What was the amount spent on electricity?

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MODEL QUESTIONS

Directions (1 − 05) : Study the following table to answer the given questions.

Production (in crore units) of six companies over the years.

Company	Years						Total
	1997	1998	1999	2000	2001	2002	
TP	103	150	105	107	110	132	707
ZIR	75	80	83	86	90	91	505
AVC	300	300	300	360	370	340	1970
CTU	275	280	281	280	285	287	1688
PEN	25	30	35	40	42	45	217
SIO	85	87	89	91	92	96	540
Total	863	927	893	964	989	991	5627

1. The product of company AVC in 2000 is approximately what percent of its average production over the given years ?
   1) 300   2) 110
   3) 136   4) 18.25
   5) 95

2. For SIO, which year was the percent increase or decrease in production from the previous year the highest ?
   1) 2001   2) 1998
   3) 2002   4) 2000
   5) None of these

3. For how many companies did the production increase every year form that of the previous year ?
   1) One   2) Two
   3) Three   4) Four
   5) None of these

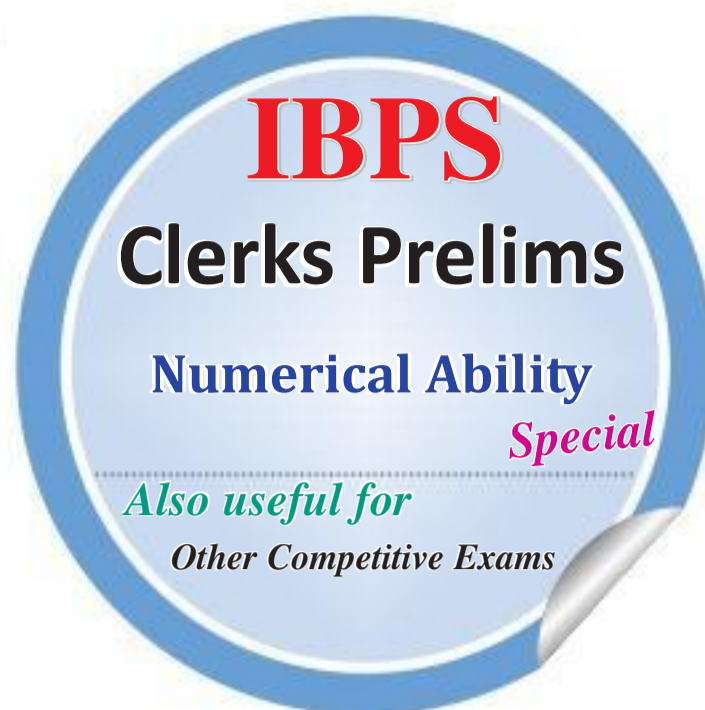4. The total production of the six companies in the first two given years in what percent of that of last two given years ? (round off up to two decimal places)
   1) 87.08   2) 104.55
   3) 90.40   4) 10.62
   5) None of these

5. For ZIR, which of the following is the difference between production in 2002 and that in 2001 ?
   1) 10,00,00,000
   2) 1,00,00,000
   3) 10,00,000
   4) 40,00,000
   5) None of these

Directions (06 − 10) : What should come in place of the question mark (?) in the following questions.

6. $(98)^2 + (?)^2 = (149)^2 − (78)^2 − 737$
   1) 6084   2) 76
   3) 82   4) 6724
   5) None of these

7. $(8.34\% \text{ of } 793) − (12.51\% \text{ of } 286) = ?$
   1) 33.3756   2) 36.3657
   3) 30.3576   4) 28.3675
   5) None of these

8. $555.05 + 55.50 + 5.55 + 5 + 0.55 = ?$
   1) 621.65   2) 655.75
   3) 634.85   4) 647.35
   5) None of these

9. $[(40)^3 ÷ 80 × 16] ÷ 25 = 32 × ?$
   1) 12   2) 15   3) 18
   4) 21   5) 16

10. $6784 + 2213 + 844 − ? = 6743 + 775$
    1) 2332   2) 2323
    3) 2343   4) 2442
    5) None of these

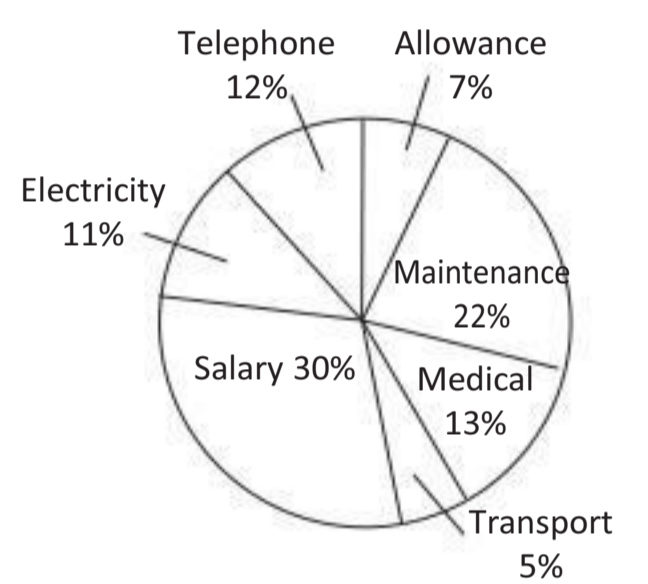*Directions (11 - 15) : Study the following graph carefully to answer these questions :*

