# Find the share of Rahul's profit 



## MODEL QUESTIONS

Directions(Q. No.1-2): There are total 7200 employees in a company. They are allotted to different departments. The various department of the company are indicated below in the pie-chart. Study the pie-chart and answer the following questions. (Take approximately nearest value.)


1. What percentage of the employees are in Accounts department?
a) $14.73 \%$
b) $14.03 \%$
d) $14.49 \%$
e) None of these
2. How many employees are there in the Management department?
$\begin{array}{ll}\text { a) } 1540 & \text { b) } 1450\end{array}$
c) 1054
d) 1350
e) None of these
3. If $15 \%$ of the employees of HR department are shifted to the Marketing department, then find the number of employees in the Marketing department after shifting?
$\begin{array}{ll}\text { a) } 1499 & \text { b) } 1419\end{array}$
c) 1409 d) $1449 \quad$ e) None of these
4. What is difference between the number of employees in Sale department and Finance department?
a) 30
b) 45
c) 50
$\begin{array}{ll}\text { d) } 40 & \text { e) None of these }\end{array}$
5. The number of employees in management department is approximately what percentage more or less than number of employees in accounts department.
a) $50.30 \%$
b) $50.72 \%$
c) $50.49 \%$
d) $50.98 \%$
e) None of these

Directions (Q.No.6-10): Find

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Quantitative Aptitude
the missing term in the series
6. $5040,720,4320,864,3456$, 1152,?
$\begin{array}{lll}\text { a) } 1924 & \text { b) } 1624 & \text { c) } 2000\end{array}$ d) $1804 \quad$ e) 2304
7. $164,201,220,261,284$,?
a) 321
b) 329
c) 300
$\begin{array}{ll}\text { d) } 372 & \text { e) } 299\end{array}$
8. $14,19,35,59,131,179$, ?
$\begin{array}{lll}\text { a) } 201 & \text { b) } 231 & \text { c) } 299\end{array}$
$\begin{array}{ll}\text { d) } 331 & \text { e) } 399\end{array}$
9. $3,5,13,19,31,41$, ?
$\begin{array}{lll}\text { a) } 52 & \text { b) } 55 & \text { c) } 57\end{array}$
$\begin{array}{ll}\text { d) } 61 & \text { e) } 67\end{array}$
10. 512, 343, 216, ?, 64
$\begin{array}{ll}\text { a) } 145 & \text { b) } 135\end{array}$
c) 140
d) $125 \quad$ e) 115

Directions (Q.No.11-15): Study the following bar graph carefully and answer the questions given below it.

Production of Pesticides by a Company (in 1000 tones) over the years.


32014201520162017
11. In how many of the given years was the production of pesticides more than the average production of the given years?
a) One b) Two
d) Four
e) Five
12. What was the percentage decline in the production of pesticides from 2012 to 2013?
$\begin{array}{lll}\text { a) } 20 \% & \text { b) } 25 \% & \text { c) } 30 \%\end{array}$ d) $22 \% \quad$ e) None of these
13. What was the percentage increase in production of pesticides in 2017 compared to that in 2010?
$\begin{array}{lll}\text { a) } 200 \% & \text { b) } 202 \% & \text { c) } 222 \%\end{array}$ d) $220 \%$ e) None of these
14. In which year the percentage
increase in production as compared to the previous year was maximum?
a) 2011
b) 2014
c) 2016
d) 2017 e) None of these
15. The average production of year 2011 and 2012 was exactly equal to the average production of which of the following pairs of year? a) $2013,2014 \quad$ b) 2015,2017 c) 2010,2014 d) 2010,2016 e) None of these
16. A group of 40 boys went for camping. They carry food for 15 days. If 10 more boys join them then for how many days the food last?
a) 13 days
b) 8 days
c) 10 days $\quad$ d) 12 days
e) None of these
17. Rahul invested Rs. 6000 in a business. After 4 months Aniket joined him in the business and invested Rs. 10000. If at the end of the year they received profit of Rs. 19000; then find the share of Rahul's profit.
$\begin{array}{ll}\text { a) Rs. } 6000 & \text { b) Rs. } 7200\end{array}$
c) Rs. $8100 \quad$ d) Rs. 9000
e) None of the above
$=\frac{77}{360} \times 7200=1540$
$\Rightarrow$ Number of employees in
Accounts department
$=\frac{51}{360} \times 7200=1020$
$\Rightarrow$ Difference $=1540-1020=520$
$\therefore$ Required percentage
$=\frac{520}{1020} \times 100=50.98 \%$
6. e ;

The pattern is as follows:
$\Rightarrow 5040$
$\Rightarrow 720=5040 \div 7$
$\Rightarrow 4320=720 \times 6$
$\Rightarrow 864=4320 \div 5$
$\Rightarrow 3456=864 \times 4$
$\Rightarrow 1152=3456 \div 3$
$\Rightarrow 1152 \times 2=2304$
$\therefore \Rightarrow=2304$
7. b ;

