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APTITUDE MASTERY SERIES

MODULE 10 – DATA INTERPRETATION

Directions (1 - 5): Study the following table and answer the questions based on it. Expenditures of a Company (in Pesetas) 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

1. What is the average amount of interest per year which the company had to pay during this period?
   A. 32.43 B. 33.72 C. 34.18 D. 36.66

Answer: Option D

$$= \left[\frac{23.4+32.5+41.6+36.4+49.4}{5}\right]$$
$$= \left[\frac{183.3}{5}\right]$$
$$= 36.66$$

2. 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. 1.0% D. 1.25%

Answer: Option C
Required Percentage is

$$\left[\frac{(3.00+2.52+3.84+3.68+3.96)}{(288+342+324+336+420)}*100\right]\%$$

$$\left[\frac{17}{1710}*100\right]\%$$

$$\approx 1\%$$

3. 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
Required Percentage is

$$\left[\frac{(288+98+3.00+23.4+83)}{(420+142+3.96+49.4+98)}*100\right]\%$$

$$\left[\frac{495.4}{713.36}*100\right]\%$$

$$\approx 69.45\%$$

4. The total expenditure of the company over these items during the year 2000 is?

A. 544.44 B. 501.11 C. 446.46 D. 478.87

Answer: Option A

Total Expenditure of the company during 2000 = (324 + 101 + 3.84 + 41.6 + 74)pesetas = 544.44 pesetas

5. The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately?

A. 4:7 B. 10:13 C. 15:18 D. 5:8

Answer: Option B
Required ratio is

$$\left[\frac{(83+108+74+88+98)}{(98+112+101+133+142)}\right]$$

$$\left[\frac{451}{586}\right]$$

$$\frac{1}{1.3}$$

$$\frac{10}{13}$$

Directions (6 - 10): The following table gives the sales of batteries manufactured by a company over the years.

Number of Different Types of Batteries Sold by a Company Over the Years (Numbers in Thousands)

Year	Types of Batteries					
	4AH	7AH	32AH	35AH	55AH	Total
1992	75	144	114	102	108	543
1993	90	126	102	84	126	528
1994	96	114	75	105	135	525
1995	105	90	150	90	75	510
1996	90	75	135	75	90	465
1997	105	60	165	45	120	495
1998	115	85	160	100	145	605

6. What was the approximate percentage increase in the sales of 55AH batteries in 1998 compared to that in 1992?
A. 28% B. 31% C. 33% D. 34%

Answer: Option D

$$\text{Required percentage} = \left[\frac{(145 - 108)}{108} \times 100\right]\%$$

$$= 34.26\%$$

$$\approx 34\%.$$

7. The total sales of all the seven years is the maximum for which battery?
A. 4AH B. 7AH C. 32AH D. 35AH

Answer: Option C

The total sales (in thousands) of all the seven years for various batteries are:

For 4AH = 75 + 90 + 96 + 105 + 90 + 105 + 115 = 676

For 7AH = 144 + 126 + 114 + 90 + 75 + 60 + 85 = 694

For 32AH = 114 + 102 + 75 + 150 + 135 + 165 + 160 = 901

For 35AH = 102 + 84 + 105 + 90 + 75 + 45 + 100 = 601

For 55AH = 108 + 126 + 135 + 75 + 90 + 120 + 145 = 799.

Clearly, sales are maximum in case of 32AH batteries.

8. What is the difference in the number of 35AH batteries sold in 1993 and 1997?
   A. 24000 B. 28000 C. 35000 D. 39000

   Answer: Option D
   Required difference = [(84 – 45) x 1000] = 39000

9. The percentage of 4AH batteries sold to the total number of batteries sold was maximum in the year?
   A. 1994 B. 1995 C. 1996 D. 1997

   Answer: Option D
   The percentage of sales of 4AH batteries to the total sales in different years are:

   For 1992 = $\left(\frac{75}{543} \times 100\right)\% = 13.81\%$.

