

## Data Interpretation

Data interpretation is the most scoring and time consuming section in IBPS and other competitive examinations. In quantitative aptitude section you can see at least 2 data interpretation sets each having 5 questions. In IBPS PO there are 50 questions in Quantitative aptitude section and the cutoff remains 18-19. So if you solve those two sets corrected you need to solve 10 questions out of remaining 40 questions. Here are three important techniques to make Data Interpretation calculations fast.

## Visual Estimation

It is a well known fact that it is near to impossible to solve 200 questions in 120 minutes accurately. Term "Accurately" is important here because I have seen many candidates attempting 190+ questions and fails to qualify. The reason behind failure is low accuracy and many times accuracy level falls below $40 \%$. Important point to be noted down here is by attempting 190+ with low accuracy you gets less time for questions you are sure about and there is negative marking in most of the competitive exams.

Now lets come to our topic. How to use visual estimation technique to solve Data Interpretation questions. Let's take an visual example:-


Example - Red bars states wheat production state and Green bars states rice production.
Question - In which year percentage increase Wheat production was highest?
As you can see there is increase of 5 tonnes in production both wheat and rice production every year.
$10 \%$ of $50=5$
$10 \%$ of $70=7$
So answer should 2006.

## Finding averages

Many times in Data Interpretation, questions are asked to find average of 5-6 big numbers. As all these numbers are from a same graph, there is high probability that these number will be close to each other. Take a look to following visual example:-


In the above example you can find average of above number in just 5 seconds:-
$7800(14+29+108+22+120 / 5)=7800+58.6=7858.6$
I always try to find answers by approximation, in my mind I calculated answer 7860. Try it yourself.

## Solve the fractions quickly

Learn the value of fractions in percentages. Please read Time and work chapter in my previous post in which I explained via a table.

## Faster calculations

Only thing that you require to score well in data interpretation questions is fast calculation. Try to find tricks and shortcuts. You can find multiplication tricks from my previous post.

Let's take an example:- How much 468 of 21428 ?
Let me make this simple for you.
$1 \%$ of $21428=214$
$2 \%$ of $21428=428$
$0.1 \%$ of $21428=21$
for me answer should be around $2.2 \%$
There are tonnes of such techniques which makes calculations easy.

## Exercise 1

Following pie charts shows the distribution of employees in three companies $\mathrm{A}, \mathrm{B}$, and C in 2014.


Number of females in each company


Female employees in A: $\mathbf{2 1 0 0}$

1) Number of female employees in $B$ and $C$ constitutes what percentage of the total number of employees in B and C ? (Rounded off figure)
a) $40 \%$
b) $42 \%$
c) $44 \%$
d) $46 \%$
e) $48 \%$
2) If $40 \%$ of the female employees in company Aare married. What percentage of the male employees are unmarried provided that the total number of married people working in the company A is 2500 ? (Rounded off figure)
a) $68 \%$
b) $70 \%$
c) $72 \%$
d) $76 \%$
e) $78 \%$
3) If the $1 / 3^{\text {th }}$ of thefemale employees are living with their husbands. Howmany of them are married but not living with their husbands, provided that $34 \%$ of the females are unmarried?
a) 2645
b) 2684
c) 2744
d) 2844
e) 2875
4) If $20 \%, 25 \%$ and $30 \%$ of the employees in company $\mathrm{A}, \mathrm{B}$ and C respectively are under the age of 30 years. Which company has got the largest pool of employees in the age group 30 yearsand above?
a) A
b) B
c) C
d) A and B
e) A and C
5) If company C increases its staff strength by $20 \%$ in 2015 and $10 \%$ of the staffs retires in 2016. What will be the total increase in staff strength of Cat the end of the year 2016 from the present levels? (No other recruitments/retirements happens other than those mentioned)
a) 880
b) 704
c) 9504
d) 1760
e) 10560

Use the table to answer the following questions.

| Plan | A (Simple interest) | B (Simple interest) | $\quad$C <br> (Compounded <br> annually) | D(Compoun ded annually) |
| :---: | :---: | :---: | :---: | :---: |
| Principle | Rs.15,000 | Rs.. | Rs.10,000 | Rs.25,000 |
| Term | 42 months | 30 months | 24 months | months |
| rate | $\%$ | 7.5\% | 9\% | 12.50\% |
| Interest | $\text { Rs. } 5250$ | Rs. 3750 | Rs............. | Rs. 3125 |

