(4) Drooped

(5) Deepened

> **Solution : 2**

11. Choose the word/group of words which is most nearly the same in meaning as the word CATERS given in bold ds used in the passage.

    (1) Is cooked

    (2) Available

    (3) Subjects

    (4) Pampers

    (5) Plans

> **Solution : 4**

12. Which of the following is true in the context of the passage ?

    (1) Women in Asia and Africa have access to primary but not higher education.

    (2) International conferences on gender equality have not resulted in any concrete aid and action.

    (3) There has been much focus on the issue of gender equality in the past two decades.

    (4) Over half the women in sub Saharan Africa are illiterate.

    (5) All of the given statements are true in the context of the passage.

> **Solution : 3**

13. Choose the word which is most opposite in meaning to the word FAIRER given in bold as used in the passage.

    (1) Dimmer

    (2) Mysterious

    (3) Depressing

    (4) Biased

    (5) Dusty

> **Solution : 4**

14. Choose the word which is most opposite in meaning to the word IMPLAUSIBLE given in bold as used in the passage.

    (1) Questionable

    (2) Open

    (3) Hypocritical

    (4) Credible

    (5) Fake

> **Solution : 4**

15. According to the passage, what can be said with regard to Africa ?
    (1) It is struggling to improve the situation with regard to discrimination against women.
    (2) While cultural attitudes are changing fast, gender equal policies lag behind.
    (3) Today there is parity between men and women in terms of property rights.
    (4) Micro-credit programmes here have not enjoyed the same success as they did in Asia.
    (5) None of the given options can be said.

    > **Solution : 1**

Directions (16-20) : *In these questions, the sentence has. two blanks, each blank indicating that something has been omitted. Choose the set of words for the blanks which best fits the meaning of the sentence as a whole.*

16. There is no clear............ as to why so many companies start at the same time with broadly the ....
    ideas.
    (1) signal, aloof
    (2) indication, same
    (3) explanation, related
    (4) clues, equal
    (5) prove, like

    > **Solution : 2**

17. Everything from our plastic water bottles and cosmetics to our non-stick frying pans,.......... chemicals that ....in our bodies.
    (1) has, stays
    (2) contains, accumulate
    (3) produces, dissolves
    (4) have, dilute
    (5) comprises, harm

    > **Solution : 2**

18. Doctors-in training................ a lot about the workings of the human body..................... medical school and residency.
    (1) acquire, while
    (2) receives, throughout
    (3) study, for
    (4) trained, from

(5) learn, during

> **Solution : 5**

19. There is a common ……………that runs……………… many of these ventures.
    (1) fiber, on
    (2) cord, by
    (3) wired, between
    (4) strand, next
    (5) thread, through

> **Solution : 5**

20. World economic growth, which was anyway …………………, will be further
    dampened …………….to Brexit.
    (1) stumbling, thank
    (2) groom, owing
    (3) low, as
    (4) sputtering, due
    (5) slowed, now

> **Solution : 4**

Directions (21-25) : In these questions, read the sentence to find out whether
there is any grammatical error in it. The error, if any, will be in one part of the
sentence. Mark the part with the error as your answer. If there is no error, mark
'No error' as your answer. (Igno're the errors of punctuation, if any).

21. The progress of the southwest monsoon (1)/ is relatively 'slow as it is (2)/ not
    getting a favourable system (3)/ for move forward. (4) No error (5).

> **Solution : 4**

22. Authorities have (1)/ derived requests (2)/ for private hospital care (3)/ to the
    accuse. (4) No error (5).

> **Solution : 4**

23. The drive intended to creating (1)/ an awareness of (2)/ the perks of riding two
    wheelers (3)/ without a helmet. (4) No error (5).

