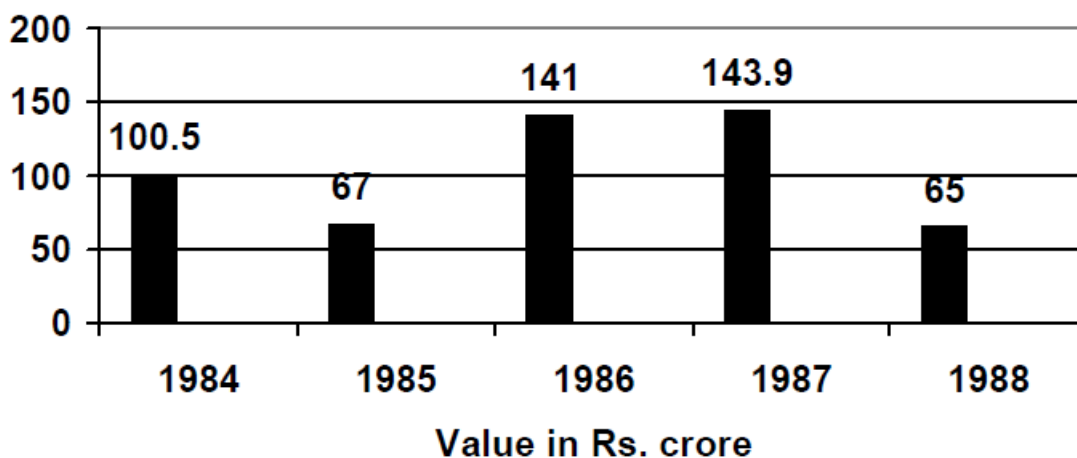


Data Interpretation: Set-1

Directions for Question 1 to 3: Refer to the following Bar-chart and answer the questions that follow:

Project Exports: Contracts Secured



Question 1: What is the average value of the contract secured during the years shown in the diagram?

- (a) Rs. 103.48 crore
- (b) Rs. 105 crore
- (c) Rs. 100 crore
- (d) Rs. 125.2 crore

Question 2: Compared to the performance in 1985 (i.e. taking it as the base), what can you say about the performances in the years '84, '85, '86, '87, '88 respectively, in percentage terms?

- (a) 150, 100, 211, 216, 97
- (b) 100, 67, 141, 144, 65
- (c) 150, 100, 200, 215, 100
- (d) 120, 100, 220, 230, 68

Question 3: Which is the year in which the highest percentage decline is seen in the value of contract secured compared to the preceding year?

- (a) 1985
- (b) 1988
- (c) 1984
- (d) 1986

View Explanation

Answer 1: a

$$(100.5 + 67 + 141 + 143.9 + 65)/5 = 103.48$$

Answer 2: a

As we see the table we see that the performance of only year i.e. 88 is less than the year 85. Hence the percentage corresponding to 1988 should be less than 100. Thus we see that (c) cannot be the answer.

Also (b) cannot be the answer as it shows two of the years having less than 100%. Between options (a) and (d), the correct answer is (a). This is because the difference between the 1985 and 1988 performance is only 2 units on 67 units. Hence percentage-wise, it has to be 97% and not 68%.

Answer 3: b

The highest percentage decrease over the previous year is in year 1988 as in the table, and the performance is almost half than that of the previous year. Such a decrease is not seen in any other year, so the right answer is b

Data Interpretation: Set-2

- Data Interpretation Sets

- Comments: 5

The table below shows the estimated cost (in Rs. Lakh) of a project of laying a railway line between two places.

	1988	1989	1990	1991
1. Surveying	41.5	7.5	2.2	0.5
2. Cement	-	95.0	80.0	75.0
3. Steel	-	70.0	45.0	60.0
4. Bricks	-	15.0	12.0	16.0
5. Other building material	-	25.0	18.0	21.0
6. Labour	2.1	25.0	20.0	18.0
7. Administration	7.5	15.0	15.0	14.0
8. Contingencies	1.0	15.0	4.2	5.0
Total	52.1	267.5	196.4	209.5

Question 1: The total expenditure is required to be kept within Rs. 700 lakh by cutting the expenditure on administration equally in all the years. What will be the percentage cut for 1989?

(a) 22.6

- (b) 32.6
- (c) 42.5
- (d) 52.6

Question 2: If the length of line to be laid each year is in proportion to the estimated cost for material and labour, what fraction of the total length is proposed to be completed by the third year?

- (a) 0.9
- (b) 0.7
- (c) 0.6
- (d) 0.3

Question 3: What is the approximate ratio of the total cost of materials for all the years bear to the total labour cost?

- (a) 4 : 1
- (b) 8 : 1
- (c) 12:1
- (d) 16 : 1

Question 4: If the cost of materials rises by 5% each year from 1990 onwards, by how much will the estimated cost rise?

- (a) Rs. 11.4 lakh
- (b) Rs. 16.4 lakh
- (c) Rs.21.4 lakh
- (d) Rs.26.4 lakh

Question 5: It is found at the end of 1990, that the entire amount estimated for the project has been spent. If for 1991, the actual amount spent was equal to that which was estimated, by what percent (approximately) has the actual expenditure exceeded the estimated expenditure?

- (a) 39
- (b) 29
- (c) 19
- (d) 9

[View Explanation](#)

Answer 1: c

Total expenditure = $52.1 + 267.5 + 196.4 + 209.5 = 725.5$ lakhs.

If it has to be kept within 700 lakhs, the expenditures has to reduce by 25.5 laks.

So the expenditure reduced each year will be $(25.5/4) = 6.375$ lakhs.

Hence, percentage reduce for 1989 would be = $(6.375/15) \times 100 = 42.5\%$.

Answer 2: b

Costs of material and labor

$$1988 = 2.1$$

$$1989 = 95+70+15+25+25 = 230$$

$$1990 = 80+45+12+18+20 = 175$$

$$1991 = 75+60+16+21+18 = 190$$

Therefore proportion of these expenditures till 1990 = $(2.1 + 230 + 175) / (2.1 + 230 + 175 + 190) = 0.6817$.

This will also be the fraction of the total length of the line.

Answer 3: b

$$\text{Total material cost} = (95+80+75+70+45+60+15+12+16+25+18+21) = 532$$

$$\text{Total labour cost} = (2.1+25+20+18) = 65.1$$

Therefore the ratio = $532 : 65.1 = 8 : 1$ (approximately)

Answer 4: b

The costs that can be taken under the head "Materials" are : Cement, steel, Bricks and Other building materials.

$$\text{The estimated cost in 1990} = 80 + 45 + 12 + 18 = 155$$

$$\text{The estimated cost in 1991} = 75 + 60 + 16 + 21 = 172$$

Cost of material rises by 5%,

$$\text{Cost would rise by } 0.05 \times (155 + 172) = \text{Rs.16.35 lakhs.}$$

Answer 5: b

$$\text{Amount spent till 1990} = \text{Rs.725.5 lakhs}$$

$$\text{Estimated Expenditure for 1991} = 209.5 \text{ lakhs.}$$

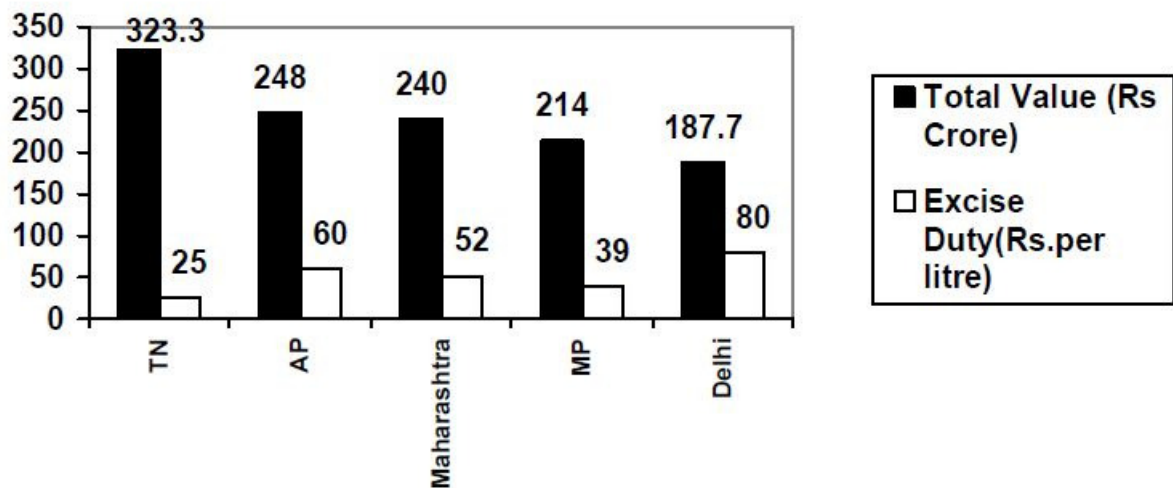
$$\text{Hence the increase in expenditure will be } 209.5 \text{ on } 725.5 = 28.87\%.$$

Data Interpretation: Set-3

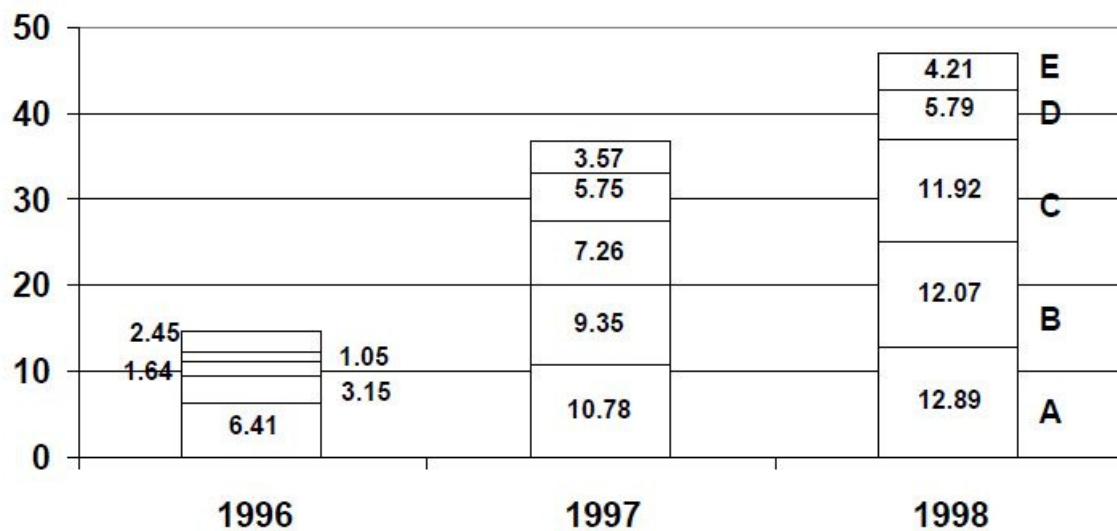
- Data Interpretation Sets

- Comments: 0

Directions for Question 1 to 4: The following graph shows the value of liquor supplied by the 5 states in 1996 and the excise duty rates in each state.



Amount of liquor supplied in Tamil Nadu Distilleries A, B, C, D, E (from bottom to top) in lakh litres.



- What is the lowest percentage difference in the excise duty rates for any two states?
 - 12
 - 15
 - 20
 - Cannot be determined.
- Which of the five states manufactured liquor at the lowest cost?
 - Tamil Nadu
 - Delhi

- (c) The states which has the lowest value for (wholesale price-Excise duty) per litre
(d) Cannot be determined.

3. If Excise duty is levied before the goods leave the factory (on the value of the liquor), then which of the following choices shows distilleries in ascending order of the excise duty paid by them for the year 1996? (Assume the total liquor in TN is supplied by only these 5 distilleries).

- (a) ECABD
(b) ADEBC
(c) DCEBA
(d) Cannot be determined.

4. If the Tamil Nadu distillery, with the least average simple annual growth in amount of liquor supplied in the given period had shown the same rate of growth as the one which grew fastest, what would that company's supply have been in 1998, in lakh liters?

- (a) 13
(b) 15.11
(c) 130
(d) Cannot be determined.

View Explanation

1. d

Since we don't know the excise duty of the other states, we cannot find the answers. So the answer of the question is option (d)

2. d

Here also the total value is given but nothing is mentioned about the amount of liquor manufactured by states other than Tamil Nadu. So the answer for the question is option (d)

3. c

Since Excise duty is collected on the total value of liquor produced by the 5 distilleries, this will be in the same order as the order of the amount of the liquor produced by them (as the excise duty rate remains constant). Hence the correct order is DCEBA.