6) Suppose the interest rate of plan $C$ is changed to that of plan $A$, how much more or less one can earn as interest on a principle amount of Rs. 10,000 ?
a) Rs. 229
b) Rs. 219
c) Rs. 239
d) Rs. 199
e) Rs. 189
7) If the investment term under plan $D$ is tripled, what will be the interest earned underthe new plan?
a) Rs. $10,595.70$
b) Rs. $10,585.70$
c) Rs. $10,955.70$
d) Rs. 10,575.90
e) Rs.10,585.90
8) After maturity of plan B if the amount along with interest is reinvested in plan A. What will be the maturity amount after a period of 24 months?
a) Rs. 27,500
b) Rs. 27,850
c) Rs. 28,500
d) Rs. 28,750
e) Rs.28,775
9) What is the ratio between interest earned under plan C (Compounded annually) and plan C (If the interest is not compounded)?
a) $68: 63$
b) $200: 209$
c) $210: 219$
d) $209: 200$
e) $219: 210$
10) A minimum of how many months should one invest Rs. 25,000 in plan $D$ so that the interest earned is not less than Rs.6,600.
a) 48
b) 36
c) 30
d) 24
e) 12

An exhibition featuring traditional clothes consists of mens, ladies and kids sections. Each section is alloted a square area and the perimeter of 3 sections adds upto 240 m and is distributed as follows.


Three types of bulbs are used to light up the entire area and they are distributed in accordance with the following criteria.

| Bulb type | Distribution |
| :--- | :--- |
| LED | 1 per $5 \mathrm{~m}^{2}$ |
| CFL | 1 per $25 \mathrm{~m}^{2}$ |
| Incandescent | 1 per each 4 m of perimeter |


11) What is the ratio between the areas of ladies, kids and gents sections?
a) $41.67: 33.33: 25$
b) $20: 16: 12$
c) $25: 9: 16$
d) $16: 9: 25$
e) Cannot be determined
12) If the furnishing of each square meter requires Rs.125, How much more money is required to furnish the gents area than the kids section?
a) Rs. 22875
b) Rs. 28175
c) Rs. 21875
d) Rs. 21975
e) RS. 22250
13) What will be cost for lighting up the ladies section provided that each LED costs Rs.80, CFL Rs. 75 and incandescent bulb Rs.12?
a) Rs. 12175
b) Rs. 12225
c) Rs. 12715
d) Rs. 12525
e) Rs. 12515
14) What percentage of the LED bulbs is utilised to light up the kids section?
a) $16 \%$
b) $17 \%$
c) $14 \%$
d) $20 \%$
e) $18 \%$
15) What will the total electricity consumption of the ladies and gents section togetherin a day provided that consumption of each LED is 0.2 units/day, CFL is 0.4 units/day, and incandescent bulbs lunit/day respectively?
a) 102.5
b) 102.4
c) 105.5
d) 115.5
e) 112.5

16) Total sales of copper in 2003 and 2004 constitute what percentage of the average sales of silver in 2004 and 2005.
a) $150 \%$
b) $160 \%$
c) $155 \%$
d) $175 \%$
e) $180 \%$
17) What will be the sales of gold in 2006 if it's equal to the average sales of gold in 2002,2004 and 2005 together?
a) $882 / 3$
b) $831 / 3$
c) $881 / 3$
d) $832 / 3$
e) $832 / 5$
18) What will be the total sales of all three in 2006 if it is equal to the 1.5 times the sum of average sales of silver in 2002-2003 and copper in 2003-2004?
a) 424.4
b) 444.5
c) 442.5
d) 454.5
e) 445.2
19) Sales of silver in all four years constitute what percentage of the total sales of gold and copper in 2003-2004.
a) $143 \%$
b) $141 \%$
c) $136 \%$
d) $134 \%$
e) $131 \%$
20) What is the ratio between the total sales of silver in 2003-2004 to the difference between the average sales of copper and gold in 2002-2003 is?
a) $68: 25$
b) $25: 68$
c) $34: 13$
d) $41: 15$
e) $13: 34$