> **Solution : 1**

24. Gold continued its rising streak (1)/ for the fourth straight session (2)/ to reclaim
    the (3)/

psychologically significant thirty thousand mark. (4) No error (5)

> **Solution : 1**

25. The system, which keeps (1)/ a record for personal and professional details (2)/ of all community members, (3)/ was hacked. (4) No error (5)

> **Solution : 1**

Directions (26-30) : *In the following passage, there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, five words/phrases are suggested, one of which fits the blank appropriately. Find out the appropriate word/phrase in each case.*

Technology is the technical ...(26)... people use to ...(27)... their surroundings. It also means knowledge of using tools and machines to do tasks ...(28)... . We use technology to control the world in which we live. Technology is people using knowledge, tools, and systems to make their lives easier and better. People use technology to refine their ability to do work. ...(29)... technology, people communicates better. Technology allows them to make more and better products. Our buildings are better through the use of technology. We travel in more comfort and speed as a ...(30)... of technology. Yes, technology is everywhere and can make life better.

26. (1) data
    (2) manpower
    (3) sound
    (4) humans
    (5) means

> **Solution : 5**

27. (1) relate
    (2) capture
    (3) improve
    (4) grow
    (5) built

> **Solution : 3**

28. (1) locally
    (2) centrally
    (3) efficiently

(4) deeply

(5) vaguely

> **Solution : 3**

29. (1) Through

    (2) Without

    (3) Since

    (4) Help

    (5) Although

    > **Solution : 1**

30. (1) source

    (2) result

    (3) matter

    (4) precursor

    (5) fortune

    > **Solution : 2**

QUANTITATIVE APTITUDE

1. The cost price of item B is Rs. 150/- more than the cost price of item A. Item A was sold at a profit of 10% and item B was sold at a loss of 20%. If the respective ratio of selling prices of items A and B is 11 : 12, what is the cost price of item B?
   (1) Rs. 450/-
   (2) Rs. 420/-
   (3) Rs. 400/-
   (4) Rs. 350/-
   (5) Rs. 480/-

Solution : 1

(1) ; Let the cost price of item A = ₹ x

and the cost price of item B = ₹ $(x + 150)$

According to question,

$$\frac{x \times \dfrac{110}{100}}{(x + 150) \times \dfrac{80}{100}} = \frac{11}{12}$$

$$\frac{11x}{2(x + 150)} = \frac{11}{3}$$

$$3x = 2x + 300$$

$$x = ₹300/\text{-}$$

∴ Cost price of item B = $x + 150 = 300 + 150$

$$= ₹ 450/\text{-}$$

2. A vessel contains a mixture of milk and water in the respective ratio of 10 : 3. Twenty-six litre of this mixture was taken out and replaced with 8 litre of water. If the resultant respective ratio of milk and water in the mixture was 5 : 2, what was the initial quantity of mixture in the vessel ? (in litre)
   (1) 143
   (2) 182
   (3) 169
   (4) 156
   (5) 130

Solution : 5

(5) ; Let the quantity of milk = $10x$

and the quantity of water = $3x$

Intial quantity of mixture = $10x + 3x = 13x$

According to question,

$$\frac{10x - 26 \times \frac{10}{13}}{3x - 26 \times \frac{3}{13} + 8} = \frac{5}{2}$$

$$\frac{10x - 20}{3x + 2} = \frac{5}{2}$$

$$20x - 40 = 15x + 10$$

$$5x = 50$$

$$x = 10 \text{ litre}$$

∴ Initial quantity of mixture in the vessel

$$= 13x = 13 \times 10 = 130 \text{ litre}$$

Directions (3-7) : What **approximate** value will come in place of the question mark(?) in the given questions ? (You are not expected to calculate the exact value

3. ? % of $750.11 \times 34.90 + 6.995 = 3000$

(1) 12

(2) 15

(3) 18

(4) 75

(5) 60

Solution : 1

(1) ; ? % of $750.11 \times 34.90 + 6.995 = 3000$

$$\frac{?}{100} \times 750 \times 35 + 7 \approx 3000$$

$$? \times 262.5 \approx 2993$$

$$? \approx 12$$

---

4. $815.002 + 29.98 - 53.998 + 3.01^2 = ?$

(1) 820

(2) 880

(3) 840

(4) 800

(5) 750

Solution : 4

(4) ; $815.002 + 29.98 - 53.998 + 3.01^2 = ?$

$$815 + 30 - 54 + 9 \approx ?$$
$$854 - 54 \approx ?$$
$$\therefore \qquad ? \approx 800$$