   For 1993 = $\left(\frac{90}{528} \times 100\right)\% = 17.05\%$.

   For 1994 = $\left(\frac{96}{525} \times 100\right)\% = 18.29\%$.

   For 1995 = $\left(\frac{105}{510} \times 100\right)\% = 20.59\%$.

   For 1996 = $\left(\frac{96}{465} \times 100\right)\% = 19.35\%$.

   For 1997 = $\left(\frac{105}{495} \times 100\right)\% = 21.21\%$.

   For 1998 = $\left(\frac{115}{605} \times 100\right)\% = 19.01\%$.

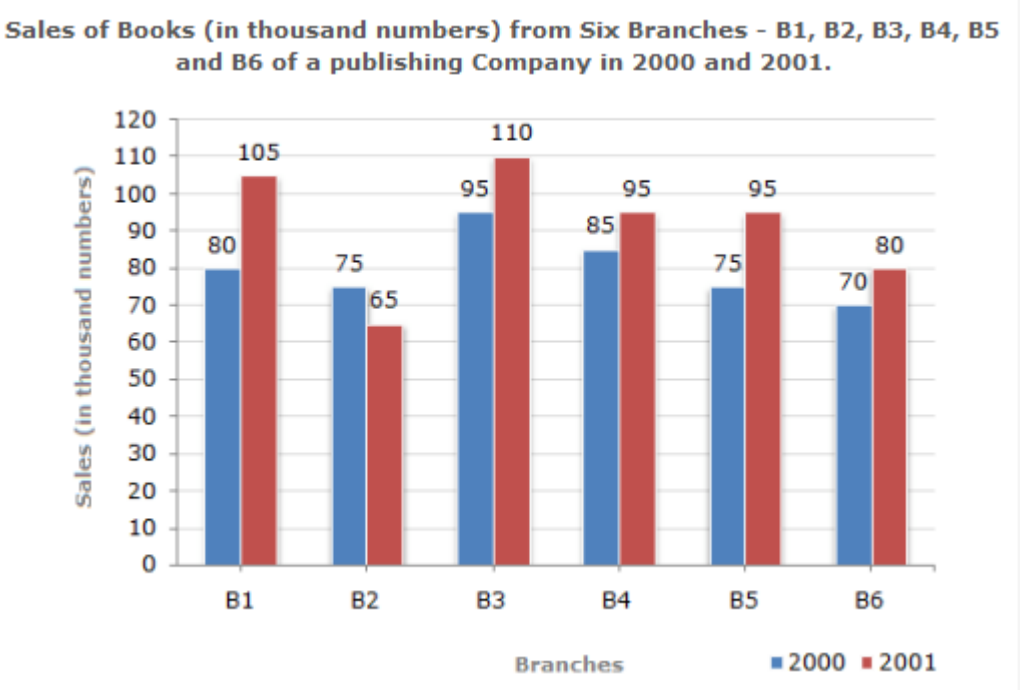
   Clearly, the percentage is maximum in 1997.

10. In the case of which battery there was continuous decrease in sales from 1992 to 1997?
    A. 4AH B. 7AH C. 32AH D. 35AH

    Answer: Option B

    From the table it is clear that the sales of 7AH batteries have been decreasing continuously from 1992 to 1997

Directions (11 - 15): 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.



11. 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

$$\text{Required ratio} = \frac{(75 + 65)}{(85 + 95)} = \frac{140}{180} = \frac{7}{9}.$$

12. 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

$$\text{Required percentage} = \left[\frac{(70 + 80)}{(95 + 110)} \times 100\right]\%$$

$$= \left[\frac{150}{205} \times 100\right]\%$$

$$= 73.17\%.$$

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

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

Answer: Option D

Average sales (in thousand number) of branches B1, B3 and B6 in 2000

$$= \frac{1}{3} \times (80 + 95 + 70) = \left(\frac{245}{3}\right).$$

Average sales (in thousand number) of branches B1, B2 and B3 in 2001

$$= \frac{1}{3} \times (105 + 65 + 110) = \left(\frac{280}{3}\right).$$

$$\therefore \text{ Required percentage} = \left[\frac{245/3}{280/3} \times 100\right]\% = \left(\frac{245}{280} \times 100\right)\% = 87.5\%.$$