21) Average number of Fiction and GK Books sold by Store A, B, and D together constitutes what percentage of the total number of books sold by Stores C, D, and E?
a) $27.65 \%$
b) $26.67 \%$
c) $26.16 \%$
d) $25.67 \%$
e) $25.16 \%$
22) How many stores sold more than 5000 copies of non-fiction?
a) 3
b) 2
c) 4
d) 1
e) None of these
23) If each fiction costs 15.50 rupees and GK costs 12.50 rupees, what is the cost of each non-fiction book provided that total the total business of C is Rs. 120,360.
a) 12
b) 13
c) 10
d) 11
e) 9
24) What will be the total business of store $C$ If the price of fiction and non-fiction is increased by $10 \%$ and that of GK is unchanged?
a) $129,814.75$
b) $134,977.25$
c) $124,225.50$
d) $140,550.25$
e) $150,515.50$

Use the given data to answer the following questions.


| Grade | Rate/Tonne |
| :--- | :--- |
| 1 | Rs.75,000 |
| 2 | Rs.60,000 |

25) What is the difference between the average sales of grade 1 and 2 in all 4 companies?
a) 5 tonnes
b) 10 tonnes
c) 15 tonnes
d) 20 tonnes
e) 25 tonnes
26) What is the difference between the total income of companies C and A ?
a) Rs. 1.05 million
b) Rs. 10.05 million
c) Rs. 1005 million
d) Rs. 1.05 crores
e) Rs. 10.05 crores
27) What percentage of the net income of company $A$ is constituted by grade 1 tea?
a) $50 \%$
b) $33.33 \%$
c) $25 \%$
d) $40 \%$
e) $38.46 \%$
28) Total production by company $D$ is what percentage of that of company $B$ ?
a) $140 \%$
b) $150 \%$
c) $160 \%$
d) $170 \%$
e) $180 \%$

Study the following pie-charts carefully to answer the given questions.
Pie-chart I and pie-chart II show the percentage of various types of cattle in Denmark and Spain respectively.

Pie Chart - I


Pie Chart - II

29) If the total cattle in Denmark is 1200000 and the ratio of cows in Denmark to that in Spain is $3: 5$, then what is the total number of cattle in Spain? (You are not expected to calculate the exact value.)
a) 16.2 lakh
b) 20.8 lakh
c) 19.2 lakh
d) 17.3 lakh
e) 20.14 lakh
30) If the total cattle in Spain is 1000000 then what is the difference between the number of camels and that of goats in Spain?
a) 44000
b) 72000
c) 60000
d) 80000
e) 41000
31) If the total number of other animals in Denmark increases by $10 \%$ per annum then what will the number of other animals be after 2 years? (Given that the number of other animals at present is 1.5 lakh)
a) 181500
b) 202500
c) 214500
d) 195500
e) 162500
32) If the number of buffaloes in Spain increases by $5 \%$ per annum, then what was the number of buffaloes in Spain two years ago? (Given that the number of buffaloes is 2.5 lakh as of now)
a) 165172
b) 189872
c) 325450
d) 282120
e) 226757
33) If the total number of goats in Spain is 50000 and the ratio of goats in Spain to that in Denmark is $2: 3$ then what is the total number of cattle in Denmark?
a) 125000
b) 625000
c) 325000
d) 425000
e) 525000

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 $=1200 \mathrm{~kg}$


Total quantity $=1000 \mathrm{~kg}$
34) 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
35) 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) $2: 5: 7$
36) 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) $180 \%$
37) 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
38) 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) $171.42 \%$

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 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Domesti | Foreig | Domesti | Foreig | Domesti | Foreig | Domesti | Foreig (


|  | $\mathbf{c}$ | $\mathbf{n}$ | $\mathbf{C}$ | $\mathbf{n}$ | $\mathbf{c}$ | $\mathbf{n}$ | $\mathbf{c}$ | $\mathbf{n}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 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 |
| Machiner <br> y | 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 |

39) 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
40) 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) $123: 233$
41) 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
42) 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) $152.3 \%$
43) 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) $167.23 \%$

Study the following information carefully to answer the questions given below:
There are 64 members of parliament (MPs) in a standing committee. Of these, three-fourths are males and the remaining are females. Among male members two-thirds belong to the Congress and $75 \%$ of the remaining belong to the BJP. Three-fourths of female members belong to the BJP and two belong to the BSP. The remaining female members belong to the Samajwadi Party (SP).
44) What is the number of male members who do not belong either to Congress or to BJP?
a) 12
b) 16
c) 8
d) 2
e) 4
45) What is the ratio of female SP members to female BJP members in the committee?
a) $2: 3$
b) $1: 4$
c) $1: 6$
d) $2: 5$
e) $3: 1$
46) The female members of the BJP in the committee is what percent of the male members of the BJP in the committee?
a) $90 \%$
b) $80 \%$
c) $75 \%$
d) $100 \%$
e) $50 \%$

