SBI PO (PRELIMINARY EXAM) , 09-07-2016- PREVIOUS YEAR PAPER

ENGLISH LANGUAGE

Directions (1-10) : *Read the following passage carefully and answer the questions. Certain words/phrases are given in bold to help you locate them while answering some of the questions.*

Until the 1960s boys spent longer and went further in school than girls, and were more likely to graduate from university. Now, across the rich world and in a growing number of , poor countries, the balance has tilted the other way. Policymakers once fretted about girls' . lack of confidence in science but this is changing. Sweden has commissioned research into its "boy crisis". Australia has devised a reading programme called "Boys, Blokes, Books and Bytes". In just a couple of generations, one gender gap has closed, only for another to open up. The reversal is laid out in a report published on March 5th by the OECD. a Paris-based rich-country think-tank. Boys' dominance just about endures in maths: at age 15 they are, on average, the equivalent of three months' schooling ahead of girls. In science the results are fairly even. But in reading, where girls have been ahead for some time, a gulf has appeared. In all G4 countries and economies in the study, girls outperform boys. The average gap is equivalent to an extra year of schooling. The OECD deems literacy to be the most important skill that it assesses, since further learning depends on it. Sure enough, teenage boys are 50% more likely than girls to fail to achieve basic proficiency in any of maths, reading and science. Youngsters in this group, with nothing to build on or shine at, are **prone** to drop out of school altogether. To see why boys and girls fare so differently in the classroom, first look at what they do outside it. The average 15-year old girl devotes five-and-a-half hours a week to homework, an hour more than the average boy, who spend more time playing video games and trawling the internet. Three-quarters of girls read for pleasure, compared with little more than half of boys. Reading rates are falling everywhere as screens **draw** eyes from pages, but boys are giving up faster. The OECD found that, among boys who do as much homework as the average girl, the gender gap in reading fell by nearly a quarter.

Once in the classroom, boys long to be out of it: They are twice as likely as girls to report that school is a "waste of time", and more often turn up late. Just as a teachers- used to struggle to persuade girls that science is not only for men, the OECD now urges parents and policymakers to steer boys away from a version of masculinity that ignores academic achievement. Boys' disdain for school might have been less irrational when there were plenty of jobs for uneducated men. But those days have long gone. It may be that a bit of swagger helps in maths, where confidence plays a part in boys' lead (though it sometimes extends to **delusion** :12% of boys told the OECD that they are familiar with the mathematical concept of "subjunctive sealing", a red herring that fooled only 7% of girls.) But their lack of self-

discipline drives teachers crazy. The OECD found that boys did much better in its anonymised tests than in teachers assessments. What is behind this discrimination? One possibility is that teachers mark up students who are polite, eager and stay out of flights, all attributes that are more common among girls. In some countries, academic points can even be **docked** for bad behaviour.

1. Choose the word which is **opposite** in meaning to the word **DOCKED** given in bold as used in the passage.
   (1) Raised
   (2) Stopped
   (3) Widened
   (4) Flown
   (5) None of these

   Solution : 2

2. According to the passage, what can be said about the school education today ?
   (1) Science education is deteriorating rapidly.
   (2) Online education can easily address its problems such as shortage of teaching staff.
   (3) It fosters rote learning instead of creative thinking.
   (4) The amount of homework for children is prohibitive.
   (5) Girls are doing better at school as compared to boys on some parameters.

   Solution : 5

3. Choose the word/group of words which is most nearly the **same** in meaning as the word **DRAW** given in **bold** as used in the passage.
   (1) Sketch
   (2) Tie
   (3) Raffle
   (4) Represent
   (5) Divert

   Solution : 5

4. Which of the following is TRUE in the context of the passage ?
   (1) Boys perform better than girls on subjective teacher assessments.
   (2) Efforts to improve representation of girls in education have had success.
   (3) By and large teachers are female and they discriminate against boys.
   (4) Education in rich countries needs to be subsidised to reduce dropout numbers.
   (5) None of the given statements is true in the context of the passage.

   Solution : 2

5. Choose the word/group of words which is most nearly the **same** in meaning as the word **PRONE** given in **bold** as used in the. passage.
   (1) Unconscious

(2) Flat
(3) Likely
(4) Lifeless
(5) Opinionated

Solution : 3

6. Which of the following factors can have an impact on results of boys in school ?
A. Perceptions of teachers
B. Societal attitude towards educa -tional achievement and boys
C. Overconfidence of male students
(1) Only (A)
(2) Only (B)
(3) All (A), (B) and (C)
(4) Only (A) and (C)
(5) Only (A) and (B)

Solution : 3

7. What do the OECD statistics in the passage indicate ?
(1) Schools dropout rates among boys are higher in developing countries than in rich ones.
(2) Despite the perception that girls are doing better than boys in school, the same is not true.
(3) Today boys are more at risk than girls in terms of educational achievement in developed countries.
(4) Enrolment of girls in schools has doubled while that of boys has fallen.
(5) By and large teenagers have very low educational achievement in rich countries.