14. What is the average sale of all the branches (in thousand numbers) for the year 2000?
A. 73 B. 80 C. 8 D. 88

Answer: Option B

Average sales of all the six branches (in thousand numbers) for the year 2000
=1/6 x [80 + 75 + 95 + 85 + 75 + 70]
= 80

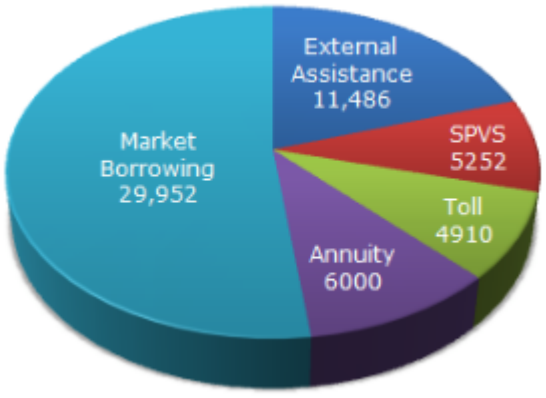
15. Total sales of branches B1, B3 and B5 together for both the years (in thousand numbers) is?
A. 250 B. 310 C. 435 D. 560

Answer: Option B

Total sales of branches B1, B2 and B5 for both the years (in thousand numbers)
= (80 + 105) + (95 + 110) + (75 + 95)
= 560

Directions (16 - 20): The following pie-chart shows the sources of funds to be collected by the National Highways Authority of India (NHAI) for its Phase II projects. Study the pie-chart and answers the question that follow.

Sources of funds to be arranged by NHAI for Phase II projects (in Yen.)



16. Nearly about 20% of the funds are to be arranged through

A. SPVS B. External Assistance

C. Annuity D. Market Borrowing

Answer: Option B

20% of the total funds to be arranged = (20% of 57600) Yen
= 11520 Yen
~= 11486 Yen
11486 Yen is the amount of funds to be arranged through External Assistance.

17. If NHAI could receive a total of 9695 Yen as External Assistance, by what percent (approximately) should it increase the Market Borrowing to arrange for the shortage of funds?

A. 4.5% B. 7.5% C. 6% D. 8%

Answer: Option C

Shortage of funds arranged through External Assistance
Therefore = (11486 - 9695) Yen = 1791 Yen
Increase required in Market Borrowing = 1791 Yen
Percentage increase required = (1791/29952)x100% = 5.98% ~= 6%.

18. If the toll is to be collected through an outsourced agency by allowing a maximum 10% commission, how much amount should be permitted to be collected by the outsourced agency, so that the project is supported with 4910 Yen?

A. 6213 Yen B. 5827 Yen C. 5401 Yen D. 5316 Yen

Answer: Option C
Amount permitted = (Funds required from Toll for projects of Phase II) + (10% of these funds)
= 4910 Yen+ (10% of 4910) Yen
= (4910 + 491) Yen
= 5401 Yen

19. The central angle corresponding to Market Borrowing is

A. 52 degree B. 137.8 degree C. 187.2 degree D. 192.4 degree

Answer: Option B
Central angle corresponding to Market Borrowing = (29952/57600)x360º= 187.2º

