DATA INTERPRETATION

Data Interpretation is one of the easy sections of one day competitive Examinations. It is an extension of Mathematical skill and accuracy. Data interpretation is nothing but drawing conclusions and inferences from a comprehensive data presented numerically in tabular form by means of an illustration, viz. Graphs, Pie Chart etc. Thus the act of organizing and interpreting data to get meaningful information is Data Interpretation.

SOME USEFUL TIPS :

1 . Data Interpretation questions are based on information given in tables and graphs. These questions test your ability to interpret the information presented and to select the appropriate data for answering a question.

2 . Get a general picture of the information before reading the question. Read the given titles carefully and try to understand its nature.

3 . Avoid lengthy calculations generally, data interpretation questions do not require to do extensive calculations and computations. Most questions simply require reading the data correctly and carefully and putting them to use directly with common sense.

4 . Breakdown lengthy questions into smaller parts and eliminate impossible choices.

5 . Use only the information given and your knowledge of everyday facts, such as the number of hours in a day, to answer the questions based on tables and graphs.
6 . Answer the questions asked and not what you think the questions should be.
7 . Be careful while dealing with units.
8 . To make reading easier and to avoid errors observe graphs keeping them straight.
9 . Be prepared to apply basic mathematical rules, principles and formulae.
10. Since one of the major benefits of graphs and tables is that they present data in a form that enables you to readily make comparisons, use this visual attribute of graphs and tables to help you answer the questions. Where possible, use your eyes instead of your computational skills.

TABLES

- Tables are often used in reports, magazines and newspaper to present a set of numerical facts. They enable the reader to make comparisons and to draw quick conclusions. It is one of the easiest and most accurate ways of presenting data. They require much closer reading than graphs of charts and hence are difficult and time consuming to interpret.

GRAPHS

There may be following types of graphs:

1) **Circle Graphs:** Circle graphs are used to show how various sectors are in the whole. Circle graphs are sometimes called **Pie Charts.** Circle graphs usually give the percent that each sector receives In such representation the total quantity in question is distributed over a total angle of 360°.

2)Line Graphs: Line graphs are used to show how a quantity changes continuously. If the line goes up, the quantity is increasing; if the line goes down, the quantity is decreasing; if the line is horizontal, the quantity is not changing.

3) Bar Graphs: Given quantities can be compared by the height or length of a bar graph. A bar graph can have either vertical or horizontal bars. You can compare different quantities or the same quantity at different times. In bar graph the data is discrete. Presentation of data in this form makes evaluation of parameters comparatively very easy.

CONCEPT TO REVISE

- **Average= Sum of observations/Total number of observations**

- **Percentage Increase= (Increase/Original Value)*100**

- **Percentage Decrease=(Decrease/Original Value)*100**

where, Original Value is the value to which increase and decrease has been done or the old value

DATA INTERPRETATION

TYPE-1
TABULAR FORM

Table Chart

Study the following table and answer the questions based on it.

Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years.

Year	Item of Expenditure				
	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

Question

What is the average amount of interest per year which the company had to pay during this period?

A. Rs. 32.43 lakhs
B. Rs. 33.72 lakhs
C. Rs. 34.18 lakhs
D. Rs. 36.66 lakhs

Answer: Option **D**

Explanation:

Average amount of interest paid by the Company during the given period

= Rs. (23.4 + 32.5 + 41.6 + 36.4 + 49.4)/5 lakhs

= Rs. 183.3 / 5 lakhs

= Rs. 36.66 lakhs

Question

The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period?

A. 0.1%

B. 0.5%

C. 1%

D. 1.25%

Answer: Option C

Explanation:

Required Percentage = $\frac{17}{1710}$ x 100

$\approx$ 1%

Question

Total expenditure on all these items in 1998 was approximately what percent of the total expenditure in 2002?

