Quiz Date: 16th September 2020

Q1. Q is as much younger than R as he is older than T. If the sum of the ages of R and T is 50 years, what is definitely the difference between R and Q's age ?
(a) 2 years
(b) 10 years
(c) 3 years
(d) Data inadequate
(e) None of these

Q2. A motorboat can travel at 10 kmph in still water. It travelled 91 km downstream in a river and then returned to the same place, taking altogether 20 hours. The rate of flow of river is:
(a) 3 kmph
(b) 4 kmph
(c) 2 kmph
(d) 5 kmph
(e) 6 kmph

Q3. In a mixture of milk and water, there is only 26% water. After replacing 7 liters of mixture with 7 liters of pure milk , the percentage of milk in the mixture become 76%. The quantity of mixture is :
(a) 65 liter
(b) 91 liter
(c) 38 liter
(d) 78 liter
(e)104 liter

Q4. When the price of sugar was increased by 32%, a family reduced its consumption in such a way that the expenditure on sugar was only 10% more than before. If 30 kg per month were consumed before, find the new monthly consumption of family?
(a) 42 kg
(b) 35 kg
(c) 25 kg
(d) 16 kg
(e) 27.5kg

Q5. One year ago, the ratio between Mahesh's and Suresh's salaries was 3 : 5. The ratio of their individual salaries of last year and present year are 2 : 3 and 4 : 5 respectively. If their total salaries for the present year are Rs. 43000, what is the present salary of Mahesh ?
(a) Rs. 19000
(b) Rs. 18000
(c) Rs. 16000
(d) Rs. 15500
(e) Rs. 23000

Q6. A hostel has provision for 250 students for 35 days. After 5 days, a fresh batch of 25 students was admitted to the hostel. Again after 10 days, a batch of 25 students left the hostel. How long will the remaining provision survive ?
(a) 18 days
(b) 19 days
(c) 20 days
(d) 17 days
(e) 16 days

Q7. Simple interest on a certain sum at 7 p.c.p.a for 4 years is Rs. 3584. What will be the compound interest on the same principal at 4 p.c.p.a. in two years?
(a) Rs. 1054.48
(b) Rs. 1044.48
(c) Rs. 938
(d) Rs. 1064.84
(e) Rs. 1144.48
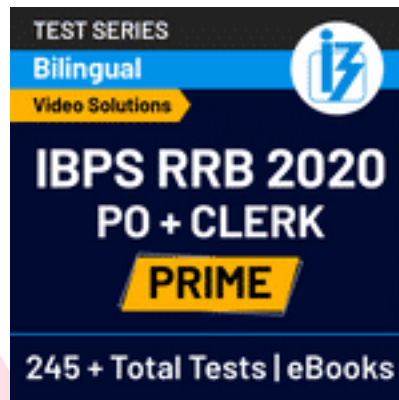
Q8. In how many different ways can the letters of the word 'HAPPY' be arranged?
(a) 120
(b) 140
(c) 60
(d) 70
(e) 80

Q9. An AC consumes 8 units of electricity in 30 minutes and a bulb consumes 18 units of electricity in 6 hours. How many units of electricity will both AC and bulb consume in 8 days if they run 10 hours a day?
(a) 1520
(b) 1620
(c) 1500
(d) 1600
(e) 1540

Q10. The manufacturer of an article makes a profit of 5%, the wholesale dealer makes a profit of 10%, and the retailer makes a profit of 15%. Find the manufacturing price of the article if the retailer sold it for Rs. 5313.

(a) Rs. 4000
(b) Rs. 4500
(c) Rs. 5000
(d) Rs. 4950
(e) Rs. 4250

Q11. The simple interest and compound interest (compounded annually) on a certain sum of money with a given rate for a period of 2 years are Rs. 900 and Rs. 954 respectively. The sum of money is:
(a) Rs. 3700
(b) Rs. 3650
(c) Rs. 3850
(d) Rs. 3750
(e) Rs. 3570

Q12. Divide Rs. 2602 between X and Y, so that the amount of X after 7 years is equal to the amount of Y after 9 years, the interest being compounded at 4% pa.
(a) Rs. 1352, Rs. 1250
(b) Rs. 1400, Rs. 1350
(c) Rs. 1415, Rs. 1300
(d) Rs. 1500, Rs. 1450
(e) None of these

Q13. X and Y enter into a partnership with the capitals of Rs. 900 and Rs. 700 respectively. they split half of the profit equally for their efforts and the remaining balance in the ratio of their investments, if X got Rs. 47 more than Y. then what is the total profit made by X and Y?
(a) Rs. 376
(b) Rs. 652
(c) Rs. 752
(d) Rs. 954
(e) Rs. 854

Q14. Two letters are chosen out of the alphabets of the English language. Find the probability that both the letters are vowels.
(a) 2/65
(b) 3/65
(c) 1/65
(d) 3/5
(e) 0.2

Q15. Akshay starts working on a job and continues for 15 days and completes 36% of the work. To complete the work, he employs Monika and together they work for 20 days and completed the work. What will be the efficiency ratio of Akshay and Monika?
(a) 7 : 5
(b) 4 : 3
(c) 5 : 3

(d) 1 : 3
(e) 3 : 1

Solutions

S1. Ans.(d)
Sol.

$\because R - Q = Q - T$

$\Rightarrow Q = \dfrac{R + T}{2}$

$\Rightarrow 2Q = R + T$ ...(i)

and,

$R + T = 50$

$\therefore Q = 25$

From here, we can't find the age of
R. So, we can't determine the answer.

