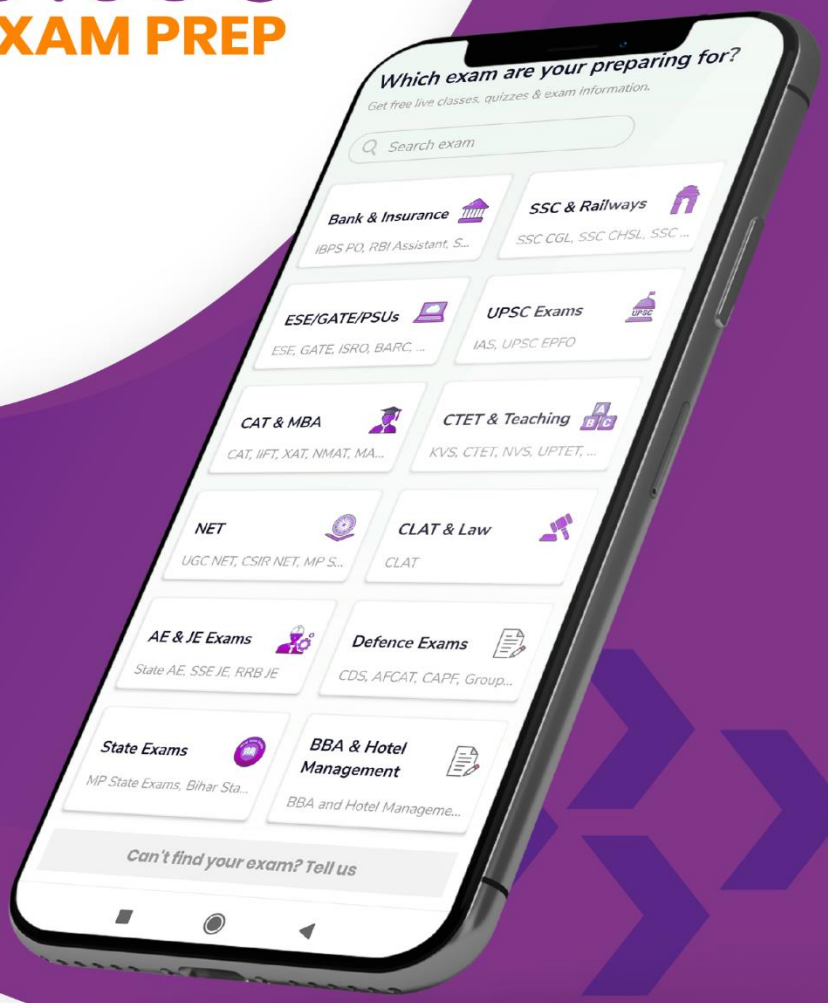
BYJU'S EXAM PREP



SBI PO 2022

50 Important DI Questions

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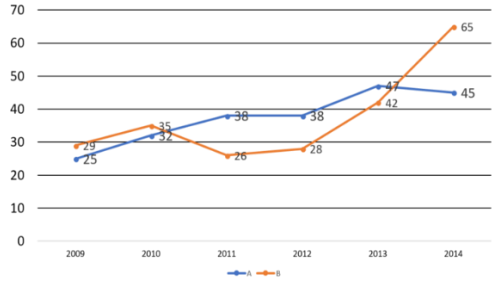
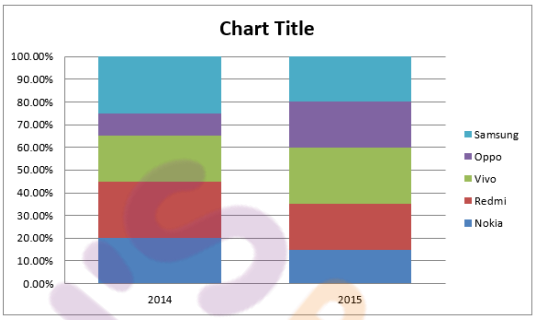
Direction (1-5): Given below is the line graph showing percentage profit of 2 companies in different years. Study the following graph carefully and answer the following questions.



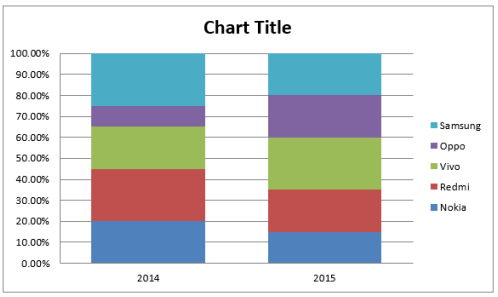
%profit= (Income – expenditure) × 100/expenditure

1. If income of company A in 2010 is equal to income of company B in 2014. Then expenditure of company A in 2010 is what percent more than expenditure of company B in 2014?
   A. 20 B. 24
   C. 30 D. 35
   E. none of these
2. If income of company B in 2012 is 165 cr. and expenditure of the same in 2012 was increased by 25% as compared to the expenditure of previous year. Then find the expenditure of company B in 2011.
   A. 101.625 cr. B. 102.325 cr.
   C. 101.325 cr. D. 103.125 cr
   E. None of these
3. Percentage increase in profit percent of a company A from 2009 to 2010 is what% more or less than percentage increase in profit percentage of same company from 2012 to 2013? (Approximate).
   A. 22% more B. 18 % less
   C. 18% more D. 26% more
   E. 8% less
4. Average profit percent of company A over the years is what percent more or less than that of company B?
   A. $\frac{4}{9}\%\ more$
   B. $\frac{4}{9}\%\ less$
   C. $\frac{5}{9}\%\ less$
   D. Cannot be determined
   E. None of these
5. **Direction**: Below is the market share of some mobile phone companies, based on the below chart answer the question that follows-



Total Number of Mobile sold In 2014 - 400000
Total number of mobile sold in 2015 - 500000
If the 15 % MOBILE phones sold by Nokia returned by the customer due to some defects in 201 4 & 2015 then in actual how many mobile phone sold by Nokia in the Both year
A. 131750 B. 121750
C. 111750 D. 131450
E. None of these