4. b The simple average annual growth for the 5 distilleries in Tamil Nadu is as shown :

Distillery	Calculation	Rate
A	$(12.89 - 6.41)/(6.41 \times 2)$	50.54%
B	$(12.07 - 3.15)/(3.15 \times 2)$	141.58%
C	$(11.92 - 1.64)/(1.64 \times 2)$	313.41%
D	$(5.79 - 1.05)/(1.05 \times 2)$	225.71%
E	$(4.21 - 2.45)/(2.45 \times 2)$	35.91%

Distillery with highest growth rate is C

Distillery with lowest growth rate is E.

E grown by 313.41% in the 2 year period

So overall its supply in 1998 would be $(2.45 \times 616.82 / 100) = 15.11$ liters.

Data Interpretation: Set-4

- Data Interpretation Sets

- Comments: 0

Directions for the questions from 1 to 5: The following table gives the national income and the population of a country for the years 1984 – 85 to 1989 – 90. For each o the following questions choose the best alternative:

Year	National Income (in Rs. Crore)	Population (in crore)
1984-85	229,225	74.0
1985-86	261,174	75.0
1986-87	291,556	77.0
1987-88	329,934	78.5
1988-89	388,539	80.0
1989-90	433,500	81.5

1. The increase in the per capita income compared to the previous year is lowest for the year :

- (a) 1985-86
- (b) 1986-87

- (c) 1987-88
- (d) 1989-90

2. The per capita income is highest for the year :

- (a) 1984-85
- (b) 1985-86
- (c) 1987-88
- (d) 1989-90

3. The difference between the percentage increase in per capita income and the percentage increase in the population compared to the previous year is highest for the year:

- (a) 1985-86
- (b) 1986-87
- (c) 1987-88
- (d) 1988-89

4. The rate of increase in population was lowest in the year:

- (a) 1985-86
- (b) 1987-88
- (c) 1989-90
- (d) None of these

5. Increase in the per capita income compared to the previous year among the years given below was highest for the year:

- (a) 1985-86
- (b) 1986-87
- (c) 1987-88
- (d) 1989-90

[View Explanation](#)

1. (b)

Year	Per Capita Income	increase over previous year
1984-85	3097.62	-
1985-86	3482.32	384.70
1986-87	3786.44	304.12
1987-88	4202.98	416.54
1988-89	4856.73	653.75
1989-90	5319.01	462.28

The increase is lowest for the year 1986 – 87 = Rs. 304 .12

2. (d)

Per Capita Income=(National Income) / (Population)

Year	National Income (in Rs. Crore)	Population (in crore)	Per Capita Income
1984-85	229,225	74.0	3097.63
1985-86	261,174	75.0	3482.32
1986-87	291,556	77.0	3786.44
1987-88	329,934	78.5	4202.98
1988-89	388,539	80.0	4856.73
1989-90	433,500	81.5	5319.01

Per Capita Income is highest for the year 1989 – 90 = (433,500/81.5)=5319

3. (d)

Year	Population (in crore)	% increase over the previous year	Per Capita Income	% increase over the previous year	Difference in %
1984-85	74.0	-	3097.63	-	-
1985-86	75.0	1.35%	3482.32	12.43%	11.08
1986-87	77.0	2.66%	3786.44	8.73%	6.07
1987-88	78.5	1.94%	4202.98	11.01%	9.07
1988-89	80.0	1.91%	4856.73	15.56%	13.65
1989-90	81.5	1.87%	5319.01	9.51%	7.64

Hence it is highest for the year 1988-89 viz.13.65

4. (a)

From the table given for Q3, the rate of increase of population is lowest for the year 1985- 86 i.e 1.35%

5. (d)

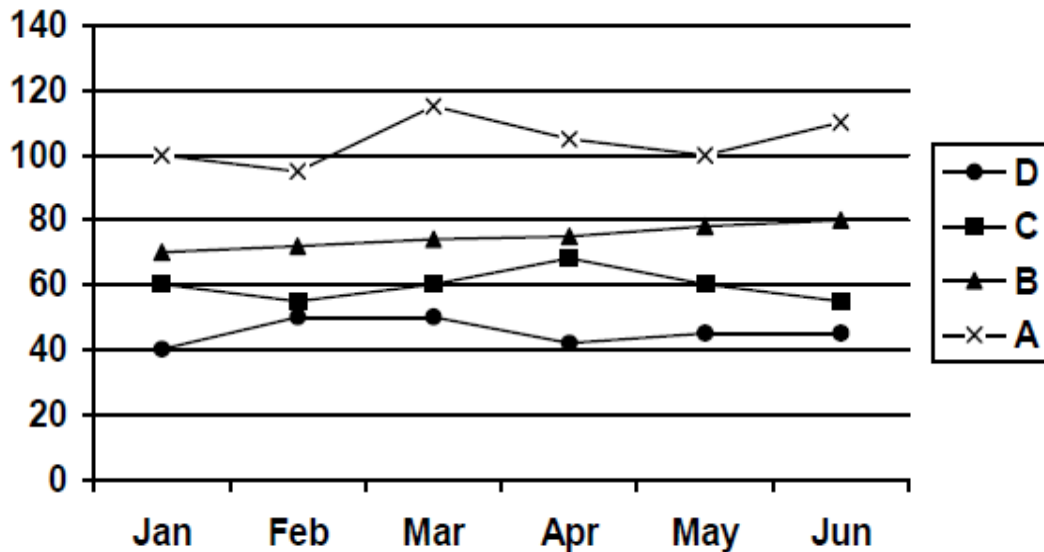
From the table given for Q.3, the increase in per capita income compared to previous year is highest for the year 1989-90.

Data Interpretation: Set-5

- Data Interpretation Sets

- Comments: 0

The graph below shows the end of the month market values of 4 shares for the period from January to June. Answer the following questions based on this graph.



Question 1: Which share showed the greatest percentage increase in market value in any month during the entire period?

- (a) A
- (b) B
- (c) C
- (d) D

Question 2: In which month was the greatest absolute change in market value for any share recorded?

- (a) March
- (b) April
- (c) May
- (d) June

Question 3: In which month was the greatest percentage increase in market value for any share recorded?

- (a) February
- (b) March
- (c) April
- (d) May

Question 4: An individual wishes to sell 1 share of C and 1 share of D to buy 1 share of A at the end of a month. At which month-end would the individual's loss from this decision, due to share value changes, be the most?

- (a) February
- (b) March
- (c) April
- (d) June

Question 5: An individual decides to sell 1 share of C and 1 share of D to buy 1 share of A at the end of the month. What can be the individual's greatest gain from this decision, due to share value changes?

- (a) 5
- (b) 10
- (c) 15
- (d) none

[View Explanation](#)

Answer 1: d

From the table we clearly seen that highest % increase is for D in Feb. i.e 25%

	A	% Change	B	% Change	C	% Change	D	% Change
Jan	100	-	70	-	60	-	40	-
Feb	95	-5%	72	2.85%	55	-8.33%	50	25%
Mar	115	21%	74	2.77%	60	9.09%	50	-
Apr	105	-8.70%	76	2.70%	69	15%	41	-18%
May	100	-4.70%	78	2.63%	60	-13%	44	7.31%
Jun	110	10%	80	2.56%	55	-8.33%	45	2.27%

Answer 2: a

The greatest absolute change in the market value is 20
i.e. In the month of March the share of A = $115 - 95 = 20$

Answer 3: a

The greatest percentage change in any share was recorded for share D for the month of February viz. 25%

Answer 4: d

	C	D	Total Earning	A	Gain/ Loss
Jan	60	40	100	100	-
Feb	55	50	105	95	+5
Mar	60	50	110	115	-5
Apr	69	41	110	105	+5
May	60	44	104	100	+4
Jun	55	45	100	110	-10

Due to share value changes the maximum loss is 10 for the month of June.
Hence the answer is (d).

Answer 5: a

From the above table again we can see that the individual's highest gain is Rs.5.

Data Interpretation: Set-6

- Data Interpretation Sets

- Comments: 0

Answer the questions on the basis of the following information.

Prakash has to decide whether or not to test a batch of 1000 widgets before sending them to the buyer. In case he decides to test, he has two options: (a) Use test I ; (b) Use test II. Test I cost Rs. 2 per widget. However, the test is not perfect. It sends 20% of the bad ones to the buyer as good. Test II costs Rs. 3 per widget. It brings out all the bad ones. A defective widget identified before sending can be corrected at a cost of Rs. 25 per widget. All defective widgets are identified at the buyer's end and penalty of Rs. 50 per defective widget has to be paid by Prakash.

Question 1: Prakash should not test if the number of bad widgets in the lot is:

- (a) less than 100
- (b) more than 200
- (c) between 120 & 190
- (d) Cannot be found out.

Question 2: If there are 120 defective widgets in the lot, Prakash:

- (a) should either use Test I or not test.
- (b) should either use Test II or not test.
- (c) should use Test I or Test II.
- (d) should use Test I only.

Question 3: If the number of defective widgets in the lot is between 200 and 400, Prakash:

- (a) may use Test I or Test II
- (b) should use Test I only.
- (c) should use Test II only
- (d) cannot decide.

Question 4: If Prakash is told that the lot has 160 defective widgets, he should:

- (a) use Test I only
- (b) use Test II only.
- (c) do no testing.
- (d) either use Test I or do not test.

Question 5: If there are 200 defective widgets in the lot, Prakash:

- (a) may use either Test I or Test II
- (b) should use Test I or not use any test
- (c) should use Test II or not use any test.
- (d) cannot decide.

[View Explanation](#)

Answer 1: a

Total number of batches = 1000

Let p be the total number of bad widgets

Therefore the total number of good ones will be $(1000 - p)$.

On test I his total cost will be = Rs. $2(1000) + 25 \times 0.8p + 50 \times 0.2p$

On test 2 his total cost will be = Rs. $3(1000) + 25 \times p$

Now, it will be worth testing if the cost of testing is less than the cost of penalty levied on the defective pieces. Let us check all the choices:

No. of defectives	Cost of Test I	Cost of Test II	Penalty if not tested
100	Rs.5000	Rs.5500	Rs.5000
120	Rs.5600	Rs.6000	Rs.6000
160	Rs.6800	Rs.7000	Rs.8000
190	Rs.7700	Rs.7750	Rs.9500
200	Rs.8000	Rs.8000	Rs.10000
400	Rs.14000	Rs.13000	Rs.20000

Above 100 defectives cost is cheaper than the penalty.

But for 100 defectives the cost of penalty is the same as that for testing.

Therefore we come to this conclusion that below 100 defectives, the penalty will be less than the cost of testing and hence it is not worth testing.

Answer 2: d

If there are 120 widgets, he should go for test I as it is cheaper.

Answer 3: c

From the table we can say that if the number of defectives is between 200 & 400, he should go for Test II as it is cheaper.

Answer 4: a

In case of 160 defectives he should use test I as it is cheaper.

Answer 5: a

As the cost of both the Tests is same = Rs.8000.

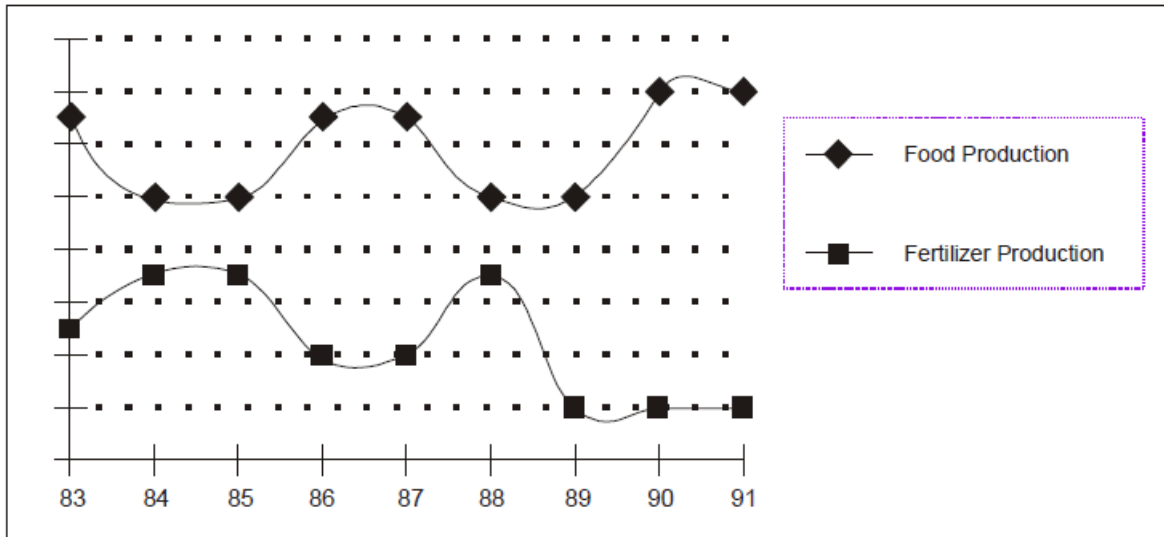
Prakash may use either Test I or Test II for 200 widgets

Data Interpretation: Set-7

- Data Interpretation Sets

- Comments: 1

Study the following graph and answer questions that follow. The x – axis denotes the years from 1983 to 1991.