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

47) 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
48) In which city is the income per working person the minimum?
a) Delhi
b) Jaipur
c) Bangalore
d) Chennai
e) Mumbai
49) 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
50) 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

## Solutions:

1. Option C

Number of female employees in B and C $=2100 \times \frac{75}{25}=6300$
Total number of employees in B and C $=22000 \times \frac{65}{100}=14,300$
Percentage $=\frac{6300}{14300} \times 100=44 \%$ (Approx. $)$
2. Option B

Number ofmarried female employees in company $A=\frac{40}{100} \times 2100=840$
Total number of people working in company $\mathrm{A}=7700$
Total number of married people working in company $\mathrm{A}=2500$
So, Number of married male employees $=2500-840=1660$
Total males in company $\mathrm{A}=7700-2100=5600$
Number ofunmarried male employees $=5600-1660=3940$
Percentage $=70 \%$ (Approx.)
3. Option C
$1 / 3^{\text {th }}$ of the female employees are living with their husbands $=2800$ $34 \%$ of the females are unmarried or $66 \%$ are married.
Marriedfemales $=8400 \times \frac{66}{100}=5544$
Female employees who are married but not living with their husbands $=5544-$ $2800=2744$

## 4. Option E

Employees in the age group 30 years and above is as follows
A- $7700-20 \%$ of $7700=6160$
B- $5500-25 \%$ of $5500=4125$
C- $8800-30 \%$ of $8800=6160$
Answer is both A and C

## 5. Option B

Present staff strength of C $=8800$
After $20 \%$ increase in $2015: 1.20 \times 8800=10560$
After 10\% decrease in 2016:0.90×10560=9504
Increase in staff strength of C $=9504-8800=704$

| Plan | A (Simple <br> interest) | B (Simple <br> interest) | C <br> (Compounded | D(Compoun <br> ded annually) |
| :---: | :---: | :---: | :---: | :---: |


|  |  |  | annually |  |
| :---: | :--- | :--- | :--- | :--- |
| Principle | Rs.15,000 | Rs.20,000 | Rs.10,000 | Rs.25,000 |
| Term | 42 months | 30 months | 24 months | $\mathbf{1 2}$ months |
| Interest <br> rate | $\mathbf{1 0 \%}$ | $7.5 \%$ | $9 \%$ | $12.50 \%$ |
| Interest | Rs. 5250 | Rs. 3750 | Rs.1881 | Rs.3125 |

6. Option B

Interest earned under default plan $\mathrm{C}=$ Rs. 1881
Interest rate of plan $\mathrm{A}=10 \%$
Interest earned under plan C at $10 \%$ p.a compounded annually $=$ Rs. 2100
Difference in interest earned $=2100-1881=$ Rs. 219
7. Option A

Original term is 12 and when it is tripled it becomes 36 months.
Interest on Rs.25,000@12.50p.a (Compounded annually) for 36 months is Rs.10,595.70
8. Option C

Maturity amount of plan B $=$ Rs. 23,750
Rs.23,750 deposited for 2 years in plan A gives Rs.28,500 on maturity.
9. Option D

Interest earned under plan C (Compounded annually) = Rs. 1881
Interest earned underplan C (If the interest is not compounded) $=$ Rs. 1800
Ratio will be $1881: 1800=209: 200$
10. Option D

Investment of Rs.25,000 in plan D will earn Rs. 6640.25 in 24 months.

Perimeter of a square $=4 \times$ length of its one side
Ladies: $41.67 \%$ of $240=100 \mathrm{~m}$ (each side is 25 m and area is $625 \mathrm{~m}^{2}$ )
Gents: $33.33 \%$ of $240=80 \mathrm{~m}$ (each side is 20 m and area is $400 \mathrm{~m}^{2}$ )
Kids: $25 \%$ of $240=60 \mathrm{~m}$ (each side is 15 m and area is $225 \mathrm{~m}^{2}$ )
From the above data we can arrive create the following table.