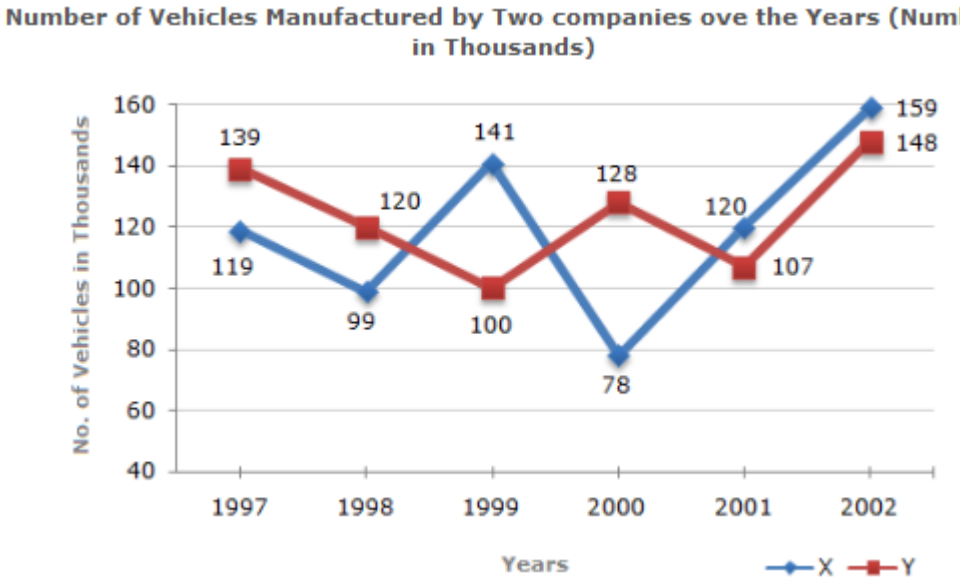
20. The approximate ratio of the funds to be arranged through Toll and that through Market Borrowing is

A. 2 : 9 B. 1 : 6 C. 3 : 11 D. 2 : 5

Answer: Option B

Required ratio = 4910/29952
= 1/6.1
~ 1/6

Directions (21 - 25): Study the following Line graph and Answer the question based on it.



21. What is the difference between the number of vehicles manufactured by Company Y in 2000 and 2001 ?

A. 50000 B. 42000 C. 33000 D. 21000

Answer: Option D

Required difference = (128000 - 107000) = 21000.

22. What is the difference between the total productions of the two Companies in the given years ?

A. 19000 B. 22000 C. 26000 D. 28000

Answer: Option C

From the line-graph it is clear that the productions of Company X in the years 1997, 1998, 1999, 2000, 2001 and 2002 are 119000, 99000, 141000, 78000, 120000 and 159000 and those of Company Y are 139000, 120000, 100000, 128000, 107000 and 148000 respectively.

Total production of Company X from 1997 to 2002
= 119000 + 99000 + 141000 + 78000 + 120000 + 159000
= 716000.
and total production of Company Y from 1997 to 2002
= 139000 + 120000 + 100000 + 128000 + 107000 + 148000
= 742000.
Difference = (742000 - 716000) = 26000.

23. What is the average numbers of vehicles manufactured by Company X over the given period ? (rounded off to nearest integer)

A. 119333 B. 113666 C. 112778 D. 111223

Answer: Option A

Average number of vehicles manufactured by Company X
= 1/6 x (119000 + 99000 + 141000 + 78000 + 120000 + 159000)
= 119333.

24. In which of the following years, the difference between the productions of Companies X and Y was the maximum among the given years ?

A. 1997 B. 1998 C. 1999 D. 2000

Answer: Option D

The difference between the productions of Companies X and Y in various years are:
For 1997 (139000 - 119000) = 20000.
For 1998 (120000 - 99000) = 21000.
For 1999 (141000 - 100000) = 41000.
For 2000 (128000 - 78000) = 50000.
For 2001 (120000 - 107000) = 13000.
For 2002 (159000 - 148000) = 11000.
Clearly, maximum difference was in 2000.

25. The production of Company Y in 2000 was approximately what percent of the production of Company X in the same year ?

A. 173 B. 164 C. 132 D. 97

Answer: Option B

$$\text{Required percentage} = \left(\frac{128000}{78000} * 100\right)\% \sim= 164\%.$$