Question 1: The sum of food and fertilizer production has shown a constant value for how many years?

- (a) None of the years
- (b) 2
- (c) 4
- (d) 5

Question 2: If in 1988, the sum of the food and fertilizer production was 170 million tonnes, the value of food production must have been (approximately, in million tones) ...

- (a) 90
- (b) 70
- (c) 100
- (d) Insufficient data

Question 3: From its apparent behavior, the food production in year 1992 can be expected to ...

- (a) go up
- (b) go down
- (c) remain the same as previous year.
- (d) nothing can be said.

Question 4: Going according to previous trends, one can say that the Fertilizer Production has shown an anomalous behavior in which year?

- (a) 1985
- (b) 1984

- (c) 1991
(d) 1989

View Explanation

Since the values on the Y-axis are not given, we assume arbitrary values on the Y-axis. We assume that Y-axis begins from 0 and has increments of 2 each. The table below is tabulated on the basis of the above assumption.

Years	Food production	Fertilizer production
83	13	5
84	10	7
85	10	7
86	13	4
87	13	4
88	10	7
89	10	2
90	14	2
91	14	2

Answer 1: d

From the table , between 1984 and 1988, the value of sum of the food and the fertilizer is 17 which is constant for 5 years.

Answer 2: c

From the values, the production of fertilizer in 1988 is 7

And the production food is 10,

i.e. the sum of values is 17.

If the production corresponds to 170 million tones, then the food production should correspond to 100 million tones.

Answer 3: b

There is alternate increase and decrease in the graph of food production shows an in every 1 to 2 years. Hence by the graph of 1990 and 1991, it can be expected that the graph will go down in 1992.

Answer 4: d

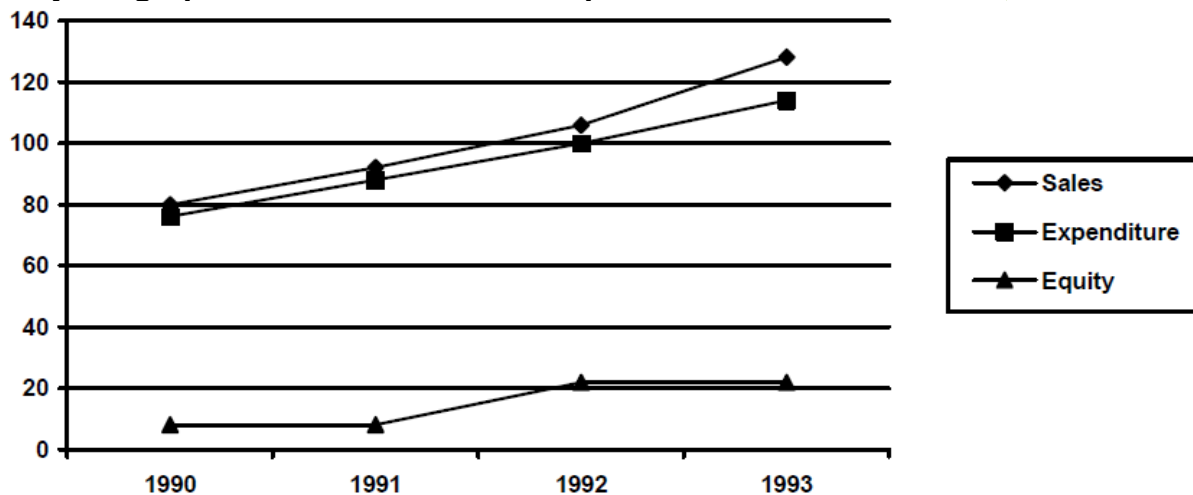
For two consecutive years the graph for fertilizer production remains constant.
This trend in 1989 breaks as it has a value of 2 instead of 7 in this year.

Data Interpretation: Set-8

- Data Interpretation Sets

- Comments: 0

Study the graph below and answer the questions that follow.



Question 1: In which year is the profit per rupee of equity the highest?

- (a) 1991
- (b) 1992
- (c) 1993
- (d) 1990 and 1991

Question 2: The simple annual growth rate in sales was the highest between the years?

- (a) 1990 – 91
- (b) 1991 – 92
- (c) 1992 – 93
- (d) 1990 – 92

Question 3: In which year are the sales per rupee of expenditure the lowest?

- (a) 1990

- (b) 1991
- (c) 1992
- (d) 1993

Question 4: In which year is a sale per rupee of equity the highest?

- (a) 1990
- (b) 1991
- (c) 1992
- (d) 1994

View Explanation

Company	Sales (A)	Expand (B)	Profit $C = (A - B)$	Equity (D)	Pro/Equ C / D	Sal/Equ A / D	Sal/Exp A / B	Growth Rate Sales
1990	80	76	4	8	0.5	10	1.05	Nil
1991	92	88	4	8	0.5	11.5	1.04	5%
1992	106	100	6	22	0.27	4.81	1.06	15.21%
1993	128	114	14	22	0.51	5.81	1.12	20.75%

Answer 1: c

From the table It is clear that the profit per rupee of equity is highest for 1993 i.e. 0.51

Answer 2: c

The simple annual growth rate in sales is maximum for the year 1992-93 i.e. 20.75%

Answer 3: b

Sales per rupee of the expenditure are lowest for the year 1991 i.e. 1.04.

Answer 4: b

Sales per rupee of equity is highest for 1991 i.e. 11.5

Data Interpretation: Set-9

- Data Interpretation Sets

- Comments: 0

Ghosh Babu has recently acquired four companies namely Arc – Net Technologies (ANT), Babu Anta Transport (BAT), Charles Anter Tailor (CAT) and Daud Akbar Transistors (DAT). When the results of the companies for the year 1992 – 93 were placed before him. He found a few interesting things about them. While the profits of CAT and DAT were the same, the sales of CAT were the same as those of BAT . Profits of ANT were 10% of its sales, where as the profits of BAT were 20% of its sales. While the total expenses of CAT were 5 times its profits, sales of DAT were 3 times its profits. The total expenses of CAT were Rs. 10,00,000, the total expenses of ANT were 10% less than those of CAT. Profits are defined as the difference between sales and total expenses.

Question 1: Which company had the lowest sales?

- (a) ANT
- (b) BAT
- (c) CAT
- (d) DAT

Question 2: Which company had the highest total expenses?

- (a) ANT
- (b) BAT
- (c) CAT
- (d) DAT

Question 3: Which company had the lowest profits?

- (a) ANT
- (b) BAT
- (c) CAT
- (d) DAT

Question 4: Which company had the highest profits?

- (a) ANT
- (b) BAT
- (c) CAT
- (d) DAT

[View Explanation](#)

Let the profits gained by the companies CAT & DAT = x,

Let the sale of the company CAT & BAT = y

Let the sale of the company sales of ANT = z.

So we have

COMPANY	SALES	EXPENDITURE	PROFIT
ANT	z	0.9z	0.1z
BAT	y	0.8y	0.2y
CAT	y	5x	x
DAT	3x		x

First the total expenses of CAT were Rs.10 lakhs.

Therefore $5x = \text{Rs.10 lakhs}$

or $x = \text{Rs.2 lakhs}$.

Also the difference between the total expenses of ANT and CAT = 10% = Rs.9 lakhs.

Therefore $0.9z = 9 \text{ lakhs}$

or $z = 10 \text{ lakhs}$.

Since the Profit = Sales – Expenditure

And Sales = Expenditure + Profit

So, $6x = 12 \text{ lakhs}$. Hence $y = 12 \text{ lakhs}$.

So from the above information the table would be

COMPANY	SALES	EXPENDITURE	PROFIT
ANT	10	9	1
BAT	12	9.6	2.4
CAT	12	10	2
DAT	6	4	2

(All values in lakh Rupees)

Answer1: (d)

From the above table it can be seen that the company with the lowest sales is DAT i.e. Rs.6 lakhs.

Answer 2: (c)

CAT had highest total expenses i.e. Rs. 10 lakhs.

Answer 3: (a)

ANT had lowest profits i.e. Rs. 1 lakh.

Answer 4: (b)

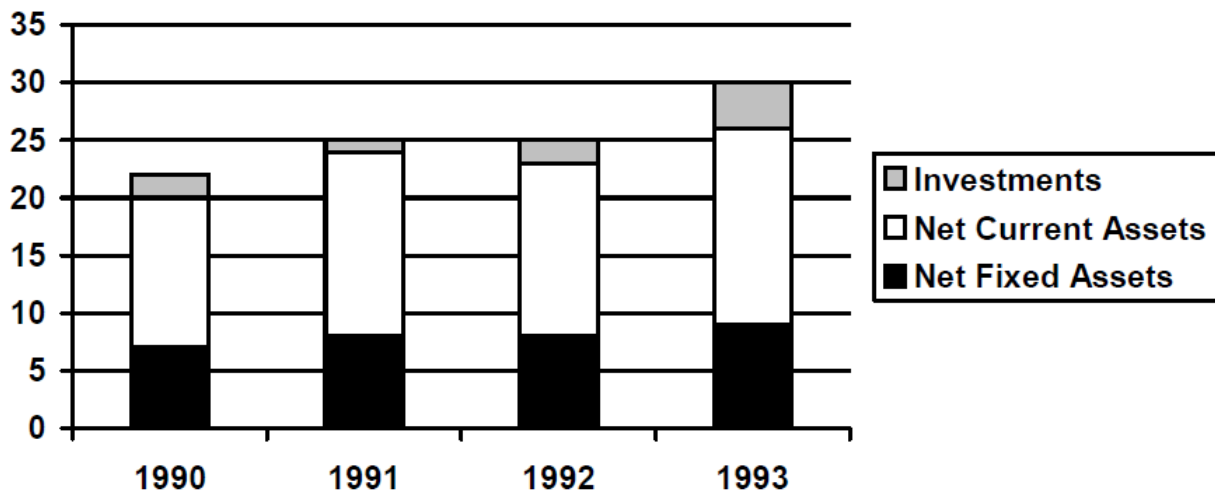
BAT had the highest profits i.e. Rs. 2.4 lakhs.

Data Interpretation: Set-10

- Data Interpretation Sets

- Comments: 0

Study the graph below and answer the questions that follow.



Total Assets are defined as Net Fixed Assets + Net Current Assets + Investments

Question 1: What is the approximate simple annual growth rate of Total Assets 1990 and 1993?

- (a) 36%
- (b) 12%
- (c) 9%
- (d) 27%

Question 2: In any two consecutive years, the growth rate is lowest for

- (a) Net Fixed Assets.
- (b) Net Current Assets.
- (c) Investments.
- (d) Total Assets.

Question 3: Between 1991 and 1992, the highest growth rate was seen for

- (a) Net Fixed Assets

- (b) Net Current Assets.
- (c) Investments.
- (d) Total Assets.

Question 4: The only item which has not shown a negative growth in every year between 1990 and 1993 is

- (a) Net Fixed Assets.
- (b) Net Current Assets.
- (c) Investments.
- (d) Total Assets.

View Explanation

	Net Fixed Assets (NFA)	Growth Rate of NFA	Net Current Assets (NCA)	Growth Rate of (NCA)	Investments	Growth Rate of investments	Total Assets (TA)	Growth Rate of Total Assets
19	7	-	13	-	2	-	22	-
19	8	14.28%	16	23%	1	-50%	25	13.63%
19	7.5	-6.25%	15	-6.25%	2	100%	25	-
19	9	20%	17	13.33%	4	100%	30	20%

Answer 1: b

From the table we can see that the growth rate between 1990-93 of of total assets = $(30-22)/22 = 36\%$.

But this is over a 3 year period.

Average annual growth rate = $36/3 = 12\%$.

Answer 2: c

The growth rate is lowest for investments in 1990-91 i.e. 50% decrease.

