1

Mar 07	-	-	-	5
Apr 07	-	-	-	6
May 07	-	-	-	2
Jun 07	-	-	10	3

**Note :-**

1. The number of lakh units sold by all the three companies in each of the months is identical.
2. The sum of the number of lakh units sold by each of the companies in all the six months together is identical.
3. The number of lakh units sold by any of the companies in any one of the months is at least 1.
4. The number of lakh units sold by exactly two companies in each of the months Feb 07, Mar 07, and Apr 07 is identical.
5. The Point Index of Jan 07 and May 07 is 26 and 17 less than Feb 07 respectively. Also the PI in Jan 07 is one more than that of March 07.
6. The number of lakh units sold by Moon in Mar 07 and Apr 07 together is equal to that in May 07.
7. The sum of PI in any month is not greater than 100.
8. The least possible Point Index (PI) is in Apr 07 for the sum of lakh units sold by all three companies.

**229. What is the number of lakh units sold by Enivi in Mar 07?**

- a) 5
- b) 6
- c) 4
- d) 7
- e) None of The Above

**230. Find the PI of all the three companies in Apr 07.**

- a) 59
- b) 60
- c) 61
- d) 58
- e) None of The Above

**231. What is the number of lakh units sold by Moon in all the six months together?**

- a) 34
- b) 32
- c) 36
- d) 38
- e) None of The Above

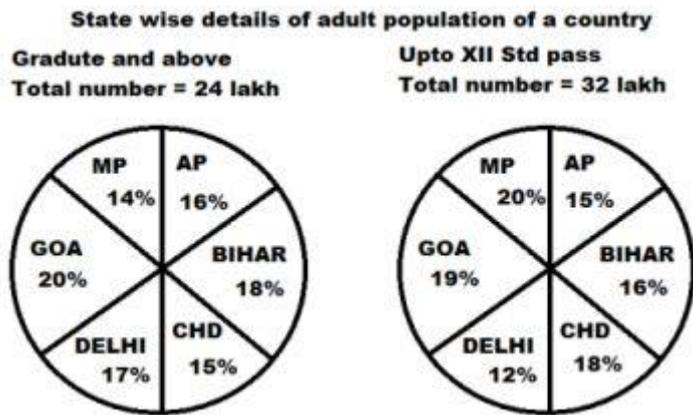
232. What is the number of lakh units sold by Enivi in May 07?

- a) 7
- b) 4
- c) 5
- d) 8
- e) None of The Above

233. What is the PI of Warle in all the six months together?

- a) 139
- b) 153
- c) 138
- d) 148
- e) None of The Above

**Directions (234-243): Study the following pie chart and table to answer these questions.**



<b>STATES</b>	<b>M:F (RATIO)</b>			
	<b>GRADUATES AND ABOVE</b>		<b>UPTO XII STD PASS</b>	
	<b>MALES</b>	<b>FEMALES</b>	<b>MALES</b>	<b>FEMALES</b>
<b>AP</b>	<b>7</b>	<b>5</b>	<b>7</b>	<b>9</b>
<b>BIHAR</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>5</b>
<b>CHD</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>5</b>
<b>DELHI</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>7</b>
<b>GOA</b>	<b>9</b>	<b>7</b>	<b>9</b>	<b>10</b>
<b>MP</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>

**234)** What is the difference between the graduate male population and XII Std male population from AP ?

- (a) 24000
- (b) 14000
- (c) 28000
- (d) 36000
- (e) None of these

**235)** What is the ratio of female population of Goa to XII Std female population of Delhi respectively?

- (a) 7:5
- (b) 5:7
- (c) 16:15
- (d) 15:16
- (e) None of these

**236)** Graduate female population of Chandigarh what per cent of the XII Std female population of the state ?

- (a) 40%
- (b) 62.5%
- (c) 50 %
- (d) 52.5%
- (e) None of these



**237)** Class XII pass male population of Chandigarh is what per cent of the total XII Std population of all the states together ?

- (a) 8%
- (b) 12%
- (c) 11%
- (d) 9%
- (e) None of these

**238)** What is the ratio of graduation male population of the Goa to XII Std female population of that state ?

- (a) 28:35
- (b) 35:28
- (c) 32:45
- (d) 45:32
- (e) None of these

**239)** Total graduate population of state MP is what per cent of the total XII Std population of AP ?

- (a) 56%
- (b) 72%
- (c) 68%



A	Triangle		16	12		50	20
B	Rectangle	10 × 20				30	15
C	Square	15				40	18
D	Parallelogram		20	12		60	25
E	Circle				10	45	22

244) What is the cost of flooring of A?

- a) Rs.4000                      b) Rs.4600                      c) Rs.4800  
d) Rs.5000                      e) Rs.4400

245) What is the difference between the cost of fencing of C and that of B?

- a) Rs.180                      b) Rs.120                      c) Rs.240  
d) Rs.360                      e) Rs.480

246) What is the ratio of the cost of flooring to that of fencing of field D?

- a) 4 : 1                      b) 6 : 1                      c) 8 : 1  
d) 9 : 1                      e) 5 : 1

247) The cost of fencing of field E is approximately what percent of the cost of flooring of field C?

- a) 10.5%                      b) 19.46%                      c) 18.71%  
d) 15.36%                      e) 13.82%

248) The cost of fencing of field C is what percent of the cost of fencing of field D?

- a) 87.54%                      b) 67.5%                      c) 72.13%  
d) 54.36%                      e) 46.5%

**Directions (249-253): Study the given chart carefully and answer the following questions.**

**Train A**

Station	Arrival time	Departure time	Distance from origin (in km)	Number of passengers boarding at each station	Fare (in Rs.)
Ahmedabad	Starting	5:00 pm	--	400	--
Vadodara	6:30 pm	6:35 pm	100	100	50
Bharuch	8:50 pm	9:00 pm	250	90	120
Mumbai	4:00 am	4:10 am	800	300	400
Pune	7:30 am	7:45 am	1050	150	500
Solapur	10:20 am	Terminates	1280	--	620

**Train B**

Station	Arrival time	Departure time	Distance from origin	Number of passengers boarding at each station	Fare (in Rs.)
Solapur	Starting	6:00 pm	--	300	--
Pune	7:40 pm	7:45 pm	230	150	120
Mumbai	9:30 pm	9:35 pm	480	270	220
Bharuch	5:40 am	5:55 am	1030	50	500
Vadodara	9:00 am	9:10 am	1180	100	570
Ahmedabad	12:00 noon	Terminates	1280	--	620

249) The number of passengers boarding Train A at Vadodara is what percent of the number of passengers boarding Train B at Mumbai?

- a) 37.03%                      b) 47.03%                      c) 27.03%  
 d) 47.30%                      e) None of these

250) What is the difference between the speed of Train A and that of Train B?

- a) 2.73 kmph                      b) 1.97 kmph                      c) 3.6 kmph  
 d) 2.62 kmph                      e) 3.9 kmph

251) What is the ratio of the total passengers of Train A to that of Train B?

- a) 102 : 79                      b) 104 : 87                      c) 103 : 87  
 d) 110 : 79                      e) 113 : 87

252) The total income of Train A is what percent of the total income of Train B?

- a) 180%                      b) 159.51%                      c) 123.29%  
 d) 125%                      e) 127.64%

253) If the average speed of Train A increases by 10% then when will it reach to its destination?

- a) 7:45 am                      b) 9:45 am                      c) 8:45 am  
 d) 10:45 am                      e) 11:45 am

**Directions (254:258): Study the chart carefully to answer the following questions.**

	Temperature				
	Durban	Quito	Columbus	Lisbon	Riyadh
January	20°C	15°C	20°C	22°C	35°C

February	21°C	16°C	18°C	20°C	30°C
March	22°C	18°C	16°C	22°C	32°C
April	25°C	20°C	15°C	25°C	36°C
May	28°C	22°C	14°C	18°C	38°C

254. What is the difference between the average temperature of Durban and that of Quito?

- a) 8°C
- b) 11°C
- c) 9°C
- d) 7°C
- e) 5°C

255. What is the difference between the average temperature of all cities in May and that of February?

- a) 10°C
- b) 13°C
- c) 3°C
- d) 2°C
- e) 5.8°C

256. The average temperature of Riyadh is approximately what percent more than that of Columbus?

- a) 105%
- b) 106%
- c) 93.5%
- d) 87.21
- e) 110.52%

257. What is the ratio of the average temperature of Lisbon to that of Quito?

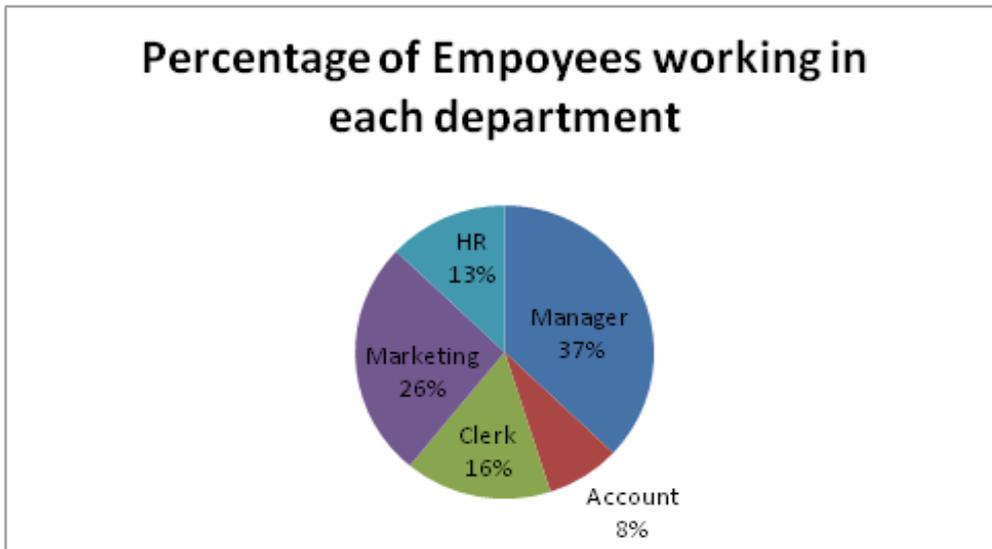
- a) 91 : 89
- b) 107 : 91
- c) 57 : 47
- d) 103 : 95
- e) 2 : 3

258. The average temperature in May is what percent of the average temperature in March of the given five cities?

- a) 89.91%
- b) 103.51%
- c) 120%
- d) 109.09%
- e) 105.21%

**Directions (259-263):**

Study the pie chart and table carefully based on that answer the following questions.



The pie chart shows the percentage of Employees working in different government department

Total number of Employees=1200

The table shows the no. Of females in each department

Manager	200
Account	40
Clerk	80
Marketing	167
Hr	116

259. What is total number of males working in department Manager, HR and Clerk.

- 1)400
- 2)380
- 3)394
- 4)396
- 5)360

**260. What is the ratio of females working in department Manager and clerk and males in department HR and marketing .**

1)56:37

2)56:35

3)55:37

4)55:30

5)57:37

**261. Number of Females working in Manager department is what percentage of total number of employees working in all the department.**

1)17%

2)20%

3)9%

4)15%

5)18%

**262. What is the central angle corresponding to the total number of clerk .**

1)52.6 °

2)55.2°

3)61.1°

4)56.4°

5)57.6°

**263. What is the ratio between total number of females employees working in all the department together and males working in all the department.**

1) 187:200

2)199:201

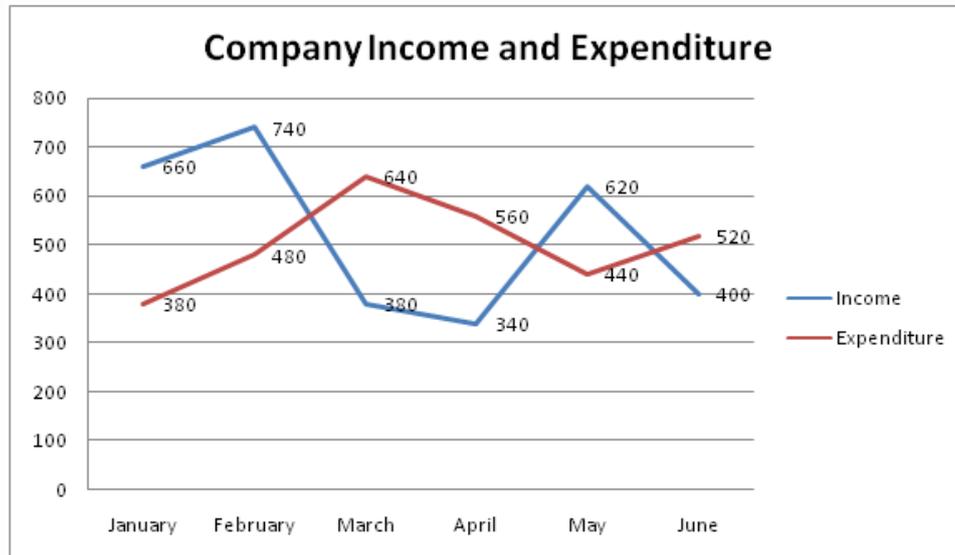
3)199:221

4)201:221

5)201:199

**Directions (264-268) : Study the graph carefully and answer the following question.**

Data related to Income (In Rs thousand ) and Expenditure (in Rs thousand) of company during six months.



$\text{Profit} = (\text{Income} - \text{Expenditure})$

$\text{Percent profit} = (\text{Profit} / \text{Expenditure} * 100)$

$\text{Loss} = (\text{Expenditure} - \text{Income})$

$\text{Loss percent} = (\text{Loss} / \text{Expenditure} * 100)$

**264. What is average profit earned by company In January ,February and May.**

1)280

2)220

3)240

4)200

5)260

**265. What is total loss percentage incurred by company in March and April .**

1)40

2)50

3)30

4)45

5) 36

**266. Profit earned by company in Feb is by what percent more than profit earned by company in May.**

1)44  $\frac{3}{9}$

2)48  $\frac{8}{9}$

3)38  $\frac{4}{9}$

4)42  $\frac{2}{9}$

5)44  $\frac{4}{9}$

**267. in Which month company earned the maximum profit .**

1) January

2) February

3) March

4) April

5) May

**268. If company income increased by 20% from June to July and Expenditure decrease by 10% .What was his profit percent in month of July.**

1)72  $\frac{1}{3}$

2)73  $\frac{1}{3}$

3)75  $\frac{2}{5}$

4)75  $\frac{1}{3}$

5)73  $\frac{2}{3}$

**Directions (269 -273): Study the following graph carefully and answer the questions that follow:**

The graph given below represents the number of users of two broadband services A and B across 5 cities P, Q, R, S and T.



269. What is the total number of users of brand B across all five cities together?

- a) 2700
- b) 3000
- c) 3100
- d) 2900
- e) 3200

270. The number of users of brand A in city T is what percent of the number of users of brand B in city Q?

- a) 150
- b) 110
- c) 140
- d) 160
- e) 120

271. What is the average number of users of brand A across all five cities together?

- a) 560
- b) 570
- c) 580
- d) 590
- e) 550

272. What is the difference between the total number of users of brand A and B together in city R and the total number of users of brand A and B together in city P?