6. **Direction**: Below is the market share of some mobile phone companies , based on the below chart answer the question that follows-



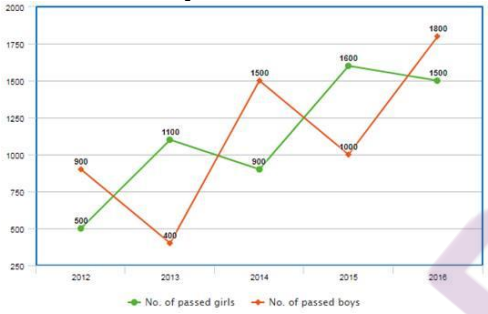
Total Number of Mobile sold In 2014 - 400000
Total number of mobile sold in 2015 - 500000

6. What is the difference between the Oppo mobile sold in 2014 & 2015 ?
   A. 60000 B. 70000
   C. 80000 D. 90000
   E. None of these

7. From 2014 to 2015 in which brand the sales increase was maximum?
   A. Samsung B. Vivo
   C. Oppo D. Redmi
   E. Nokia
8. If the percentage of Redmi phone was same in 2016 as of the previous year then how much Redmi phone sold in 2016?
   A. 150000 B. 100000
   C. 200000 D. 350000
   E. Cannot be determined

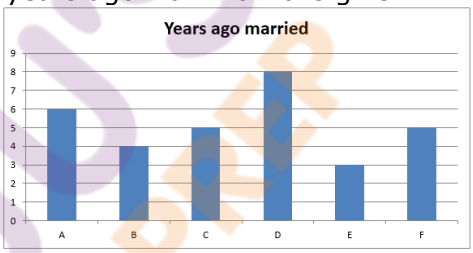
Direction (9-13): Study the following table carefully to answer the questions that follow.

In the line graph data is given about passed boys and girls of a school in 5 different years.



9. If passing percentage of boys and girls in 2015 is 40% and 80% respectively then what is passing percentage of students in this year ?
   A. 53.55% B. 61.77%
   C. 53.77% D. 56.77%
   E. None of these
10. What is difference between average number of passed boys and passed girls in all the year together ?
   A. 500 B. 700
   C. 100 D. 0
   E. None of these
11. What is respective ratio of total number of passed students in 2014 to the students passed in 2016 ?
   A. 3 : 8 B. 11 : 8
   C. 8 : 11 D. 9 : 13
   E. None of these
12. What is average number of passed students in all year together ?
   A. 2420 B. 2240
   C. 4220 D. 2024
   E. None of these
13. If 30% students are passed in 2013 and 40% students are passed in 2015 then number of students in 2015 is what percent more/less than that of 2013?
   A. 30% B. 20%
   C. 25% D. 40%
   E. None of these

Direction (14-18): Study the bar graph and answer the given questions.
Different people (male) married some years ago from now are given:



14. The present age of A is (5/4) times his age at the time of his marriage. His brother was 10 years younger than him at time of his marriage. Find the present age of his brother.
   A. 18 years B. 25 years
   C. 20 years D. 24 years
   E. None of these
15. F's wife is 4 years younger than him. 8 years from now, the sum of their ages will be 86 years. What is the present age of his wife?
   A. 31 years B. 28 years
   C. 36 years D. 33 years
   E. None of these
16. 6 years from now, the age of D will be 40 years. The second child of D was born after 6 years of marriage. If the first child is 4 years older than second one, find the sum of the ages of his two children after 6 years from now.
   A. 20 years B. 16 years
   C. 24 years D. 22 years
   E. None of these
17. G is 4 years younger than B. At the time of their marriage, the ratio of the age of B and G was 10 : 9. Find the ratio of their present ages.

A. 11 : 8 B. 11 : 10
C. 23 : 17 D. 13 : 11
E. None of these

18. If the present age of F is 35 years and the he is some years older than person who was also married in the same year that he was, the ratio of their ages at the time of marriage was 6 : 5. Find the sum of the ages of F and the other person at 5 years before marriage.
A. 36 years B. 42 years
C. 45 years D. 56 years
E. None of these

19. **Directions:** Study the following charts and answer the following questions:
In a school there are total of 240 staff members and 1600 students. 65 percent of the numbers of staff members are teachers and the remaining staff members are administrative officials. Out of the total number of the students 45 percent are girls. Twenty percent of the number of girls can speak only English. The remaining girls can speak both Hindi and English. Three-fourths of the number of boys can speak only English. The remaining boys can speak both Hindi and English. Two –thirds of the numbers of teachers are males. Five-fourteens of the number of the administrative officials are females.
What is the difference between the number of boys (students) who can speak both Hindi and English and the number of girls (students) who can speak both Hindi and English?
A. 346 B. 356
C. 376 D. 400
E. None of these

20. **Directions:** Study the following charts and answer the following questions:
In a school there are total of 240 staff members and 1600 students. 65 percent of the numbers of staff members are teachers and the remaining staff members are administrative officials. Out of the total number of the students 45 percent are girls. Twenty percent of the number of girls can speak only English. The remaining girls can speak both Hindi and English. Three-fourths of the number of boys can speak only English. The remaining boys can speak both Hindi and English. Two –thirds of the numbers of teachers are males. Five-fourteens of the number of the administrative officials are females.
The total number of girls students is what percent of the total number of staff members in the school?
A. 100% B. 200%
C. 300% D. 400%
E. None of these

21. What is the difference between the number of total number of female administrative officials, female teachers and the number of male administrative officials?
A. 14 B. 22
C. 28 D. 30
E. None of these

22. What is the ratio of the total number of teachers to the number of boys (students) who can speak English only?
A. 13:53 B. 13:55
C. 13:56 D. 13:57
E. None of these

23. What is the total number of male administrative officials, female teachers and girls (students) who can speak English only?
A. 125 B. 225
C. 250 D. 300
E. None of these

Direction (24-28): Study the information given below and answer the questions based on it.
There are three highways: Highway A, Highway B and Highway C. On each of the given days - Friday, Saturday and Sunday, some number of vehicles ply on these three highways.
We have these pieces of information relating to the traffic on these days:
Friday: The number of vehicles on highway B is one-third of the number of vehicles on highway B on Saturday. The number of vehicles on highway C is

$3/4^{th}$ of the number of vehicles on highway C on Saturday. The number of vehicles on highway A and C is the same.