Solution : 4

8. Choose the word which is **opposite** in meaning to the word **DELUSION** given in **bold** as used in the passage.
(1) Myth
(2) Superstition
(3) Precipitating
(4) Reality
(5) Familiarity

Solution : 4

9. Which of the following best describes the author's opinion about the `boy crisis'?
(1) It is not as much of a problem as it is made out to be.
(2) Policymakers should address the issue of 'uneducated' boys as it will impact boys employment subsequently.
(3) It can be addressed by implementing quotas at university level.
(4) It is a rich country phenomenon and can be easily addressed through increased

funding for schools.
(5) None of the given options

Solution : 2

10. Which of the following is an appropriate title for the passage ?
(1) Finding the Glass Ceiling
(2) Men Storming Up the Irony Tower
(3) Pay and Job Flexibility
(4) Attention! A New Gender Gap
(5) A Broken Safety Net

Solution : 4

Directions (11-15) : *Read each 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. (Ignore the errors of punctuation; if any)*

11. The fare will be calculated/(1) on the basis of/(2) expected travel time distance/(3)and traffic where applied. (4) No error (5)

Solution : 4

12. Junior colleges sees/(1) marginal violations in/(2) minimum score cap for arts,/(3) science and commerce streams. (4) No error (5)

Solution : 1

13. The actor has/(1) filed a case/(2) against the director and/(3) has sought a written apology. (4) No error (5)

Solution : 5

14. The practice of big pharma companies/(1) offering kickbacks to/(2) prescribing physicians may not be/(3) a breach of ethics. (4) No error (5)

Solution : 5

15. The government has narrowed/(1) its list of candidates/(2) to become the next/(3) governor on the RBI. (4) No error (5)

Solution : 4

Directions (16-20) : *Rearrange the given six sentences/ group of sentences (A), (B), (C), (D), (E) and (F) in a proper sequence so as to form a meaningful paragraph and then answer the given questions.*
A. Others were shown advertisements of more affordable stuff, such as smartphones.

B. This experience shows the complexities of advertising today, when it is so easy for dissatisfied customers to make their voices heard.
C. Moreover, some of those not shown the advertisement complained, referring to themselves as , or (putting it politely)losers.
D. But its advertisement was shown only to those whose profiles suggested they were potential buyers of expensive cars.
E. Eventually, this bruised a few egos.
F. Earlier this year a carmaker advertised on WeChat, a popular messaging app in China with around 550m monthly users.

16. Which of the following should be the **FIRST** sentence after the rearrangement ?
(1) A
(2) C
(3) B
(4) F
(5) E

Solution : 4

17. Which of the following should be the **SECOND** sentence after the rearrangement ?
(1) A
(2) B
(3) F
(4) D
(5) C

Solution : 4

18. Which of the following should be the **FOURTH** sentence after the rearrangement ?
(1) A
(2) E
(3) C
(4) F
(5) D

Solution : 2

19. Which of the following should be the **SIXTH (last)** sentence after the rearrangement ?
(1) B
(2) D
(3) A
(4) C
(5) E

Solution : 1

20. Which of the following should be the FIFTH sentence after the rearrangement ?
(1) E
(2) D
(3) A
(4) F
(5) C

Solution : 5

Directions (21-25) : 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.

21. The Governor's successor will find the economy in a much better than what it was in when he himself took
three years ago.
(1) condition, holding
(2) turmoil, over
(3) shape, charge
(4) characters, reigns
(5) position, duty

Solution : 3

22. The government's to consolidate public sector hanks (PSBs) could create in the current environment where stressed assets across banks are high.
(1) actions, exposed
(2) intend, uncertainty
(3) proposal, secure
(4) strategise, havoc
(5) plans, risks

Solution : 5

23. The IT firm may be out as clients shifts to cloud servicesby rivals.
(1) venting, existing
(2) losing, offered
(3) close, provided
(4) locking, promising
(5) shutting, delivered

Solution : 2

24. Inspite of social performs are likely to an ever larger part of marketers' budget.
(1) pitfalls, receive
(2) hazards, getting

(3) negative, share
(4) drawbacks, obtained
(5) fallen, have

Solution : 1

25. Litigation and hurdles in a potential sale to a Chinese partner have ‘ the company to the closing of one of its plants.
(1) raised, changing
(2) denying, choose
(3) forced, defer
(4) enable, modify
(5) compelled, defeat

Solution : 3

Directions (26-30) : In following passage, there are blanks, each of which has been numbered. Against each, five words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.There’s been some buzz lately around the not-so-new idea that emerging technology is destroying jobs and will (26) destroy the middle class. Fears about a shrinking job pool are ...(27)... our economy is still recovering from the recession, and jobs have not returned to pre-recession levels. Meanwhile, technology is ...(28)... some low-skilled jobs. Yet, changes to the job landscape, while they may require some adjustments, are not bad news for the middle class. ...(29)..., advances in innovation and technology promise to make life better for everyone, both professionally and ...(30)... .