Answer 3: c

The highest growth rate was seen for 1991 & 1992 i.e 100% increase.

Answer 4: d

Each and every particular thing is shown , but the decrease in the total assets is not shown in this trend

Data Interpretation: Set-11

- Data Interpretation Sets

- Comments: 0

A professor keeps data on students tabulated by performance and sex of the student. The data is kept on a computer disk, but unfortunately some of it is lost because of a virus. Only the following could be recovered:

	Performance			Total
	Average	Good	Excellent	
Male			10	
Female				32
Total		30		

Panic buttons were pressed but to no avail. An expert committee was formed, which decided that the following facts were self evident:

1. Half the students were either excellent or good.
2. 40% of the students were females.
3. One third of the male students were average.

Question 1: How many students were both female and excellent?

- (a) 0
- (b) 8
- (c) 16
- (d) 32

Question 2: How many students are both male and good?

- (a) 10
- (b) 16
- (c) 22
- (d) 48

Question 3: Among average students, what is the ratio of male to female?

- (a) 1 : 2
- (b) 2 : 1

- (c) 3 : 2
(d) 2 : 3

Question 4: What proportion of female students are good?

- (a) 0
(b) 0.25
(c) 0.5
(d) 1.0

Question 5: What proportion of good students are male?

- (a) 0
(b) 0.73
(c) 0.4
(d) 1.0

View Explanation

1. From the table it is given that the number of females is 32 and this number is 40% of the students. This means that the total number of students is 80 and the number of boys is 48
2. Now in the question we are given that half the students were excellent or good, Also, it is given that one third of the male students were average. So the number of male average students is 16
3. (Number of average students) = (number of good students + number of excellent students) = 40.
4. Total good students = 30
5. Therefore the number of excellent students = $40 - 30 = 10$.
6. Also in the question it is mentioned that $\frac{1}{3}$ rd of male students were average, therefore total number of boys students that were good = $(48 - 16 - 10) = 22$.

Now from this information our graph will change into the following graph:

	Performance			Total
	Average	Good	Excellent	
Male	16	22	10	48
Female	24	8	0	32
Total	40	30	10	80

Answer 1: a

Number of students who are both female & excellent = 0.

Answer 2: c

Number of students who are both male and good = 22.

Answer 3: d

Ratio of male to female among average students = $16/24 = 2:3$.

Answer 4: b

Proportion of female students who are good = $(8/32) = 0.25$.

Answer 5: b

Proportion of good students who are male = $(22/30) = 0.73$.

Data Interpretation: Set-12

- Data Interpretation Sets

- Comments: 0

Given below are the forecasts of the World and Asian energy demand for the years 1990, 2000 and 2010 AD. The demand is given in million barrels per day, crude oil equivalent.

	1990		2000		2010	
	World	Asia	World	Asia	World	Asia
Petroleum	50.0	4.0	70.0	10.0	80.0	15.0
Natural Gas	30.0	0.5	40.0	2.5	50.0	5.0
Solid Fuels	50.0	4.0	60.0	5.0	75.0	10.0
Nuclear	10.0	0.5	20.0	1.0	25.0	1.3
Hydropower	10.0	1.0	10.0	1.5	20.0	2.0
Total	150.00	10.0	200.0	20.0	250.0	33.3

Question 1: Over 1990 – 2010, which two fuels meet more than 60 percent of the total energy demand of both World and Asia?

- (a) Petroleum & Natural Gas
- (b) Petroleum & Solid Fuels
- (c) Natural Gas & Solid Fuels
- (d) None of the above

Question 2: Which fuel's proportion in the total energy demand increases over the decade 1990–2000 and decreases over the decade 2000 – 2010 for both the World and Asia?

- (a) Petroleum
- (b) Natural Gas
- (c) Solid Fuels
- (d) Nuclear

Question 3: Which is the fuel whose proportion in the total energy demand will decrease continuously over the period 1990 – 2010, in Asia?

- (a) Natural Gas
- (b) Solid Fuels
- (c) Nuclear
- (d) Hydropower

Question 4: Which is the fuel whose proportion to the total energy demand of the world will remain constant over the period 1990 – 2010 but whose proportion will increase in the total energy demand in Asia?

- (a) Solid Fuels
- (b) Nuclear
- (c) Hydropower
- (d) Natural Gas

[View Explanation](#)

Answer 1: b

		1990		2000		2010	
		World	Asia	World	Asia	World	Asia
Total Energy		150	10	200	20	250	33
Natural Gas	Value	30	1	40	1.5	50	2
	Proportion	20%	10%	20%	7.5%	20%	6.06%
Solid Fuels	Value	50	4	60	2.5	75	5
	Proportion	33.3%	40%	30%	12.5%	30%	15.1%
Petroleum	Value	50	4	70	10	80	15
	Proportion	33.3%	40%	35%	50%	32%	45.4%

From the table we can say that over 1990 – 2010, Solid Fuels and Petroleum combined meet more than 60 percent of the total energy demand of both the World and Asia.

Answer 2: a

From the table the fuel whose fuel's proportion in the total energy demand increases

over the decade 1990–2000 and decreases over the decade 2000 – 2010 for both the World and Asia is Petroleum

Answer 3: d

This can be extracted with the help of following table:

		1990	2000	2010
Total Energy		10	20	33
Natural Gas	Value	0.5	2.5	5
	Proportion	5%	12.5%	15.15%
Solid Fuels	Value	4	5	10
	Proportion	40%	25%	30.3%
Nuclear	Value	0.5	1	1.3
	Proportion	5%	5%	3.9%
Hydropower	Value	1	1.5	2
	Proportion	10%	7.5%	6.06%

Hence proportion of Hydropower goes on decreasing over the period.

Answer 4: d

This is also can be extracted with the help of following table:

		1990	2000	2010
Total Energy		150	200	250
Natural Gas	Value	30	40	50
	Proportion	20%	20%	20%
Solid Fuels	Value	50	60	75
	Proportion	33.3%	30%	30%
Nuclear	Value	10	20	25
	Proportion	6.66%	10%	10%
Hydropower	Value	10	10	20
	Proportion	6.66%	5%	8%

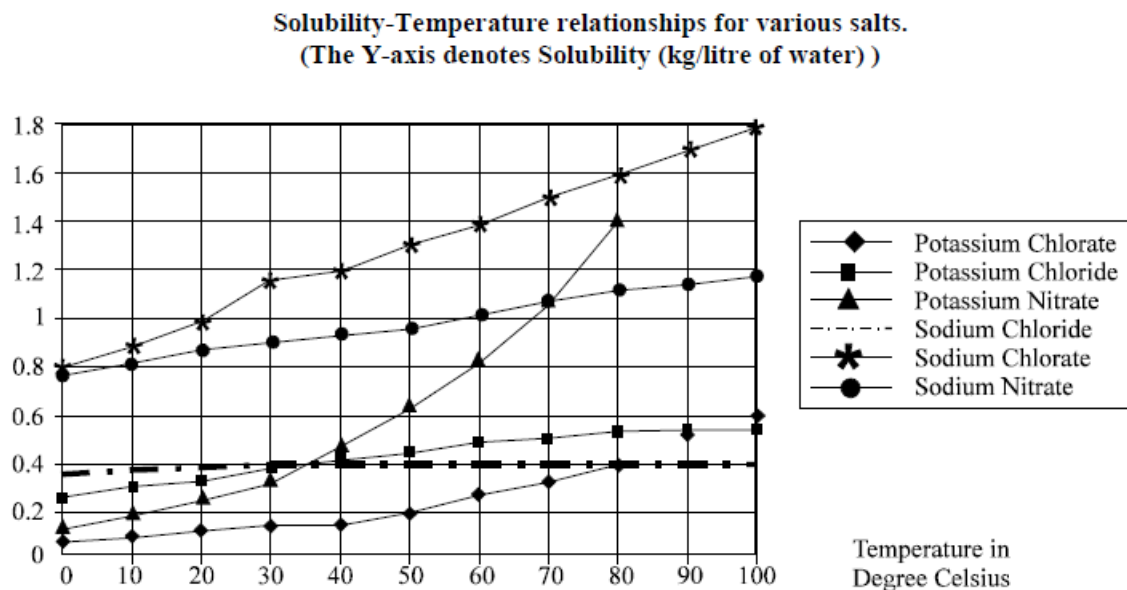
Hence proportion of Natural gas remains constant over the given period.

Data Interpretation: Set-13

- Data Interpretation Sets

- Comments: 0

Question 1 to 5 are based on the graph given below:



Question 1: Which of the following salts has greatest solubility?

- Potassium Chlorate at 800C.
- Potassium Chloride at 350 C.
- Potassium Nitrate at 390 C.
- Sodium Chloride at 850 C.

Question 2: Approximately, how many kg of Potassium Nitrate can be dissolved in 10 liters of water at 300C?

- 0.04
- 0.4
- 4
- 0.35

Question 3: By what % is the solubility of Potassium Chlorate in water increased as the water is heated from 300C to 800 C?

- 100
- 200
- 250
- 300

Question 4: If 1 mole of Potassium Chloride weighs 0.07456 kg, approximately. How many moles of Potassium Chloride can be dissolved in 100 liters of water at 360C?

- (a) 700
- (b) 650
- (c) 480
- (d) 540

Question 5: Which of the salts has greater change in solubility in kg / litre of water between 150C and 250C?

- (a) Potassium Chlorate
- (b) Potassium Nitrate
- (c) Sodium Chlorate
- (d) Sodium Nitrate

[View Explanation](#)

Option	Description	Solubility
(a)	Potassium Chlorate at 80°	0.4
(b)	Potassium Chloride at 35° C	0.4
(c)	Potassium Nitrate at 39° C	0.48
(d)	Sodium Chloride at 85° C	0.4

Answer 1: C

Refer to the picture above. Hence (c) is the correct answer.

Answer 2: c

The solubility of potassium nitrate in one litter at 300C = 0.38 kg

Therefore solubility of potassium nitrate in 10 lt. would be = 3.8 kg., Approx = 4 kg.

Therefore the right answer is option (c)

Answer 3: d

The increase in % of solubility of potassium chlorate = $(0.4 - 0.1) \frac{100}{0.1} = 300\%$.

Answer 4: d

The Solubility of potassium chloride at 36oC = 0.4 kg./lt.

Therefore in 100 lt. the amount of Potassium chloride that can be dissolved = 40 kg.

Number of moles = $40 / 0.075 = 533$.

Therefore approx. 540 moles can be dissolved in 100 lt. of water at 36oC.

Answer 5: c

The solubility of sodium nitrate, potassium chloride, sodium chloride, is almost constant

as we see the graph between 15oC & 25oC,.

Therefore it is also can be seen from graph that solubility of sodium chlorate is maximum.

Data Interpretation: Set-14

- Data Interpretation Sets

- Comments: 0

In 1984 – 85 value of exports of manufactured articles exceeds over the value of exports of raw materials by 100%. In 1985 – 86 the ratio of % of exports of raw material to that of exports of manufactured articles is 3 : 4. Exports of food in 1985 – 86 exceeds the 1984 – 85 figures by Rs. 1006 crore.

Item	1984-85	1985-86
Food		23%
Manufactured Articles		
Raw Material		
Total Value of Exports in Crore of Rs.	22400	25800

Question

1: In 1984 – 85 what percentage of total values of exports accounts for items related to food

- (a) 23%
- (b) 29.2%
- (c) 32%
- (d) 22%

Question 2: During 1984 – 85, how much more raw material than food was exported?

- (a) Rs. 2580 crore
- (b) Rs. 896 crore
- (c) Rs. 1986 crore
- (d) Rs. 1852 crore

Question 3: Value of exports of raw materials during 84 – 85 was how much percent less than that for 85 – 86?

- (a) 39
- (b) 46.18
- (c) 7
- (d) 31.6

Question 4: The change in value of exports of manufactured articles from 1984 – 85 to 1985 – 86 is

- (a) 296 crore
- (b) 629 crore
- (c) 2064 crore
- (d) 1792 crore

[View Explanation](#)

From the data that is given we can extrapolate the following data:

Item	1984-85	1985-86
Food (Percentage)	22%	23%
Food (Value)	4928	5934
Manufactured Articles	11648	11352
Raw Material	5824	8514
Total Value of Exports in Crore of Rs.	22400	25800

Answer 1: d

The exports related to food in 85-86 = $0.23 \times 25800 = 5934$.

Therefore the exports related to food 1984-95 = $(5934 - 1006) = 4928$.

Therefore the percentage food related exports in 84-85 = $4928/22400 = 22\%$.