Saturday: The total number of vehicles on Saturday is 75000. The number of vehicles on highway B is 15000 less than that of highway A & C together. The number of vehicles on highway A is $5/6^{th}$ of the number of vehicles on highway A on Sunday.

Sunday: The total number of vehicles on Sunday is $4/5^{th}$ of the total number of vehicles on Saturday. The number of vehicles on highway A is equal to the number of vehicles on highway B on Saturday. The number of vehicles on highway C is the same on Saturday and Sunday.

24. What is the total number of vehicles on all three highways on Friday?
A. 45000 B. 40000
C. 50000 D. 55000
E. 48000

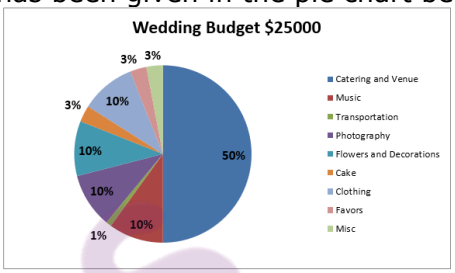
25. What is the total number of vehicles on Highway A of three days?
A. 75000 B. 65000
C. 60000 D. 70000
E. 80000

26. What is the average number of vehicles on Sunday?
A. 15000 B. 20000
C. 25000 D. 10000
E. 12000

27. What is the difference between the vehicles on highway A on Saturday and the vehicles on highway C on Friday?
A. 5000 B. 15000
C. 10000 D. 20000
E. 8000

28. The number of vehicles on highway B on Friday is approximately what percent of the total vehicles on Sunday?
A. 15% B. 18%
C. 12% D. 16.67%
E. 21%

Direction (29-33): Read the following information carefully and answer the questions that follow:
The budget breakdown for a wedding has been given in the pie chart below:



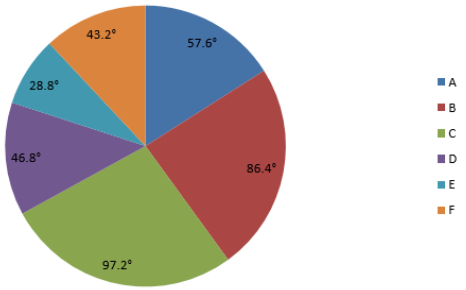
29. What is the average money spent on Clothing, Favours and Catering and venue?
A. $ 4280 B. $ 9810
C. $ 5250 D. $ 6420
E. $ 8180

30. What amount was spent on Photography?
A. $1200 B. $2500
C. $3750 D. $4200
E. None of these

31. What is the ratio of the amount spent on Transportation to the amount spent on Favours?
A. 1 : 3 B. 2 : 3
C. 5 : 7 D. 4 : 7
E. 2 : 5

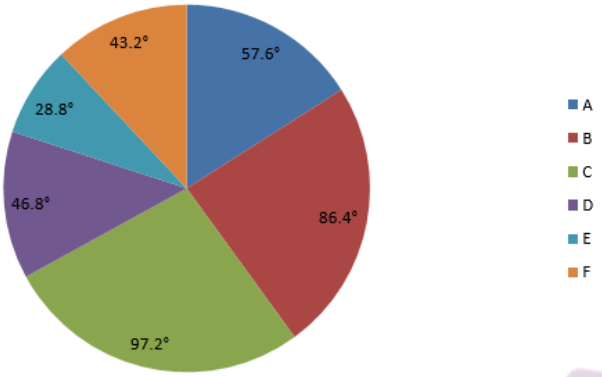
32. What is the difference between the amount spent on Catering and the combined amount spent on Clothing and Cake?
A. $ 8560 B. $ 9870
C. $ 10240 D. $ 6140
E. $ 9250

33. **Direction:** Refer to the pie-chart and answer the given questions.
A survey was done on 60000 people having bank accounts in different banks:



33. If the ratio of the number of males and the number of females in bank C is 1 : 2, what is the number of females having bank account in that bank?
A. 12500 B. 10800
C. 10280 D. 13500
E. 10450

34. **Direction:** Refer to the pie-chart and answer the given questions.
A survey was done on 60000 people having bank accounts in different banks:

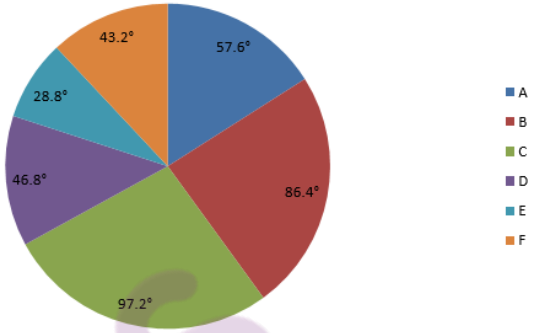


34. The no. of people having accounts in bank D is what percent of those in bank E?
A. 145.2 B. 162.5
C. 45.8 D. 65
E. 78.4

35. If the percentage of people aged below 18 is 22% of the total no. of people having accounts in banks B & F together, find the number of people aged below 18 in both the banks together.
A. 2865 B. 4685
C. 3865 D. 4752
E. 3220

36. If the percentage of females having accounts in bank A is 40% of the total accounts there and females having accounts in bank D is 45%, find the ratio of the total number of males in banks A and D to the total number of females in banks A and D?
A. 7 : 5 B. 77 : 47
C. 67 : 49 D. 67 : 42
E. 47 : 37