26. (1) not
(2) ultimately
(3) securely
(4) publicly
(5) demandingly

Solution : 2

27. (1) understandable
(2) weird
(3) unjust
(4) remanded
(5) wrong

Solution : 1

28. (1) dicing
(2) acquiring
(3) replacing

(4) lifting
(5) paying

Solution : 3

29. (1) But
(2) Instead
(3) Fact
(4) Since
(5) However

Solution : 2

30. (1) workplace
(2) shortly
(3) personally
(4) morosely
(5) environmental

Solution : 3

QUANTITATIVE APTITUDE

1. C is 20% more efficient than A. A and B together can finish a piece of work in 16 days. B and C together can do it in 15 days. In how many days A alone can finish the same piece of work ?
   (1) 42
   (2) 48
   (3) 54
   (4) 36
   (5) 45

Solution : 2

(2) : Let A can finish a piece of work in x days.

$$\text{A's 1 day's work} = \frac{1}{x}$$

$$\text{C's 1 day's work} = \frac{1}{x} \times \frac{120}{100} = \frac{6}{5x}$$

According to question,

$$\text{(A + B)'s 1 day's work} = \frac{1}{16}$$

$$\text{(B + C)'s 1 day's work} = \frac{1}{15}$$

$$\text{(C – A)'s 1 day's work} = \frac{1}{15} - \frac{1}{16} = \frac{1}{15 \times 16}$$

$$\therefore \quad \frac{6}{5x} - \frac{1}{x} = \frac{1}{15 \times 16}$$

$$\frac{1}{5x} = \frac{1}{15 \times 16}$$

$$\therefore \quad x = 48 \text{ days}$$

2. A started a business with an investment of Rs. 16,000/-. After 6 months from the start of the business, B and C joined with Rs.12,000/- and Rs.18,000/-respectively and A invested an -additional amount of Rs.4,000/-. If the difference between A's share and B's share in the annual profit is Rs.6,000/-, what was the annual profit received ?
   (1) Rs.17,600/-
   (2) Rs.13,200/-

(3) Rs.14,300/-
(4) Rs.16,500/-
(5) Rs.11,000/-

Solution : 4

$$(4)\ ;\ A:B:C=(6\times16000+6\times20000):6\times12000$$
$$:6\times18000$$
$$=(16+20):12:18$$
$$=36:12:18$$
$$=6:2:3$$
$$\therefore \text{Total annual profit}=\frac{6000\times(6+2+3)}{6-2}$$
$$=\frac{6000\times11}{4}$$
$$=₹16{,}500/-$$

3. Shiva gives 20% of her monthly salary to his mother, 50% of the remaining salary he invests in an insurance scheme and PPF in the respective ratio of 5 : 3 and the remaining he keeps in his bank account. If the sum of the amount he gives to his mother and that he invests in PPF is Rs.12,600/-, how much is Shiva's monthly salary ?
(1) Rs. 36,000/-
(2) Rs. 64,000/-
(3) Rs. 42,000/-
(4) Rs. 40,000/-
(5) Rs. 21,000/-

Solution : 1

(1) ; Let the monthly salary of Shiva be ₹ x.

The amount given to his mother $= x \times \frac{20}{100} = \frac{x}{5}$

Remaining salary $= x - \frac{x}{5} = \frac{4x}{5}$

Salary invested in an insurance scheme and PPF

$$= \frac{4x}{5} \times \frac{50}{100} = \frac{2x}{5}$$

Salary invested in insurance scheme

$$= \frac{2x}{5} \times \frac{5}{8} = \frac{x}{4}$$

Salary invested in PPF $= \frac{2x}{5} \times \frac{3}{8} = \frac{3x}{20}$

According to question,

$$\frac{x}{5} + \frac{3x}{20} = 12600$$

$$\Rightarrow \quad \frac{4x + 3x}{20} = 12600$$

$$\Rightarrow \quad \frac{7x}{20} = 12600$$

$$\Rightarrow \quad x = ₹36{,}000/-$$

4. The respective ratio of radii of two right circular cylinders (A and B) is 4 : 7. The respective ratio of the heights of cylinders A and B is 2 : 1. What is the respective ratio of volumes of cylinders A and B ?