Answer 2: b

The Value of Manufactured articles & Raw materials exports In 84-85, = $(22400 - 4928)$
= Rs.17472 crore. Since Export in manufactured goods is twice that of raw materials,

Therefore the ratio of export of manufactured goods and raw materials is 2:1

Therefore export of manufactured goods = Rs.11648 crore and Raw materials =
Rs.5824 crore

Hence the difference between raw material and food = $(5824 - 4928) = \text{Rs.}896$ crore

Answer 3: d

The combined percentage of Manufactured articles and Raw materials in 85-86 = 77%

And therefore the ratio will be 4 : 3.

Therefore the percentage of Manufactured articles export = 44%

The percentage of Raw materials export = 33%.

Therefore value of manufactured = $0.44 \times 25800 = \text{Rs.}11352$ crore

And the value of Raw materials = Rs.8514 crore

Therefore the percentage difference between the value of Raw materials between 84-85 and 85-86 = $[(8514 - 5824)/8514] \times 100 = 31.6\%$

Answer 4: a

The change in value of exports of manufactured articles from 1984 – 85 to 1985 – 86 = $(11648 - 11352) = \text{Rs.}296$ crore

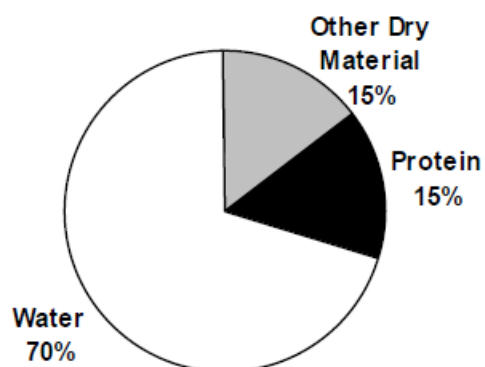
Data Interpretation: Set-15

- Data Interpretation Sets

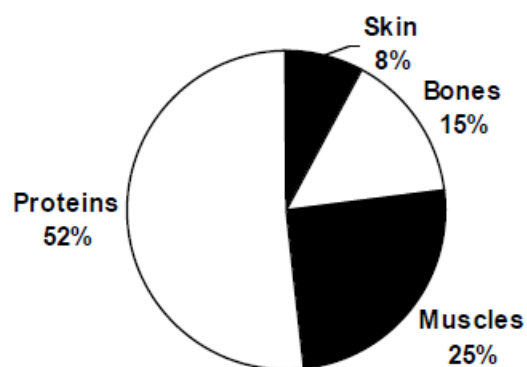
- Comments: 0

Direction for 1 to 4: Refer to the pie-chart given below:

Distribution of material in
Ghosh Babu's body
(as % of total body weight)



Occurance of Proteins in different
organ's of Ghosh Babu's body



Question 1: What fraction of Ghoshbabu's weight consists of muscular and skin protein?

- (a) $1/13$
- (b) $1/30$
- (c) $1/20$
- (d) Cannot be determined

Question 2: Ratio of distribution of protein in muscle to the distribution of protein in skin is

- (a) 3 : 1
- (b) 3 : 10
- (c) 1 : 3
- (d) $3\frac{1}{2}$: 1

Question 3: What percent of Ghosh Babu's body weight is made up of skin?

- (a) 0.15
- (b) 10
- (c) 1.2
- (d) Cannot be determined

Question 4: In terms of total body weight, the portion of material other than water and protein is closest to

- (a) $3/20$
- (b) $1/15$
- (c) $85/100$
- (d) $1/20$

View Explanation

Answer 1: c

From the pie chart we can say that the percentage of the total protein constituted by the skin & muscular protein is only 33 %

And the total protein in the body = 15 % of the total body weight

Therefore percentage of skin & muscular protein as a fraction of the total body weight = $33\% \text{ of } 15\% = 5\% = 1/20$.

Answer 2: a

Ratio of distribution of protein in muscle to the distribution of protein in skin is
 $= 25 : 8 = 3 : 1$

Answer 3: d

Since we do not have data about the percentage of skin in Ghosh Babu's body ,
therefore we cannot determine the answer for this question

Answer 4: a

The portion of material other than water and protein is closest to
 $15/100 = 3/20$.

Data Interpretation: Set-16

- Data Interpretation Sets

- Comments: 1

The following table gives the sales details for text books and reference books at Primary / Secondary/ Higher Secondary/ Graduate Levels.

Year	Primary	Secondary	Higher Secondary	Graduate Level
1975	42137	8820	65303	25343
1976	53568	10285	71602	27930
1977	58770	16437	73667	28687
1978	56872	15475	71668	30057
1979	66213	17500	78697	33682
1980	68718	20177	82175	36697

Question 1: What is the growth rate of sales of books at primary school level from 1975 to 1980?

- (a) 29%
- (b) 51%
- (c) 63%
- (d) 163%

Question 2: Which of the categories shows the lowest growth rate from 1975 to 1980?

- (a) Primary
- (b) Secondary

- (c) Higher secondary
- (d) Graduate Level

Question 3: Which category had the highest growth rate in the period?

- (a) Primary
- (b) Secondary
- (c) Higher secondary
- (d) Graduate Level

Question 4: Which of the categories had either a consistent growth or a consistent decline in the period shown?

- (a) Primary
- (b) Secondary
- (c) Higher secondary
- (d) Graduate Level

[View Explanation](#)

Answer 1: c

Since we can see that the answer options are not too close to each other so we can take the approximate values. So the required ratio = $(68600 - 42000) 100 / 42000 = 2650 / 42 = 63\%$

Books	1975	1980	Percentage growth
Primary	42137	68718	66%
Secondary	8820	20177	125%
Higher Secondary	65303	82175	26%
Graduate Level	25343	36697	45%

Answer 2: c

From the table it is shown that percentage growth is least for higher secondary books i.e. 26%.

Answer 3: b

From the given table in answer we can see that the percentage growth rate is maximum for secondary level books i.e.125%.

Answer 4: d

We can see that primary, secondary and higher secondary level books have all suffered from some sort of a decrease at a certain point of time, and have not shown a

consistent decline or increase. But on the other hand, all the graduate level books have shown a consistent growth over the period.

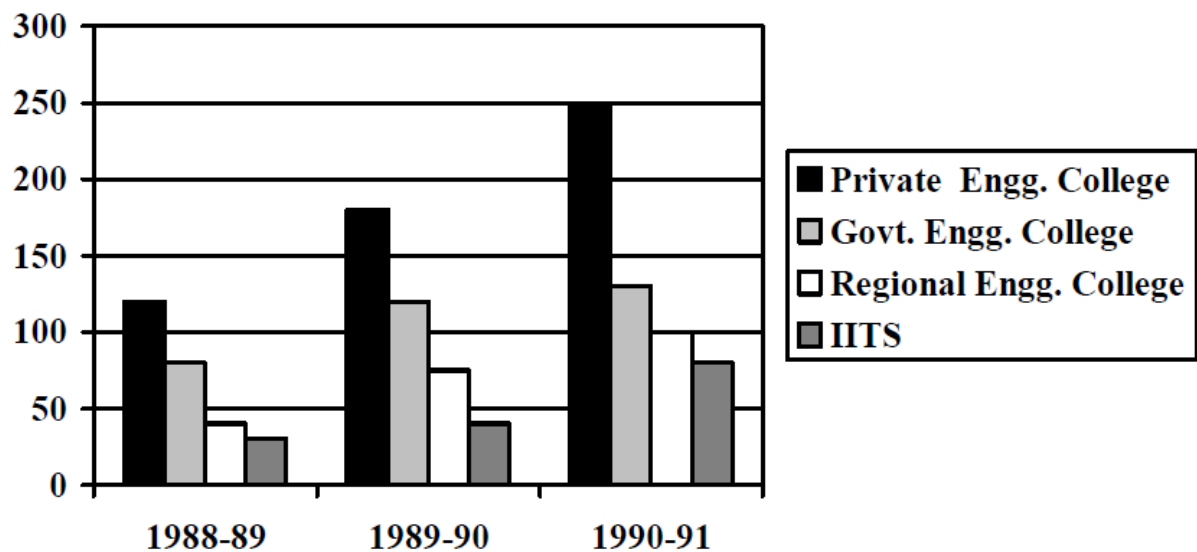
Data Interpretation: Set-17

- Data Interpretation Sets

- Comments: 0

Direction for 1 to 4: Analyze the table and answer the questions carefully

Number of Engineering Students (in hundreds) at institutions of different kind



Question 1: What was the total number of engineering students in 1989 – 90?

- (a) 28500
- (b) 4400
- (c) 4200
- (d) 42000

Question 2: The growth rate in students of Govt. Engg. Colleges compared to that of Private Engg. Colleges between 1988 – 89 and 1989 – 90 is

- (a) more
- (b) less
- (c) equal
- (d) 3/2

Question 3: The total number of Engg. Students in 1991 – 92, assuming a 10% reduction in the number over the previous year, is

- (a) 5700
- (b) 57000
- (c) 44800
- (d) none of these

Question 4: In 1990 – 91, what percent of Engg. Students were studying at IIT's?

- (a) 16
- (b) 15
- (c) 14
- (d) 12

View Explanation

College	1988-89	1989-90	1990-91
Private Engg. College	120	180	250
Govt. Engg. College	80	120	130
Regional Engg. College	40	75	100
IIT	30	40	80

Answer 1: d

From the table we can say that Total number of students in 1989–90 = $(180 + 120 + 75 + 40) \times 100 = 41500 = 42000$ (approx)

Answer 2: c

Growth rate (Govt. Engg. College) = $(120 - 80) / 80 = 50\%$

Growth rate (Private Engg. College) = $(180 - 120) / 120 = 50\%$.

Hence the growth rate is equal.

Answer 3: d

Total number of students in 1990–91 = $(250 + 130 + 100 + 80) \times 100 = 56000$,

Hence the total number of students in 1991-92 = $0.9 \times 56000 = 50400$.

Hence (d) is the correct answer

Answer 4: c

% of IIT students in 1990 – 91 = $80 / 570 = 1/7 = 14\%$ (approx.)

Data Interpretation: Set-18

- Data Interpretation Sets
-

- Comments: 0
-

Bankatlal works x hours a day and rests y hours a day. This pattern continues for 1 week, with an exactly opposite pattern next week, and so on for four weeks. Every fifth week he has a different pattern. When he works longer than he rests, his wage per hour is twice what he earns per hour when he rests longer than he works. The following are his daily working hours for the weeks numbered 1 to 13:

	1 st week	5 th week	9 th week	13 th week
Rest	2	3	4	-
Work	5	7	6	8

A week consists of six days and a month consists of 4 weeks.

Question 1: If Bankatlal is paid Rs. 20 per working hour in the 1st week. What is his salary for the 1st month?