| Bulb type | Distribution | Ladies | Gents | Kids | Total |
| :--- | :--- | :--- | :--- | :--- | :--- |
| LED | 1 per $5 \mathrm{~m}^{2}$ | 125 | 80 | 45 | 250 |
| CFL | 1 per $25 \mathrm{~m}^{2}$ | 25 | 16 | 9 | 50 |
| Incandescent | 1 per each 4 m | 25 | 20 | 15 | 60 |



## 11. Option C

Ratio between the areas of ladies, kids and gents sections is $625: 225: 400=$ 25:9:16

## 12. Option C

Area of gents section - Area of kids section $=400-225=175 \mathrm{~m}^{2}$
Furnishing charge is Rs. $125 / \mathrm{m}^{2}$
Expense for furnishing extra $175 \mathrm{~m}^{2}=175 \times 125=21875$

## 13. Option A

Cost for lighting up the ladies section $=125 \times 80+25 \times 75+25 \times 12=$ Rs. 12175
14. Option E

Percentage of the LED bulbs utilised to light up the kids section $=\frac{45}{250} \times 100=$ 18\%
15. Option B

Total number of LED, CFL, and incandescent bulbs in ladies and gents section together is 205, 41 , and 45 respectively.
Therefore the total electricity consumption in a day $=205 \times 0.2+41 \times 0.4+45$
$\times 1=102.4$ (b)

## 16. Option B

Total sales of copper in 2003 and $2004=160+160=320$ tonnes
Average sales of silver in 2004 and $2005=\frac{180+220}{2}=200$ tonnes
Percentage $=\frac{320}{200} \times 100=160 \%$

## 17. Option B

Average sales of gold in 2002, 2004 and 2005 together $=\frac{60+110+80}{3}=\frac{250}{3}=$ 83 1/3

## 18. Option C

Sum of average sales of silver in 2002-2003 and copper in 2003-2004
$=\frac{110+160}{2}+\frac{160+160}{2}$
$=135+160=295$
1.5 times $295=1.5 \times 295=442.50$

## 19. Option D

Sales of silver in all four years $=670$ tonnes
Total sales of gold and copper in 2003-2004 $=500$ tonnes
Percentage $=\frac{670}{500} \times 100=134 \%$
20. Option A

Sales of silver in 2003-2004 $=340$
Difference between the average sales of copper and gold in 2002-2003 is
$\frac{220+160}{2}-\frac{60+80}{2}$
$=190-65=125$
Ratio is $340: 125=68: 25$

## 21. Option B

Average number of Fiction and GK Books sold by Store A, B, and D together
$=\frac{\text { Avara }}{3}$
$=\frac{35400}{3}=11,800$
Total number of books sold by Stores C, D, and E $=10 \%+15 \%+25 \%$ of total sales
$=50 \%$ of 88,500
$=44,250$
Percentage $=\frac{11800}{44250} \times 100=26.67 \%$

## 22. Option A

Non-fiction sold by
$\mathrm{A}=\frac{5}{20} \times 20 \%$ of $88500=4425$
$\mathrm{B}=\frac{7}{15} \times 30 \%$ of $88500=12390$
$\mathrm{C}=\frac{8}{30} \times 10 \%$ of $88500=2360$
$\mathrm{D}=\frac{6}{b^{5}} \times 15 \%$ of $88500=5310$
$\mathrm{E}=\frac{\delta}{27} \times 25 \%$ of $88500=6556$ (Appox)
Answer is B,D and $\mathrm{E}=3$ stores

## 23. Option D

Total business of $\mathrm{C}=$ Rs. 120,360
Total number of books sold by Store C $=10 \%$ of $88500=8850$
Number of fiction $=\frac{15}{30} \times 8850=4425$ (Total Cost $=4425 \times$ Rs. $15.50=$ Rs. 68587.5
(1)

$$
\text { Number of non-fiction }=\frac{8}{30} \times 8850=2360(\text { Total Cost }=\text { Unknown) }(2)
$$

Number of GK books $=(7 / 30) * 8850=2065$ (Total Cost $=2065 \times$ Rs. $12.50=$
Rs. 25812.5 (3)
Total Cost of non-fiction= Total business - (1) - (3)
Rs. 120,360 -Rs. $68587.5-$ Rs. $25812.5=25960$

$$
\begin{array}{ll}
\text { ar } & =\text { Price per copy }=\frac{25960}{2360}=\text { Rs. } 11.10
\end{array}
$$