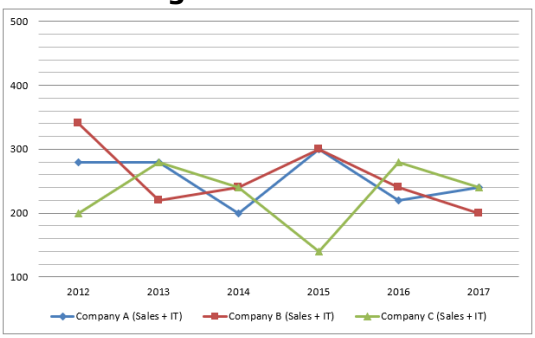
37. **Direction:** Refer to the pie-chart and answer the given questions.
A survey was done on 60000 people having bank accounts in different banks:



37. What is the percentage of people having accounts in banks A and B?
A. 40% B. 44%
C. 34% D. 56.4%
E. 34.5%

38. If 12% of the money spent on Catering and Venue was to be saved, and amount spent on flowers and Decorations is increased by 2%, then how much extra money would the family save or lose?
A. $ 900 B. $ 1450
C. $ 3140 D. $ 2250
E. Cannot be determined

Direction (39-43): Study the line graph carefully and answer the given questions.
The line graph shows the different number of employees work in three different companies (A, B and C) of two departments (Sales + IT) in different years.
The total number of employees work in a company = Sales + IT + Marketing



39. The total number of employees in all three companies in 2012 is 1220 and the ratio of the total number of employees in Marketing department in company A, company B and company C is 7:6:7 respectively in 2012 then find the difference between the total number of employees in Marketing department in company A in 2012 to that of the total number of employees in Marketing department in company B in 2012.
A. 40 B. 30
C. 20 D. 50
E. 60

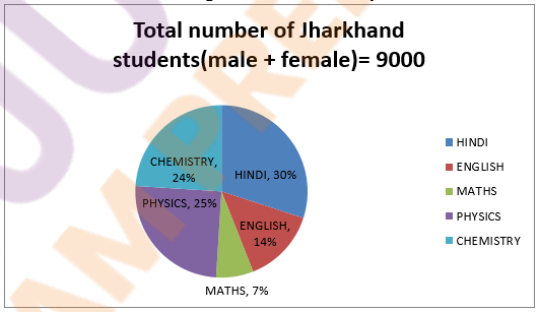
40. If the ratio of the total number of employees in Sales department to IT department of company A in 2014 is 2:3 and the total number of employees in Sales department of company A in 2014 is equal to the total number of employees in Sales department of company B in 2014 then find the ratio of the total number of employees in IT department of company B in 2014 to that of the total number of employees in IT department of company A in 2014.
A. 5:7 B. 4:3
C. 2:3 D. 1:2
E. 5:6

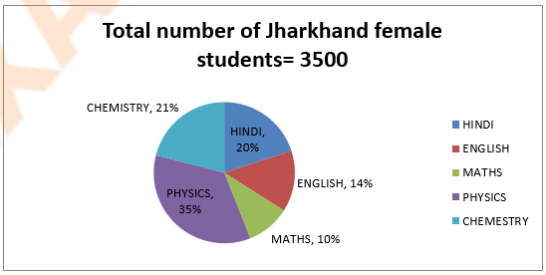
41. The total number of employees in Sales and IT department together of all three companies in 2013 and 2014 together is approximately what percentage more/less of the total number of employees in Sales and IT department together of all three companies in 2015 and 2016 together?
A. 5% B. 7%
C. 11% D. 1%
E. 13%

42. The total number of employees in Marketing department of company A in 2015 is 100 and the total number of employees in company B in 2015 is 10% more than that of the total number of employees in company A in 2015 then the total number of employees in Marketing department of company A in 2015 is approximately what percentage of the total number of employees in Marketing department of company B in 2015?
A. 75% B. 71%
C. 81% D. 91%
E. 127%

43. What is the average number of employees in Sales and IT department together of company C in all these years together?
A. 200 B. 190
C. 210 D. 250
E. 230

Direction (44-48): The following pie-chart shows the distribution of the number of Jharkhand students studying different subjects in the year 2017





44. What is the ratio of the total number of male students from English and Maths together to the total number of students (male + female) from the same subjects together?
A. 4:7 B. 5:14
C. 4:9 D. 5:6
E. 5:9

45. What is the average number of male students from subject Maths, Physics and chemistry?
A. 910 B. 915
C. 900 D. 945
E. None of these

46. The total number of female students from subject Hindi and English together is what % of the number of male student from Hindi subject?
A. 60% B. 59.5%
C. 65.25% D. 70.5%
E. 50%

47. Female students from Chemistry subject are what % more than those from English Subject?
A. 45 B. 50
C. 40 D. 60
E. 30

48. Male students from subject Chemistry in the year 2018 is 20 % more than those from the same subject in the previous year. If the male students from subject Chemistry constituted 60% of the total students(male + female), in the year 2018, how many Jharkhand students in the same year are female, if female constitute 20% of total number of students(male + female)?
A. 560 B. 570
C. 580 D. 590
E. 600

49. **Direction :** Study the information given below and answer the questions based on it.
The following tabular graph represents the number of people living in five villages in 2017. Use the information to answer the following question. (Total people in a village=Male+ Female+ Children)

Village	Male + Children	Female + Children	Male + Female
A	190	140	230
B	220	140	240
C	180	240	260
D	180	140	200
E	280	180	340

49. Find the difference between the total number of male from village A and the total number of female from village E.
A. 80 B. 20
C. 60 D. 40
E. 100

50. The ratio of total number of married male to the total number of unmarried male from village B and village D together is 9:5. Find the number of unmarried male.
A. 100 B. 180
C. 80 D. 140
E. 120

ANSWERS

1. Ans. E.
Let expenditure company A in 2010 = Exp_A
Expenditure of company B in 2014 = Exp_B

$\frac{(100+32)}{100} \times exp_A = \frac{(100+65)}{100} \times Exp^B$

$\frac{expA}{expB} = \frac{165}{132}$

Required percentage =

$\frac{(165-132)}{132} \times 100 = 25\ \%$

2. Ans. D.
Expenditure of company B in 2012 = $165 \times \frac{100}{(100+28)}$

Expenditure of company B in 2011 = $\frac{100}{125} \times 165 \times \frac{100}{128} = 103.125\ Cr$

3. Ans. C.
Percent increase in profit percent of company A from 2009 to 2010

$= \frac{32-25}{25} \times 100 = 28\ \%$

Percent increase in profit percent of company A from 2012 to 2013

$\frac{47-38}{38} \times 100 = 23.68$

Required percentage =

$\frac{28-23.68}{23.68} \times 100 = 18.24 \approx 18\%$

4. Ans. D.
As the actual income or expenditure is not given, so we cannot determine the average profit percentage of companies A and B.
Therefore (D) is correct.