- (a) Rs.1760
- (b) Rs.1440
- (c) Rs.1320
- (d) Rs.1680

Question 2: Referring to the data given in Q.1, Bankatlal's average monthly salary at the end of the first four months will be

- (a) Rs.1780
- (b) Rs.2040
- (c) Rs.1830
- (d) Rs.1680

Question 3: The new manager Khushaldas stipulated that Rs.5 be deducted for every hour of rest and Rs. 25 be paid per hour starting 9th week, then what will be the change in Bankatlal's salary for the 3rd month? (Hourly deductions are constant for all weeks starting 9th week)

- (a) Rs.540
- (b) Rs.480
- (c) Rs.240
- (d) Rs.120

Question 4: Using the data in the previous questions, what will be the total earning of Bankatlal at the end of sixteen weeks:

- (a) Rs.7320
- (b) Rs.7800
- (c) Rs.8400
- (d) Rs.9600

View Explanation

The data given in the question can be computed as:

Answer 1: b

From the data we can say about the performance and the strategy of Bankatlal for the 1st month

First Month :

	1 st week	2 nd week	3 rd week	4 th week
Hours of rest	2	5	2	5
Working hrs.	5	2	5	2
Wage per hour	Rs.20	Rs.10	Rs.20	Rs.10
Total Wage per day	Rs.100	Rs.20	Rs.100	Rs.20
Total Wage per week	Rs.600	Rs.120	Rs.600	Rs.120

Thus his total wage = $(600+120+600+120) = \text{Rs.1440}$

Answer 2: c

Let check the data for second third and fourth month

Second Month :

	5 th week	6 th week	7 th week	8 th week
Hours of rest	3	7	3	5
Working hrs.	7	3	7	2
Wage per hour	Rs.20	Rs.10	Rs.20	Rs.10
Total Wage per day	Rs.140	Rs.30	Rs.140	Rs.30
Total Wage per week	Rs.840	Rs.180	Rs.840	Rs.180

Third Month :

	9 th week	10 th week	11 th week	12 th week
Hours of rest	4	6	4	6
Working hrs.	6	4	6	4
Wage per hour	Rs.20	Rs.10	Rs.20	Rs.10
Total Wage per day	Rs.120	Rs.40	Rs.120	Rs.40
Total Wage per week	Rs.720	Rs.240	Rs.720	Rs.240

Fourth Month :

	13 th week	14 th week	15 th week	16 th week
Hours of rest	0	8	0	8
Working hrs.	8	0	8	0
Wage per hour	Rs.20	Rs.10	Rs.20	Rs.10
Total Wage per day	Rs.160	0	Rs.160	0
Total Wage per week	Rs.960	0	Rs.960	0

From the above pictures we can say about

Total wage for 1st month = Rs.1440

Total wage for 2nd month = (840+180+840+180) = Rs.2040

Total wage for 3rd month = (720+240+720+240) = Rs.1920

Total wage for 4th month = (960+960) = Rs.1920

Total wage for the 4 months = (1440+2040+1920+1920) = 7320

Hence the average salary = $7320/4 = \text{Rs.}1830$

Answer 3: d

From the extracted data above we can say about the wage for the third month:

Third Month :

	9 th week	10 th week	11 th week	12 th week
Hours of rest	4	6	4	6
Working hrs.	6	4	6	4
Wage per hour or work	Rs.25	Rs.12.5	Rs.25	Rs.12.5
Fine per hour of rest	Rs.5	Rs.5	Rs.5	Rs.5
Total wage per day	Rs.150	Rs.50	Rs.150	Rs.50
Total fine per day	Rs.20	Rs.30	Rs.20	Rs.30
Effective wage per day	Rs.130	Rs.20	Rs.130	Rs.20
Total Wage per week	Rs.780	Rs.120	Rs.780	Rs.120

So now his third month wage = $(780+120+780+120) = \text{Rs.}1800$.

Initially he earned Rs.1920 in the third month.

Therefore change in Bankatlal's salary for the 3rd month = $(1920 - 1800) = \text{Rs.}120$.

Answer 4: d

For the fourth month:

Fourth Month :

	9 th week	10 th week	11 th week	12 th week
Hours of rest	0	8	0	8
Working hrs.	8	0	8	0
Wage per hour or work	Rs.25	Rs.12.5	Rs.25	Rs.12.5
Fine per hour of rest	Rs.5	Rs.5	Rs.5	Rs.5
Total wage per day	Rs.400	0	Rs.400	0
Total fine per day	0	Rs.40	0	Rs.40
Effective wage per day	Rs.400	-Rs.40	Rs.400	-Rs.40
Total Wage per week	Rs.2400	-Rs.240	Rs.2400	-Rs.240

So now his total wage for the 4th month = $(2400+2400-240-240) = \text{Rs.}4320$.

Since the initial calculations are based on old schemes, the initial wages for the first two months are:

Total wage for 1st month = Rs.1440

Total wage for 2nd month = Rs.2040

Calculation for the third and fourth month are as per new calculations:

Total wage for 3rd month = Rs.1800

Total wage for 4th month = Rs.4320

So total salary for the four months = $(1440+2040+1800+4320) = \text{Rs.}9600$

Data Interpretation: Set-19

- Data Interpretation Sets

- Comments: 0

Direction for questions 1 to 4: Answer the questions based on the following information. Ghosh Babu surveyed his companies and obtained the following data. Income tax is paid from profit before tax and the remaining amount is apportioned to dividend and retained earnings. The retained earnings were accumulated into reserves. The reserves at the beginning of 1991 were Rs. 80 lakh.

Figure (Rs. in lakh)	1994	1993	1992	1991
Share capital	0310	0205	0098	0098
Sales	6435	4725	2620	3270
Profit before tax	0790	0525	0170	0315
Dividends	0110	0060	0030	0030
Retained earnings	0400	0245	0070	0140

Question 1: In which year was the tax per rupee of 'profit before tax' lowest?

- a. 1991
- b. 1992
- c. 1993
- d. 1994

Question 2: In which year was the sales per rupee of share capital highest?

- a. 1991
- b. 1992
- c. 1993
- d. 1994

Question 3: In which year the profit before tax per rupee of sales was the highest?

- a. 1991
- b. 1992
- c. 1993
- d. 1994

Question 4: In which year was the percentage addition to reserves over previous years reserves the highest?

- a. 1991
- b. 1992
- c. 1993
- d. 1994

Question 5: Amount of the reserves at the end of 1994 is

- a. Rs. 935 lakh
- b. Rs. 915 lakh

- c. Rs. 230 lakh
- d. None of these

View Explanation

Answer 1: d

As we know that (Dividends + Retained earnings) = (Profit before tax) – Tax.

Tax = (Profit before tax) – (Dividends + Retained earnings).so from the table we can say that

Figure (Rs. in lakh)	1994	1993	1992	1991
Share capital	0310	0205	0098	0098
Sales	6435	4725	2620	3270
Profit before tax	0790	0525	0170	0315
Dividends	0110	0060	0030	0030
Retained earnings	0400	0245	0070	0140

Tax per rupee of 'profit before tax' is lowest for 1994.

Answer 2: a

	1991	1992	1993	1994
Sales	3270	2620	4725	6435
Share Capital	98	98	205	310
Sales per rupee of share capital	33.36	26.73	23.04	20.75

Therefore from the table we can say that the sales per rupee of the share capital is highest for 1991.

Answer 3:d

	1991	1992	1993	1994
Profit before tax	315	170	525	790
Sales	3270	2620	4725	6435
Profit before tax per rupee of sales	0.09	0.06	0.11	0.12

Hence, profit before tax per rupee of sales is highest for 1994.

Answer 4:a

	1991	1992	1993	1994
Reserves	80	220	290	535
Retained earnings	140	70	245	400
Percentage addition to reserves	175%	31%	84%	75%

Hence, we find that the highest percentage addition to reserves is in 1991.

Answer 5:a

From the above table it is clear that the amount of reserves at the end of 1994 = (535 + 400) = Rs. 935 lakh.

Data Interpretation: Set-20

- Data Interpretation Sets

- Comments: 0

Direction for questions 1 to 5: Answer the questions based on the following table.

Market share in four metropolitan cities				
Period/ Product	Mumbai 1993-94	Kolkata 1993-94	Delhi 1993-94	Chennai 1993-94
HD	20-15	35-30	20-15	20-30
CO	20-25	30-15	15-10	20-15
BN	45-40	25-35	35-35	10-10
MT	15-20	10-20	10-10	50-45

Question 1: The maximum percentage decrease in market share is

- a. 60%
- b. 50%
- c. 53.3%
- d. 20%

Question 2: The city in which minimum number of products increased their market shares in 1993-94 is

- a. Mumbai
- b. Delhi
- c. Kolkata
- d. Chennai

Question 3: The market shares of which products did not decreased between 1993-94 in any city?

- a. HD
- b. CO
- c. BN
- d. None of these

Question 4: The number of products which had 100% market share in four metropolitan cities is

- a. 0
- b. 1

- c. 2
- d. 3

Question 5: The number of products which doubled their market shares in one or more cities is

- a. 0
- b. 1
- c. 2
- d. 3

View Explanation

Answer 1. b

From the table, the market share of CO in Kolkata has halved. It is the only product which shows such a drastic decrease in any city.

Hence, percentage of this decrease = 50%.

Answer2. b

It is clear from the table that the market shares only increased by two cities Mumbai and Kolkata, on the other hand, Chennai has 1, while Delhi has none.

Answer 3. d

The market share of HD decreased in Mumbai, Kolkata and Delhi.

The market share of HD decreased in Mumbai, Kolkata and Delhi.

The market share of CO decreased in Kolkata, Delhi and Chennai and the market share of BN decreased in Mumbai.

So none of these is the right answer

Answer 4. a

None of the products has 100% market share.

Answer 5. b

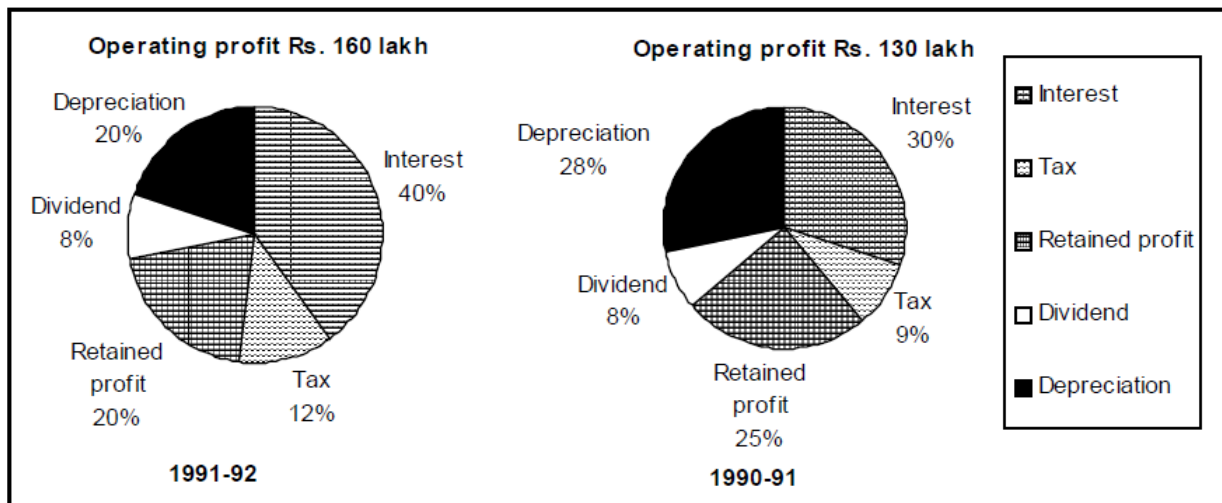
From the given data in the table we can say that the market share is doubled by MT only in KOLKATA in 1993-94.

Data Interpretation: Set-21

- Data Interpretation Sets
-

- Comments: 0

Direction for questions 1 to 5: Answer the questions based on the following pie charts.



Question 1: The operating profit in 1991-92 increased over that in 1990-91 by

- 23%
- 22%
- 25%
- 24%

Question 2: The interest burden in 1991-92 was higher than that in 1990-91 by

- 50%
- Rs. 25 lakh
- 90%
- Rs. 41 lakh

Question 3: If on an average, 20% rate of interest was charged on borrowed funds, then the total borrowed funds used by this company in the given two years amounted to

- Rs. 221 lakh
- Rs. 195 lakh
- Rs. 368 lakh
- Rs. 515 lakh

Question 4: The retained profit in 1991-92, as compared to that in 1990-91 was

- a. higher by 2.5%
- b. higher by 1.5%
- c. lower by 2.5%
- d. lower by 1.5%

Question 5: The equity base of these companies remained unchanged. Then the total dividend earning by the share holders in 1991-92 is

- a. Rs. 104 lakh
- b. Rs. 9 lakh
- c. Rs. 12.8 lakh
- d. Rs. 15.6 lakh

View Explanation

Answer 1. a

Percentage increase = $(160 - 130)100/130 = 300/13 = 23\%$

Answer 2: b

From the pie chart we can calculate that Interest in 1990-91 = 30% of 130 = Rs. 39 lakh

Interest in 1991-92 = 40% of 160 = Rs. 64 lakh

Hence, difference = $(64 - 39) = \text{Rs. } 25 \text{ lakh}$

Answer 3: d

From the pie chart we can say that Total interest = $(30\% \text{ of } 130) + (40\% \text{ of } 160) = (39 + 64)$

= Rs. 103 lakh.

If borrowed funds is charged by interest , then $(20\% \text{ of borrowed funds}) = 103$.