- a) 170
- b) 140

- c) 130
- d) 150
- e) 160

273. What is the respective ratio of the number users of brand A in city P to the number of users of brand B in city S?

- a) 5 : 7
- b) 4 : 7
- c) 2 : 5
- d) 3 : 4
- e) 5 : 6

**Directions (274-278): Study the given table carefully to answer the following questions.**

Field Name	Shape	Side (in m)	Base (in m)	Height (in m)	Radius (in m)	Cost of flooring (in Rs. per sq. metre)	Cost of fencing (in Rs. per m)
A	Triangle		16	12		50	20
B	Rectangle	10 × 20				30	15
C	Square	15				40	18
D	Parallelogram		20	12		60	25
E	Circle				10	45	22

274. What is the cost of flooring of A?

- a) Rs.4000
- b) Rs.4600
- c) Rs.4800
- d) Rs.5000
- e) Rs.4400

275. What is the difference between the cost of fencing of C and that of B?

- a) Rs.180
- b) Rs.120
- c) Rs.240
- d) Rs.360
- e) Rs.480

276. What is the ratio of the cost of flooring to that of fencing of field D?

- a) 4 : 1
- b) 6 : 1
- c) 8 : 1
- d) 9 : 1
- e) 5 : 1

277. The cost of fencing of field E is approximately what percent of the cost of flooring of field C?

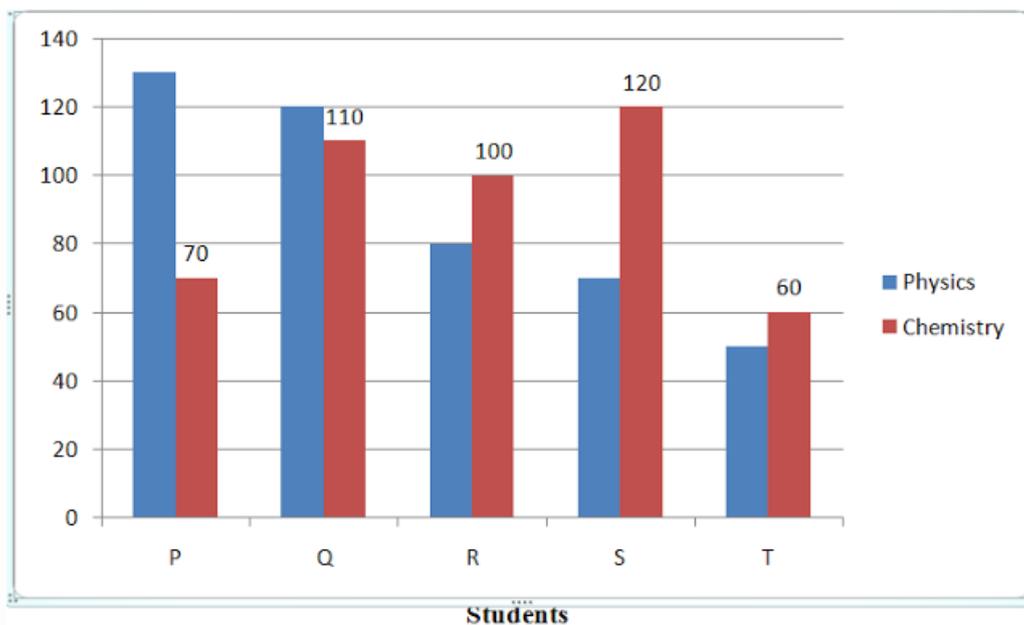
- a) 10.5%
- b) 19.46%
- c) 18.71%
- d) 15.36%
- e) 13.82%

278. The cost of fencing of field C is what percent of the cost of fencing of field D?

- a) 87.54%
- b) 67.5%
- c) 72.13%
- d) 54.36%
- e) 46.5%

**Directions (279 -283): Study the following bar graph carefully to answer the questions.**

Five students namely Param, Qartar, Rasheed, Sultan and Tango are termed as P, Q, R, S and T. Marks obtained by them in Physics and Chemistry :-



279. Marks obtained by Sultan in Chemistry is what percent of the total marks obtained by all the students in Chemistry?

- a) 26

- b) 28.5
- c) 35
- d) 31.5
- e) 22

**280. If the marks obtained by Tango in Physics were increased by 14% of the original marks, what would be his new approximate percentage in Physics if the maximum marks in Physics were 140?**

- a) 57
- b) 32
- c) 38
- d) 48
- e) 41

**281. Fill in the blank space in order to make the sentence correct as per the given information. Total marks obtained by Tango in both the subjects together is more than the marks obtained by**

- a) Qartar in Chemistry
- b) Rasheed in Physics
- c) Sultan in Chemistry
- d) Param in Physics
- e) Rasheed in both the subjects together

**282. What is the respective ratio between the total marks obtained by Param in Physics and Chemistry together to the total marks obtained by Tango in Physics and Chemistry together?**

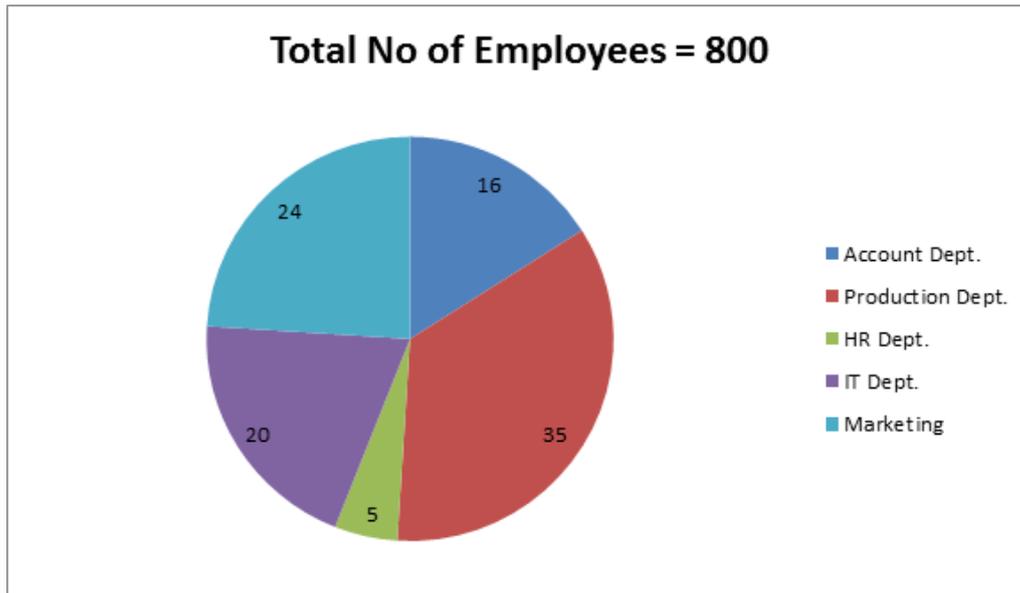
- a) 3 : 2
- b) 20 : 11
- c) 5 : 3
- d) 2 : 1
- e) None of these

**283. What is the respective ratio between the total marks obtained by Qartar and Sultan together in Chemistry to the total marks obtained by Param and Rasheed together in Physics?**

- a) 23 : 25
- b) 23 : 21
- c) 17 : 19
- d) 17 : 23
- e) None of these

**Directions (284-288) Study the following pie chart and table carefully to answer the questions:**

**Percentage breakup of employees working in various departments of an organization and the number of males in them**



Department	Number of Males
Production	245
HR	12
IT	74
Marketing	165
Accounts	93

284. The number of males working in the Marketing department is what percent of the total number of employees working in that department? (Rounded off to the nearest integer)

- a) 70
- b) 78
- c) 63
- d) 91
- e) 86

285. What is the respective ratio between the number of females working in the HR department and the total number of employees in that department?

- a) 7:10
- b) 5:7
- c) 8:17
- d) 12:19
- e) None of these

286. The number of males working in the Production department of the organization forms what percent of the total number of employees working in that department?

- a) 76.5
- b) 72.5

- c) 61.5
- d) 87.5
- e) None of these

287. The number of females working in the IT department forms what percent of the total number of employees in the organization from all departments together?

- a) 10.75
- b) 15.25
- c) 11.5
- d) 13.75
- e) None of these

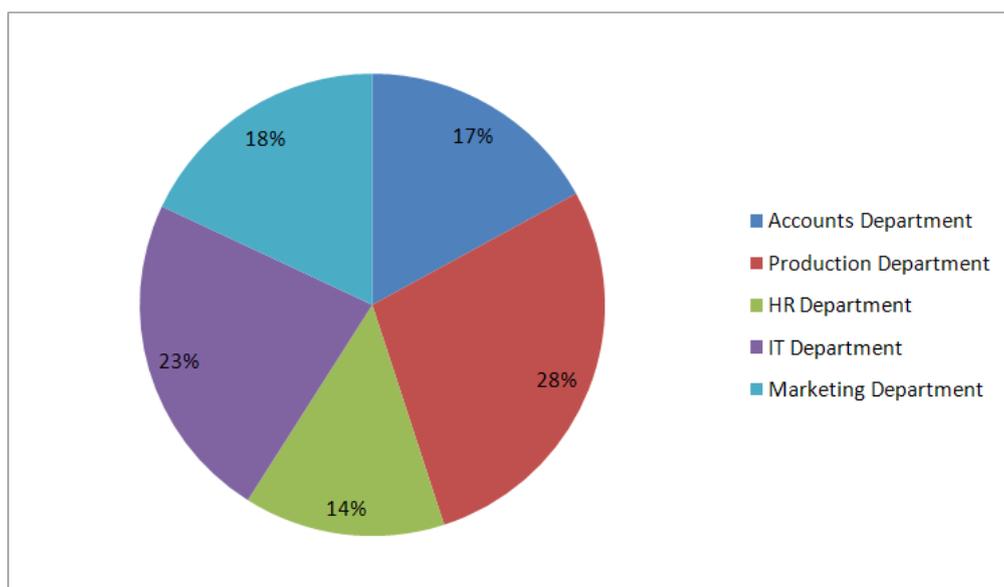
288. What is the respective ratio of the number of males working in the marketing department to the number of females working in that department?

- a) 63:8
- b) 55:9
- c) 64:7
- d) 56:3
- e) None of these

**Directions (289-293) Study the following pie chart and table carefully to answer the questions that follow.**

Percentage breakup of employees working in various departments of an organization and the ratio of men to women in them

Total number of employees = 1800



Ratio of Men to Women

Department	Men	Women
Production	11	1
HR	1	3
IT	5	4
Marketing	7	5
Accounts	2	7

289. What is the number of men working in the Marketing department?

- a) 132
- b) 174
- c) 126
- d) 189
- e) None of these



290. The number of men working in the production department of the organization forms what percent of the total number of employees working in that department? (rounded off to two digits after decimal)

- a) 89.76
- b) 91.67
- c) 88.56
- d) 94.29
- e) None of these

291. What is the respective ratio of the number of men working in the Accounts department of the total number of employees working in that department?

- a) 9:2
- b) 7:6
- c) 2:9

d) 6:7

e) None of these

**292. What is the respective ratio of the number of women working in the HR department of the organization and the total number of employees in that department?**

a) 3:4

b) 2:5

c) 2:9

d) 3:7

e) None of these

**293. The number of women working in the IT department of the organization forms approximately what percent of the total number of employees in the organization from all departments together?**

a) 7

b) 5

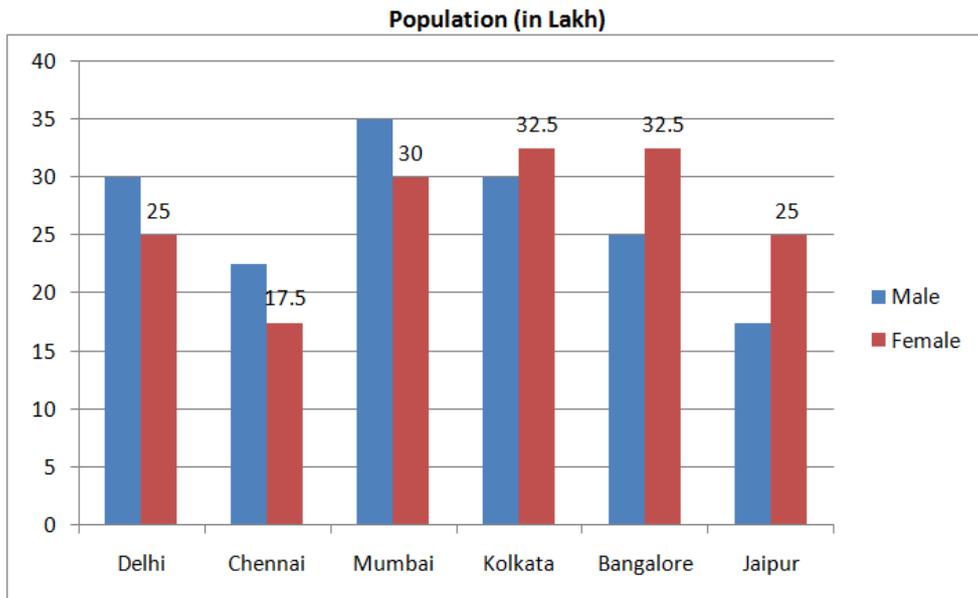
c) 19

d) 15

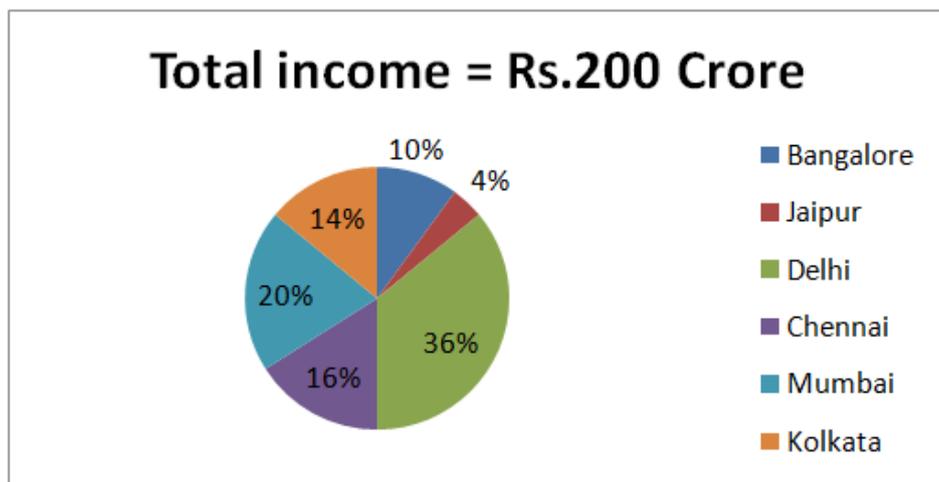
e) 10

**Directions (294-298): Study the bar-chart and pie-chart carefully to answer the given questions.**

Working male and female population (in lakh) in various cities



|  
**Percentage income of the people among six cities**



294) What is the difference between the number of working females in Bangalore and the number of working males in Chennai?

- a) 12.5 lakh
- b) 11 lakh
- c) 9 lakh
- d) 12 lakh
- e) 10 lakh

295) In which city is the income per working person the minimum?