A. 62%
B. 66%
C. 69%
D. 71%

Answer: Option C

Explanation:

$$\text{Required Percentage} = \frac{495}{713.36} \times 100$$

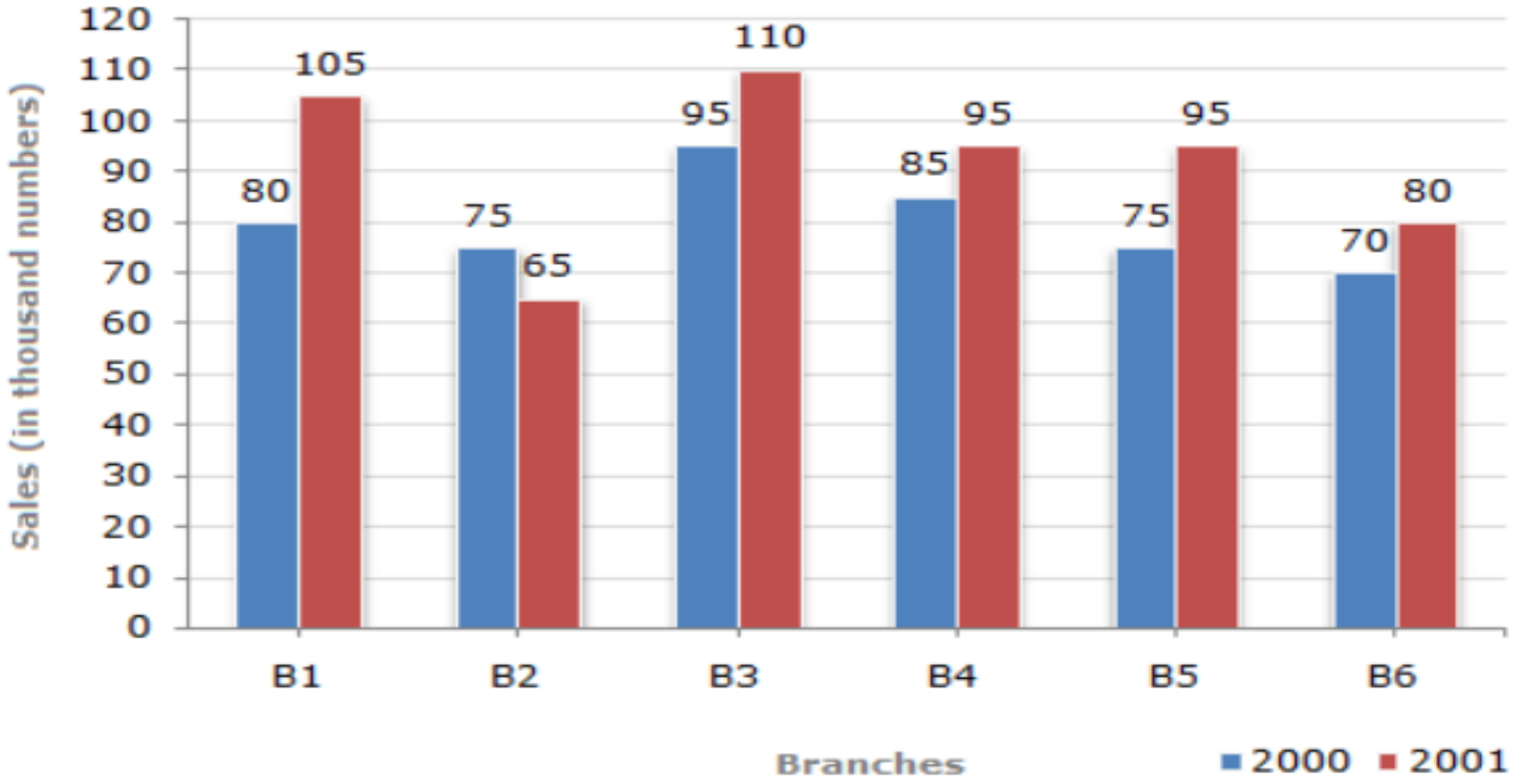
$$\approx 69.45\%$$

TYPE-2
BAR CHART

Bar Chart

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches – B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



Question

What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?