Hence, borrowed funds

= $(5 \times 103) = \text{Rs. } 515 \text{ lakh.}$

Answer 4: d

From the pie chart

Retained profit in 1990-91 = $(25\% \text{ of } 130) = \text{Rs. } 32.5 \text{ lakh}$

Retained profit in 1991-92 = $(20\% \text{ of } 160) = \text{Rs. } 32 \text{ lakh}$

Hence, percentage change in retained profit = $(32.5 - 32)/ 32.5 = 1.5\% \text{ lower}$

Answer 5: c

Total dividend in 1991-92

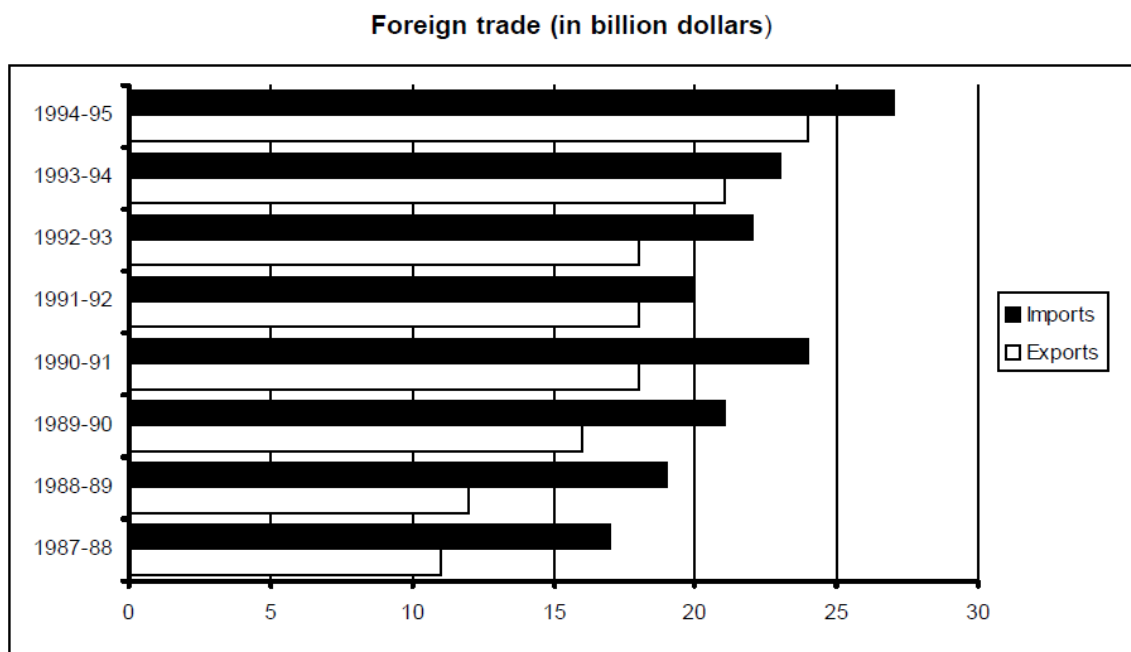
= $(8\% \text{ of } 160) = \text{Rs. } 12.8 \text{ lakh.}$

Data Interpretation: Set-22

- Data Interpretation Sets

- Comments: 0

Directions for question 1 to 4: Follow the bar graph and answer the following question



Question 1. In which year was the trade deficit highest?

- a. 1987-88
- b. 1988-89
- c. 1989-90
- d. 1990-91

Question 2. In how many years was the trade deficit less than the trade deficit in the succeeding year?

- a. 1
- b. 2
- c. 3
- d. 4

Question 3. Export earning in 1990-91 is how many per cent of imports in 1991-92?

- a. 82%
- b. 85%
- c. 90%
- d. 15%

Question 4. In the last three years the total export earnings have accounted for how many per cent of the value of the imports?

- a. 80%
- b. 83%
- c. 95%
- d. 88%

[View Explanation](#)

By analyzing the data above, we can construct the following table:

Year	Import	Export	Trade Deficit
1987-88	17	11	6
1988-89	19	12	7
1989-90	21	16	5
1990-91	24	18	6
1991-92	20	18	2
1992-93	22	18	4
1993-94	23	21	2
1994-95	27	24	3
	173	138	

Answer 1: b

We know that Trade deficit = Imports – Exports

Therefore from the table we can say that TD is highest for the year 1988-89, viz. 7 billion dollars.

Answer 2: d

Again Trade deficit is less than the trade deficit in the succeeding years in 1987-88, 1989-90, 1991-92 and 1993-94.

Answer 3: c

Required percentage = $18/20 = 90\%$

Answer 4: d

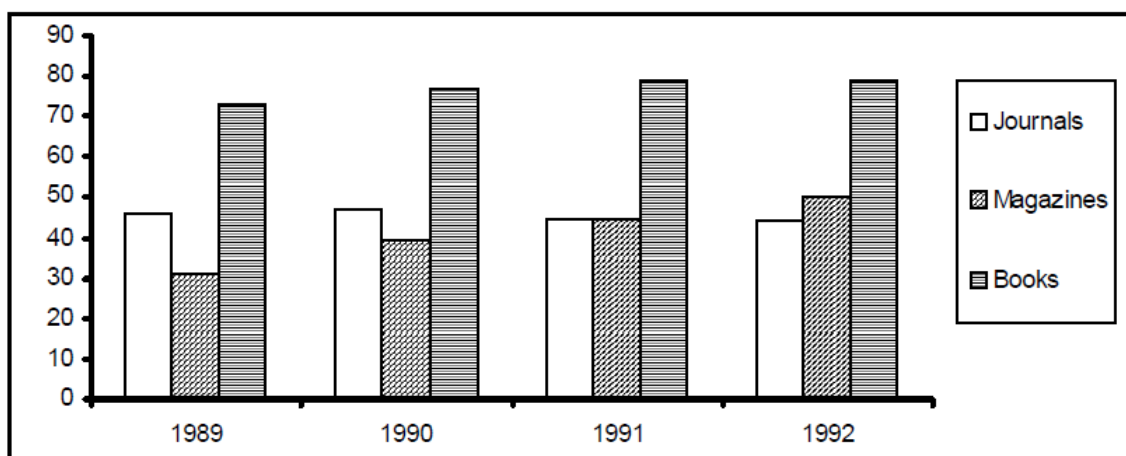
In last three years, Imports = $(22 + 23 + 27) = 72$ and Exports = $(18 + 21 + 24) = 63$. Hence, the required percentage = $63/72 = 87.5\% = 88\%$ approx.

Data Interpretation: Set-23

- Data Interpretation Sets

- Comments: 0

Direction for questions 1 to 4: Answer the questions based on the following graph. Revenue obtained by a publishing house while selling books, magazines and journals (Rs. in lakh).



Question 1: Which year shows the highest change in revenue obtained from journals?

- a. 1989
- b. 1990
- c. 1991
- d. 1992

Question 2: In 1992, what per cent of the total revenue came from books?

- a. 45%
- b. 55%
- c. 35%
- d. 25%

Question 3: The number of years in which there was an increase in revenue from at least two categories is

- a. 1
- b. 2
- c. 3
- d. 4

Question 4: If 1993 were to show the same growth as 1992 over 1991, the revenue in 1993 must be

- a. Rs. 194 lakh
- b. Rs. 187 lakh
- c. Rs. 172 lakh
- d. Rs. 177 lakh

[View Explanation](#)

The graph given in the question can be depicted in the following table:

	1989	1990	1991	1992
Journals	46	47	45	44
Magazines	31	39	45	50
Books	73	77	79	79
Total	150	163	169	173

Answer 1. c

The highest change in the revenue obtained from journals is $(47 - 45) = 2$ in 1991.

Answer 2. a

In 1992 percentage of total revenue that came from books = $79/173 = 45.6\%$

Answer 3. b

From the figure we can see that the revenue increased in all three categories in 1990. In 1991 it increased for magazines and books whereas in 1992 it increased only for magazines. So the answer is b, i.e. 2 years.

Answer 4.d

Growth rate in 1992 over 1991 = $(173 - 169) / 169 = 2.36\%$

If this rate were to remain same in 1993 as well, then the revenue in 1993 will be $173 \times (1 + 2.36/100) = 1.77$ lakhs

Data Interpretation: Set-24

- Data Interpretation Sets

- Comments: 0

Answer the questions based on the following information.

A company produces five types of shirts — A, B, C, D and E — using cloth of three qualities — high, medium and low -, using dyes of three qualities — high, medium and low. One shirt requires 1.5 m of cloth. The following table gives respectively:

1. The number of shirts (of each category) produced, in thousands
2. The percentage distribution of cloth quality in each type of shirt, and
3. The percentage distribution of dye quality in each type of shirt

		Distribution of cloth (%)				Distribution of dye (%)			
Shirt type	Number in thousands	Shirt type	High	Medium	Low	Shirt type	High	Medium	Low
A	20	A	80	20	–	A	70	15	15
B	30	B	30	40	30	B	20	50	30
C	30	C	–	70	30	C	–	60	40
D	10	D	–	60	40	D	–	40	60
E	10	E	–	10	90	E	–	20	80

Question 1: What is the total requirement of cloth?

- a. 1,50,000 m
- b. 2,00,000 m
- c. 2,25,000 m
- d. 2,50,000 m

Question 2: How many metres of low-quality cloth is consumed?

- a. 22,500 m
- b. 46,500 m
- c. 60,000 m
- d. 40,000 m

Question 3: How many metres of high quality cloth is consumed by A-type shirts?

- a. 8,000 m
- b. 112,000 m
- c. 24,000 m
- d. 30,000 m

Question 4: What is the ratio of the three qualities of dyes in high-quality cloth?

- a. 2 : 3 : 5
- b. 1 : 2 : 5
- c. 7 : 9 : 10
- d. Cannot be determined

Question 5: What is the ratio of low-quality dye used for C-type shirts to that used for D-type shirts?

- a. 3 : 2

- b. 2 : 1
- c. 1 : 2
- d. 2 : 3

View Explanation

Answer 1: a

Total requirement of cloth

$$\begin{aligned} &= \text{Total number of shirts} \times \text{Cloth required per shirt} \\ &= (20 + 30 + 30 + 10 + 10) 1000 \times 1.5 = 1,50,000 \text{ m.} \end{aligned}$$

Answer 2: b

Total low quality cloth consumed

$$= 1.5 (30\% \text{ of } 30000 + 30\% \text{ of } 30000 + 40\% \text{ of } 10000 + 90\% \text{ of } 10000) = 46,500 \text{ m.}$$

Answer 3: c

$$\begin{aligned} \text{Total quantity of high quality cloth consumed by A-type shirts} &= (80\% \text{ of } 20000) \times 1.5 = \\ &= 24,000 \text{ m.} \end{aligned}$$

Answer 4: d

From the given data we only know the relationship between the type of shirt and cloth used and type of shirt and dye used. So we don't have idea about type of cloth and dye used.

Answer 5: b

$$\text{Amount of low quality dye used for C-type shirts} = (40\% \text{ of } 30000) = 12,000 \text{ units.}$$

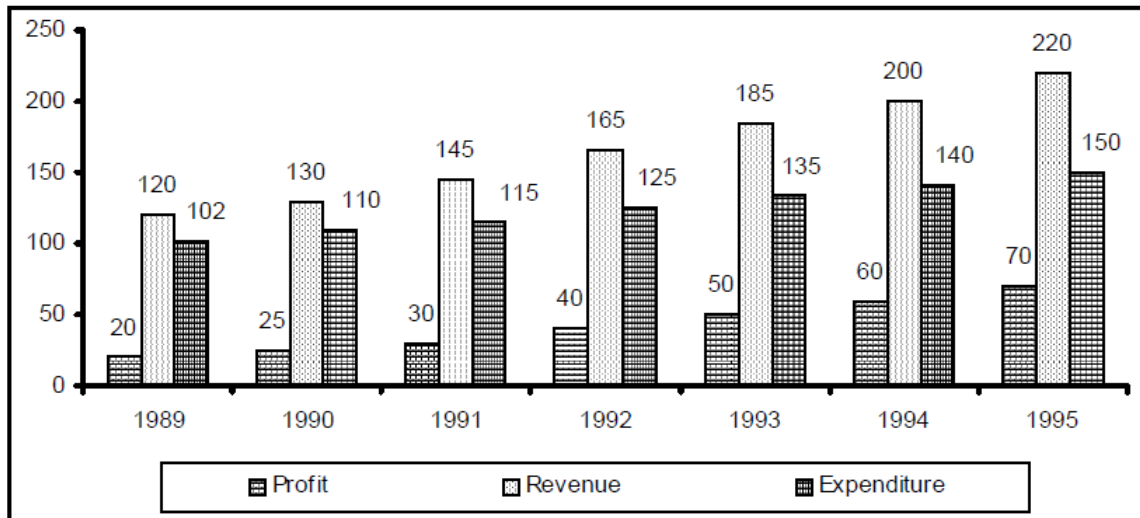
$$\text{Amount of low quality dye consumed by D-type shirts} = (60\% \text{ of } 10000) = 6,000 \text{ units.}$$

Data Interpretation: Set-25

- Data Interpretation Sets
-

- Comments: 0
-

Direction for questions 1 to 5: Answer the questions based on the following information.



