Quiz Date: 3rd October 2020
Directions (1-5) : Study the following graphs and answer the following questions:
The following graph shows the percentage distribution of students admitted in different schools in 2010-2011
Total number of students admitted in 2010-2011 $=\mathbf{2 0 , 0 0 0}$


The above graph shows the percentage distribution of boys and girls in different schools. (in per cent)

Q1. What is the total number of girls having taken admission in MPPS?
(a) 1664
(b) 1536
(c) 1648
(d) 1694
(e) None of these

Q2. The number of boys in GNAV is approximately what per cent of the number of girls in APS?
(a) $45.66 \%$
(b) $80.16 \%$
(c) $35.50 \%$
(d) $51.33 \%$
(e) $56.83 \%$

Q3. What is the total number of boys admitted in all the schools in 2010-2011?
(a) 10,004
(b) 9,766
(c) 10,234
(d) 11,405
(e) 10534

Q4. The total number of boys taking admission in all schools is approximately what per cent more than the total number of girls taking admission in all schools in 2010-2011?
(a) $4.80 \%$
(b) $4.50 \%$
(c) $4.90 \%$
(d) $5.04 \%$
(e) $5.20 \%$

Q5. The number of girls who have taken admission in MPPS is how many times the number of boys who have taken admission in GNAV?
(a) 0.625
(b) 1.50
(c) 1.60
(d) 0.98
(e) 1.20

Q6. Time taken by a boat to cover ( $\mathrm{D}-11$ ) km in upstream is 5 times of the time taken by boat to cover ( $D-21$ ) km in downstream. If ratio of speed of current to speed of boat in downstream is $1: 3$ and boat can cover (D-8) km in upstream in 14 hours, then, find speed of boat in still water?
(a) 6 kmph
(b) 4 kmph
(c) 8 kmph
(d) 5 kmph
(e) 7 kmph

Q7. Length of rectangle is equal to the radius of a circle whose circumference is 176 cm and breadth of rectangle is equal to the side of square whose area is $196 \mathrm{~cm}^{2}$, then find the length of a diagonal of that rectangle?
(a) $2 \sqrt{130} \mathrm{~cm}$
(b) $14 \sqrt{5} \mathrm{~cm}$
(c) $14 \sqrt{3} \mathrm{~cm}$
(d) $14 \sqrt{6} \mathrm{~cm}$
(e) $14 \sqrt{2} \mathrm{~cm}$

Q8. A, B and C can complete a work in 20 days working together. A and B together are $50 \%$ more efficient than C and A \& C together are 100\% more efficient than B. Then in how many days A alone can complete the work?
(a)None of these
(b) 85 days
(c) 80 days
(d) 75 days
(e)65 days

Q9. A container contains mixture of milk and water in the ratio $7: x$. If 20 litre of water is added to mixture then ratio of milk to water becomes $7: 15$ and if 10 litres of water is added then ratio of milk to water becomes $14: 25$. Find initial quantity of milk in the mixture.
(a) 42 L
(b) 35 L
(c) 28 L
(d) 21 L
(e) 14 L

Q10. Veer bought 12 jeans at a discount of $12.5 \%$. If cost price of one jeans is $80 \%$ of marked price of one jeans and total profit obtained on all jeans is Rs. 1800 then find the total cost price of one jeans.
(a) Rs. 1200
(b) Rs. 1700
(c) Rs. 2000
(d) Rs. 1800
(e) Rs. 1600

Direction (11-15): Given below bar graph shows number of applications (in lakh) filled for 'SBI PO' in five different years and percentage of applications rejected in that respective years. Read the data carefully and answer the questions.


Q11. Find difference between total applications accepted in the year 2016 \& 2013 ?
(a) 12.04 lakh
(b) 11.04 lakh
(c) 8.08 lakh
(d) 14.04 lakh
(e) 6.08 laklh

Q12. Find ratio between total applications rejected in the year 2012 to total accepted applications in the year 2014?
(a) $3: 19$
(b) $5: 19$
(c) $7: 19$
(d) 9:19
(e) $11: 19$

Q13. Total rejected applications in the year 2014 is approximate what percent less than total accepted applications in the year 2015?
(a) 65\%
(b) $60 \%$
(c) $55 \%$
(d) $75 \%$
(e) 48\%

Q14. Find the average number of applications accepted in the year 2013 \& 2016 ?
(a) 18.78 lakh
(b) 14.78 lakh
(c) 21.78 lakh
(d) 16.78 lakh
(e) 12.78 lakh

Q15. If out of total accepted applications in the year 2013 \& $201575 \%$ \& 80\% applicants respectively appeared in exam, then find total appeared applicants in the exam in both the years is approximate what percent of total applicants applied in these given years?
(a) $60 \%$
(b) $65 \%$
(c) $84 \%$
(d) $76 \%$
(e) $80 \%$

## Solutions

S1. Ans. (b)
Sol. Total number of those who have taken the admission in MPPS

$$
=20,000 \times \frac{16}{100} \times \frac{48}{100}=1536
$$

S2. Ans. (d)
Sol.

$$
=\frac{20000 \times \frac{12}{100} \times \frac{40}{100}}{20000 \times \frac{17}{100} \times \frac{55}{100}} \times 100
$$

$=\frac{12 \times 40}{17 \times 55} \times 100=51.33 \%$

S3. Ans. (c)
(approx.)