---

5. 40.1% of 360.2 − 59.98% of ? =12

   (1) 220

   (2) 228

   (3) 300

   (4) 325

   (5) 200

Solution : 1

(1) ; 40.1% of 360.2 − 59.98% of ? = 12

$$\frac{40}{100} \times 360 - \frac{60}{100} \times ? \approx 12$$

$$144 - 12 \approx \frac{6}{10} \times ?$$

$$? \approx \frac{1320}{6}$$

$$? \approx 220$$

---

6. $96.894 + 33.002 + 15.02 \times 7.99 = ?$

   (1) 180

   (2) 200

   (3) 250

   (4) 169

   (5) 170

Solution : 3

(3) ; $96.894 + 33.002 + 15.02 \times 7.99 = ?$

$$97 + 33 + 15 \times 8 \approx ?$$
$$130 + 120 \approx ?$$
$$\therefore \qquad ? \approx 250$$

---

7. $(42.11 \times 5.006) - \sqrt{7} \times 15.08 = ?$

   (1) 250

   (2) 150

(3) 45

(4) 200

(5) 125

Solution : 2

(2) ; $(42.11 \times 5.006) - \sqrt{17} \times 15.08 = ?$

$42 \times 5 - \sqrt{16} \times 15 \approx ?$

$210 - 4 \times 15 \approx ?$

$210 - 60 \approx ?$

$\therefore \quad ? \approx 150$

---

8. There are 6 consecutive odd numbers. The difference between the square of the average of the first three numbers and the square of the average of the last three numbers is 288. What is the last odd number ?

(1) 31

(2) 27

(3) 29

(4) 25

(5) 33

Solution : 3

(3) ; Let the six consecutive odd numbers are

$x, (x + 2), (x + 4), (x + 6), (x + 8)$ and $(x + 10)$.

According to question,

$$\left[\frac{x + 6 + x + 8 + x + 10}{3}\right]^2 - \left[\frac{x + x + 2 + x + 4}{3}\right]^2 = 288$$

$(x + 8)^2 - (x + 2)^2 = 288$

$x^2 + 64 + 16x - x^2 - 4 - 4x = 288$

$12x = 228$

$x = 19$

$\therefore$ Last odd number $= x + 10$

$= 19 + 10 = 29$

---

9. In a bag, there are 6 red balls and 9 green balls. Two balls are drawn at random, what is the probability that at least one of the balls drawn is red ?

(1) 29/35

(2) 7/15

(3) 23/35

(4) 2/5

(5) 19/35

Solution : 3

(3) ; Required probability $= \dfrac{[^6C_1 \times {}^9C_1] + {}^6C_2}{^{15}C_2}$

$$= \dfrac{54 + 15}{105} = \dfrac{69}{105}$$

$$= \dfrac{23}{35}$$

Directions (10-14) : *Refer to the bar graph and answer the given questions.*
Data related to the number of students enrolled
for a vocational course in two institutes
(A and B) during 5 years

	2009	2010	2011	2012	2013
■ A	170	270	90	320	330
B	240	360	160	200	210
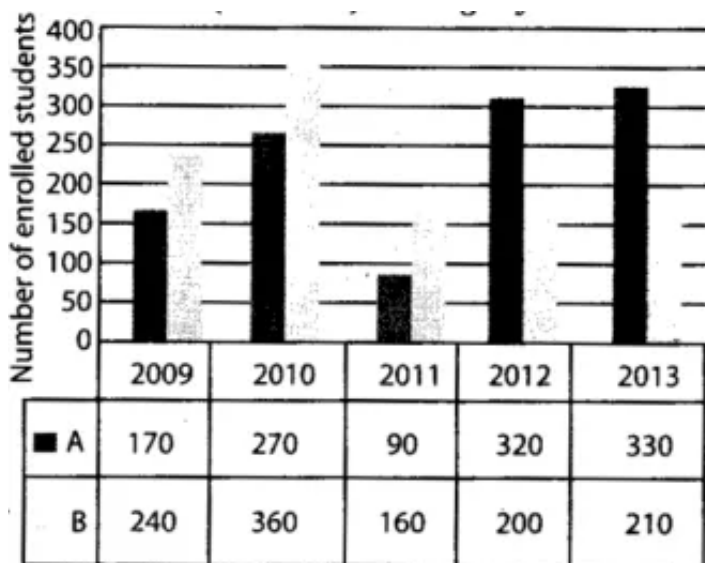
10. What is the difference between average number of students enrolled in institute A in 2009 and 2010 and that in institute B in 2011 and 2012 ?
(1) 20
(2) 40
(3) 30
(4) 10
(5) 60