- a) Delhi
- b) Jaipur
- c) Bangalore
- d) Chennai
- e) Mumbai

**296) What is the sum of the average working male and average working female population of the given six cities (calculate approximate value)?**

- a) 63.35 lakh
- b) 49.96 lakh
- c) 51.48 lakh
- d) 53.75 lakh
- e) 65.51 lakh

**297) In Delhi, what is the difference between the income of males and that of females? (Assume each person (male/female) has equal income.)**

- a) Rs.6.545 Crore
- b) Rs.5.055 Crore
- c) Rs.2.935 Crore
- d) Rs.3.455 Crore
- e) Rs.4.565 Crore

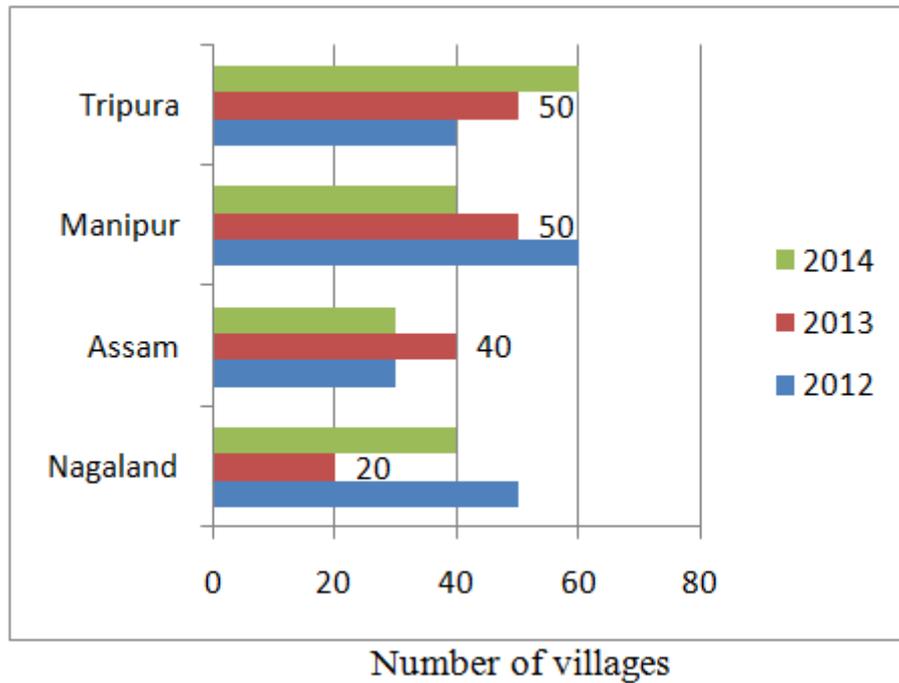
**298) The number of working females in Mumbai is what percent of the number of working males in Bangalore?**

- a) 95%
- b) 110%
- c) 120%
- d) 132%

e) 144%

**Directions (299-303): Study the given bar-chart carefully and answer the following questions.**

The graph shows the number of villages in four different states where electrification was done in different years.



299) The number of villages in Nagaland where electrification was done in 2013 is what percentage of the number of villages in Tripura where electrification was done in 2014?

- a) 55.5%
- b) 44.4%
- c) 77.7%
- d) 66.6%
- e) 33.3%

300) What is the ratio of the villages in Assam to those in Manipur where electrification was done in 2013?

- a) 1 : 4
- b) 3 : 4
- c) 1 : 2

d) 4 : 5

e) 3 : 2

**301) In which state was the electrification work done in maximum villages during the given three years?**

a) Assam

b) Manipur

c) Manipur and Tripura

d) Nagaland

e) Manipur and Assam

**302) If the cost of electrification of a village is Rs.75 lakh then what is the cost of electrification in four states during the given period?**

a) Rs.4319000000

b) Rs.3825000000

c) Rs.4143000000

d) Rs.3557000000

e) Rs.2721000000

**303) In which year was the electrification work done in maximum number of villages?**

a) 2012

b) 2013

c) 2014

d) 2013 and 2012

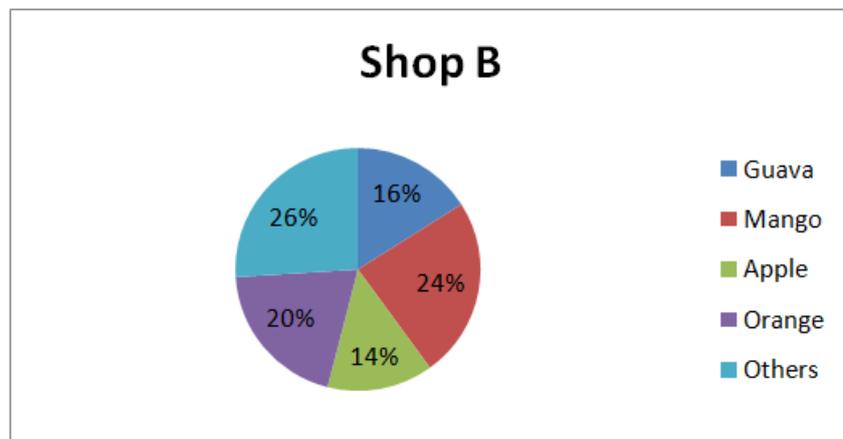
e) 2012 and 2014

**Directions (304-308): Study the pie-chart carefully to answer the questions given below:**

The pie-charts shows the percentage quantity of fruits at two fruit shops A and B.



**Total quantity = 1200 kg**



**Total quantity = 1000 kg**

304) What is the difference between the quantity of Guava at Shop B and that at Shop A?

- a) 40 kg
- b) 45 kg
- c) 35 kg
- d) 30 kg
- e) 50 kg

305) If the price of Mango is Rs.30 per kg, Apple Rs.40 per kg and Orange Rs.20 per kg, then what is the ratio of their costs at Shop A?

- a) 1 : 4 : 6
- b) 9 : 8 : 5

c) 3 : 7 : 8

d) 5 : 4 : 1

e) 2 : 5 : 7

**306) The quantity of Mango at Shop B is what percent of the quantity of Mango at Shop A?**

a) 20%

b) 220%

c) 120%

d) 80%

e) 180%

**307) If the price of Mango is Rs.30 per kg, Apple Rs.40 per kg and Orange Rs.20 per kg, other fruits Rs.15 per kg and Guava Rs. 18 per kg for both Shop A and B then what is the difference between the cost of all fruits at Shop A and that at Shop B?**

a) Rs.7200

b) Rs.3500

c) Rs.6400

d) Rs.5100

e) Rs.4600

**308) The quantity of Orange at Shop A is what percent more than that of Apple at Shop B?**

a) 161.52%

b) 195.5%

c) 182%

d) 190%

e) 171.42%

**Directions (309-313): Study the given table carefully to answer the following questions:**

Following table shows the investment (In Rs. Crore) in various sectors in different years

	2011		2012		2013		2014	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Industry	5000	2000	1000	1500	4000	3000	6000	1500
Cement	3000	1600	3000	2500	5000	2800	4000	1800
Metals	4000	2800	3500	2000	3200	2200	1500	500
Machinery	2000	3000	2500	3000	3600	6000	1000	1500
Transport	2500	2000	1500	3200	3000	1600	4000	1000
Fuel	1500	2500	1000	2800	1500	5000	1200	2000
Chemical	3500	1000	500	4000	2400	3200	2000	3000

309) What is the difference between the total domestic investment and the total foreign investment in the year 2011?



- a) Rs.6400 Crore
- b) Rs.6200 Crore
- c) Rs.6600 Crore
- d) Rs.7000 Crore
- e) Rs.7100 Crore

310) What is the ratio of the total investment in Metals to that in Machinery?

- a) 135 : 302
- b) 24 : 49
- c) 2 : 4
- d) 197 : 226
- e) 123 : 233

311) What is the average domestic investment in the year 2014? (You are not expected to calculate the exact value?)

- a) Rs.2814.28 Crore
- b) Rs.2519.75 Crore
- c) Rs.2234.82 Crore
- d) Rs.3151.51 Crore
- e) Rs.3329.79 Crore

312) Domestic investment in 2013 is what percent of foreign investment in 2011?

- a) 176.5%
- b) 179.7%
- c) 181.6%
- d) 183.5%
- e) 152.3%

313) The average domestic investment in the year 2011 is what percent of the average investment in Transport during the given four years?

- a) 201%
- b) 65.34%
- c) 125.45%
- d) 147.97%
- e) 167.23%

**Answer :**

1. 3;

The percentage increase/decrease in the income of company  $C_2$  in:

$$2009 = \frac{6-5}{5} \times 100 = 20\% \text{ (increase)}$$

$$2010 = \frac{5.5-6}{6} \times 100 = 8.3\% \text{ (decrease)}$$

$$2011 = \frac{7-5.5}{5.5} \times 100 = 27.27\% \text{ (increase)}$$

$$2012 = \frac{6.5-7}{7} \times 100 = 7.14\% \text{ (decrease)}$$

$$2013 = \frac{5.5-6.5}{6.5} \times 100 = 15.3\% \text{ (decrease)}$$

Hence, highest is in the year 2011.

2. 3;

Company  $C_1$  in 2009:

$\therefore$  Profit percentage =

$$\therefore \text{Profit Percentage} = \frac{5-2.25}{2.25} \times 100 = 122\%$$

3. 1;

Company  $C_2$  in 2011:

$$20 = \frac{7 - \text{Expenditure}}{\text{Expenditure}} \times 100$$

$$\Rightarrow 20 \text{ Expenditure} = 700 - 100E$$

$$\Rightarrow E = \frac{700}{120} = \text{Rs. 5.83 lakh}$$

4. 3;

Average income of company  $C_3$

$$= \text{Rs.} \left( \frac{6+4.5+5+4+5+4.5}{6} \right) \text{ lakh} = \text{Rs. 4.83 lakh}$$

5. 1;

Required percentage increase

$$= \frac{5.6-4}{4} \times 100 = 40\%$$

6. 4;

Suppose  $x$  units are produced in each year

**In year 2007:**

$$25x = 4500$$

$$\text{or, } x = 180$$

$$\therefore \text{profit} = \text{Rs. } 2500$$

$$\therefore \text{CP} = \text{Rs. } (4500 - 2500) = \text{Rs. } 2000$$

$\therefore$  Cost per unit

$$= \frac{2000}{180} = \text{Rs. } 11.11$$

**In year 2008:**

$$20x = 4000$$

$$\text{or, } x = 200$$

$$\therefore \text{profit} = \text{Rs. } 2000$$

$$\therefore \text{CP} = \text{Rs. } (4000 - 2000) = \text{Rs. } 2000$$

$\therefore$  Cost per unit

$$= \frac{2000}{200} = \text{Rs. } 10$$

**In year 2009:**

$$30x = 4200$$

$$\text{or, } x = 140$$

$$\therefore \text{profit} = \text{Rs. } 2500$$

$$\therefore \text{CP} = \text{Rs. } (4200 - 2500) = 1700$$

$\therefore$  Cost per unit

$$= \frac{1700}{140} = \text{Rs. } 12.14$$

**In year 2010:**

$$30x = 5100$$

$$\text{or, } x = 170$$

$$\therefore \text{profit} = \text{Rs. } 3000$$

$$\therefore \text{CP} = \text{Rs. } (5100 - 3000) = \text{Rs. } 12.35$$

**In year 2011:**

$$25x = 4000$$

$$\text{or, } x = 160$$

$$\therefore \text{Profit} = \text{Rs. } 1500$$

$$\therefore \text{CP} = \text{Rs. } (4000 - 1500) = 2500$$

$\therefore$  Cost per unit

$$= \frac{2500}{160} = \text{Rs. } 15.625$$

**In year 2012:**

$$35x = 3500$$

$$\text{or, } x = 100$$

$$\therefore \text{profit} = 2500$$

$$\therefore \text{CP} = \text{Rs. } (3500 - 2500) = \text{Rs. } 1000$$

$\therefore$  Cost per unit

$$= \frac{1000}{100} = \text{Rs. } 10$$

**In year 2013:**

$$25x = 3500$$

$$\text{or, } x = 140$$

$$\therefore \text{profit} = 2000$$

$$\therefore \text{CP} = \text{Rs. } (3500 - 2000) = \text{Rs. } 1500$$

$\therefore$  Cost per unit

$$= \frac{1500}{140} = \text{Rs. } 10.71$$

**In year 2014:**

$$20x = 4000$$

$$\text{or, } x = 200$$

$$\therefore \text{profit} = \text{Rs. } 3500$$

$$\therefore \text{CP} = \text{Rs. } (4000 - 3500) = \text{Rs. } 500$$

$\therefore$  Cost per unit

$$= \frac{500}{200} = \text{Rs. } 2.5$$

Hence, in 2011 cost price per unit is the maximum.

**7. 5;**

Cost = Revenue - Profit

$$\text{Cost in 2007} = 4500 - 2500 = 2000$$

$$2008 = 4000 - 2000 = 2000$$

$$2009 = 4200 - 2500 = 1700$$

$$2010 = 5100 - 3000 = 2100$$

$$2011 = 4000 - 1500 = 2500$$

$$2012 = 3500 - 2500 = 1000$$

$$2013 = 3500 - 2000 = 1500$$

$$2014 = 4000 - 3500 = 500$$

$$\text{Average} = \frac{2000+2000+1700+2100+2500+1000+1500+500}{8} = \text{Rs. } 1662.5$$

8. 1;

Year	Revenue	Total cost (old revenue – profit)
2007	80% of 4500 = 3600	4500-2500=2000
2008	80% of 4000 = 3200	4000-2000=2000
2009	80% of 4200 = 3360	4200-2500=1700
2010	80% of 5100 = 4080	5100-3000=2100
2011	4000	120% of (4000-1500 = 2500) = 3000
2012	3500	120% of (3500-2500=1000) = 1200
2013	3500	120% of (2500-1000=1500)=1800
2014	4000	120% of (4000-3500=500)=600

∴ 'None' is the answer.



9. 3;

Average of quantities sold

$$= \left( \frac{4000}{20} + \frac{4200}{30} + \frac{5100}{30} + \frac{4000}{25} + \frac{3500}{35} \right) \times \frac{1}{5}$$

$$= (200 + 140 + 170 + 160 + 100) \times \frac{1}{5}$$

$$= 770 \times \frac{1}{5} = 154$$

10. 5;

Total decrease in revenue

$$= 25\% \text{ of } (4500 + 4000 + 4200 + 5100) = 4450$$

Total increase in cost

$$= 25\% \text{ of } (2500 + 1000 + 1500 + 500) = 1375$$

∴ Decrease in cumulative profit

$$= \text{Total decrease in revenue} + \text{Total increase in cost}$$

$$= 4450 + 1375 = \text{Rs. } 5825$$

(11-15):

Countries	ODI	T20
Pakistan	294	190
Australia	490	230
England	308	180
Sri Lanka	252	250
S. Africa	350	330
New Zealand	336	200
Zimbabwe	378	260
WI	392	360

11. 1;

Required average runs

$$= \frac{252}{14-5} = 28$$

12. 5;

Required percentage

$$= \frac{200}{294} \times 100 = 68\%$$

13. 3;

The difference between the runs scored in ODI and T20 against:

Pakistan = 140	Australia = 260
England = 128	Sri Lanka = 2
S. Africa = 20	New Zealand = 136
Zimbabwe = 118	WI = 32

Hence, second lowest is of South Africa.