24. Option A

Price of fiction and non-fiction is increased by $10 \%$
Now fiction will cost Rs. 17.05, non-fiction Rs.12.1, and GK Rs.12.5
(Unchanged)
Total business of C will be equal to $(4425 \times 17.05+2360 \times 12.1+2065 \times$ $12.5)=$ RS. 129,814.75
25. Option C

Average sales of grade $1=\frac{20+40+50+60}{40+60}=42.5$ tonnes
Average sales of grade $2=\frac{40+60+{ }^{4} 20+110}{4}=57.5$ tonnes
Difference $=57.5-42.5=15$ tonnes.
26. Option A

Total income of companies $\mathrm{A}=(75000 \times 20)+(60000 \times 40)=$ Rs. 3900000
Total income of companies $C=(75000 \times 50)+(60000 \times 20)=$ Rs. 4950000

Difference $=$ Rs. $1050000=$ Rs. 1.05 million.

| Company | Grade1 <br> (tonnes) | Grade 2 <br> (tonnes) |
| :--- | :---: | :---: |
| A | 20 | 40 |
| B | 40 | 60 |
| C | 50 | 20 |
| D | 60 | 110 |

## 27. Option E

Net income of company $A=(75000 \times 20)+(40 \times 60000)=$ Rs. 3900000
Grade 1 constitutes $38.46 \%\left[\frac{150000}{3900000} \times 100\right]$
28. Option D

Total production by company $\mathrm{D}=60+110=170$ tonnes
Total production by company $\mathrm{B}=40+60=100$ tonnes
Total production by company D is $170 \%$ that of company B. $(170 / 100) * 100$
29. Option D

Total cattle in Denmark $=1200000$
So, cows in Denmark $=1200000 \times \frac{26}{100}=312000$
Cows in Spain $=312000 \times \frac{5}{3} \quad=520000$
So, total cattle in Spain $=520000 \times \frac{100}{30} \quad=1733333.3$
$=1733333=17.3$ lakh
30. Option D

The difference between the number of Camels and that of Goats in Spain = $1000000(16-8) \times \frac{1}{100}=80000$
31. Option A

The total number of other animals in Denmark after 2 years $=1.5\left[1+{ }^{10}\right]^{2} \frac{100}{10}$ lakh $=181500$

## 32. Option E

The total number of buffaloes two years ago in Spain $=\frac{25}{\left(1+\frac{5}{100}^{2}\right.}=226757.38=$ 226757

## 33. Option B

The total number of Goats in Spain $=50000$
The total number of Goats in Denmark $=50000 \times \frac{3}{2}=75000$
Total number of cattle in Denmark $=75000 \times \frac{100}{12}=625000$

## 34. Option A

Quantity of Guava at Shop A $\quad=1200 \times \frac{10}{100}=120 \mathrm{~kg}$
Quantity of Guava at Shop B $\quad=1000 \times \frac{16}{100}=160 \mathrm{~kg}$
So, required difference $\quad=160-120=40 \mathrm{~kg}$
35. Option B

Cost of Mango at Shop A $=30 \times 1200 \times \frac{24}{100}=$ Rs. 8640
Cost of apple
Cost of Orange
$=40 \times 1200 \times \frac{16}{100}=$ Rs .7680
$=20 \times 1200 \times \frac{20}{100}=$ Rs. 4800
So, required ratio
$=8640: 7680: 4800$
$=9: 8: 5$
36. Option C
$\begin{array}{ll}\text { Quantity of Mango at Shop B } & =1000 \times \frac{24}{100}=240 \mathrm{~kg} \\ \text { Quantity of Mango at Shop A } & =1200 \times \frac{24}{100}=288 \mathrm{~kg}\end{array}$
So, required $\% \quad=288 \times \frac{100}{240}=120 \%$ of the quantity of Mango at Shop A
37. 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
$\left(1200 \times \frac{24}{300} \times 30+1200 \times \frac{16}{100} \times 40+1200 \times \frac{10}{100} \times 18+1200 \times \frac{20}{100} \times 20+\right.$ $1200 \times \frac{30}{100} \times 15$ )
$=8640+7680+2160+4800+5400=$ Rs. 28680
Cost of total fruits at Shop B $=\left(1000 \times \frac{24}{100} \times 30+1000 \times \frac{14}{100} \times 40+1000 \times\right.$
$\frac{16}{100} \times 18+1000 \times \frac{20}{100} \times 20+1000 \times \frac{26}{100} \times 15$ )
$=7200+5600+2880+4000+3900=$ Rs. 23580
So, required difference $=28680-23580=$ Rs. 5100
38. Option E