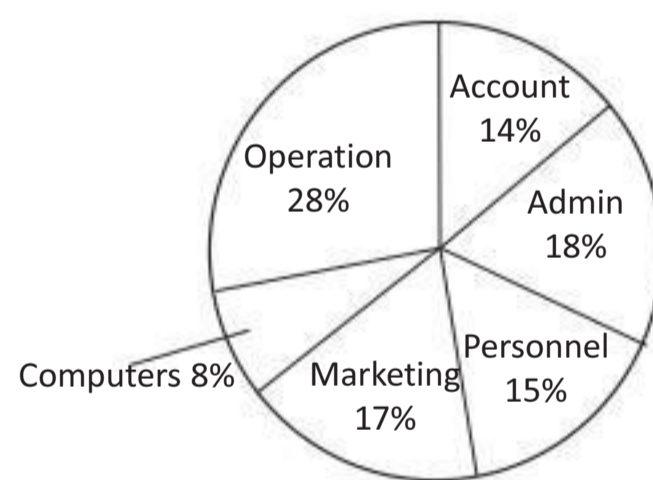Details about the distribution of employees and expenditure of an organization.
(Distributed proportionately across the departments)
Annual expenditure on different items. Total expenditure = Rs.12 crores

Departmentwise distribution of employees.
Total number of employees = 1200

11. What was the total expenditure on Accounts department ?
    1) Rs.16.8 lakhs
    2) Rs.1680 lakhs
    3) Rs.18.6 millions
    4) Rs.16.8 millions
    5) None of these

12. What was per employee expenditure on medical ?
    1) Rs.12000   2) Rs.13000
    3) Rs.12500   4) Rs.13500
    5) None of these

13. What was the total expenditure on salary of employees in marketing department ?
    1) Rs.6.12 lakhs
    2) Rs.61.2 millions
    3) Rs.6.12 millions
    4) Rs.176 lakhs
    5) None of these

14. What was the amount spent on electricity ?
    1) Rs.132 millions
    2) Rs.13.2 lakhs
    3) Rs.126 millions
    4) Rs.12.6 lakhs
    5) None of these

15. What was the expenditure on telephone for employees in computer department ?
    1) Rs.11.52 lakhs
    2) Rs.11.52 millions
    3) Rs.10.72 lakhs
    4) Rs.10.72 millions
    5) None of these

Directions (16 - 20) : What will come in place of question mark (?).

16. ?, 272, 216, 168, 124, 82
    1) 342   2) 344
    3) 340   4) 338
    5) 336

17. 12, ?, 1048, 6294, 25180, 50362
    1) 128   2) 136
    3) 130   4) 134
    5) 124

18. 2, 7, 25, 105, 531, ?
    1) 3836   2) 3275
    3) 3193   4) 3525
    5) 3143

19. 5040, 2520, 7560, 1890, 9450, ?
    1) 1575   2) 1590
    3) 1675   4) 1175
    5) 1475

20. 29, 40, 57,80, 111, ?
    1) 150   2) 151
    3) 152   4) 147
    5) 155

KEY WITH SOLUTIONS

(1 − 05):

1) 2;
   Production of company AVC in 2000
   = 36 crore units
   Average production of AVC over the given years
   $\dfrac{300+300+300+360+370+340}{6}$
   $= \dfrac{1970}{6}$
   Hence required per cent
   $= \dfrac{36×6}{1970}×100$
   = 109.64% ≈ 110%

2) 3;
   Approximate percent increase or decrease in production from the previous year for SIO are as follows :
   $1998 = \dfrac{2×100}{85} = 2.35\%$;
   $1999 = \dfrac{2×100}{87} = 2.29\%$;
   $2000 = \dfrac{2×100}{89} = 2.24\%$;
   $2001 = \dfrac{1×100}{91} = 1.09\%$;
   $2002 = \dfrac{4×100}{92} = 4.34\%$

3) 3;
   Those companies are : ZIR, PEN and SIO

4) 3;
   Total production of the six companies in first two given years
   = 863 + 927 = 1790
   Again, total production of the six companies in last two given years
   = 989 + 991 = 1980
   Therefore, require percent
   $\dfrac{1790×100}{1980} = 90.40\%$

5) 2;
   The required different (91 − 90)
   crore units
   = 1 × 10000000
   = 10000000 units

6) 2;
7) 3;
8) 1;
9) 5;
10) 2;
11) 4;
   Total expenditure on accounts department
   $\dfrac{120000000×168}{1200}$
   $= 120000000×\dfrac{14}{100}$
   = Rs. 16.8 millions

12) 2;
   Per employee expenditure on medical
   $= \dfrac{15600000}{1200} = Rs.13000$

13) 3;
   Total expenditure on salary of employees in marketing department
   $= \dfrac{36000000×204}{1200}$
   = Rs. 6.12 millions

14) 5;
   Amount spent on electricity
   $120000000×\dfrac{11}{100}$
   Rs. 13200000 = Rs. 132 lakhs

15) 1; Expenditure on telephone for employees in computer department.

16) 2; Series is −72, −56, − 48, − 44, − 42, and so on

17) 3;

18) 3;
   Series is
   ×2 +3, ×3 +4, ×4 + 5……and so on.

19) 1; Series is
   ÷2, ×3, ÷4, ×5 ……and so on.

20) 3; Series is
   +11, +17, +23, + 31, +41… and so on.