14. 4;

Required percentage

$$= \frac{360}{490} \times 100 = 73\%$$

15. 4;

Required percentage

$$= \frac{280}{2000} \times 100 = 14\%$$

16. 4;

Average expenses of P

$$= (10\% \text{ of } \frac{96}{360} + 30\% \text{ of } \frac{129}{360} + 10\% \text{ of } \frac{36}{360} + 40\%$$

$$\text{Of } \frac{51}{360} + 20\% \text{ of } \frac{48}{360}) \times \frac{1,20,000}{5}$$

$$= \frac{960+3870+360+2040+960}{3600} \times \frac{1,20,000}{5}$$

$$= \text{Rs. 5460}$$

17. 1;

Amount spent by Rahul on Entertainment

$$= \frac{20}{100} \times \frac{36}{360} \times 1,20,000 = \text{Rs. 2400}$$

Amount spent by Preeti on Entertainment

$$= \frac{15}{100} \times \frac{36}{360} \times 1,20,000 = \text{Rs. 1800}$$

∴ Required percentage increase

$$= \frac{2400-1800}{1800} \times 100 = 33\%$$

18. 4;

Average expenses of Rohit

$$= (25\% \text{ of } \frac{96}{360} + 15\% \text{ of } \frac{129}{360} + 25\% \text{ of } \frac{36}{360} + 10\%$$

$$\text{Of } \frac{51}{360} + 10\% \text{ of } \frac{48}{360}) \times 1,20,000$$

$$= \frac{2400+1935+900+510+480}{36000} \times \frac{1,20,000}{5}$$

$$= \text{Rs. 4150}$$

Average expenses of W (wife)

$$= (15\% \text{ of } \frac{96}{360} + 25\% \text{ of } \frac{129}{360} + 30\% \text{ of } \frac{36}{360} + 10\%$$

$$\text{Of } \frac{51}{360} + 25\% \text{ of } \frac{48}{360}) \times \frac{1,20,000}{5}$$

$$= \frac{1440+3225+1080+510+1200}{36000} \times \frac{1,20,000}{5}$$

$$= \text{Rs. 4970}$$

∴ Required percentage

$$= \frac{4150}{4970} \times 100 = 83.5\%$$

19. 1;

Required difference

$$= ((10+15) \text{ of } \frac{96}{360} - (30+10)\% \text{ of } \frac{36}{360}) \times \frac{1,20,000}{2}$$

$$= \frac{2400-1440}{36000} \times \frac{1,20,000}{5} = \text{Rs. 1600}$$

∴ Required percentage

$$= \frac{1600}{1,20,000} \times 100 = 1.3\%$$

20. 3;

Required percentage

$$= \frac{20\% \text{ of } \frac{129}{360} + 25\% \text{ of } \frac{51}{360}}{10\% \text{ of } \frac{96}{360} + 10\% \text{ of } \frac{129}{360}} \times 100$$

$$= \frac{20 \times 129 + 25 \times 51}{960 + 1290} \times 100$$

$$= \frac{2580 + 1275}{960 + 1290} \times 100 = \frac{3855}{2250} \times 100 = 171\%$$

21. 1;

Percentage increase/decrease in the production of company A are:

$$2011 = \frac{880 - 850}{850} \times 100 = 3.53\%$$

$$2012 = \frac{630 - 880}{880} \times 100 = -28.41\%$$

$$2013 = \frac{540 - 630}{630} \times 100 = -14.29\%$$

$$2014 = \frac{700 - 540}{540} \times 100 = 29.63\%$$

$$2015 = \frac{650 - 700}{700} \times 100 = -7.14\%$$

22. 3;

Required percentage

$$= \frac{2700}{4250} \times 100 = 63.5\%$$

23. 3;

Required answer

$$= \frac{4140}{6} = 690 \text{ tonnes}$$

24. 5;

Required answer = 3172 tonnes

25. 4;

Required ratio = 880 : 630 = 80:63

26) 1;

Production of company A in 2012

$$= \frac{15}{26} \times 650 = 375$$

Production of company A in 2013

$$= \frac{5}{8} \times 800 = 500$$

∴ Required percentage increase

$$= \frac{500-375}{375} \times 100 = 33\%$$

27) 4;

Required average

$$= \left( \frac{8}{17} \times 850 + \frac{7}{15} \times 900 + \frac{9}{14} \times 700 + \frac{11}{26} \times 650 + \frac{3}{8} \times 800 + \frac{13}{25} \times 750 \right) \times \frac{1}{6}$$
$$= \frac{400+420+450+275+300+390}{6} = 372.5$$

28) 2;

Required percentage

$$= \frac{\frac{3}{15} \times 500}{\frac{10}{26} \times 650} \times 100 = 40\%$$

29) 1;

Total production of company A in all the years together

$$= 850 \times \frac{9}{17} + 900 \times \frac{8}{15} + 700 \times \frac{5}{14} + 650 \times \frac{15}{26} + 800 \times \frac{5}{8} + 750 \times \frac{12}{25}$$

$$= 450 + 480 + 250 + 375 + 500 + 360 = 2415$$

Total sales of company B

$$= \frac{3}{5} \times 400 + \frac{15}{26} \times 650 + \frac{17}{11} \times 550 + \frac{7}{10} \times 500 + \frac{5}{12} \times 600 + \frac{1}{2} \times 650$$

$$= (240 + 375 + 350 + 350 + 250 + 325) = 1890$$

∴ Required ratio = 2415 : 1890 = 161:126

30) 2;

Average sales of company A

$$\begin{aligned} &= \frac{\text{Total sales} - \text{Total sales of company B}}{6} \\ &= \frac{3350 - 1890}{6} = 243 \end{aligned}$$

31) 5;

Required ratio

$$\begin{aligned} &= \frac{8}{17} \times 850 : \frac{9}{14} \times 700 \\ &= 400 : 450 = 8:9 \end{aligned}$$

32) 3;

Required percentage increase

$$\begin{aligned} &= \frac{\frac{1}{25} \times 750}{\frac{12}{25} \times 750} \times 100 \\ &= 8.3\% = 8\% \end{aligned}$$



33. 3

$$\text{In 2011 - 12} = \frac{12130 - 11080}{11080} \times 100 = 9.48\%$$

$$2012 - 13 = \frac{11970 - 12130}{12130} \times 100 = -1.32\%$$

$$2013 - 14 = \frac{12660 - 11970}{11970} \times 100 = 5.76\%$$

$$2014 - 15 = \frac{13830 - 12660}{12660} \times 100 = 9.24\%$$

Hence, maximum increase is in 2011-12

34. 2;

Profits in (Rs. Crore):

2010 -11 = 1370, 2011-12 = 2270, 2012-13 = 3010

2013-14 = 2060, 2014 - 15 = 1330

Hence, maximum profit is in 2012-13

35. 1;

Average income from the Express train

$$\frac{21220}{5} = \text{Rs. 4244 crore}$$

In 3 years (i.e 2010-11 , 2011-12, 2012-13) income from the Express trains is less than the average income from Express trains.

36. 4;

Required percentage =

$$\frac{7970}{40450} \times 100 = 20\%$$

37. 1;

Required percentage =

$$\frac{51630}{21220+40450} \times 100$$

$$\frac{51630}{61670} \times 100 = 83.7\%$$

38. 1;

Number of females above poverty line

$$= \frac{100-16}{100} \times 4400 \times \frac{2}{5} = 1478.4 = 1478$$

39. 4;

Since we cannot find the population of states separately, so we cannot find the required answer.

40. 1;

Population of state  $S_1$  below poverty line

$$= 18000 \times \frac{4+3}{4} = 31500$$

Total population of state  $S_1$

$$= 31500 \times \frac{100}{16} = 196875$$

Population of state  $S_5$  below poverty line

$$= 24000 \times \frac{3+2}{3} = 40000$$

Population of state  $S_5$

$$= 40000 \times \frac{100}{12.5} = 320000$$

$\therefore$  Required ratio = 196874: 320000 = 315: 512

41. 5;

Total population of state  $S_2$

$$= 4100 \times \frac{5+7}{5} \times \frac{100}{100-18} = 12000$$

42. 2;

Number of males below poverty line

$$= 4800 \times \frac{2+3}{3} \times \frac{100}{100-36} \times \frac{36}{100} \times \frac{4}{9} = 2000$$

(43-48):

Number of male artists = 160

Number of female artists = 240

Male	Female
Drama = $\frac{1 \times 160}{8} = 20$	Drama = $\frac{25 \times 240}{100} = 60$
Dance = $105 \times \frac{3}{7} = 45$	Dance = $\frac{40 \times 240}{100} = 96$
Skit = $105 \times \frac{4}{7} \times 60$	Skit = $\frac{4}{7} \times 84 = 48$
Singing = $\frac{25 \times 140}{100} = 35$	Singing = $\frac{3}{7} \times 84 = 36$

43. 3;

Required answer = 60 + 48 = 108

44. 2;

Required difference = 60 - 36 = 24

45. 5;

Required ratio = 36 : 45 = 4:5

46. 1;

Required answer = (20+45) + (60+96)

$$= 65 + 156 = 221$$

47. 4;

Required ratio = 35:48

**48. 2;**

Total number of students studying in all the colleges in 2012

$$= (1125 + 330 + 290 + 1050 + 450 + 325 + 1200 + 420 + 400 + 1600 + 440 + 400 + 1550 + 350 + 380) - (220 + 210 + 250 + 215 + 230 + 250 + 260 + 225 + 230) = 7970$$

$$\therefore \text{Required average} = 7970/5 = 1594$$

**49. 4;**

Required number of students

$$= 1050 + (450-250) + (325-215) + (285 - 210) + (300-190)$$

$$= 1545$$

**50. 3;**

$$\text{Required percentage} = 1225/3130 \times 100 = 39\%$$

**51. 1;**

Required difference

$$= (440 + 400 + 395 + 420 + 460) - (450 + 325 + 285 + 300 + 340)$$

$$= 2115 - 1700 = 415$$



**52. 5;**

Increase in the number of students in college A

$$= (330 - 220) + (290 - 210) + (345 - 200) + (380 - 250) + (350 - 230)$$

$$= 585$$

Percentage increase in 2015 from 2010

$$= \frac{585}{1125} \times 100 = 52\%$$

Similarly, for

$$\text{College B} = \frac{615}{1050} \times 100 = 58.57\%$$

$$\text{College C} = \frac{705}{1200} \times 100 = 58.75\%$$

$$\text{College D} = \frac{920}{1600} \times 100 = 57.5\%$$

$$\text{College E} = \frac{905}{1550} \times 100 = 58.38\%$$

Hence, maximum is for college C.

(53-57)

Number of boys = 600

Number of girls = 800

	<b>Girls</b>	<b>Boys</b>
Zoology	$30 \times 8 = 240$	$290 - 240 = 50$
Botany	$220 - 120 = 100$	$20 \times 6 = 120$
Mathematics	$2/5 \times 250 = 100$	$3/5 \times 350 = 150$
Physics	200	200
Statistics	$20 \times 8 = 160$	$160/2 = 80$

**53. 3;**

Required answer =  $200 + 200 + 160 + 80 = 640$

**54. 4;**

Required ratio =  $150 : 100 = 3:2$

**55. 1;**

Required difference =  $100 - 50 = 50$

**56. 4;**

Zoology and statistics

**57. 3;**

Required percentage =  $160/200 \times 100 = 80\%$

**58. 4; Required ratio**

$$= \frac{50+52+55+53+55}{5} \times 1000:$$

$$\frac{53+54+55+58+62}{5} \times 1000 = 265 : 282$$

**59. 1; The percentage increase or decrease in the number of females for town Y are as under;**

$$2012 = \frac{52-50}{50} \times 100 = 4\%$$

$$2013 = \frac{54-52}{52} \times 100 = 3.85\%$$

$$2014 = \frac{56-54}{54} \times 100 = 3.70\%$$

$$2015 = \frac{55-56}{56} \times 100 = 1.78\%$$

Hence, minimum is in 2015.

**60. 5; Required percentage**

$$\begin{aligned} &= \frac{(50+49)+(52+49)}{(58+56)+(62+55)} \times 100 \\ &= \frac{200}{231} \times 100 = 86.6\% \end{aligned}$$

**61. 2; Average number of females for town X = 51000**

Average number of females for town Y = 53400

So, 2011 and 2012 are two desired years for town X. Also, 2011 and 2012 are two desired years for town Y.

**62. 3; Difference between the population of males and females;**

	2011	2012	2013	2014	2015
X	1000	3000	3000	0	3000
Y	3000	2000	1000	2000	7000

$\therefore$  Desired pair is 2015 and 2014.

63. 3;

Procurement Department:

$$\text{Male manager} = \frac{5}{9} \times 2700 = 1500$$

$$\text{Female Manager} = \frac{4}{9} \times 2700 = 1200$$

$$\text{Male Officers} = \frac{9}{22} \times 2200 = 900$$

$$\text{Female Officers} = \frac{13}{22} \times 2200 = 1300$$

Total female employees = 1200 + 1300 = 2500  
Total male employees = 1500 + 900 = 2400

∴ Required percentage more

$$= \frac{2500 - 2400}{2400} \times 100 = 4\%$$

64. 5;

Female managers in Finance department

$$= \frac{11}{25} \times 2500 = 1100$$



Male managers in Sales department

$$= \frac{9}{16} \times 2400 = 1350$$

∴ Required percentage

$$= \frac{1100}{1350} \times 100 = 81\%$$

65. 4;

Female managers in Operation and Finance departments together

$$= \frac{4}{11} \times 2200 + \frac{11}{25} \times 2500$$

$$= 800 + 1100 = 1900$$

Male officers in Operation and Finance department together

$$= \frac{6}{14} \times 2800 + \frac{17}{32} \times 3200$$

$$= 1200 + 1700 = 2900$$

∴ Required ratio = 19: 29

**66. 5;**

Male officers in Advertising and Sales departments

$$= \frac{9}{16} \times 1600 + \frac{8}{13} \times 2600$$

$$= 900 + 1600 = 2500$$

∴ Required percentage

$$= \frac{2500}{1600 + 2600} \times 100 = 59.5\%$$

**67. 3;**

Female officers in Advertising and Public relation

$$= \frac{7}{16} \times 1600 + \frac{11}{20} \times 2500$$

$$= 700 + 1375 = 2075$$

Female managers in Advertising and Public Relation

$$= \frac{17}{29} \times 2900 + \frac{4}{9} \times 1800$$

$$= 1700 + 800 = 2500$$

∴ Required difference = 2500 - 2075 = 425

**68. 5;**

Required Ratio

$$= (1800 + 2500 + 2400 + 2200) : (3200 + 1600 + 2600 + 2200)$$

$$= 8900 : 9600 = 89:96$$

**69. 3;**

Required answer

$$= \left( \frac{24}{100} \times 5800 - \frac{28}{100} \times 3600 \right)$$

$$+ \left( \frac{11}{100} \times 5800 - \frac{14}{100} \times 3600 \right)$$

$$= 1392 - 1008 + 638 - 504 = 384 + 134 = 518$$

**70. 5;**

Required percentage

$$= \frac{15 \times 36}{16 \times 58} \times 100 = 58\%$$

71. 1;