Question 1: The average revenue collected in the given 7 years is approximately

- a. Rs. 164 lakh
- b. Rs. 168 lakh
- c. Rs. 171 lakh
- d. Rs. 175 lakh

Question 2: The expenditure for the 7 years together form what per cent of the revenues during the same period?

- a. 75%
- b. 67%
- c. 62%
- d. 83%

Question 3: Which year showed the greatest percentage increase in profit as compared to the previous year?

- a. 1993
- b. 1994
- c. 1990
- d. 1992

Question 4: In which year was the growth in expenditure maximum as compared to the previous year?

- a. 1993
- b. 1995
- c. 1991
- d. 1992

Question 5: If the profit in 1996 shows the annual rate of growth as it had shown in 1995 over the previous year, then what approximately will be the profit in 1996?

- a. Rs. 72 lakh
- b. Rs. 82 lakh
- c. Rs. 93 lakh
- d. Rs. 78 lakh

View Explanation

Answer 1: b

Average will be equal to = $(120 + 130 + 145 + 165 + 185 + 200 + 220)/7 = 166.42$

This is approximately is Rs. 168 lakh.

Answer 2:a

If we add the expenses of 7 years then it will add up to 877.

And Revenue of 7 years add up to 1165.

Hence, the required answer is $(877/1165) \times 100 = 75.5\%$ approx.

Answer 3: d

To find the answer we have to find the profit in each year.

Year	Profit percentage
1990	$(5/20) \times 100 = 25\%$
1991	$(5/25) \times 100 = 20\%$
1992	$(10/30) \times 100 = 33.33\%$
1993	$(10/40) \times 100 = 25\%$
1994	$(10/50) \times 100 = 20\%$
1995	$(10/60) \times 100 = 16.66\%$

From the above table, clearly, the answer is 1992, as in 1992 the profit is maximum, i.e. 33.33%.

Answer 4: d

The following table shows the expenditure over the previous year:

Year	Growth in expenditure
1990	$(8/202) \times 100 = 7.8\%$
1991	$(5/110) \times 100 = 4.5\%$
1992	$(10/115) \times 100 = 8.7\%$
1993	$(10/125) \times 100 = 8\%$
1994	$(5/135) \times 100 = 3.7\%$
1995	$(10/140) \times 100 = 7.14\%$

Hence, it is maximum for 1992.

Answer 5: b

Profit in 1994 = 60. Profit in 1995 = 70. Growth percentage in profit in 1995 over 1994 = $(10/60) \times 100 = 16.66\%$, Profit in 1996 will be $(16.66\% \text{ of } 70) + 70 = \text{Rs. } 82 \text{ lakh}$.

Data Interpretation: Set-26

- Data Interpretation Sets

- Comments: 0

Directions for the question 1 to 5: Answer the questions based on the following information, which gives data about certain coffee producers in India.

	Production (^{'000} tonnes)	Capacity utilisation (%)	Sales (^{'000} tonnes)	Total sales value (Rs. in crores)
Brooke Bond	2.97	76.50	2.55	31.15
Nestle	2.48	71.20	2.03	26.75
Lipton	1.64	64.80	1.26	15.25
MAC	1.54	59.35	1.47	17.45
Total (including others)	11.60	61.30	10.67	132.80

Directions for the question 1 to 5: Answer the questions based on the following information, which gives data about certain coffee producers in India.

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MAC	1.54	59.35	1.47	17.45
Total (including others)	11.60	61.30	10.67	132.80

Question 1: What is the maximum production capacity (in ^{'000} tonnes) of Lipton for coffee?

- a. 2.53
- b. 2.85
- c. 2.24
- d. 2.07

Question 2: Which company out of the four companies mentioned above has the maximum unutilized capacity (in ^{'000} tonnes)?

- a. Lipton
- b. Nestle

- c. Brooke Bond
- d. MAC

Question 3: What is the approximate total production capacity (in '000 tonnes) for coffee in India?

- a. 18
- b. 20
- c. 18.7
- d. Data insufficient

Question 4: The highest price for coffee per kilogram is for

- a. Nestle
- b. MAC
- c. Lipton
- d. Data insufficient

Question 5: What percent of the total market share (by sales value) is controlled by 'others'?

- a. 60%
- b. 32%
- c. 67%
- d. insufficient data

View Explanation

Answer 1: a

The production of Lipton is 1.64 (in '000 tonnes) which corresponds to 64.8% capacity.

Now the capacity for 64.8% is 1.64

So for 100% it will be = $(100/64.8) \times 1.64 = 2.53$ approx. in 000 tones

Answer 2: d

Unutilized capacity can be represented in the following manner.

	Production (’000 tonnes)	Capacity utilisation (%)	Total capacity (100%)	Unutilised capacity
	A	sB	$C = \frac{C}{A/B} \times 100$	C - A
Brooke Bond	2.97	76.50	3.88	0.912
Nestle	2.48	71.20	3.48	1.003
Lipton	1.64	64.80	2.53	0.89
MAC	1.54	59.35	2.59	1.05

Hence, we find that the maximum unutilized capacity is for MAC, i.e. 1,050 tones.

Answer 3: c

61.3 % \equiv 11.6

100% = $100/61.3 \times 11.6 = 18.7$ approx.

Answer 4: d

From the given data, we cannot say anything about the price of coffee for the companies among others.

Answer 5: b

Total sales of all brands = $(31.15 + 26.75 + 15.25 + 17.45) = \text{Rs. } 90.6$ crore

Total sales value of others = $132.8 - 90.6 = \text{Rs. } 42.2$ crore

Required percentage = $42.2/132.8 \times 100 = 32.5$ approx.

Data Interpretation: Set-27

- Data Interpretation Sets

- Comments: 0

Direction for questions 1 to 5: Answer the questions based on the following information. Mulayam Software Co., before selling a package to its clients, follows the given schedule.

Month	Stage	Cost (Rs. '000 per man /month)
1-2	Specification	40
3-4	Design	20
5-8	Coding	10
9-10	Testing	15
11-15	Maintenance	10

The number of people employed in each month is:

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Number of people employed	2	3	4	3	4	5	5	4	4	1	3	3	1	1	1

Question 1: Due to overrun in 'design', the design stage took 3 months, i.e. months 3, 4 and 5. The number of people working on design in the fifth month was 5. Calculate the percentage change in the cost incurred in the fifth month. (Due to improvement in 'coding' technique, this stage was completed in months 6-8 only.)

- a. 225%
- b. 150%
- c. 275%
- d. 240%

Question 2: With reference to the above question, what is the cost incurred in the new 'coding' stage? (Under the new technique, 4 people work in the sixth month and 5 in the eighth.)

- a. Rs. 1,40,000
- b. Rs. 1,50,000
- c. Rs. 1,60,000
- d. Rs. 1,70,000

Question 3: What is the difference in cost between the old and the new techniques?

- a. Rs. 30,000

- b. Rs. 60,000
- c. Rs. 70,000
- d. Rs. 40,000

Question 4: Under the new technique, which stage of software development is most expensive for Mulayam Software Co.?

- a. Testing
- b. Specification
- c. Coding
- d. Design

Question 5: Which five consecutive months have the lowest average cost per man-month under the new technique?

- a. 1-5
- b. 9-13
- c. 11-15
- d. None of these

View Explanation

Answer 1: b

Originally 4 people were scheduled for the fifth month to do coding

Therefore the cost for them $(10000 \times 4) = \text{Rs. } 40,000$.

Now there is increase in number of men from 4 to 5 who are working on design in the fifth month.

Therefore the cost changes and the total cost for this would be $(20000 \times 5) = \text{Rs. } 1,00,000$.

Therefore the percentage change in the in the cost incurred in the fifth month = $\{(100000 - 40000)/40000\} \times 100 = 150\%$

Answer 2: a

With the help of last question we will come to know that the coding stage is now completed in 6th, 7th and 8th months. We also know that the number of people employed in the 6th month is 4 and in the 8th month is 5 and by the month 7th there are 5 people employed (from previous data).

Therefore by combining all the months we find that the total cost incurred in the coding stage = $(5 + 5 + 4) \times 10000 = \text{Rs. } 1,40,000$.

Answer 3: b

The difference in the cost will arise only because of the following months: 5, 6 and 8.
And we can compare the costs as given below

	Original scheme			New scheme		
Month	People	Cost per man/month	Total cost for the month	People	Cost per man/month	Total cost for the month
5	4	10000	40000	5	20000	1,00,000
6	5	10000	50000	4	10000	40,000
8	4	10000	40000	5	10000	50,000
	Total cost		Rs. 1,30,000	Total cost		Rs. 1,90,000

It can be clearly seen that the difference in the cost between the old and the new technique is Rs. 60,000.

Answer 4: d

The cost incurred in various stages under the present scheme is as given below.

	Month	People	Cost per man/month	Total cost for the month	Total cost for the stage
Specification	1	2	40000	80000	Rs. 2,00,000
	2	3	40000	120000	
Design	3	4	20000	80000	Rs. 2,40,000
	4	3	20000	60000	
	5	5	20000	100000	
Coding	6	4	10000	40000	Rs. 1,40,000
	7	5	10000	50000	
	8	5	10000	50000	
Testing	9	4	15000	60000	Rs. 75,000
	10	1	15000	15000	
Maintenance	11	3	10000	30000	Rs. 90,000
	12	3	10000	30000	
	13	1	10000	10000	
	14	1	10000	10000	
	15	1	10000	10000	

Hence, the most expensive stage is Design.

Answer 5: c

From the above table it is clear that the average cost for 5 consecutive month period is lowest for months 11 to 15.



Data Interpretation: Set-28

- Data Interpretation Sets

- Comments: 0

Direction for questions 1 to 4: Answer the questions based on the following information. The amount of money invested (rupees in crores) in the core infrastructure areas of two districts, Chittoor and Khammam, Andhra Pradesh, is as follows.

Chittoor district			Khammam district		
Core area	1995	1996	Core area	1995	1996
Electricity	815.2	1054.2	Electricity	2065.8	2365.1
Chemical	389.5	476.7	Chemical	745.3	986.4
Thermal	632.4	565.9	Thermal	1232.7	1026.3
Solar	468.1	589.6	Solar	1363.5	1792.1
Nuclear	617.9	803.1	Nuclear	1674.3	2182.1
Total	2923.1	3489.5	Total	7081.6	8352.0

Question 1: By what per cent was the total investment in the two districts more in 1996 as compared to 1995?

- a. 14%
- b. 21%
- c. 24%
- d. 18%

Question 2: The investment in electricity and thermal energy in 1995 in these two districts formed what per cent of the total investment made in that year?

- a. 41%
- b. 47%
- c. 52%
- d. 55%

Question 3: In Khammam district, the investment in which area in 1996 showed the highest percentage increase over the investment in that area in 1995?

- a. Electricity
- b. Chemical
- c. Solar
- d. Nuclear

Question 4: Approximately how many times was the total investment in Chittoor to the total investment in Khammam?

- a. 2.8
- b. 2
- c. 2.4
- d. 1.7

View Explanation

Answer 1: d

Total investment in the two districts in 1995 = $2932.1 + 7081.6 \approx 10,000$.

Total investment in the two districts in 1996 = $3489.5 + 8352 \approx 11840$.

Required percentage = $(11840 - 10000)/10000 = 18\%$ (approx.)

Answer 2: b

Total investment in electricity and thermal energy in both the districts in 1995 = $(815.2 + 632.4 + 2065.8 + 1232.7) = 4746.1$.

Total investment made in that year = $2923.1 + 7081.6 = 10004.7 \approx 10000$

Hence required percentage = $(4746.1/10000) = 47\%$ (approx.)

Answer 3: b

Percentage increase in investment in electricity = $30/2070 = 14\%$

Percentage increase in investment in chemical = $\{(986.4 - 745.3)/745.31\} \times 100 = 240/745 = 32\%$

Percentage increase in investment in solar = $(428.6/1792.1)$

let's take the approximate values = $430/1792 = 23\%$

And the Percentage increase in investment in nuclear = $507/1674$ approximately = $(500/1670) \times 100 = 23\%$

Clearly percentage increase in investment in chemical is the highest

Answer 4: c

Total investment in Chittoor = $2923.1 + 3489.5 = 6412.6 \approx 6410$.

Total investment in Khammam = $7081.6 + 8352 \approx 15430$.

Required ratio = $(15430/6410) = 2.4$ times