S2. Ans.(a)
Sol.

Let rate of flow of river = s km/h

$\therefore \dfrac{91}{10+s} + \dfrac{91}{10-s} = 20$

$\Rightarrow 91(10 + s + 10 - s) = 20(100 - s^2)$

$\Rightarrow s^2 = 9$

$\Rightarrow s = 3 \, km/h$

S3. Ans.(b)
Sol.

Let quantity of mixture was 100x liters
Initial quantity of milk in the mixture
= 74x liters
ATQ,

$74x - \dfrac{74}{100} \times 7 + 7 = \dfrac{76}{100} \times 100x$

$\Rightarrow x = 0.91$

$\therefore$ Quantity of mixture = 91 liter

S4. Ans.(c)
Sol.

Let per kg price of Sugar initially was Rs. 100.
Then, total expenditure in a month was
100 × 30 = 3000
After increase in price,

$x \times 132 = \frac{110}{100} \times 3000$, where $x =$
new monthly consumption of family
$\Rightarrow x = 25$ kg

S57. Ans.(b)
Sol.

Ratio between salaries of Mahesh and
Suresh one year ago

i.e. $\frac{M_L}{S_L} = \frac{3}{5}$

also, ratio of Mahesh last year & present
year salaries

i.e. $\frac{M_L}{M_P} = \frac{2}{3} = \frac{2 \times \frac{3}{2}}{3 \times \frac{3}{2}} = \frac{3}{\frac{9}{2}}$ ... (i)

and, ratio of Suresh last year & present
year salaries

i.e. $\frac{S_L}{S_P} = \frac{4}{5} = \frac{4 \times \frac{5}{4}}{5 \times \frac{5}{4}} = \frac{5}{\frac{25}{4}}$ ... (ii)

From eqn i and ii,

their present salary ratio $= \frac{\frac{9}{2}}{\frac{25}{4}} = \frac{18}{25}$

∴ $18x + 25x = 43000$
$\Rightarrow x = 1000$
So, required present salary of Mahesh
$= 18 \times 1000 =$ Rs. 18000

S6. Ans.(b)
Sol.

Let the remaining provisions lasted for x days.
Then,
$250 \times 35 = 250 \times 5 + 275 \times 10 + 250 \times x$
$\Rightarrow 350 = 50 + 110 + 10x$
$\Rightarrow x = 19$ days.

S7. Ans. (b)
Sol.
$P = \dfrac{SI \times 100}{Time \times Rate} = \dfrac{3584 \times 100}{4 \times 7}$
    = Rs. 12800
$CI = P\left[\left(1 + \dfrac{R}{100}\right)^n - 1\right]$
    $= 12800\left[\left(1 + \dfrac{4}{100}\right)^2 - 1\right]$
    $= 12800\left[\left(\dfrac{26}{25}\right)^2 - 1\right]$
    $= 12800\left(\dfrac{676}{625} - 1\right)$
    $= 12800 \times \dfrac{51}{625} = Rs.\,1044.48$

S8. Ans.(c)
Sol.
HAPPY
There are 5 letters.
And number of words formed $= \dfrac{5!}{2!}$
$= \dfrac{5 \times 4 \times 3 \times 2 \times 1}{2 \times 1} = \dfrac{120}{2} = 60$

S9.Ans.(a)
Sol. Per hour consumption for AC = 16 units
total consumption of Both Ac and Bulb for 8 days (10 hours a day)
= (8×10)(16+3) =1520 units

S10.Ans.(a)
Sol.
Let the manufacturing price is MP
$MP \times \dfrac{105}{100} \times \dfrac{110}{100} \times \dfrac{115}{100} = 5313$
MP = 4000

S11. Ans.(d)
Sol.

Let sum = Rs. P and rate = R% per annum

$\therefore \frac{PR^2}{100^2} = 954 - 900$

$\frac{PR^2}{100^2} = 54$ ___(i)

And $\frac{2PR}{100} = 900$ ___(ii)

Solving (i) and (ii), we get

R = 12%

$\therefore P = \frac{54 \times 10000}{144}$

= Rs. 3750

S12. Ans.(a)
Sol.

Let X get x rupee and Y gets y rupee

ATQ,

$x\left(1 + \frac{4}{100}\right)^7 = y\left(1 + \frac{4}{100}\right)^9$

$\Rightarrow x = \frac{676y}{625}$ ___ (i)

And x + y = 2602 _____(ii)

Solving (i) and (ii) we get

y = Rs. 1250 and x = 1352 rupee

S13. Ans.(c)
Sol.

Ratio of investment of x and y is 9 : 7

Total profit = K

$\frac{9}{16} \times \frac{K}{2} - \frac{7K}{16 \times 2} = 47$

2K = 47 × 16 × 2

K = Rs. 752

S14. Ans.(a)
Sol.

Total vowels in English alphabet

= 5 (A, E, I, O, U)

$\therefore$ Required probability $= \frac{^5C_2}{^{26}C_2}$

$= \frac{5 \times 4}{26 \times 25}$

= 2/65

S15. Ans.(e)
Sol.

Akshay : 15 days → 36% of the work
∴ 20 days → 48% of the work
Total workdone by Akshay = 48% + 36% = 84%
Which means Monika did only 16% of the work in
20 days while comparing the working efficiency

	Akshay		Monika
In 20 days,	48%		16%
∴ Efficiency	3	:	1

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