Required average

$$\begin{aligned} &= \frac{(24 \times 58 - 28 \times 36) + (11 \times 58 - 14 \times 36) + (18 \times 58 - 21 \times 36)}{3} \\ &= \frac{1392 - 1008 + 638 - 504 + 1044 - 756}{3} \\ &= 268.67 = 269 \end{aligned}$$

72. 4;

Required percentage

$$\begin{aligned} &= \frac{(18 \times 58 - 21 \times 36) + (31 \times 58 - 22 \times 36)}{(31 \times 58 + 18 \times 58)} \times 100 \\ &= \frac{(1044 - 756) + (1798 - 792)}{1798 + 1044} \times 100 \\ &= \frac{288 + 1006}{1798 + 1044} \times 100 = \frac{1294}{2833} \times 100 = 46\% \end{aligned}$$



73. 3;

Required ratio

$$\begin{aligned} &= 18 \times 58 : 21 \times 36 \\ &= 58 : 42 = 29 : 21 \end{aligned}$$

74. 4;

Required difference

$$\begin{aligned} &= \frac{5}{14} \times \frac{21}{100} \times 10000 - \frac{4}{9} \times \frac{24}{100} \times 6000 \\ &= 750 - 640 = 110 \end{aligned}$$

75. 1;

Required percent

$$\frac{\frac{6}{100} \times 10000 \times \frac{1}{5}}{\frac{8}{100} \times 6000 \times \frac{7}{8}} \times 100$$

$$= 28.57\%$$

76. 3;

Number of boys (as required)

$$= \frac{24}{100} \times 6000 \times \frac{4}{9} + \frac{20}{100} \times 6000 \times \frac{3}{8}$$

$$= 640 + 450 = 1090$$

Number of girls (as required)

$$= \frac{6}{100} \times 10000 \times \frac{1}{5} + \frac{21}{100} \times 10000 \times \frac{9}{14}$$

$$= 120 + 1350 = 1470$$

∴ Required percent less

$$= \frac{1470 - 1090}{1470} \times 100 = 26\% \text{ less}$$



77. 5;

Required average

$$= \left[ \frac{13 \times 11}{16} + \frac{18 \times 5}{12} + \frac{17 \times 3}{8} + \frac{8 \times 7}{8} + \frac{24 \times 5}{9} + \frac{20 \times 5}{8} \right] \times \frac{6000}{100 \times 6}$$

$$= \left[ \frac{143}{16} + \frac{15}{2} + \frac{51}{8} + \frac{56}{8} + \frac{40}{3} + \frac{100}{8} \right] \times 10$$

$$= \left[ \frac{143 + 120 + 102 + 112 + 200}{16} + \frac{40}{3} \right] \times 10$$

$$= \left( \frac{677}{16} + \frac{40}{3} \right) \times 10$$

$$= \left( \frac{2031 + 640}{48} \right) \times 10 = 556$$

78. 2;

Required ratio

$$= \frac{3}{8} \times \frac{10}{100} \times 10000 : \frac{5}{8} \times \frac{17}{100} \times 6000 = 10:17$$

(79-83):

Banks	Male employee	Female employees
A	1040	480
B	960	720
C	657	803
D	600	780
E	923	497

79. 4;

Required answer = 4180

80. 1;

Required average

$$= \frac{3280}{5} = 656$$



81. 5;

Required percentage more

$$= \frac{(1040+657)-(720+780)}{720+780} \times 100$$

$$= \frac{1697-1500}{1500} \times 100 = 13\%$$

82. 2;

Required ratio

= 780:497

83. 2;

Required percentage

$$= \frac{1460-1380}{1380} \times 100 = 6\%$$

(84-91):

Number of candidates qualified in the year

$$2013 = 45 \times 1420 = 63900$$

$$2014 = 52 \times 1800 = 93600$$

States	2013	2013		2014	2014	
	Qualified	M	F	Qualified	M	F
$S_1$	$18 \times 639 =$ 11502	6390	5112	$20 \times 936 =$ 18720	11648	7072
$S_2$	$16 \times 639 =$ 10224	7668	2556	$12 \times 936 =$ 11232	7020	4212
$S_3$	$12 \times 639 =$ 7668	4473	3195	$16 \times 936 =$ 14976	10296	4680
$S_4$	$16 \times 639 =$ 10224	5538	4686	$15 \times 936 =$ 14040	8100	5640
$S_5$	$25 \times 639 =$ 15975	8307	7668	$22 \times 936 =$ 20592	12870	7722
$S_6$	$13 \times 639 =$ 8307	7384	923	$15 \times 936 =$ 14040	7722	6318

87. 2;

Required percentage

$$= \frac{2556}{11648} \times 100 = 22\%$$

85. 1;

Required average

$$= \frac{7068+4212+4680+5940+7722+6318}{6} = 5990$$

86. 3;

Required ratio

$$= 5112 + 3195 : 11648 + 10296$$

= 8307 : 21944

87. 3;

Required average

$$= \frac{10224+7668+10224+8307}{4} = 9105.75$$

88. 5;

Required average

$$= \frac{6390+7668+4473+5538+8307+7384}{6} = 6627$$

89. 2;

Required percentage more

$$= \frac{12870-7384}{7384} \times 100 = 74\%$$

90. 1

91. 4

92. 3;

Total foreign investment in other sectors

$$= 19.5/100 \times (1560+1780+1970+690+730+830+1940)$$

= Rs. 18.52 crore

93. 5;

Required percentage

$$= \frac{18.5 \times 1560}{14.4 \times 1940} \times 100$$

$$= \frac{28860}{27936} \times 100 = 103\%$$

94. 2;

Foreign investment in Pharmaceutical sector in AP

$$= \frac{730 \times 8.5}{100} = \text{Rs. } 62.05 \text{ crore}$$

Foreign investment in telecom sector in Delhi

$$= 830 \times \frac{13.5}{100} = \text{Rs. } 112.05 \text{ crore}$$

∴ Required percentage less =

$$= \frac{112.05 - 62.05}{112.05} \times 100 = 44.6\%$$

95. 1;

Ratio of foreign investment in Defence sector in states are as under

Rajasthan : TN = 1560 : 690 = 52:23

Maharashtra : TN = 1940 : 690 = 194:69

MP : AP = 1780 : 730 = 178: 73

MP : TN = 1780 : 690 = 178: 69

Gujarat : Delhi = 1970 : 830 = 197 : 83

96. 4;

Required ratio =

$$= \frac{25.6}{100} \times 1970 : \frac{(14.4+18.5)}{100} \times 1780$$

$$= 256 \times 197:329 \times 178$$

$$= 25216: 29281$$

(97-101)

Sector	Total Workforce (in lakh)	Male (in lakh)	Female (in lakh)
Service	12	7.2	4.8
Sales	9.6	6	3.6
Construction and Maintenance	7.2	4	3.2

Professionals	14.4	6	8.4
Management	16.8	7.2	9.6
Production and Transportation	15.2	9.5	5.7
Others	4.8	1.8	3

97. 4; Required average = = 5.96 lakh

98. 1; Required percentage =  $x 100 = 330\%$

99. 3; Required percentage =  $x 100 = 87\%$

100. 2; Required percentage

=  $x 100 = 131.6\%$

101. 5; Required ratio =  $3.2 : 6 + 1.8$

=  $3.2 : 7.8 = 32 : 78 = 16 : 39$

(102-106)

City	Population	Adults
U	$20 \times 28000 = 560000$	$55 \times 5600 = 308000$
V	$19 \times 28000 = 532000$	$60 \times 5320 = 319200$
W	$17 \times 28000 = 476000$	$68 \times 4760 = 323680$
X	$21 \times 28000 = 588000$	$66 \times 5880 = 388080$
Y	$9 \times 28000 = 252000$	$72 \times 2520 = 181440$
Z	$14 \times 28000 = 392000$	$70 \times 3920 = 274400$

102. 2; Total number of adults in city Y = 181440

Total number of males in city X

=  $x 588000 = 252000$

$\therefore$  Required percentage =  $x 100 = 72\%$

103. 3; Required difference =  $x 532000 = 84000$

104. 5; Data not sufficient

105. 5; Number of male population in city Z

$$= 392000 \times = 2,24,000$$

106. 2; Number of persons in city W who are not adult

$$= x 476000 = 152320$$

107.1

$$\text{Chemistry} = 18 \times 23 = 414$$

$$\text{After increasing 26 students} = 414 + 26 = 440$$

$$\text{Physics} = 17 \times 18 = 306$$

$$\text{After decreasing 26 students} = 306 - 26 = 280$$

$$\text{percentage} = 280 \times 100 / 440 = 63.63 \approx 64\%$$

108. 3

$$\text{English} = (27 \times 18) - 20 = 486 - 20 = 466$$

$$\text{Physics} = 17 \times 18 = 306$$

$$\text{Hindi} = 8 \times 18 = 414$$

$$\text{Chemistry} = 18 \times 23 = 414$$

$$\text{Biology} = 12 \times 18 - 35 = 216 - 35 = 181$$

$$\text{Difference} = (\text{English} + \text{Physics}) - (\text{Hindi} + \text{Chemistry} + \text{Biology})$$

$$\Rightarrow \text{difference} = 772 - 739 = 33$$

109.1

$$\text{Students passed in English} = 18 \times 27 = 486$$

$$\text{Students passed in Chemistry} = 18 \times 23 = 414$$

$$\text{after increasing 69 in Chemistry} = 414 + 69 = 510$$

$$\text{Ratio between English and Chemistry} = 486 : 510 = 81 : 85$$

110.2

$$\text{Total together} = 1800 \left( \frac{13 \times 150}{100 \times 100} + \frac{8 \times 75}{100 \times 100} \right)$$

$$\Rightarrow \text{Total together} = 351 + 108 = 459$$

111. 1

$$\text{Male students passed in Physics} = \frac{7}{9} \times 1800 \times \frac{17}{100} = 238$$

$$\text{Students passed in Chemistry} = \frac{23 \times 1800}{100} = 414$$

$$\text{percentage} = \frac{238}{414} \times 100 = 57.48$$

112. c

$$\frac{40}{100} = \frac{(I - 400)}{400}$$

$$\Rightarrow \text{Income} = 560$$

113. a

$$35/100 = (300 - E)/E$$

$$E = 222.22 \text{ crore}$$

**114. c**

$$35/100 = (I - E_1)/E_1$$

$$\Rightarrow I = 27E_1/20 \text{ ---(i)}$$

$$30/100 = (I - E_2)/E_2$$

$$\Rightarrow I = 13E_2/10$$

$$E_1/E_2 = 26 : 27$$

**115. c**

$$\% \text{ profit in 2010} = 30\%$$

$$\% \text{ profit in 2012} = 40\%$$

$$\% \text{ increase} = (10/30) * 100 = 33.33\%$$

**116. b**

$$\text{Company 1} = 60/100 = (I - E)/E$$

$$\Rightarrow I_1 = (8/5) * E$$

$$\text{Company 2} = 50/100 = (I - E)/E$$

$$\Rightarrow I_2 = (3/2) * E$$

$$\text{so ratio } I_1 : I_2 = 16 : 15$$

**117. 4**

$$88\% \text{ ----- } 22,000$$

$$100\% \text{ ----- } ?$$

$$\text{Total salary} = 25,000$$

$$\text{Savings} = 25,000 - 22,000 = 3,000$$

$$\text{Ratio} = 25,000 : 3,000 = 25 : 3$$

**118. 3**

$$\text{Expenditure} = 32,000 - 5,500 = 26,500$$

$$100\% \text{ ---- } 26,500$$

$$20\% \text{ ---- } ?$$

$$\text{For Education he spends} = 5,300$$

**119. 2**

$$C \text{ salary} = 27,000$$

$$C \text{ expenditure} = 27,000 * 88/100 = 23,760$$

$$\text{Rent} = 23,760 * 10/100 = 2,376$$

**120. 2**

A's salary = 45,000

B's salary = 38,000

D's salary = 25,800 + 4,200 = 30,000

E's salary = 32,000

Average =  $(45,000+38,000+30,000+32,000)/4 = 36,250$

### 121. 2

A's Savings = 45,000 - 37,500 = 7500

After increasing his salary become =  $120*45000/100 = 54,000$

Expenditure =  $37,500*110/100 = 41,250$

A's new savings = 54,000 - 41,250 = 12,750

Difference = 12,750 - 7,500 = 5,250

### 122.5

Girls in School T = 1500

Total number of students in School Q = 3500+2000=5500

Ratio = 1500 : 5500 = 3:11

### 123.4

Boys in School S = 4500

Boys in School Q = 3500

==> percentage of Boys from school S in Boys in School Q =  $(4500*100)/3500=128.57\sim=129\%$



### 124.1

Total number of boys from all schools = 5500+3500+3000+4500+4000=20500

Average number of boys =  $20500/5 = 4100$

### 125.5

100 students increased . But here not mentioned number of girls and boys in the number of 100 students.