5. Ans. A.
Total phone sold by Noki in 2014 & 2015
→80000+75000 =155000
15 % of 155000 = 23250
So, 155000-23250 = 131750
6. Ans. A.
Oppo mobile sold in 2014= 10%
In 2015= 20 %
So, difference is – 10000-40000=60000
7. Ans. C.
Company *2014*(in 1000) *2015*(in 1000)
Samsung 100 100
Oppo 40 100
Vivo 80 125
Redmi 100 100
Nokia 80 75
Clearly, In OPPO there is maximum increase from year 2014 to 2015.
8. Ans. E.
We cannot determined this because we do not know how much total sale was happen in 2016
9. Ans. E.
Required % =

$$\frac{1600+1000}{1600\times\frac{100}{80}+1000\times\frac{100}{40}}=\frac{2600}{4500}\times 100$$

$$=\frac{520}{9}=57.77\%$$

10. Ans. D.
Required difference =

$$\frac{500+1100+900+1600+1500}{5}$$

$$-\frac{900+400+1500+1000+1800}{5}$$

= 0
11. Ans. C.
Required ratio =
(1500 + 900) : (1800 + 1500)
= 2400 : 3300 = 8 : 11
12. Ans. B.
Required average =

$$\frac{5600+5600}{5}=\frac{11200}{5}=2240$$

13. Ans. A.
Since total students passed in 2015 = no of boys passed + no of girls passed
= 1000+ 1600 =2600
Now, since the passing percentage is 40%
Therefore, (number of students appeared in 2015) * (40/100) = 2600 (i.e. passes students)
---->Number of students appeared in 2015 = 2600*(100/40) = 6500
---->Similarly, number of students in 2013 = (400 + 1100) * (100/30) =5000
Required % =

$$\frac{2600\times\frac{100}{40}-1500\times\frac{100}{30}}{1500\times\frac{100}{30}}\times 100$$

$$=\frac{6500-5000}{5000}\times 100=30\%$$

14. Ans. C.
From the bar graph,
No. of years before A married = 6
Let the age of A at the time of his marriage be x years.
So, the present age of A = (x + 6) years.
The present age of A is (5/4) times his age at the time of his marriage.
So, we can write now,
(x + 6) = (5/4) × x
⇒ 4x + 24 = 5x
⇒ x = 24
So, the present age of A = (24 + 6) years = 30 years.
His brother was 10 years younger than him at time of his marriage.
∴ The present age of his brother = 30 – 10 = 20 years.
15. Ans. D.
From the bar graph,
No. of years before F married = 5
Let the age of F at time of his marriage be x years.
F's wife is 4 years younger than him.
So, the age of his wife at time of their marriage = (x – 4) years.
8 years from now, the sum of their ages will be 86 years.

So, we can write now,
(x + 5 + 8) + [(x – 4) + 5 + 8] = 86
⇒ x + 13 + x + 9 = 86
⇒ 2x = 64
⇒ x = 32
So, the age of his wife at the time of their marriage = 32 – 4 = 28 years.
∴ The present age of his wife = 28 + 5 = 33 years.
16. Ans. A.
From the bar graph,
No. of years before D married = 8
6 years from now, the age of D will be 40 years.
So, the present age of D = 40 – 6 = 34 years
And, the age of D at the time of his marriage = 34 – 8 = 26 years.
The second child of F was born after 6 years of marriage.
So, the age of D when his second child was born = 26 + 6 = 32 years.
Then, the present age of the second child = 34 – 32 = 2 years.
The first child is 4 years older than second one.
So, the present age of first child = 2 + 4 = 6 years.
∴ 6 years from now, the sum of the two children = (6 + 6) + (2 + 6) = 20 years.
17. Ans. B.
10:9 at the time of marriage
difference between their ages are 4 years
B's age during marriage = 10*4 = 40 yrs
G's age during marriage = 9*4 = 36 yrs
B was married 4 years ago
Their present ages are = 44 years and 40 years
Required ratio = 11:10
18. Ans. C.
From the bar graph,
No. of years before F married = 5
We can find from the graph that C was also married 5 years ago. That means C and F are married in the same year.
Let C is x years younger than F.
So, the present age of C = (35 – x) years.
The ratio of their ages at the time of marriage was 6 : 5.
So, we can write now,

$$\frac{35-5}{35-x-5}=\frac{6}{5}$$

⇒ 150 = 180 – 6x
⇒ 6x = 30
⇒ x = 5
So, the present age of C =35 – 5 = 30 years.
Then, the age of F, 5 years before marriage = 35 – 5 – 5 = 25
And, the age of C, 5 years before marriage = 30 – 5 – 5 = 20
∴ The required sum = 25 + 20 = 45 years.
19. Ans. B.
Staff members = 240
[Teachers = 156 (male = 104. Females = 52)
Administrative staff = 84 (Male = 54, female = 30)]
Students = 1600
[Boys = 880 (only English = 660, both Hindi and English = 220)],
Girls = 720 (only English = 144, both Hindi and English = 576)]
576 – 220 = 356
20. Ans. C.
Staff members = 240
[Teachers = 156 (male = 104. Females = 52)
Administrative staff = 84 (Male = 54, female = 30)]
Students = 1600
[Boys = 880 (only English = 660, both Hindi and English = 220)],
Girls = 720 (only English = 144, both Hindi and English = 576)]
(720/240)*100 = 300%
21. Ans. C.
Staff members = 240
[Teachers = 156 (male = 104. Females = 52)
Administrative staff = 84 (Male = 54, female = 30)]
Students = 1600
[Boys = 880 (only English = 660, both Hindi and English = 220)],
Girls = 720 (only English = 144, both Hindi and English = 576)]
30 + 52 – 54 = 28