Quantity of Orange at Shop A $=1200 \times \frac{20}{\frac{100}{100}}=240 \mathrm{~kg}$
Quantity of Apple at Shop B $=1000 \times \frac{14}{100}=140 \mathrm{~kg}$
So, required $\%=\frac{240 \times 100}{140} \%=171.42 \%$ more than the quantity of Apple at Shop B.
39. Option C

Total domestic investment in $2011=5000+3000+4000+2000+2500+$ $1500+3500=$ Rs. 21500 Crore
Total foreign investment in 2011 $=2000+1600+2800+3000+2000+2500$
$+1000=$ Rs. 14900 Crore
So, required difference $=21500-14900=$ Rs. 6600 Crore
40. Option D

Total investment in Metals $=4000+2800+3500+2000+3200+2200+$ $1500+500=$ Rs. 19700 Crore
Total investment in Machinery $=2000+3000+2500+3000+3600+6000+$ $1000+1500=$ Rs. 22600 Crore
So, required ratio $=19700: 22600=197: 226$
41. Option A

Average domestic investment in 2014 =
$\frac{6000+4000+1500+1000+4000+1200+2000}{7}$
$=\frac{19700}{7}=$ Rs.2814.28 Crore
42. Option E

Domestic investment in 2013 $=4000+5000+3200+3600+3000+1500+$ 2400 = Rs. 22700 Crore
Foreign investment in $2011=2000+1600+2800+3000+2000+2500+$ $1000=$ Rs. 14900 Crore

$$
=\frac{22700 \times 100}{14900}=152.3 \%
$$

43. Option B

Average domestic investment in $2011=$ Rs. $\frac{21500}{7}$ Crore
Average investment in transport $=$

$$
\frac{2500+2000+1500+3200+3000+1600+4000+1000}{4}=\text { Rs. } 4700 \text { Crore }
$$

So, required $\%=\frac{21500}{7 \times 4700} \times 100=65.34 \%$

Total members $=64$
Males $=64 \times \frac{3}{4}=48$, Females $=(64-48)=16$
Male congress members $=48 \times \frac{2}{3}=32$
Male BJP members $=(48-32) \times \frac{75}{100}=12$
Female BJP members $=16 \times \frac{3}{4}=12$
Female BSP members $=2$
Female SP members $=16-(12+2)=2$

## 44. Option E

Number of male members who do not belong either to congress or to BJP $=$ $48-(32+12)=4$

## 45. Option C

Ratio of female SP members to female BJP members $=2: 12=1: 6$
46. Option D

Required $\%=\frac{12 \times 100}{12}=100 \%$

## 47. Option E

The difference between the working females in Bangalore and the working males in Chennai $=32.5-22.5=10$ lakh
48. Option B

Income per working person in Delhi $=\frac{200 \square \frac{36}{100}}{(30+25) \square 000000000}=\frac{720000000}{55000}=$ Rs. 130.9 In Chennai $=\frac{200 \times \frac{16}{100}}{(22.5+17.5)}=$ Rs. 80 .
In Mumbai $=\frac{\left(200 \times \frac{20}{100}\right.}{(35+30) \square \square 0}=$ Rs.61.53.
In Kolkata $==\frac{200 \times \frac{14}{100}}{(30+32.5)}=$ Rs.44.8.
In Bangalore $==\frac{200 \times \frac{10}{100}}{(25+32.5)}=$ Rs.34.78
In Jaipur $==\frac{200 \times \frac{4}{100}}{(17.5+25)}=$ Rs. 18.82.

The income per working person in Jaipur is the minimum.

## 49. Option D

Average number of working males $=\frac{1}{6} \times(30+22.5+35+30+25+17.5)=$ 26.66 lakh

Average number of working females $=\frac{1}{6} \times(25+17.5+30+32.5+32.5+25)$ $=27.08$ lakh
So, required sum $=26.66+27.08=53.75$ lakh
50. Option A

Total income of Delhi $=\left[200 \times \frac{36}{100}\right]=$ Rs. 72 Crore Income per person $=\frac{72 \square \square}{55 \square \square}=$ Rs.130.9
So, required difference of income $=5$ lakh $\times 130.9=$ Rs. 654.5 lakh = Rs.6.545 Crore