Data insufficient

### 126.2

Total number of girls in P, Q and R = 2500+2000+1500= 6000

Total number of boys in R, S and T = 3000+4500+4000=11500

Ratio = 6000 : 11500 = 12:23

### 127. 3

No.of students appearing from B state in 2016 =  $20*240000/100 = 48000$

No.of students appearing from F state in 2015 =  $20*250000/100 = 50000$

Percentage =  $48000*100/50000 = 96\%$

**128. 3**

Students appearing from B and C in 2015 =  $(18+12)*250000/100 = 75000$

Go through options verification check one by one

You will find option C is approximately equal to 75000

**129. 4**

Students from Hyderabad and Chennai in 2016 =  $30000+35000=650000$

Total number of students in 2016 = 240000

Students not from Chennai and Hyderabad =  $240000-65000= 175000$

Percentage =  $175000*100/240000 = 72.91$

**130. 1**

Students appearing from A,C,and F in 2016 =  $(13+18+23)*240000/100= 129600$

Students appearing from A,C and F in 2015 =  $(19+12+20)*250000/100 = 127500$

Percentage =  $127500/129600 * 100 = 98.37$

**131. 4**

Students appearing examination is 20% more than the students appearing examination in 2015 = 300000

But F state details in 2014 not given



**132. 2**

Let expenditure =  $x$

65% of  $x = 8,12,500$

$x=12,50,000$

Income = Expenditure + Profit

=  $12,50,000 + 8,12,500$

=  $20,62,500$

**133. 3**

Let the expenditure of X = expenditure of Y =  $a$

Income of X = 170% of  $a$

=  $1.7 a$

Income of Y = 155% of  $a$

=  $1.55 a$

Ratio =  $1.7//1.55 = 34/31$

**134. 2**

Let the amount invested by Y =  $x$

And amount invested by X =  $2x$

$x+2x=27$

$x=9$

Expenditure of X =  $2x = 18$

Expenditure of Y =  $x = 9$

Profit earned by X = 75% of 18 = 13.5

Profit earned by Y = 80% of 9 = 7.2

Total profit earned by two companies = 20.7

### 135.1

Let the investment of X in 2012 =  $x$

And investment of X in 2013 =  $x$

Income of X in 2013 = 24

Income of X in 2013 = 160% of  $x = 1.6x$  [60% Profit]

$1.6x = 24$

$x = 15$

profit in 2012 = 45% of 15 = 6.75

profit in 2013 = 60% of 15 = 9

Difference = 2.25

### 136.4

Investment of X in 2015 = 25

Profit of X in 2015 = 90% of 25 = 22.5

Investment of Y in 2015 = 25

Profit of Y in 2015 = 70% of 25 = 17.5

Average profit =  $40/2 = 20$

### (137-141):

According to the given information

Useful formulas is

$d = s \times t$ ,  $t = d/s$ ;  $d = \text{distance}$ ,  $t = \text{time}$ ,  $s = \text{speed}$

two cars or trains are moving to opposite towards each other the time take they meet is = (total distance)/(sum of the speeds)

Distance Between V and VI =  $36 \times 8 \frac{2}{3}$

=  $36 \times \frac{26}{3} = 312$  km

Between VI and VII =  $22 \times 6 \frac{7}{11}$

=  $73 \times \frac{22}{11} = 146$  km

Between VII and VIII =  $42 \times 13/3 = 182$  km

137. c distance between destinations IV and V = 162

distance between destinations VII and VIII = 182

ratio is 162 : 182  $\Rightarrow$  81:91

138. a  $t = \text{distance b/w IV and V} / \text{speed}$

$$=162/18=9 \text{ hrs}$$

$t = \text{distance b/w V and VI} / \text{speed}$

$$=312/60=5 \frac{1}{5} \text{ hrs}$$

Avg speed = total dis / total time

$$=474 / (9 + 5 \frac{1}{5})$$

$$=38.85$$

Approximately 39 kmph

**139. b**  $t = (\text{total distance I to V}) / (\text{sum of speeds of A\&D})$

$$\text{total dis} = (188 + 254 + 228 + 162) = 832 \text{ km}$$

$$D \text{ 's speed} = 162 / 6 = 27 \text{ kmph}$$

$$\text{total speeds} = 77 + 27 = 104 \text{ kmph}$$

$$\text{time taken by they meet} = 832 / 104 = 8 \text{ hrs}$$

that means they at 1 pm (5 am + 8 hrs = 1pm)

**140.d** Total distance b/w =  $188 + 254 + 228 + 162 + 312 + 146 + 182$

$$=1472 \text{ km}$$

$$B \text{ 's speed} = 254 / 5 \frac{12}{23}$$

$$=254 \times 23 / 127$$

$$=46 \text{ kmph}$$

$$\text{Time taken by B to travel I to VIII} = 1472 / 46 = 32 \text{ hrs}$$

**141. b** Total distance I to VIII = 1472

$$\text{Time taken by to reach I to VIII} = 1472 / 77 = 19.11$$

$$=19$$

$$H \text{ 's speed} = 77 + 10 = 87$$

$$\text{Time taken by to reach I to VIII} = 1472 / 87 = 16.88$$

$$=17$$

So H reach destination 2 hrs early than A (approx)

**142.**

The year 1993 there was an increase of 10% population of AP. and 12% of Bihar

$$\text{The ratio is} = 370000 \times 110 / 100 : 500000 \times 112 / 100$$

$$= 407 : 560$$

**143.**

$$\text{Total no of woman in AP is} = 370000 \times 6 / 10 = 222000$$

$$\text{Total no of woman in HP is} = 280000 \times 4 / 7 = 160000$$

$$\text{Required percentage} = (222000 / 160000) \times 100 = \sim 126$$

**144.**

The total no of literate under graduates population in Assam=  $300000 \times (7/90) \times (30/100)$   
=è 70000

**145.**

if 70% of the females are literate and 75% of the males are literate

female illiterate Haryana=  $(450000 \times 4/9) \times (30/100)$

=è60000

male illiterate Haryana=  $(450000 \times 5/9) \times (25/100)$

=è62500

Total no of illiterate population in Haryana=122500

**146.**

the ratio of literates in Assam to the literates in Bihar

=è  $300000 \times 7/9 : 500000 \times 1/5$

=è 21 : 45

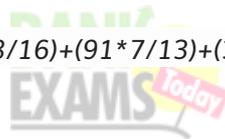
=è 7 : 15

**147.3**

A =  $568 - 536 = 32$

Total women employees =  $(288 \times 5/12) + (128 \times 8/16) + (91 \times 7/13) + (38 \times 7/19)$

=247



**148.1**

C =  $683 - 548 = 135$

Men PO =  $135 \times 11/27 = 55$

Percentage =  $55 \times 100/683 = 8.0527 \sim 8\%$

**149.5**

D =  $657 - 297 = 360$

Total Men clerks in all bank =  $(325 \times 7/13) + (427 \times 5/7) + (288 \times 7/12) + (360 \times 5/8) + (465 \times 17/31) = 1128$

**150.2**

E = 78

A = 32

B = 135

Sum = 245

**151.1**

A = 32

B = 135

C = 91

$$D = 360$$

$$E = 78$$

$$C+E = 169$$

$$A+B+D = 527$$

$$\text{Percentage} = 169 \times 100 / 527 = 32.068 \approx 32\%$$

### 152.5

$$\text{Percentage} = (70 \times 100) / 290 = 24.13\%$$

### 153. 1

$$\text{Total students from Hyderabad} = 84 + 52 = 136$$

$$\text{Percentage} = (136 \times 100) / 1400 = 9.71$$

### 154. 3

$$\text{Males} = 820$$

$$\text{After replacing} = 820 - 20 = 800$$

$$\text{Females} = 290$$

$$\text{After replacing} = 290 + 20 = 310$$

$$\text{Ratio} = 800 : 310 = 80 : 31$$

### 155. 2

$$\text{Total seats in Z college} = 216$$

$$\text{Post Graduate seats in Z college} = 96$$

$$\text{Percentage} = (96 \times 100) / 216 = 44.44\%$$

### 156.3

$$\text{Total seats in W college} = 360 + 30 = 390$$

$$\text{Total seats in X college} = 210 + 72 = 282$$

$$\text{Difference} = 390 - 282 = 108$$

### 157.1

$$\text{Total percentage of marks obtained by all students in Hindi} = 70 + 80 + 66 + 58 + 76 + 64 = 414$$

$$\text{Total Marks obtained by all students in Hindi} = (50 \times 414) / 100 = 207$$

$$\text{Average} = 207 / 6 = 34.5$$

### 158.1

$$\text{Marks obtained by B in all subjects together} = (65 \times 150) / 100 + (68 \times 100) / 100 + (66 \times 50) / 100 + (69 \times 100) / 100 + (80 \times 125) / 100 + (80 \times 50) / 100 = 407.5$$

### 159.5

$$\text{F's overall percentage of marks} = (356 \times 100) / 575 = 61.91\%$$

**160.2**

Pass percentage in chemistry =  $(120 \times 100) / 150 = 80\%$

Pass percentage in Physics =  $(95 \times 100) / 125 = 76\%$

From the above table Only D could pass in both subjects .

**161.3**

Calculate All students scores , you will find D got the highest marks in all subjects together .

**162.1**

Selling price =  $32,000 + 4000 = 36,000$

% of Profit =  $4000 / 36000 = 12.5\%$

**163.3**

HTC mobile Selling Price = 33,000

HTC Mobile % Of Profit = 10%

means 33,000 ----- 110%

? ----- 100% (CP)

Cost Price of HTC = 30,000

Micromax cost price =  $3/5 * 30,000 = 18,000$

Selling price = 22,000

profit = 4,000

% of profit =  $(4000 / 18,000) * 100 = 22 \frac{2}{9}\%$

**164.5**

Profit on Samsung mobile = 3,500

from that profit on LG mobile =  $3500 + 500 = 4000$

Selling Price of LG mobile = 32,000

% of profit on LG =  $(4000 / 28,000) * 100 = 14 \frac{2}{7}\%$

**165.3**

Cost Price = 53,000

% of profit = 14%

53,000 ----- 100%

? ----- 114%

Selling price = 60,420

profit =  $60,420 - 53,000 = 7420$

**166.5**

Cost Price = 35,000

Selling Price =  $35,000 + 3500 = 38500$

$$\text{Ratio} = 35000 : 38500 = 10:11$$

**167. 3**

number of students who failed in all the three subjects is  
 $= 2000 - 1316 - 744 - 1180 + 868 + 252 + 332 = 212$

**168. 1**

number of students who failed in Bengali but not in Punjabi is  $= 1180 - 252 = 928$

**169. 1**

number of students who failed in Telugu but not in Bengali is  $= 1316 - 868 = 448$

**170. 4**

number of students who failed in Punjabi but not in Telugu is  
 $= 744 - 332 = 412$

**171. 3**

number of students who failed in Telugu or Bengali but not in Punjabi is  
 $= 2000 - 744 = 1256$



**(172-176)**

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

33.5% 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  $= 1200 - (235 + 250 + 405) = 310$

**172. 4**

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  $= 220 : 405 = 44:81$

173. 3

total number of passengers in the general coaches of Krishna Express and the AC coaches of Godavari Express together =  $270+235=505$

174. 2

difference between the number of passengers in the AC coaches of Krishna Express and total number of passengers in sleeper class coaches and first class coaches together of Godavari Express =  $(405+250)-175=480$

175. 3

total amount will be generated from first class coaches of Krishna Express =  $550*220=121000$

176. 3

total amount will be generated from First and AC class coaches of Godavari Express =  $(450*250)+(950*235)=335750$

(177-181):

Days	Speed (Km/hr)		Distance (km.)		Time (hr.)	
	P	Q	P	Q	P	Q
1	5	10	10	20	2	2
2	7	12	14	12	2	1
3	3	10	15	16	5	1 hr 36 min.
4	12	18	12	18	1	1
5	18	15	9	18	30 min.	1 hr. 12 min.

177. 2

178. 3

179. 4

180. 4

181. 3

(182-186):

State	No. o Students	Boys	Girls
Bihar	500	410	90
Jhk.	450	378	72
U.P.	300	246	54
M.P.	625	475	150
W.B.	625	475	150
<b>Total</b>		1984	516

182. 3

183. 2

184. 2

185. 2

186. 3

187 (Option C)

Average number of players who play Football and Rugby = [(17 + 13) % of 4200]

$$= 4200 \times \frac{30}{100} = 1260$$

188 (Option B)

$$\text{Number of Male players who play Rugby} = 4200 \times \frac{13}{100} = 546$$

$$\text{Number of Female players who play Rugby} = 2000 \times \frac{10}{100} = 200$$

$$\text{Hence, Number of Male players who play Rugby} = 546 - 200 = 346$$

$$\text{Number of Female players who play Lawn Tennis} = 2000 \times \frac{22}{100} = 440$$

$$\text{Hence, Required Difference} = 440 - 346 = 94$$

189. (Option C)

$$\text{Number of Female Cricketers} = 2000 \times \frac{40}{100} = 800$$

$$\text{Number of Male Hockey players} = 4200 \times \frac{10}{100} - 2000 \times \frac{15}{100}$$

$$= 420 - 300 = 120$$

$$\text{Hence Required Ratio} = 800 : 120 = 20 : 3$$

**190. (Option B)**

Number of Male players who play Football, Cricket and Lawn Tennis

$$= (17 + 35 + 25)\% \text{ of } 4200 - (13 + 40 + 22)\% \text{ of } 2000$$

$$= 4200 \times \frac{77}{100} - 2000 \times \frac{75}{100} = 3234 - 1500 = 1734$$

**191 (Option B)**

$$\text{Number of Male players who play Rugby} = 4200 \times \frac{13}{100} - 200 = 346$$

$$\text{Number of Players who play Lawn Tennis} = 4200 \times \frac{25}{100} = 1050$$

$$\text{Hence Required Percentage} = \frac{346}{1050} \times 100 = 33$$

**192)** Cost of production (A + B) by X2 = (15% of 75) crores

Cost of production of medicine A by X2 =  $\frac{2}{5}$  of (15% of 75) crores

$$= 4.5 \text{ crores}$$

Similarly, cost of production of medicine B by X6 =  $\frac{3}{8}$  of (8% of 75) crores

$$= 2.25 \text{ crores}$$

$$\text{Required Ratio} = 4.5 / 2.25 = 2:1$$

**193)** Cost of production of medicine A by company X2 =  $\frac{2}{5}$  of (15% of 75) crores

$$= 4.5 \text{ crores}$$

Cost of production of medicine B by company X1 =  $\frac{2}{5}$  of (11% of 75) crores

$$= 3.3 \text{ crores}$$

$$\Rightarrow \text{Total cost} = (4.5 + 3.3) \text{ crores} = 7.8 \text{ crores}$$

**194)** Cost of production of medicine B by company X3 =  $\frac{2}{3}$  of (12% of 75) crores

$$= 6 \text{ crores}$$

Cost of production of medicine B by company X4 =  $\frac{4}{5}$  of (5% of 75) crores

$$= 3 \text{ crores}$$

$$\Rightarrow \text{Total cost} = (6 + 3) \text{ crores} = 9 \text{ crores}$$

**195)** It is clear from the pie chart that the cost of production of both the medicines together by company

$$X5 = (27\% \text{ of } 75) \text{ crores}$$

Similarly, we have (from the pie chart) that the production of both the medicines together by combinations of companies is as follows:

$$(i) (X1 + X3) = [(11\% + 12\%) \text{ of } 75] \text{ crores} = (23\% \text{ of } 75) \text{ crores}$$

$$(ii) (X6 + X7) = [(8\% + 22\%) \text{ of } 75] \text{ crores} = (30\% \text{ of } 75) \text{ crores}$$

$$(iii) (X4 + X7) = [(15\% + 22\%) \text{ of } 75] \text{ crores} = (27\% \text{ of } 75) \text{ crores}$$

which is same as that for company X5.