A. 2:3
B. 3:5
C. 4:5
D. 7:9

Answer: Option **D**

Explanation:

Required ratio = (75 + 65) / (85 + 95)

= 140 / 180

= 7 / 9

Question

Total sales of branch B6 for both the years is what percent of the total sales of branches B3 for both the years?

A. 68.54%
B. 71.11%
C. 73.17%
D. 75.55%

Answer: Option C

Explanation:

Required Percentage = $\frac{150}{205}$ x 100

$\approx$ 73.17%

Question

What percent of the average sales of branches B1, B3 and B6 in 2000 is the average sales of branches B1, B2 and B3 in 2001?

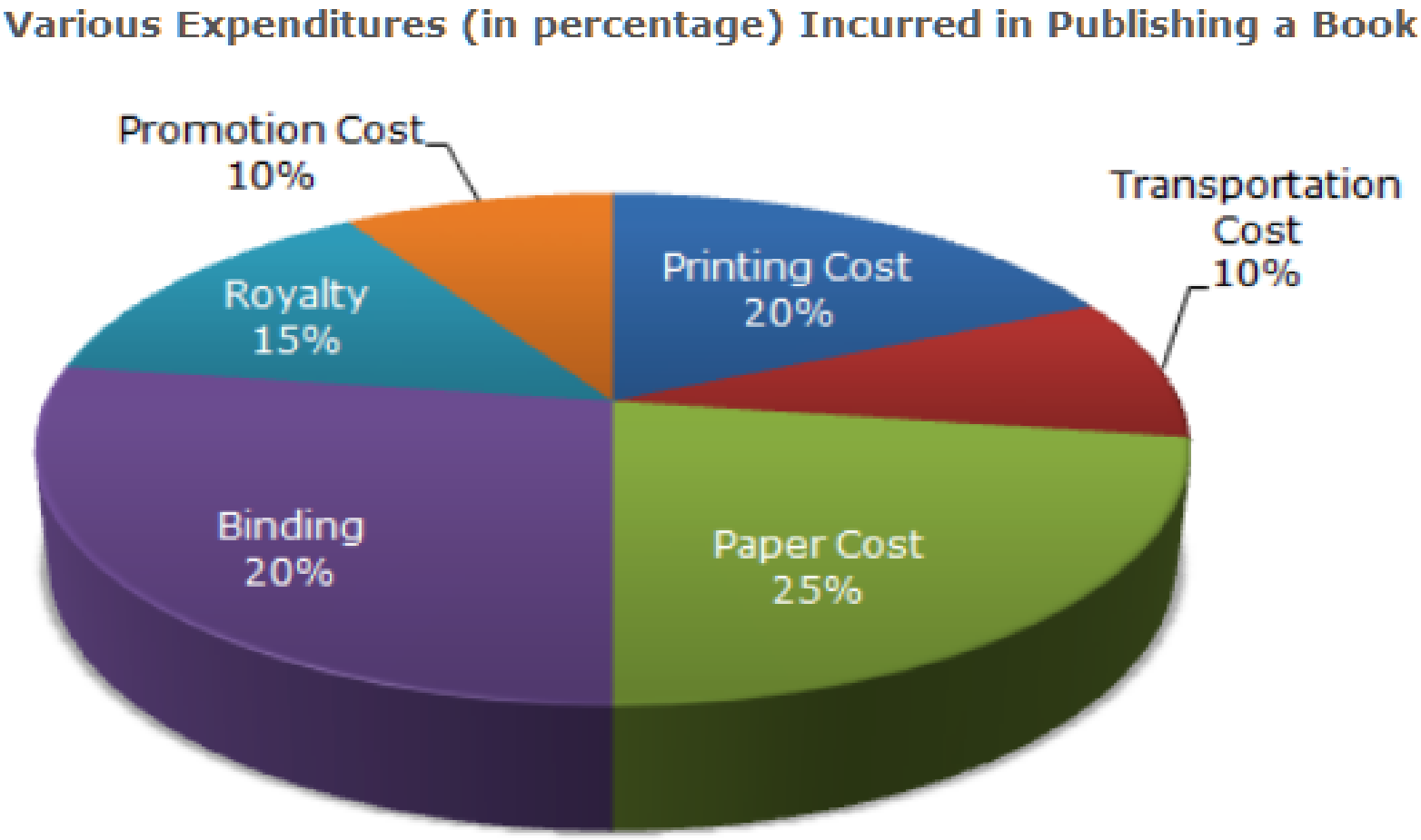
A. 75%
B. 77.5%
C. 82.5%
D. 87.5%

Answer: Option D

TYPE-3
PIE CHART
(CIRCULAR GRAPH)

Pie Chart

The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.



Question

If for a certain quantity of books, the publisher has to pay Rs. 30,600 as printing cost, then what will be amount of royalty to be paid for these books?

A. Rs. 19,450
B. Rs. 21,200
C. Rs. 22,950
D. Rs. 26,150

Answer: Option **C**

Question

What is the central angle of the sector corresponding to the expenditure incurred on Royalty?

A. 15º
B. 24º
C. 54º
D. 48º

Answer: Option **C**

Question

The price of the book is marked 20% above the C.P. If the marked price of the book is Rs. 180, then what is the cost of the paper used in a single copy of the book?