Solution : 2

2) ; Required difference $= \left[\dfrac{170 + 270}{2}\right] - \left[\dfrac{160 + 200}{2}\right]$

$$= 220 - 180 = 40$$

11. If the number of enrolled students in institute A in 2013 is 25% less than that in 2014, how many students were enrolled in Institute A in 2014 ?
(1) 450
(2) 480

(3) 440

(4) 460

(5) 470

Solution : 3

(3) ; Required students $= 330 \times \dfrac{100}{75} = 440$

---

12. In 2009, 65% of students enrolled in institute B were male. If the respective ratio between number of male students enrolled in institutes A and B in 2009 was 3 : 4, what was the number of male students enrolled in institute A in the same year ?

    (1) 111

    (2) 117

    (3) 123

    (4) 114

    (5) 105

Solution : 2

(2) ; Let the number of male students enrolled in institute A in 2009 $= 3x$

and the number of male students enrolled in institute B in 2009 $= 4x$

According to question,

Number of male students in institute B in 2009

$$= 240 \times \dfrac{65}{100}$$

$$4x = 156$$

$$x = 39$$

∴ Number of male students in institute A in 2009

$$= 3x = 3 \times 39 = 117$$

---

13. Number of students enrolled in institute A in 2011 is what percent of that enrolled in institute B in the same year ?

    (1) 50.75%

    (2) 60.25%

    (3) 58.5%

    (4) 54.75%

    (5) 56.25%

Solution : 5

---

(5) ; Required percentage $= \dfrac{90}{160} \times 100$

$= 56.25\%$

14. Number of students enrolled in institute B decreased by what percent from 2010 to 2013 ?

(1) 41 2/3

(2) 36 2/3

(3) 43 1/3

(4) 29 1/3

(5)

Solution : 1

(1) ; Required percentage $= \dfrac{360 - 210}{360} \times 100$

$= \dfrac{150}{360} \times 100$

$= 41\dfrac{2}{3}\%$

15. A is thrice as efficient as B. A started working and after 4 days he was replaced by B. B then worked for 15 days and left. If A and B together finished 75% of the total work, in how many days B alone can finish the whole work ?

(1) 27

(2) 45

(3) 24

(4) 36

(5) 42

Solution : 4

(4) ; Let A alone can finish the work in x days.

and B alone can finish the work in $3x$ days.

According to question,

$\dfrac{4}{x} + \dfrac{15}{3x} = \dfrac{3}{4}$

$\dfrac{9}{x} = \dfrac{3}{4}$

$x = 12$ days

∴ The number of days taken by B to complete the work $= 3x = 3 \times 12 = 36$ days

16. Raman invested P for 2 years in scheme A which offered 20% p.a. compound interest (compounded annually). He lent the interest earned from scheme A to Shubh, at the rate of 7.5% p.a. simple interest. If at the end of 2 years, Shubh gave Rs.3,036/- to Raman and thereby repaid the whole amount (actual loan + interest), what is the value of P ?

(1) Rs. 6,000/-
(2) Rs. 5,800/-
(3) Rs. 6,800/-
(4) Rs. 5,400/-
(5) Rs. 6,400/-

Solution : 1

(1) ; Amount invested by Raman

$$= P\left[\left(1 + \frac{20}{100}\right)^2 - 1\right] = \frac{11\,P}{25}$$

According to question,

$$\frac{11\,P \times 7.5 \times 2}{25 \times 100} + \frac{11\,P}{25} = 3036$$

$$\frac{11\,P}{25}\left[\frac{3}{20} + 1\right] = 3036$$

$$\frac{11\,P}{25} \times \frac{23}{20} = 3036$$

$$P = \frac{3036 \times 25 \times 20}{11 \times 23}$$

$$= ₹6,000/-$$

Directions (17- 21) : *Study the following table carefully and answer the questions.*

Coaching institute	Total number of students who have enrolled for the coaching institutes	Percentage of students who have enrolled for the given coaching institutes from different schools			
		P	Q	R	S
A	80	25	20	15	40
B	100	24	33	21	22
C	200	32	20	17	31
D	250	20	10	20	50

Note : The coaching institutes have students from only the given four schools.