(iv)  $(X2 + X6) = [(15\% + 8\%) \text{ of } 75] \text{ crores} = (23\% \text{ of } 75) \text{ crores}$

**196)** Cost of production of medicine B by company X6 =  $[5/8 \text{ of } (8\% \text{ of } 75)] \text{ crores}$   
=  $15/4 \text{ crores}$

Now, Profit earned = 25% of cost of production

=  $(25\% \text{ of } 15/4) \text{ crores}$

= 93.75 lakhs

**197)** Profit earned by Company X3 for medicine A

=  $\{30\% \text{ of } [1/3 \text{ of } (12\% \text{ of } 75)]\} \text{ crores} = 0.90 \text{ crores}$

Profit earned by Company X3 for medicine B

=  $\{24\% \text{ of } [2/3 \text{ of } (12\% \text{ of } 75)]\} \text{ crores} = 1.44 \text{ crores}$

Total profit earned by Company X3 =  $(0.90 + 1.44) \text{ crores}$

= 2.34 crores

**198)** Profit earned by Company X5 for medicine A

=  $[28\% \text{ of } \{5/8 \text{ of } (27\% \text{ of } 75)\}] \text{ crores} = 3.54 \text{ crores}$

Profit earned by Company X7 for medicine B

=  $[22\% \text{ of } \{1/5 \text{ of } (22\% \text{ of } 75)\}] \text{ crores} = 0.73 \text{ crores}$

Total profit =  $(3.54 + 0.73) \text{ crores} = 4.27 \text{ crores}$



**199. d**

Solution: Average of Q-6:  $(8.5+7.5+4.5+23.5+9.5+9.5)/6=63/6=10.5$

Average of Q-3:  $(7.25+6.25+4.5+22.5+8.25+8.25)/6= 57/6=9.50$

Required Difference =  $10.50 - 9.50 = 1.00$

**200. b**

Solution: Average of MSF:  $(9.5+9.75+8.25+8.75+8.25+9.50)/6=54/6=9$

Average of Reverse Repo Rate:  $(6.50+5.25+6.25+6.75+6.75)/6= 39/6=6.50$

Required Sum =  $9+6.50=15.50$

**201. c**

Solution: Sum of Repo Rate:  $(7.50+6.25+7.25+7.75+7.75+8.5) =45.00$

Sum of Reverse Repo Rate:  $(6.50+5.25+6.25+6.75+6.75+7.5) =39.00$

Required Ratio =  $45.00:39.00= 45:39= 15:13$

**202. a**

Solution: Sum of Repo Rates:  $(7.50+6.25+7.25+7.75+7.75+8.5) =45.00$

Sum of SLR:  $(22.50+23+22.50+23.50+22+23.50) =137.00$

Required % =  $(45.00/137.00) \times 100= 32.846=32.85 \text{ (approx)}$

**203. c**

Solution: Sum of Rates in Q-4:  $(7.75+6.75+4.75+23.50+8.75+8.75) = 60.25$

Sum of Rates in Q-1:  $(7.50+6.50+4.25+22.50+9.50+9.50) = 59.75$

Required % =  $(60.25/59.75) \times 100 = 100.836 = 100.84$  (approx)

**204. (Option B)**

Sales Value = Sales Volume  $\times$  Average Price per Unit

Total Market Size :-

= Sales Value of Company X / Market Share (in %) of company X  $\times$  100

Question is asking for size of domestic market (in Rs.). Out of three different data sets given in the question (a pie chart, a line chart and a bar chart), we have Rupees value in only one data set – Bar chart. In pie chart and line chart, we do not have any information in Rupees Terms. So to answer any question in Rupees terms, we need to use Chart 3 – Bar Chart.

How do we calculate the size of domestic watch market:

Chart 1 provides the market share in sales volume in 2010. Chart 2 provides the sales volume of Titan from 2008 to 2012.

Using chart 2, Sales volume of Titan in 2010 = 32 million units and using chart 3, average selling price = Rs. 900/watch. So, total market value for Titan in 2010 = 32 million units  $\times$  Rs. 900/watch = Rs. X (Assume) [we are not required to calculate this value as question is only asking for the possibility of market size calculation].

Now using chart 1, market share of Titan is known = 38% = Rs. X. Using this, we can calculate 100% = Total market size of domestic watch market.

Hence it is possible to calculate only for the year 2010. We do not have Average Selling Price of Titan for the year other than 2010. So we can't calculate the domestic market size for any year other than 2010.

Hence option B is the correct answer.

**205. (Option B)**

**206. (Option D)**

Now this is no brainer. You just have to calculate the percentage growth in the number of units sold of Titan.

2012 saw the minimum growth rate = 4.6%. Hence, option D is the answer.

**207. (Option B)**

Using the data from Answer 1,

So, total market value of Titan in 2010 = 32 million units  $\times$  Rs. 900/watch = Rs. 28800 million

Titan has a market share of 38% in 2010.

Hence 38% = Rs. 28800 million

100% = Rs. 75789.47 million = Rs. 7578.9 crores

Hence, option B is the answer.

**208. (Option A)**

If the percentage increase in the expenditure of both the families, is the same then the ratio will be the same.

**209. (Option A)**

The total consumption has become 3 times more keeping the expenses on education the same. Hence, the percentage consumption on education will become 1/3rd of the person

**210. (Option B)**

**211. (Option C)**

By visual inspection we can see that option C is the correct answer

**212. (Option B)**

It should be understood that the final percentage of expenditure will always be in between the percentage of family A and family B (it is true of any mixture that the percentage composition of the mixture will be always in between the percentage compositions of the components).

**213. (Option B)**

By visual inspection we can see the correct answer is option B.



**(214-218):**

Let's try to find out the information from given data and formulate a table based on that.

Number of student in the college = 7200

Number of boys =  $7/12 \times 7200 = 4200$

Number of girls =  $5/12 \times 7200 = 3000$

Number of students in MBA (Marketing) = 22% of 7200 = 1584

Number of girls in MBA (IT) = 16% of 3000 = 480

Number of boys in MBA (HR) = 18% of 4200 = 756

Number of girls in MBA (Entrepreneur) = 30% of 480 = 144

Number of boys in MBA (Finance) = 15% of 4200 = 630

Number of boys in MBA (IT) = 50% of 480 = 240

Number of girls in MBA (Operations) = 15% of 3000 = 450

Number of boys in MBA (Entrepreneur) =  $3/1 \times 144 = 432$

Number of students in MBA (Finance) = 24% of 7200 = 1728

=> Therefore, Number of girls in MBA (Finance) =  $1728 - 630 = 1098$

Number of boys in MBA (Operations) =  $12/5 \times 450 = 1080$

Number of boys in MBA (Marketing) = Remaining number of boys

=  $4200 - (756+630+240+432+1080)$

=  $4200 - 3138 = 1062$

=> Therefore, Number of girls in MBA (Marketing) =  $1584 - 1062 = 522$

Number of girls in MBA (HR) = Remaining number of girls =  $3000 - (480 + 144 + 450 + 1098 + 522)$

$$= 3000 - 2694 = 306$$

**TABULAR FORM:**

SUBJECTS	NUMBER OF BOYS	NUMBER OF GIRLS
MBA(IT)	240	480
MBA(HR)	756	306
MBA(ENTREPRENEUR)	432	144
MBA(FINANCE)	630	1098
MBA(OPERATIONS)	1080	450
MBA(MARKETING)	1062	522
<b>Total</b>	<b>4200</b>	<b>3000</b>

**214)** From the table, it is clear that total number of students enrolled in MBA (HR) = 756 + 306 = 1062

**215)** Number of girls enrolled in MBA (Finance) = 1098

$$\Rightarrow \text{Required Percentage} = 1098/7200 \times 100\% = 15.25\% = 15\%$$

**216)** Number of girls enrolled in MBA (Marketing) = 522

**217)** Number of boys enrolled in MBA (Operations) = 1080

Number of girls enrolled in MBA (IT) = 480

$$\Rightarrow \text{Required Percentage} = 1080/480 \times 100\% = 225\%$$

**218)** Total number of boys enrolled in MBA (Entrepreneur) = 432

**219)** Total circulation in 1988 = 40000 + 60000 + 30000 + 27000 = 157000

**220)** Percentage growth for the business India during 1987-89 =  $(69 - 45) / 45 * 100\% = 53.3\%$

Percentage growth for the Dalal Street Journal during 1987-89 =  $(49 - 18) / 18 * 100\% = 172\%$

Percentage growth for the Business World during 1987-89 =  $(32 - 25) / 25 * 100\% = 28\%$

Percentage growth for the Fortune during 1987-89 =  $(31 - 20) / 20 * 100\% = 55\%$

MAXIMUM is for Dalal Street Journal

**221)** In 1989, advertisement tariff for FI in 1989 = Rs 28000

According to condition, advertisement tariff for 1989 = Rs 14000

So, cost of advertisement will be decreased and percentage decrease per thousand copies

$$= [(28000 - 31000)/1000] - [(14000/31000) - 1000] / [(28000 - 31000)/1000] = 50\%$$

**222)** Advertisement cost per 100 copies is given below

Dalal Street Journal =  $(14000/40000)*1000 = \text{Rs } 350$

Business World =  $(20000/30000)*1000 = \text{Rs } 666$

Fortune India =  $(17000/27000) \times 1000 = \text{Rs } 629$

Business India =  $(30000/60000) \times 1000 = \text{Rs } 500$

LOWEST is for Dalal Street Journal.

223) Advertising Cost per 1000 copies of Business World in 1987

$$= (5000/25000)/1000 = \text{Rs } 200$$

Advertising Cost per 1000 copies of Business World in 1988

$$= (20000/30000)/1000 = \text{Rs } 666$$

Hence, cost increased by Rs 466

224. (Option B)

Total number of adult females in colonies A, B and C together

$$= \left\{ \frac{1250 \times 36}{100} + \frac{2050 \times 30}{100} + \frac{1800 \times 42}{100} \right\}$$
$$= (450 + 615 + 756) = 1821$$

225. (Option B)

**BANK** 

$$\text{Number of Children in Colony A} = \frac{1250 \times 30}{100} = 375$$

$$\text{Number of Children in Colony E} = \frac{1620 \times 30}{100} = 324$$

$$\text{Required Percentage} = \frac{375}{324} \times 100 = 116$$

226. (Option E)

Required Ratio =  $50 : 30 = 5 : 3$

227. (Option D)

Average number of residents from all the colonies together

$$= \frac{1250 + 2050 + 1800 + 1150 + 1620}{5} = \frac{7870}{5} = 1574$$

228. (Option A)

Required Difference =  $(38 - 26)\%$  of 1150

$$= \frac{12 \times 1150}{100} = 138$$

229. (Option B)

230. (Option D)

231. (Option A)

232. (Option C)

233. (Option D)

234) Graduate male population of AP =  $(24 * 16 / 100 * 7/12)$  lakh = 2.24 lakh

XII Std male population of AP =  $(32 * 12 / 100 * 7 / 16)$  lakh = 2.1 lakh

=> Required difference =  $(2.24 - 2.1)$  lakh = 14000

235) Graduate female population of Goa =  $(24 * 20 / 100 * 7 / 16)$  lakh = 2.1 lakh

XII Std female population of Delhi =  $(32 * 12 / 100 * 7 / 12)$  lakh = 2.24 lakh

=> Required Ration =  $2.1:2.24 = 210:224 = 15:16$

236) Graduate female population of Chandigarh =  $(24 * 15/100 * 4/9)$  lakh = 1.6 lakh

XII Std female population of Chandigarh =  $(32 * 18/100 * 5/9)$  lakh = 3.2 lakh

=> Required percentage =  $1.6/3.2 * 100 = 50\%$

237) XII Std male population of Chandigarh =  $32 * 18/100 * 4/9 = 2.56$  lakh

=> Required percentage =  $2.56/32 * 100 = 8\%$

238) Graduate male population of Goa =  $24 * 20/100 * 9/16 = 2.7$  lakh

XII Std female population of Goa =  $32 * 19/100 * 10/19 = 3.2$  lakh

=> Required Ratio = 27:32

239) Total graduate population of MP =  $24 * 14/100 = 3.36$  lakh

XII Std total population of AP =  $32 * 15/100 = 4.8$  lakh

=> Required Percentage =  $3.36/4.8 * 100 = 70\%$

240) XII Std pass male population of Goa =  $32 * 19/100 * 9/19 = 2.88$  lakh

XII Std pass male population of MP =  $32 * 20/100 * 3/5 = 3.84$  lakh

=> Required Percentage =  $2.88/3.84 * 100 = 75\%$

241) Graduate male population of AP =  $24 * 7/12 * 6/100 = 2.24$  lakh

XII Std pass male population of state AP =  $32 * 15/100 * 7/16 = 2.1$  lakh

Sum = (2.24 + 2.1) lakh = 4.34 lakh

Graduate female population of AP =  $24 \times \frac{5}{12} \times \frac{16}{100} = 1.6$  lakh

XII Std pass female population of state AP =  $32 \times \frac{15}{100} \times \frac{9}{16} = 2.7$  lakh

Sum = (1.6 + 2.7) = 4.3 lakh

=> Required ratio = 434:430 = 217:215

242) Total population of Delhi = 17% of 24 lakh

Total XII Std population of Delhi = 12% of 32 lakh

=> Required Percentage = 17% of 24 lakh : 12% of 32 lakh

$$= 17 \times 24 : 12 \times 32$$

$$= 17 : 16$$

243) Graduate female population of Bihar =  $24 \times \frac{18}{100} \times \frac{3}{8} = 1.62$  lakh

Graduate female population of Goa =  $24 \times \frac{20}{100} \times \frac{7}{16} = 2.1$  lakh

=> Required Percentage =  $\frac{1.62}{2.1} \times 100 = 77\%$

#### 244. Option C

A is a triangle

So, area of A =  $\frac{1}{2} \times 16 \times 12 = 96$  sqm

So, cost of flooring of A =  $96 \times 50 = \text{Rs.}4800$



#### 245. Option A

Perimeter of B =  $2(10 + 20) = 60$  m

So, cost of fencing of B =  $60 \times 15 = 900$

Perimeter of C =  $4 \times 15 = 60$  m

So, cost of fencing of C =  $60 \times 18 = \text{Rs.}1080$

So, required difference =  $1080 - 900 = \text{Rs.}180$

#### 246. Option D

Area of D = Base  $\times$  Height

=  $20 \times 12 = 240$  mtr sq

So, cost of flooring of D =  $240 \times 60 = \text{Rs.}14400$

Perimeter of D =  $2(20 + 12) = 64$  m

So, cost of fencing of D =  $64 \times 25 = \text{Rs.}1600$

So, required ratio =  $14400 : 1600 = 9 : 1$

#### 247. Option D

Perimeter of E =  $2\pi r = 2 \times \frac{22}{7} \times 10 = \frac{440}{7}$  m

Cost of fencing of E =  $\frac{440}{7} \times 22 = \text{Rs.}1382.85$

Area of C =  $15 \times 15 = 225$  mtr square

So, cost of flooring of C =  $225 \times 40 = \text{Rs.}9000$

So, required % =  $1382.85 \times 100 / 9000$   
= 15.36% of flooring cost of C.

**248. Option B**

Fencing cost of C = Rs.1080

Fencing cost of D = Rs.1600

Required % =  $1080/1600 \times 100 = 67.5\%$

**249. Option A**

Required percentage =  $100/270 \times 100 = 37.03\%$

**250. Option A**

Speed of Train A =  $1280 / 10:20 \text{ am} - 5:00 \text{ pm}$

=  $1280 / 17 \text{ hours } 20 \text{ minutes}$

=  $1280 \times 3 / 52 = 73.84 \text{ kmph}$

Speed of train B =  $1280 / 12:00 \text{ noon} - 6:00 \text{ pm}$

=  $1280/18 \text{ hours} = 71.11 \text{ kmph}$

So, difference between the speed of train A and train B =  $73.84 - 71.11 = 2.73 \text{ kmph}$

**251. Option B**

Total passengers in train A =  $400 + 100 + 90 + 300 + 150 = 1040$

Total passengers in train B =  $300 + 150 + 270 + 50 + 100 = 870$

So, required ratio =  $1040 : 870 = 104 : 87$

**252. Option E**

Total income of train A =  $(400 \times 50) + (500 \times 70) + (590 \times 280) + (890 \times 100) + (1040 \times 120) = \text{Rs.}434000$

Total income of train B =  $(300 \times 120) + (450 \times 100) + (620 \times 280) + (670 \times 70) + (770 \times 50) = \text{Rs.}340000$

So, required % =  $434000 \times 100 / 340000$

= 127.64% of the total income of train B.