The pattern is as follows;
$\Rightarrow 164=13^{2}-5$
$\Rightarrow 201=14^{2}+5$
$\Rightarrow 220=15^{2}-5$
$\Rightarrow 261=16^{2}+5$
$\Rightarrow 284=17^{2}-5$
$\Rightarrow$ ? $=18^{2}+5=329$
$\therefore ?=329$
8. c;
$\Rightarrow 14=2^{2}+10$
$\Rightarrow 19=3^{2}+10$
$\Rightarrow 35=5^{2}+10$
$\Rightarrow 59=7^{2}+10$
$\Rightarrow 131=11^{2}+10$
$\Rightarrow 179=13^{2}+10$
$\Rightarrow ?=17^{2}+10=299$
$\therefore ?=299$
9. c;

The pattern is as follows;
$\Rightarrow 3=1^{2}+1+1$
$\Rightarrow 5=2^{2}+2-1$
$\Rightarrow 13=3^{2}+3+1$
$\Rightarrow 19=4^{2}+4-1$
$\Rightarrow 31=5^{2}+5+1$
$\Rightarrow 41=6^{2}+6-1$
$\Rightarrow 57=7^{2}+7+1=$ ?
$\therefore ?=57$
10. d;
$4^{3}=64$
$5^{3}=125$
$6^{3}=216$
$7^{3}=343$
$8^{3}=512$
11. d;

Total production $=50+80+120$
$+90+130+100+150+160=$ 880
$\Rightarrow$ Average production
$=\frac{880}{8}=110$
$\therefore$ Production in years 2012,
2014, 2016 and 2017 is more
than the average production
12. b ;

Production in $2012=120$
Production in $2013=90$
$\Rightarrow$ Decrease in production
$=120-90=30$
$\therefore$ Percentage decline
$=\frac{30}{120} \times 100=25 \%$
13. d;

Production in $2010=50$
Production in $2017=160$
$\Rightarrow$ Increase in production
$=160-50=110$
$\therefore$ Percentage increase
$=\frac{110}{50} \times 100=220 \%$
14. a;

Production in $2010=50$

Production in $2011=80$
$\Rightarrow$ Increase in production
$=80-50=30$
$\therefore$ Percentage increase
$=\frac{30}{50} \times 100=60 \%$
Production in $2011=80$
Production in $2012=120$
Increase in production
$=120-80=40$
Percentage increase
$=\frac{40}{80} \times 100=50 \%$
Production in 2013 $=90$
Production in $2014=130$
$\Rightarrow$ Increase in production
$=130-90=40$
$\Rightarrow$ Percentage increase
$=\frac{40}{90} \times 100=44.44 \%$
Production in 2015 $=100$
Production in $2016=150$
$\Rightarrow$ Increase in production
$=150-100=50$
$\Rightarrow$ Percentage increase
$=\frac{50}{100} \times 100=50 \%$
Production in 2016 $=150$
Production in $2017=160$
$\Rightarrow$ Increase in production
$=160-150=10$
$\Rightarrow$ Percentage increase
$=\frac{10}{150} \times 100=6.66 \%$
$\therefore$ Year 2011 has the maximum percent increase as compared to the year 2010
15. d;

Average production of 2011 and 2012
$=\frac{(80+120)}{2}=\frac{200}{2}=100$
Average production of 2013 and 2014
$=\frac{90+130}{2}=\frac{220}{2}=110$
Average production of 2015 and 2017
$=\frac{(100+160)}{2}=\frac{260}{2}=130$
Average production of 2010 and 2014
$=\frac{(50+130)}{2}=\frac{180}{2}=90$
Average production of 2010 and 2016

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=\frac{(50+150)}{2}=\frac{200}{2}=100
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$\therefore$ Year 2010 and 2016 have the
same average production as year
2011 and 2012
16. d;

We know that,
$\mathrm{M}_{1} \times \mathrm{T}_{1}=\mathrm{M}_{2} \times \mathrm{T}_{2}$
$\Rightarrow 40 \times 15=(40+10) \times \mathrm{T}_{2}$
$\Rightarrow 50 \times \mathrm{T}_{2}=600$
$\Rightarrow \mathrm{T}_{2}=12$ days
$\therefore$ The food will last for 12 days
17. d;

Rahul's part of investment :
Aniket's part of investment
$=$ Rs. $6000 \times 12$ months: Rs. $10000 \times 8$ months .
$\therefore$ Rahul's part of investment:
Aniket's part of investment
$=72000: 80000=9: 10$
$\therefore$ Profit of Rahul
$=\frac{9}{19} \times 19000=$ Rs. 9000
$\therefore$ Rahul will receive Rs. 9000 profit.

