Quiz Date: 19th September 2020
Q1. A sum of money invested at compound interest amount to Rs. 2400 in 3 years and in 4 years to Rs. 2,520. The interest rate per annum is:
(a) $8 \%$
(b) $10 \%$
(c) $5 \%$
(d) $7 \%$
(e) $9 \%$

Q2. What does Rs. 250 amounts to in 2 years with compound interest at the rate of $4 \%$ in the $1^{\text {st }}$ year and $8 \%$ in the second year?
(a) Rs. 280
(b) Rs. 280.80
(c) Rs. 468
(d) Rs. 290.80
(e) Rs. 270.50

Q3. By selling an article for Rs. 240, a man incurs a loss of $10 \%$. At what price should he sell it, so that he makes a profit of $20 \%$ ?
(a) Rs. 264
(b) Rs. 288
(c) Rs. 300
(d) Rs. 320
(e) Rs. 420

Q4. The difference between the selling price and cost price of an article is Rs. 210. If the profit percent is 25 , then the selling price of the article is:
(a) Rs. 950
(b) Rs. 1050
(c) Rs. 1150
(d) Rs. 1250
(e) Rs. 1500

Q5. A certain number of people were supposed to complete a work in 20 days. The work, however, took 28 days, since 8 people were absent throughout. How many people were supposed to be working originally?
(a) 32
(b) 27
(c) 36
(d) 30
(e) 28

Directions (6-10): Find the value of the (?) in the following problems.

$$
(2 \times 3)^{3} \div(4 \times 9)^{2} \times(27 \times 8)^{2}=(6)^{?}
$$

Q6.
(a) 5
(b) 6
(c) 3
(d) 8
(e) 7

Q7. 454.58-376.89 + 121.45-95.42 = ?
(a) 102.22
(b) 103.72
(c) 91.72
(d) 92.32
(e) 104.42

Q8. $\sqrt{576} \div(4)^{2} \times 7.4+(7)^{3}-231=$ ?
(a) 123.9
(b) 121.1
(c) 111.4
(d) 122.1
(e) 123.1

Q9. $\left[(84)^{2} \div 28 \times 12\right] \div 24=7 \times$ ?
(a) 15
(b) 17
(c) 18
(d) 21
(e) 24

Q10. (7.9\% of 134) - (3.4\% of 79) =?
(a) 8.1
(b) 7.9
(c) 8.6
(d) 7.3
(e) 6.8

Directions (11-15): Study the following graph carefully to answer the questions that follow:
Number of students (In thousands) enrolled in three different districts in six different years


Q11. What was percentage increase in enrollment in the number of students in District-R in year 2013 as compared to that of the previous year?
(a) $115.5 \%$
(b) $112.5 \%$
(c) $15.5 \%$
(d) $12.5 \%$
(e) $16.5 \%$

Q12. What was the difference between the number of students enrolled in all the three districts in the year 2014 together and the number of students enrolled in District- $Q$ over all the years together?
(a) 12,000

(b) 11,000
(c) 1,100
(d) 1,400
(e) 16,000

Q13. What was the approximate average number of students enrolled in District-P over all the years together?
(a) 5,999
(b) 5,666
(c) 5,444
(d) 53,333
(e) 43,333

Q14. In which year was the number of students enrolled in all the three districts together second highest?
(a) 2011
(b) 2012
(c) 2014
(d) 2013
(e) 2016

Q15. Total number of students enrolled in the District-P and District - Q together in the year 2016 was what percentage of the total number of students enrolled in District-P in the year 2014?
(a) 150
(b) 120
(c) 250
(d) 220
(e) 240

## Solutions

S1. Ans. (c)
Sol.
Let rate of interest be R\%
then,
$\Rightarrow \frac{2520}{2400}=\frac{\left(1+\frac{R}{100}\right)^{4}}{\left(1+\frac{R}{100}\right)^{3}} \Rightarrow \frac{63}{60}=1+\frac{\mathrm{R}}{100}$
So, $\mathrm{R}=5 \%$