A. Rs. 36
B. Rs. 37.50
C. Rs. 42
D. Rs. 44.25

Answer: Option B

Marked price of book = 120% of CP

So, marked price = $\frac{180}{1.20}$ = Rs.150

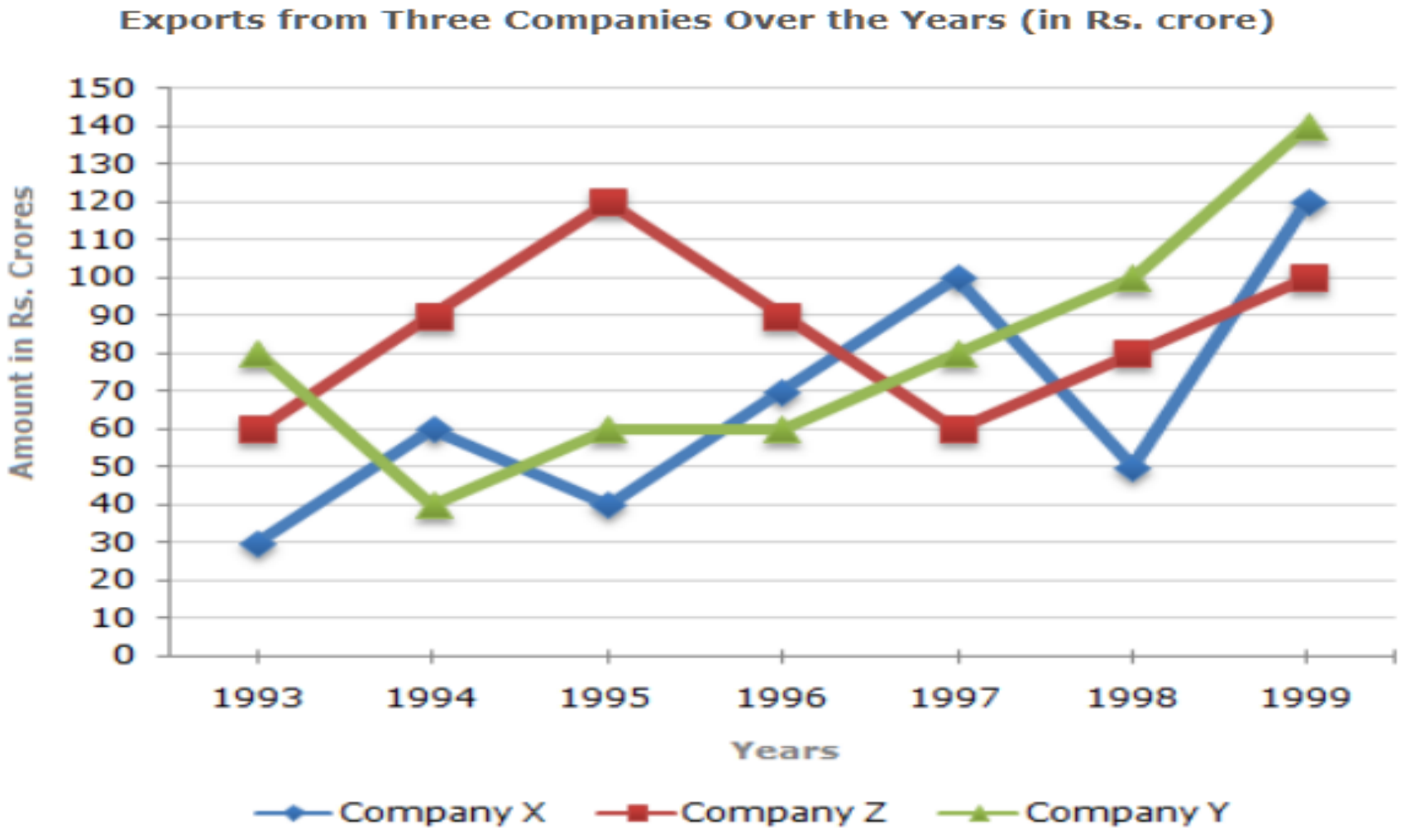
Cost of paper = 25% of CP

So, cost of paper = 25% of 150 = Rs.37.50

TYPE-4
LINE GRAPH

Line Chart

Study the following line graph and answer the questions.



Question

For which of the following pairs of years the total exports from the three Companies together are equal?

A. 1995 and 1998
B. 1996 and 1998
C. 1997 and 1998
D. 1995 and 1996

Answer: Option **D**

Explanation:

Total exports of the three Companies X, Y and Z together, during various years are:

In 1993 = Rs. (30 + 80 + 60) crores = Rs. 170 crores.

In 1994 = Rs. (60 + 40 + 90) crores = Rs. 190 crores.

In 1995 = Rs. (40 + 60 + 120) crores = Rs. 220 crores.

In 1996 = Rs. (70 + 60 + 90) crores = Rs. 220 crores.

In 1997 = Rs. (100 + 80 + 60) crores = Rs. 240 crores.

In 1998 = Rs. (50 + 100 + 80) crores = Rs. 230 crores.

In 1999 = Rs. (120 + 140 + 100) crores = Rs. 360 crores.

Clearly, the total exports of the three Companies X, Y and Z together are same during the years 1995 and 1996.

Question

Average annual exports during the given period for Company Y is approximately what percent of the average annual exports for Company Z?

A. 87.12%
B. 89.64%
C. 91.21%
D. 93.33%

Answer: Option **D**

Question

In which year was the difference between the exports from Companies X and Y the minimum?

A. 1994
B. 1995
C. 1996
D. 1997

Answer: Option **C**

Explanation:

The difference between the exports from the Companies X and Y during the various years are:

In 1993 = Rs. (80 - 30) crores = Rs. 50 crores.

In 1994 = Rs. (60 - 40) crores = Rs. 20 crores.

In 1995 = Rs. (60 - 40) crores = Rs. 20 crores.

In 1996 = Rs. (70 - 60) crores = Rs. 10 crores.

In 1997 = Rs. (100 - 80) crores = Rs. 20 crores.

In 1998 = Rs. (100 - 50) crores = Rs. 50 crores.

In 1999 = Rs. (140 - 120) crores = Rs. 20 crores.

Clearly, the difference is minimum in the year 1996