22. Ans. B.
Staff members = 240
[Teachers = 156 (male = 104. Females = 52)
Administrative staff = 84 (Male = 54, female = 30)]
Students = 1600
[Boys = 880 (only English = 660, both Hindi and English = 220)],
Girls = 720 (only English = 144, both Hindi and English = 576)]
156:660 = 13:55
23. Ans. C.
Staff members = 240
[Teachers = 156 (male = 104. Females = 52)
Administrative staff = 84 (Male = 54, female = 30)]
Students = 1600
[Boys = 880 (only English = 660, both Hindi and English = 220)],
Girls = 720 (only English = 144, both Hindi and English = 576)]
54 + 52 + 144 = 250
24. Ans. B.
The number of vehicles on Friday is 40000.
Hence, option B.
Total vehicles on Saturday=75000
Total vehicles on Sunday=75000*4/5=60000
Saturday,
The number of vehicles on highway B is 15000 less than that of highway A & C together.
Let A&C together=x
Then highway B=x-15000
x+x-15000=75000
x=45000
So on highway B=75000-45000=30000
A&C=45000
Friday,
The number of vehicles on highway B is one third of the highway B of Saturday.
So on highway B=30000/3=10000
Sunday,
The number of vehicle of highway A is equal to highway B of Saturday.
So highway A=30000
Saturday,
The number of vehicles on highway A is 5/6th of highway A of Sunday.
So highway A=30000*5/6=25000
We know that highway A +C=45000
So highway C=45000-25000=20000
Sunday,
The number of vehicles on highway C is same on Saturday and Sunday.
So highway C=20000
Total Sunday=60000
Then highway B=60000-(30000+20000)10000
Friday,
The number of vehicles on highway C is 3/4th of highway C of Saturday.
So highway C=20000*3/4=15000
The number of vehicle on highway A and C is same.
So highway A=15000

Day	Highway A	Highway B	Highway C
Friday	15000	10000	15000
Saturday	25000	30000	20000
Sunday	30000	10000	20000

25. Ans. D.
The total number of vehicles on highway A of three days,
15000+25000+30000=70000
Hence, option D.
Total vehicles on Saturday=75000
Total vehicles on Sunday=75000*4/5=60000
Saturday,
The number of vehicles on highway B is 15000 less than that of highway A & C together.
Let A&C together=x
Then highway B=x-15000
x+x-15000=75000
x=45000
So on highway B=75000-45000=30000
A&C=45000
Friday,
The number of vehicles on highway B is one third of the highway B of Saturday.
So on highway B=30000/3=10000
Sunday,
The number of vehicle of highway A is equal to highway B of Saturday.
So highway A=30000
Saturday,
The number of vehicles on highway A is 5/6th of highway A of Sunday.
So highway A=30000*5/6=25000

We know that highway A +C=45000
So highway C=45000-25000=20000
Sunday,
The number of vehicles on highway C is same on Saturday and Sunday.
So highway C=20000
Total Sunday=60000
Then highway B=60000-(30000+20000)10000
Friday,
The number of vehicles on highway C is 3/4th of highway C of Saturday.
So highway C=20000*3/4=15000
The number of vehicle on highway A and C is same.
So highway A=15000

Day	Highway A	Highway B	Highway C
Friday	15000	10000	15000
Saturday	25000	30000	20000
Sunday	30000	10000	20000

26. Ans. B.
60000/3=20000
Hence, option B.
Total vehicles on Saturday=75000
Total vehicles on Sunday=75000*4/5=60000
Saturday,
The number of vehicles on highway B is 15000 less than that of highway A & C together.
Let A&C together=x
Then highway B=x-15000
x+x-15000=75000
x=45000
So on highway B=75000-45000=30000
A&C=45000
Friday,
The number of vehicles on highway B is one third of the highway B of Saturday.
So on highway B=30000/3=10000
Sunday,
The number of vehicle of highway A is equal to highway B of Saturday.
So highway A=30000
Saturday,
The number of vehicles on highway A is 5/6th of highway A of Sunday.
So highway A=30000*5/6=25000
We know that highway A +C=45000
So highway C=45000-25000=20000
Sunday,
The number of vehicles on highway C is same on Saturday and Sunday.
So highway C=20000
Total Sunday=60000
Then highway B=60000-(30000+20000)10000
Friday,
The number of vehicles on highway C is 3/4th of highway C of Saturday.
So highway C=20000*3/4=15000
The number of vehicle on highway A and C is same.
So highway A=15000

Day	Highway A	Highway B	Highway C
Friday	15000	10000	15000
Saturday	25000	30000	20000
Sunday	30000	10000	20000

27. Ans. C.
Highway A on Saturday=25000
Highway C on Friday=15000
Difference=25000-15000=10000
Hence, option C.
Total vehicles on Saturday=75000
Total vehicles on Sunday=75000*4/5=60000
Saturday,
The number of vehicles on highway B is 15000 less than that of highway A & C together.
Let A&C together=x
Then highway B=x-15000
x+x-15000=75000
x=45000
So on highway B=75000-45000=30000
A&C=45000
Friday,
The number of vehicles on highway B is one third of the highway B of Saturday.
So on highway B=30000/3=10000
Sunday,
The number of vehicle of highway A is equal to highway B of Saturday.
So highway A=30000
Saturday,
The number of vehicles on highway A is 5/6th of highway A of Sunday.
So highway A=30000*5/6=25000
We know that highway A +C=45000
So highway C=45000-25000=20000

Sunday,
The number of vehicles on highway C is same on Saturday and Sunday.
So highway C=20000
Total Sunday=60000
Then highway B=60000-(30000+20000)10000
Friday,
The number of vehicles on highway C is 3/4th of highway C of Saturday.
So highway C=20000*3/4=15000
The number of vehicle on highway A and C is same.
So highway A=15000

Day	Highway A	Highway B	Highway C
Friday	15000	10000	15000
Saturday	25000	30000	20000
Sunday	30000	10000	20000