S2. Ans. (b)
Sol.
Amount $=250 \times \frac{104}{100} \times \frac{108}{100}=$ Rs. 280.80
S3. Ans.(d)
Sol.
$90 \%$ of CP = Rs. 240
$\therefore \mathrm{CP}=\mathrm{Rs}$. $\frac{240 \times 100}{90}$
New SP $=120 \%$ of CP
$=240 \times \frac{100}{90} \times \frac{120}{100}=R s .320$
$240 \times \frac{120}{90}=320$

S4. Ans.(b)
Sol.

Let CP is Rs. x and SP is Rs. $(\mathrm{x}+210)$
$\therefore C P \times \frac{125}{100}=S P \Rightarrow \frac{x \times 125}{100}=(x+210)$
$\therefore \frac{x \times 5}{4}=\frac{(x+210)}{1}=5 x=4 x=840$
$\Rightarrow x=840$
$\therefore \mathrm{CP}=\mathrm{Rs} .840 \Rightarrow \mathrm{SP}-\mathrm{CP}=210$
$\therefore \mathrm{SP}=840+210=$ Rs. 1050

S5. Ans.(e)
Sol.
Let $x$ people were supposed to work
$\therefore(\mathrm{x}-8) \times 28=\mathrm{x} \times 20$
$\Rightarrow 7 \mathrm{x}-56=5 \mathrm{x}$
$\Rightarrow \mathrm{x}=28$

S6. Ans. (a)
Sol.
$(6)^{?}=(6)^{3} \div 6^{4} \times 6^{6}$
$\Rightarrow(6)^{?}=6^{3-4+6}$
$\Rightarrow$ ? = 5

S7. Ans.(b)
Sol.
? = 576.03-472.31
$=103.72$

S8. Ans.(e)


Sol.

$$
\begin{aligned}
& ?=24 \div 16 \times 7.4+343-231 \\
& =11.1+112 \\
& =123.1
\end{aligned}
$$

S9. Ans.(c)
Sol.

$$
\begin{aligned}
& 7 \times ?=\frac{84 \times 84}{28} \times 12 \times \frac{1}{24} \\
& ?=18
\end{aligned}
$$

S10. Ans.(b)
Sol.

$$
\begin{aligned}
& ?=\frac{7.9}{100} \times 134-\frac{3.4}{100} \times 79 \\
& =7.9
\end{aligned}
$$

S11. Ans.(d)
Sol.
Required percentage increase
$=\frac{9-8}{8} \times 100=\frac{100}{8}=12.5 \%$

S12. Ans.(a)
Sol.
Number of students enrolled in all the three
districts in the year 2014
$=(8+6+7)$
$=21$ thousand
Number of students enrolled in District-Q
over all the years together
$=(5+4+7+6+4+7)$
$=33$ thousand
$\therefore$ Required difference $=(33-21)$
$=12,000$

S13. Ans.(b)
Sol.
Average number of students enrolled in
District-P over all the years together
$=\frac{1}{6} \times(3+5+6+8+7+5)$
$=\frac{1}{6} \times 34$
$\simeq 5.666$ thousands
$\simeq 5666$ (approximately)


## S14. Ans.(c)

Sol.
The highest number of students may be in year 2013 or 2014 from the graph.
$\therefore$ Students enrolled in 2013
$=(6+7+9)$
$=[6+7+9)$
$=22$ thousand
and students enrolled in $2014=(8+6+7)$
$=21$ thousand
$\therefore$ second highest enrolled students are in 2014

S15. Ans.(a)
Sol.

Total number of students enrolled in the year 2016 from district-P and Q
$=(5+7)$
$=12$ thousand
Number of students enrolled in
District-P in 2014 $=8$ thousands
Required percentage $=\frac{12}{8} \times 100$
$=\frac{3}{2} \times 100$
$=150 \%$

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