Sol. Total number of boys taking admission in all the schools $=\frac{20000}{100 \times 100}$

$$
[22 \times 55+18 \times 60+16 \times 52+17 \times 45+15 \times 50+12 \times 40]=2 \times 5117=10234
$$

S4. Ans. (a)
Sol. Total number of girls taking admission in all schools

$$
\begin{aligned}
& =20,000-10234=9766 \\
& \text { Required per cent }=\frac{(10234-9766) \times 100}{9766} \\
& =4.80 \%
\end{aligned}
$$

S5. Ans. (c)
Sol. Required answer

$$
=\frac{20000 \times \frac{16}{100} \times \frac{48}{100}}{20000 \times \frac{12}{100} \times \frac{40}{100}}=\frac{16 \times 48}{12 \times 40}=1.60 \text { times }
$$

S6. Ans.(b)
Sol.
Let speed of boat in still water $=x \mathrm{kmph}$
And speed of current $=y \mathrm{kmph}$
$\therefore$ upstream speed $=(\mathrm{x}-\mathrm{y}) \mathrm{kmph}$
Downstream speed $=(x+y) \mathrm{kmph}$
ATQ,
$\frac{D-11}{x-y}=\frac{5(D-21)}{x+y}$
...(i) $\quad\left[\right.$ using time $\left.=\frac{\text { Distance }}{\text { Speed }}\right]$
Also,
$\frac{y}{x+y}=\frac{1}{3}$
$\Rightarrow \mathrm{x}+\mathrm{y}=3 \mathrm{y}$
$\Rightarrow x=2 y$
From (i) \& (ii)
$\frac{D-11}{2 y-y}=\frac{5(D-21)}{2 y+y}$
$D-11=\frac{5(D-21)}{3}$
$3 D-33=5 D-105$
2D $=72$
$\mathrm{D}=36 \mathrm{~km}$
Also,
$\frac{D-8}{x-y}=14 \quad\left[\right.$ using time $\left.=\frac{\text { Distance }}{\text { speed }}\right]$
$\frac{36-8}{2 y-y}=14$
$y=\frac{28}{14}=2 \mathrm{kmph}$
Speed of boat in still water $=x=2 y$
$=2 \times 2=4 \mathrm{kmph}$

S7. Ans.(b)
Sol.
Radius of circle $(\mathrm{r})=\frac{176}{2 \times \frac{22}{7}}=$ length of rectangle $(\ell)$
$=28 \mathrm{~cm}$
Breadth of rectangle (b) $=\sqrt{196}=14 \mathrm{~cm}$
$\therefore$ Diagonal of rectangle $=\sqrt{28^{2}+14^{2}}=\sqrt{980} \mathrm{~cm}=14 \sqrt{5} \mathrm{~cm}$
S8. Ans.(d)
Sol.
Let efficiency of A, B and C be a, b and c respectively
ATQ,
$\frac{\mathrm{a}+\mathrm{b}}{\mathrm{c}}=\frac{3}{2} \ldots$ (i)
$\frac{\mathrm{a}+\mathrm{c}}{\mathrm{b}}=\frac{2}{1}$.

On solving (i) and (ii)
$\mathrm{a}: \mathrm{b}: \mathrm{c}=4: 5: 6$
$\therefore$ A alone can complete in $=\frac{20 \times 15}{4}=75$ days
S9. Ans.(c)
Sol.
Let initial quantity of milk and water in the mixture be 7 y and xy respectively
So,
$\frac{7 y}{x y+20}=\frac{7}{15}$
$105 y=7 x y+140$...(i)
and
$\frac{7 y}{x y+10}=\frac{14}{25}$
$175 y=14 x y+140 \ldots$ (ii)
Solving (i) and (ii)
$y=4$
Initial quantity of milk in mixture $=7 y=28 \mathrm{~L}$
S10. Ans.(e)
Sol.
Let marked price of one jeans be 100x
So cost price of one jeans be 80 x
and selling price of one jeans be 87.5 x
ATQ,
$12 \times(87.5 x-80 x)=1800$
$7.5 \mathrm{x}=150$
$\Rightarrow \mathrm{x}=20$
Total cost price of all jeans $=80 \times 20=$ Rs. 1600
S11. Ans(d)
Sol.
Total applications accepted in the year $2016=32 \times \frac{90}{100}=28.8 \mathrm{lakh}$
Total applications accepted in the year $2013=18 \times \frac{82}{100}=14.76 \mathrm{lakh}$
Required difference $=28.8-14.76=14.04$ lakh
S12. Ans(a)
Sol.
Total rejected applications in the year $2012=15 \times \frac{20}{100}=3$ lakh
Total accepted applications in the year $2014=25 \times \frac{76}{100}=19$ lakh
Required ratio $=3: 19$
S13. Ans(d)
Sol.

Total rejected applications in the year $2014=25 \times \frac{24}{100}=6$ lakh
Total accepted applications in the year $2015=28 \times \frac{85}{100}=23.8$ lakh
Required percentage $=\frac{23.8-6}{23.8} \times 100$

$$
=74.78 \approx 75 \%
$$

S14. Ans(c)
Sol.
Total accepted applications in the year $2013=18 \times \frac{82}{100}=14.76 \mathrm{lakh}$
Total accepted applications in the year $2016=32 \times \frac{90}{100}=28.8$ lakh
Required average $=\frac{14.76+28.8}{2}$

$$
=\frac{43 . .56^{2}}{2}=21.78 \text { lakh }
$$

S15. Ans(b)
Sol.
Total applicants appeared in the year $2013=18 \times \frac{82}{100} \times \frac{3}{4}=11.07 \mathrm{lakh}$
Total applicants appeared in the year $2015=28 \times \frac{85}{100} \times \frac{4}{5}=19.04 \mathrm{lakh}$
Total appeared applicants $=11.07+19.04=30.11$ lakh
Required percentage $=\frac{30.11}{18+28} \times 100 \approx 65 \%$