28. Ans. D.
Vehicles on highway B on Friday=10000
Total vehicles on Sunday=60000
According to the questions,
10000*100/60000=16.66%
Hence, option D.
Total vehicles on Saturday=75000
Total vehicles on Sunday=75000*4/5=60000
Saturday,
The number of vehicles on highway B is 15000 less than that of highway A & C together.
Let A&C together=x
Then highway B=x-15000
x+x-15000=75000
x=45000
So on highway B=75000-45000=30000
A&C=45000
Friday,
The number of vehicles on highway B is one third of the highway B of Saturday.
So on highway B=30000/3=10000
Sunday,
The number of vehicle of highway A is equal to highway B of Saturday.
So highway A=30000
Saturday,
The number of vehicles on highway A is 5/6th of highway A of Sunday.
So highway A=30000*5/6=25000
We know that highway A +C=45000
So highway C=45000-25000=20000

Sunday,
The number of vehicles on highway C is same on Saturday and Sunday.
So highway C=20000
Total Sunday=60000
Then highway B=60000-(30000+20000)10000
Friday,
The number of vehicles on highway C is 3/4th of highway C of Saturday.
So highway C=20000*3/4=15000
The number of vehicle on highway A and C is same.
So highway A=15000

Day	Highway A	Highway B	Highway C
Friday	15000	10000	15000
Saturday	25000	30000	20000
Sunday	30000	10000	20000

29. Ans. C.
10% of the total expenses was spent on Clothing
Amount spent on Clothing = $2500
3% of the total expenses was spent on Favors
Amount spent on Favors= $750
50% of the total expenses was spent on Catering and venue
Amount spent on Catering and venue = $12500
Average amount spent = $\frac{2500+750+12500}{3}$
Average amount spent = $ 5250
Hence the correct option is option (C).
Alternate way:
% of budget spent on Clothing =10
% of budget spent on Favours =3
% of budget spent on Catering and venue = 50
Adding all three we get
% of budget spend on Clothing , favour and catering and venue=10+3+50=63
Avg budget spend on Clothing , favour and catering and venue= (1/3) *63% of 25000 =**5250**
30. Ans. B.
10% of the total expenses comprised of Photography costs.
∴ Money spent on Photography = $\frac{10}{100}\times 25000$

∴ Money spent on Photography = $2500
Hence the correct option is option (B).
31. Ans. A.
1% of the total expenses comprised of Transportation costs.
∴ Money spent on Transportation = $\frac{1}{100} \times 25000$
∴ Money spent on Transportation = $250
3% of the total expenses comprised of Favors costs.
∴ Money spent on Favors = $\frac{3}{100} \times 25000$
∴ Money spent on Favors = $750
∴ Required ratio = $\frac{250}{750} = \frac{1}{3}$
∴ Required ratio = 1 : 3
Hence the correct option is option (A).
Alternate way :
% of budget spent on Transportation=1
% of budget spent on Favours =3
Required Ratio - % of budget spent on Transportation : % of budget spent on Favours
1: 3
32. Ans. E.
50% of the total expenses was spent on Catering and venue
Amount spent on Catering and venue = $12500 …….(1)
10% of the total expenses was spent on Clothing
Amount spent on Clothing = $2500
3% of the total expenses was spent on Cake
Amount spent on Cake = $750
Total amount spent on Clothing and Cake = 2500 + 750 = $ 3250 ……(2)
Difference = 12500 - 3250 = $ 9250
Hence the correct option is option (E).
33. Ans. B.
From the pie-chart,
The survey done on the no. of people = 60000
We know, the central angle for the survey done on the total no. of people
is 360 °, which is 100% of the pie-chart.
Central angle for the no. of people having account in bank C = 97.2 °.
So, percentage of people having account in bank C = (97.2 °/360 °) × 100 = 27
Then, the no. of people having account in bank C = 60000 × (27/100) = 16200
The ratio of male and female in bank C is 1 : 2.
∴ The no. of female having account in bank C = 16200 × (2/3) = 10800.
34. Ans. B.
From the pie-chart,
Central angle for the no. of people having account in bank D = 46.8 °.
Central angle for the no. of people having account in bank E = 28.8 °.
∴ The required percentage = [(46.8/28.8) × 100]% = 162.5%.
35. Ans. D.
From the pie-chart,
The survey done on the no. of people = 60000
We know, the central angle for the survey done on the total no. of people
is 360 °, which is 100% of the pie-chart.
Central angle for the no. of people having account in bank B = 86.4 °.
So, percentage of people having account in bank B = (86.4 °/360 °) × 100 = 24
Then, the no. of people having account in bank B = 60000 × (24/100) = 14400
Central angle for the no. of people having account in bank F = 43.2 °.
So, percentage of people having account in bank F = (43.2 °/360 °) × 100 = 12
Then, the no. of people having account in bank F = 60000 × (12/100) = 7200
Total no. of people having account in bank B and F together = 14400 + 7200 = 21600.
The percentage of people aged below 18 is 22% of the total no. of people having account in bank B & F together.
∴ The number of people aged below 18 in both the banks together
= 21600 × (22/100) = 4752.
Alternate method
Combined angle of B & F= 86.4+43.2=129.6
Total number of people aged below 18 in both the banks together=
22%129.6*60000/360
=4752

36. Ans. C.
From the pie-chart,
The survey done on the no. of people = 60000
We know, the central angle for the survey done on the total no. of people
is 360 °, which is 100% of the pie-chart.
Central angle for the no. of people having account in bank A = 57.6 °.
So, percentage of people having account in bank A = (57.6 °/360 °) × 100 = 16
Then, the no. of people having account in bank A = 60000 × (16/100) = 9600
The percentage of female having account in bank A is 40%.
So, the no. of female having account in bank A = 9600 × (40/100) = 3840
And, the no. of male having account in bank A = 9600 – 3840 = 5760
Central angle for the no. of people having account in bank D = 46.8 °.
So, percentage of people having account in bank A = (46.8 °/360 °) × 100 = 13
Then, the no. of people having account in bank A = 60000 × (13/100) = 7800
The percentage of female having account in bank D is 45%.
So, the no. of female having account in bank D = 7800 × (45/100) = 3510
And, the no. of male having account in bank D = 7800 – 3510 = 4290
∴ The required ratio = (5760 + 4290) : (3840 + 3510) = 10050 : 7350
= 67 : 49.
37. Ans. A.
From the pie-chart,
The survey done on the no. of people = 60000
We know, the central angle for the survey done on the total no. of people
is 360 °, which is 100% of the pie-chart.
Central angle for the no. of people having account in bank A = 57.6 °.
Central angle for the no. of people having account in bank B = 86.4 °.
So, the total central angle for the no. of people having account in bank A and B
= 57.6 ° + 86.4 ° = 144 °
∴ The percentage of people having account in bank A and B
= [(144 °/360 °) × 100]% = 40%.