**253. Option C**

If the average speed of train A increases by 10%

then its new speed =  $73.84 \times 110/100$

= 81.22 kmph

Time taken by train A during the journey =  $1280/81.22 = 15.75 \text{ hours} = 15 \text{ hours } 45 \text{ minutes}$

The time when the train will reach its destination = 5 pm + 15 hours 45 minutes = 8:45 am

(254-258):

254. (Option E)

$$\text{Average temperature of Durban} = \frac{(20+21+22+25+28)}{5} = 23.2^{\circ}\text{C}$$

$$\text{Average temperature of Quito} = \frac{(15+16+18+20+22)}{5} = 18.2^{\circ}\text{C}$$

$$\text{So, required difference} = (23.2^{\circ} - 18.2^{\circ}\text{C}) = 5^{\circ}\text{C}$$

255. (Option C)

$$\text{Average temperature in May} = \frac{(28^{\circ}+22^{\circ}+14^{\circ}+18^{\circ}+38^{\circ})\text{C}}{5} = 24^{\circ}\text{C}$$

$$\text{Average temperature in Feb.} = \frac{(21^{\circ}+16^{\circ}+18^{\circ}+20^{\circ}+30^{\circ})\text{C}}{5} = 21^{\circ}\text{C}$$

$$\text{So, required difference} = (24^{\circ}\text{C} - 21^{\circ}\text{C}) = 3^{\circ}\text{C}$$

256. (Option B)

$$\text{Average temperature of Riyadh} = \frac{(35^{\circ}+30^{\circ}+32^{\circ}+36^{\circ}+38^{\circ})\text{C}}{5} = 34.2^{\circ}\text{C}$$

$$\text{Average temperature of Columbus} = \frac{(20^{\circ}+18^{\circ}+16^{\circ}+15^{\circ}+14^{\circ})\text{C}}{5} = 16.6^{\circ}\text{C}$$

$$\text{So, required \%} = \frac{34.2^{\circ} - 16.6^{\circ}}{16.6^{\circ}} \times 100\%$$

$$= 106.02\%$$

106% more than average temperature of Columbus

257. (Option B)

$$\text{Average temperature of Lisbon} = \frac{(22^{\circ}+20^{\circ}+22^{\circ}+25^{\circ}+18^{\circ})\text{C}}{5} = 21.4^{\circ}\text{C}$$

$$\text{Average temperature of Quito} = \frac{(15^{\circ}+16^{\circ}+18^{\circ}+20^{\circ}+22^{\circ})\text{C}}{5} = 18.2^{\circ}\text{C}$$

$$\text{So, required ratio} = 21.4 : 18.2 = 107 : 91$$

258. (Option B)

$$\text{Average temperature in May} = 24^{\circ}\text{C}$$

$$\text{Average temperature in March} = \frac{22^{\circ}+18^{\circ}+16^{\circ}+22^{\circ}+32^{\circ}\text{C}}{5} = 22^{\circ}\text{C}$$

$$\text{So, average temperature in May is } \frac{24 \times 100}{22} = 109.09\% \text{ of average temperature in March}$$

259. (4)

260. (1)

261. (1)

262. (5)

263. (5)

264. (3)

265. (1)

266. (5)

267. (1)

268. (2)

**(269-273):**

**269. (Option B)**

Total users of brand B across five cities =  $600 + 500 + 650 + 700 + 550 = 3000$

**270. (Option C)**

Brand A users in city T = 700

Brand B users in city Q = 500

Required % =  $700 / 500 \times 100 = 140\%$

**271. (Option C)**

Total users of Brand A across five cities =  $500 + 550 + 600 + 550 + 700 = 2900$

Average =  $2900 / 5 = 580$

**272. (Option D)**

Brand A and B users in city R =  $600 + 650 = 1250$

Brand A and B users in city P =  $500 + 600 = 1100$

Required difference =  $1250 - 1100 = 150$

**273. (Option A )**

Brand A users in city P = 500

Brand B users in city S = 700

Ratio =  $500 / 700 = 5 / 7 = 5 : 7$

**274. Option C**

A is a triangle

So, area of A =  $1/2 \times 16 \times 12 = 96$  sqm

So, cost of flooring of A =  $96 \times 50 = \text{Rs.}4800$

**275. Option A**

Perimeter of B =  $2(10 + 20) = 60$  m

So, cost of fencing of B =  $60 \times 15 = 900$

$$\text{Perimeter of } C = 4 \times 15 = 60 \text{ m}$$

$$\text{So, cost of fencing of } C = 60 \times 18 = \text{Rs.1080}$$

$$\text{So, required difference} = 1080 - 900 = \text{Rs.180}$$

#### 276. Option D

$$\text{Area of } D = \text{Base} \times \text{Height}$$

$$= 20 \times 12 = 240\text{m}^2$$

$$\text{So, cost of flooring of } D = 240 \times 60 = \text{Rs.14400}$$

$$\text{Perimeter of } D = 2(20 + 12) = 64 \text{ m}$$

$$\text{So, cost of fencing of } D = 64 \times 25 = \text{Rs.1600}$$

$$\text{So, required ratio} = 14400 : 1600 = 9 : 1$$

#### 277. Option D

$$\text{Perimeter of } E = 2\pi r = 2 \times 22 / 7 \times 10 = 440 / 7 \text{ m}$$

$$\text{Cost of fencing of } E = 440 / 7 \times 22 = \text{Rs.1382.85}$$

$$\text{Area of } C = (15)^2 = 225\text{m}^2$$

$$\text{So, cost of flooring of } C = 225 \times 40 = \text{Rs.9000}$$

$$\text{So, required \%} = 1382.85 \times 100 / 9000$$

$$= 15.36\% \text{ of flooring cost of } C.$$

#### 278. Option B

$$\text{Fencing cost of } C = \text{Rs.1080}$$

$$\text{Fencing cost of } D = \text{Rs.1600}$$

$$\text{Required \%} = 1080 / 1600 \times 100 = 67.5\%$$

#### 279 (Option A)

$$\text{Required percentage mark} = 120 / 90 + 110 + 100 + 120 + 60 \times 100$$

$$20 / 460 \times 100 = 26\%$$

**280. (Option E)**

New marks of T in physics =  $114 / 100 \times 50 = 57$

T's new percentage =  $57 / 140 \times 100 = 41$

**281. (Option B)**

Marks obtained by Tango in both subjects together is more than the marks obtained by Rasheed in Physics.

**282. (Option D)**

Required ratio =  $130 + 70 : 50 + 60$

=  $200 : 110$                    $20 : 11$

**283. (Option B)**

Required ratio =  $110 + 120 : 130 + 80$

=  $230 : 210$                    $23 : 21$

**284. Option E**

Total number of employees working in the marketing department =  $800 \times 24/100$

= 192

Required percentage =  $165/192 \times 100 = 85.94\% = 86\%$

**285. Option A**

Total number of employees working in the HR department =  $800 \times 5/100 = 40$

Total number of female employees working in the HR department =  $40 - 12 = 28$

Required ratio =  $28:40 = 7:10$

**286. Option D**

Total number of employees working in the Production department =  $800 \times 35/100 = 280$

Required percentage =  $245/280 \times 100 = 87.5\%$

**287. Option A**

Total number of employees working in the IT department =  $800 \times 20/100 = 160$

Total number of female employees working in the IT department =  $160 - 74 = 86$

Required percentage =  $86/800 \times 100 = 10.75\%$

**288. Option B**

Total number of employees working in the Marketing department =  $800 \times 24/100 = 192$

Total number of female employees working in the Marketing department =  $192 - 165 = 27$

Required ratio =  $165:27 = 55:9$

289. Option D

Number of working men in Marketing department =

$$1800 \times \frac{18}{100} \times \frac{7}{715} = 189$$

290. 2. Option B

$$\frac{1800 \times \frac{28}{100} \times \frac{11}{11+1}}{1800 \times \frac{28}{100}} \times 100$$
$$= \frac{462}{504} \times 100 = 91.67\%$$

291. Option C

$$\frac{1800 \times \frac{17}{100} \times \frac{2}{2+7}}{1800 \times \frac{17}{100}} = \frac{68}{306} = \frac{2}{9} = 2:9$$

292. Option A

$$\frac{1800 \times \frac{14}{100} \times \frac{3}{4}}{1800 \times \frac{14}{100}} = \frac{189}{252} = \frac{3}{4} = 3:4$$

293. Option E

$$\frac{1800 \times \frac{23}{100} \times \frac{4}{9}}{1800} \times 100 = 10\% \text{ (approx.)}$$

294. Option E

The difference between the working females in Bangalore and the working males in Chennai =  $32.5 - 22.5 = 10$  lakh

295. Option B

Income per working person = Total income of city / Number of working people in city

Income per working person in Delhi =  $200 \text{ Crore} \times 36/100 / (30+25) \text{ Lakh} = 72 / 55 =$

Rs.130.9

In Chennai =  $200 \times 16/100 / (22.5+17.5) \text{ Lakh} = \text{Rs.80}$

In Mumbai =  $200 \times 20/100 / (35+30)$  Lakh = Rs.61.53  
In Kolkata =  $200 \times 14/100 / (30+32.5)$  Lakh = Rs.44.8  
In Bangalore =  $200 \times 10/100 / (25+32.5)$  Lakh = Rs.34.78  
In Jaipur =  $200 \times 4/100 / (17.5+25)$  Lakh = Rs.18.82  
The income per working person in Jaipur is the minimum.

**296. Option D**

Average number of working males =  $1/6 \times (30 + 22.5 + 35 + 30 + 25 + 17.5) = 26.66$  lakh  
Average number of working females =  $1/6 \times (25 + 17.5 + 30 + 32.5 + 32.5 + 25) = 27.08$  lakh  
So, required sum =  $26.66 + 27.08 = 53.75$  lakh

**297. Option A**

Total income of Delhi =  $[200 \times 36/100] = \text{Rs.72 Crore}$   
Income per person =  $72 \text{ Crore} / 55 \text{ Lakh} = \text{Rs.130.9}$   
So, required difference of income =  $5 \text{ lakh} \times 130.9 = \text{Rs.654.5 lakh}$   
= Rs.6.545 Crore

**298. Option C**

Required % =  $30/25 \times 100 = 120\%$

**299. Option E**

Required % =  $20/60 \times 100 = 33.3\%$  of electrification of villages in Tripura in the year 2014

**300. Option D**

Number of villages in Assam where electrification was done in 2013 = 40  
Number of villages in Manipur where electrification was done in 2013 = 50  
So, required ratio = 4 : 5

**301. Option C**

In Assam, the number of villages where electrification was done =  $30 + 40 + 30 = 100$   
In Manipur =  $40 + 50 + 60 = 150$   
In Tripura =  $40 + 50 + 60 = 150$   
In Nagaland =  $40 + 20 + 50 = 110$   
So, maximum electrification in both Tripura and Manipur.

**302. Option B**

Total number of villages in four states where electrification was done =  $100 + 150 + 150 + 110 = 510$   
So, cost of electrification =  $7500000 \times 510 = \text{Rs.3825000000}$

**303. Option A**

Number of villages where electrification was done in 2012 =  $50 + 30 + 60 + 40 = 180$   
Number of villages where electrification was done in 2013 =  $20 + 40 + 50 + 50 = 160$

Number of villages where electrification was done in 2014 = 40 + 30 + 40 + 60 = 170

In 2012 maximum electrification work was done.

**304. Option A**

Quantity of Guava at Shop A =  $1200 \times 10/100 = 120$  kg

Quantity of Guava at Shop B =  $1000 \times 16/100 = 160$  kg

So, required difference =  $160 - 120 = 40$  kg

**305. Option B**

Cost of Mango at Shop A =  $30 \times 1200 \times 24/100 = \text{Rs.}8640$

Cost of apple =  $40 \times 1200 \times 16/100 = \text{Rs.}7680$

Cost of Orange =  $20 \times 1200 \times 20/100 = \text{Rs.}4800$

So, required ratio =  $8640 : 7680 : 4800$

=  $9 : 8 : 5$

**306. Option C**

Quantity of Mango at Shop B =  $1000 \times 24/100 = 240$  kg

Quantity of Mango at Shop A =  $1200 \times 24/100 = 288$  kg

So, required % =  $288 \times 100/240 = 120\%$  of the quantity of Mango at Shop A

**307. Option D**



Cost of total fruits at Shop A = Cost of Mango + Cost of Apple + Cost of Guava + cost of orange + cost of other fruits

$(1200 \times 24/100 \times 30 + 1200 \times 16/100 \times 40 + 1200 \times 10/100 \times 18 + 1200 \times 20/100 \times 20 + 1200 \times 30/100 \times 15)$

=  $8640 + 7680 + 2160 + 4800 + 5400 = \text{Rs.}28680$

Cost of total fruits at Shop B =  $(1000 \times 24/100 \times 30 + 1000 \times 14/100 \times 40 + 1000 \times 16/100 \times 18 + 1000 \times 20/100 \times 20 + 1000 \times 26/100 \times 15)$

=  $7200 + 5600 + 2880 + 4000 + 3900 = \text{Rs.}23580$

So, required difference =  $28680 - 23580 = \text{Rs.}5100$

**308. Option E**

Quantity of Orange at Shop A =  $1200 \times 20/100 = 240$  kg

Quantity of Apple at Shop B =  $1000 \times 14/100 = 140$  kg

So, required % =  $240 \times 100 / 140 \% = 171.42\%$  more than the quantity of Apple at Shop B.

**309. Option C**

Total domestic investment in 2011 =  $5000 + 3000 + 4000 + 2000 + 2500 + 1500 + 3500 = \text{Rs.}21500$  Crore

Total foreign investment in 2011 =  $2000 + 1600 + 2800 + 3000 + 2000 + 2500 + 1000 = \text{Rs.}14900$  Crore

So, required difference =  $21500 - 14900 = \text{Rs.}6600$  Crore

**310. Option D**

Total investment in Metals =  $4000 + 2800 + 3500 + 2000 + 3200 + 2200 + 1500 + 500 = \text{Rs.}19700 \text{ Crore}$

Total investment in Machinery =  $2000 + 3000 + 2500 + 3000 + 3600 + 6000 + 1000 + 1500 = \text{Rs.}22600 \text{ Crore}$

So, required ratio =  $19700 : 22600 = 197 : 226$

**311. Option A**

Average domestic investment in 2014 =  $6000 + 4000 + 1500 + 1000 + 4000 + 1200 + 2000 / 7$

=  $19700/7 = \text{Rs.}2814.28 \text{ Crore}$

**312. Option E**

Domestic investment in 2013 =  $4000 + 5000 + 3200 + 3600 + 3000 + 1500 + 2400 = \text{Rs.}22700 \text{ Crore}$

Foreign investment in 2011 =  $2000 + 1600 + 2800 + 3000 + 2000 + 2500 + 1000 = \text{Rs.}14900 \text{ Crore}$

=  $22700 \times 100 / 14900$

=  $152.3\%$

**313. Option B**

Average domestic investment in 2011 =  $\text{Rs.}21500/7 \text{ Crore}$

Average investment in transport =  $2500 + 2000 + 1500 + 3200 + 3000 + 1600 + 4000 + 1000 / 4 = \text{Rs.}4700$

Crore

So, required % =  $21500 / 7 \times 4700 \times 100 = 65.34\%$