17. What is the respective ratio between the total number of students who have enrolled for coaching institutes A and C together from school P and the total number of students who have enrolled for the same coaching institutes together from school Q ?

(1) 9 : 4

(2) 3 : 1

(3) 6 : 5

(4) 3 : 2

(5) 7 : 2

Solution : 4

(4) ; Required ratio $= \left(80 \times \dfrac{25}{100} + 200 \times \dfrac{32}{100}\right)$

$: \left(80 \times \dfrac{20}{100} + 200 \times \dfrac{20}{100}\right)$

$= (20 + 64) : (16 + 40)$

$= 84 : 56 = 3 : 2$

---

18. In coaching institute B, the total number of students who have enrolled from schools P and R together is what percent less than the 'total number of students enrolled from schools Q and S together ?

    (1) 20 1/13%

    (2) 17 3/11%

    (3) 19 2/11%

    (4) 19 1/5%

    (5) 16 2/5%

Solution : 3

(3) ; Required percentage $= \dfrac{55 - 45}{55} \times 100$

$= \dfrac{200}{11} = 18\dfrac{2}{11}\%$

---

19. What is the average number of students who have enrolled in coaching institutes A, C and D from school R ?

    (1) 32

    (2) 33

    (3) 34

    (4) 31

    (5) 30

Solution : 1

---

(1) ; Required average

$$= \frac{\left[80 \times \dfrac{15}{100} + 200 \times \dfrac{17}{100} + 250 \times \dfrac{20}{100} \right]}{3}$$

$$= \frac{12 + 34 + 50}{3} = \frac{96}{3} = 32$$

20. what is the difference between the total number of students who have enrolled from coaching institute A from schools P and S together and the total number of students who have enrolled for coaching institute C from the same school together ?

(1) 78

(2) 64

(3) 38

(4) 74

(5) 67

Solution : 4

(4) ; Required difference

$$= \left[200 \times \left(\frac{32 + 31}{100} \right) \right] - \left[80 \times \left(\frac{25 + 40}{100} \right) \right]$$

$$= 126 - 52 = 74$$

21. In coaching institute D, 42% are females. If 20% of the total females are from school Q, what is the number of male students from school Q who have enrolled from coaching institute D ?

(1) 5

(2) 7

(3) 6

(4) 3

(5) 4

Solution : 5

(5) ; Total number of students who have enrolled from coaching institute D from school Q

$$= 250 \times \frac{10}{100} = 25$$

Number of female students in coaching institute D

$$= 250 \times \frac{42}{100} = 105$$

Number of female students from school Q

$$= 105 \times \frac{20}{100} = 21$$

∴ Number of male students from school Q

$$= 25 - 21 = 4$$

Directions (22-26) : *In these questions, two equations numbered I and II are given. You have to solve both the equations and mark the appropriate option.*

Give answer :

(1) If x > y

(2) If x < y

(3) If x ≥ y

(4) If x ≤ y

(5) If x = y or the relationship cannot be established

22. I. $x^2 - 11x + 30 = 0$

II. $2y^2 - 9y + 10 = 0$

> **Solution : 1**
>
> (1) ; I. $x^2 - 11x + 30 = 0$
>
> $x^2 - 6x - 5x + 30 = 0$
>
> $x(x - 6) - 5(x - 6) = 0$
>
> $(x - 5)(x - 6) = 0$
>
> $x = 5, 6$
>
> II. $2y^2 - 9y + 10 = 0$
>
> $2y^2 - 4y - 5y + 10 = 0$
>
> $2y(y - 2) - 5(y - 2) = 0$
>
> $(y - 2)(2y - 5) = 0$
>
> $y = 2, \dfrac{5}{2}$
>
> ∴ x > y

23. I. $15x^2 + 8x + 1 = 0$

II. $3y^2 + 14y + 8 = 0$

> **Solution : 1**