38. Ans. B.
50% of the total expenses was spent on Catering and venue
Amount spent on Catering and venue = $12500
12% of this is to be saved.
Thus money saved from catering costs = $\frac{12}{100}\times 12500$ = $ 1500 ……(1)
10% of the total expenses was spent on Decorations
Amount spent on Decorations = $2500
2% of this is to be spent extra.
∴ extra money spent = $\frac{2}{100}\times 2500$ = $ 50 ……..(2)
From (1) and (2)
Money saved = 1500 - 50 = $ 1450
Hence the correct option is option (B).
39. Ans. C.
The total number of employees in all three companies in 2012= 1220
The total number of employees in Sales and IT department together in all three companies in 2012= 280+340+200=820
The total number of employees in Marketing department in all three companies in 2012=1220-820= 400
The total number of employees in Marketing department in company A,
$=\frac{400}{(7+6+7)}\times 7=$**140**
The total number of employees in Marketing department in company B,
$=\frac{400}{(7+6+7)}\times 6=$**120**
So, required difference= 140-120= 20
40. Ans. B.
The total number of employees in Sales and IT department together of company A in 2014=200
The total number of employees in Sales department of company A in 2014= $\frac{200}{(2+3)}\times 2=80$

The total number of employees in IT department of company A in 2014=200-80=**120**
The total number of employees in Sales department of company B in 2014=80
(Because Sales employees of company A is equal to the Sales employees of company B)
The total number of employees in Sales and IT department together of company B in 2014=240
The total number of employees in IT department of company B in 2014=240-80=**160**

So, required ratio= $\frac{160}{120}$ = 4 : 3

41. Ans. D.
The total number of employees in Sales and IT department together of all three companies in 2013 and 2014 together=280+220+280+200+240+240=1460
The total number of employees in Sales and IT department together of all three companies in 2015 and 2016 together=300+300+140+220+240+280=1480

So, required percentage= $\frac{(1480-1460)}{1480}$ ×100=1%**(Approx)**

42. Ans. B.
The total number of employees in Marketing department of company A in 2015= **100**
The total number of employees of company A in 2015= Sales + IT + Marketing=300+100=400
The total number of employees of company B in 2015= $\frac{400}{100}$ ×110=440
The total number of employees in Sales and IT department of company B in 2015=300
The total number of employees in Marketing department of company B in 2015, =440-300=**140**

So, required percentage= $\frac{100}{140}$ ×100= 71% **(Approx)**

43. Ans. E.
The total number of employees in Sales and IT department of company C in all six years=200+280+240+140+280+240=1380

So, required average= $\frac{1380}{6}$ =230

44. Ans. E.
Required ratio = total number of male students from English and Maths/ total number of students (male + female)
= {(14+7)%of 9000 – (14+10)%of3500}/(14+7)% of 9000
=1890-840/1890
=1050/1890
=5:9 ans

45. Ans. A.
Average= {(7+25+24)% of 9000 – (10 + 35 +21)% of 3500}/3
= (5040 – 2310)/3
=910 ans.

46. Ans. B.
Required % = (20+14)% of 3500 * 100/ (30% of 9000 – 20% of 3500)
=59.5%

47. Ans. B.
Required % = (21 - 14)% of 3500 *100/14% of 3500
= 7*100/14
= 50%

48. Ans. B.
Male students from subject Chemistry in the year 2018 =
120% of (24% of 9000 – 21% of 3500)= 6*1425/5= 1710
Now,
60% ==== 1710
Therefore 20% ==== 1710 *20/60 = 570 ans.

49. Ans. B.

Village	Total people	Male	Female	Children
A	280	140	90	50
B	300	160	80	60
C	340	100	160	80
D	260	120	80	60
E	400	220	120	60

From village A,
Let M represents male, F represent female and C represents children. So,
M+C=190
F+C=140

M+F=230
2(M+F+C)=190+140+230=560
M+F+C=560/2=280
Total number of males=(M+F+C)-(F+C)
=280-140=140
Total number of females=(M+F+C)-(M+C)
=280-190=90
Total number of children=(M+F+C)-(M+F)
=280-230=50

From village E,

M+C=280
F+C=180
M+F=340
2(M+F+C)=280+180+340=800
M+F+C=800/2=400
Total number of females=(M+F+C)-(M+C)
=400-280=120
Difference=Male from village A-female from village E
=140-120=20
Hence, option B is the correct answer.

50. Ans. A.

Village	Total people	Male	Female	Children
A	280	140	90	50
B	300	160	80	60
C	340	100	160	80
D	260	120	80	60
E	400	220	120	60

Let M represents male, F represents female and C represents children.

From village B,

M+C=220
F+C=140
M+F=240
2(M+F+C)=220+140+240=600
M+F+C=600/2=300
Total number of male=(M+F+C)-(F+C)
=300-140=160

From village D,

M+C=180
F+C=140
M+F=200
2(M+F+C)=180+140+200=
M+F+C=520/2=260
Total number of male=(M+F+C)-(F+C)
=260-140=120
Total male B+D=160+120=280
Ratio of married to unmarried=9:5
So total unmarried male=280*5/14=100
Hence, option A is the correct answer.