(1) 25 : 42
(2) 23 : 42
(3) 32 : 49
(4) 30 : 49
(5) 36 : 49

Solution : 3

(3) ; $\frac{\text{Volume of cylinder A}}{\text{Volume of cylinder B}} = \frac{\pi r_1^2 h_1}{\pi r_2^2 h_2} = \left(\frac{r_1}{r_2}\right)^2 \times \left(\frac{h_1}{h_2}\right)$

$$= \left(\frac{4}{7}\right)^2 \times \left(\frac{2}{1}\right)$$

$$= \frac{32}{49}$$

5. At present, Aanshi is five years younger to Binny. Binny's age twenty- years hence will be equal to twice of Aanshi's age five years ago. What will be Binny's age eight years hence ?
(1) 42 years
(2) 35 years
(3) 38
(4) 30 years
(5) 48 years

Solution : 5

(5) ; Let Binny's present age = x years

Anshi's present age = $(x - 5)$ years

According to question,

$$x + 20 = 2(x - 5 - 5)$$

$$\Rightarrow \quad x + 20 = 2x - 20$$

$$\Rightarrow \quad x = 40 \text{ years}$$

$\therefore$ Binny's age eight years hence = 40 + 8

= 48 years

Directions (6-10) : *In these questions, two equations numbered I and H are given. You have to solve both the -equations and mark the appropriate option.*

Give answer :

(1) If relationship between x and y cannot be established
(2) If x < y
(3) If x > y
(4) If x ≤ y
(5) If x ≥ y

6. I. $9x^2 - 37x + 30 = 0$
II. $3y^2 - 19y + 30 = 0$

Solution : 4

(4) ; **I.** $9x^2 - 37x + 30 = 0$

$\Rightarrow 9x^2 - 27x - 10x + 30 = 0$

$\Rightarrow 9x(x-3) - 10(x-3) = 0$

$\Rightarrow (x-3)(9x-10) = 0$

$\Rightarrow x = 3, \frac{10}{9}$

II. $3y^2 - 19y + 30 = 0$

$\Rightarrow 3y^2 - 10y - 9y + 30 = 0$

$\Rightarrow y(3y-10) - 3(3y-10) = 0$

$\Rightarrow (3y-10)(y-3) = 0$

$\Rightarrow y = \frac{10}{3}, 3$

$\therefore y \geq x$

7. I. $2x^2 - 17x + 36 = 0$

II. $5y^2 - 33y + 40 = 0$

Solution : 1

(1) ; **I.** $2x^2 - 17x + 36 = 0$

$\Rightarrow 2x^2 - 9x - 8x + 36 = 0$

$\Rightarrow x(2x-9) - 4(2x-9) = 0$

$\Rightarrow (2x-9)(x-4) = 0$

$\Rightarrow x = 4, \frac{9}{2}$

II. $5y^2 - 33y + 40 = 0$

$\Rightarrow 5y^2 - 25y - 8y + 40 = 0$

$\Rightarrow 5y(y-5) - 8(y-5) = 0$

$\Rightarrow (y-5)(5y-8) = 0$

$y = \frac{8}{5}, 5$

$\therefore$ Relationship between x and y can not be established.

8. I.$12x^2$ -23x+11 =0

II. $21y^2 - 20y + 4 = 0$

Solution : 3

(3) ; **I.** $12x^2 - 23x + 11 = 0$

$\Rightarrow 12x^2 - 12x - 11x + 11 = 0$

$\Rightarrow 12x(x-1) - 11(x-1) = 0$

$\Rightarrow (x-1)(12x-11) = 0$

$\Rightarrow x = 1, \frac{11}{12}$

II. $21y^2 - 20y + 4 = 0$

$\Rightarrow 21y^2 - 14y - 6y + 4 = 0$

$\Rightarrow 7y(3y-2) - 2(3y-2) = 0$

$\Rightarrow (3y-2)(7y-2) = 0$

$\Rightarrow y = \frac{2}{3}, \frac{2}{7}$

$\therefore x > y$

9. I. $x^2 + 12x + 35 = 0$

II. $7y^2 + 32y + 16 = 0$

Solution : 2

(2) ; **I.** $x^2 + 12x + 35 = 0$

$\Rightarrow x^2 + 7x + 5x + 35 = 0$

$\Rightarrow x(x+7) + 5(x+7) = 0$

$\Rightarrow (x+7)(x+5) = 0$

$\Rightarrow x = -7, -5$

II. $7y^2 + 32y + 16 = 0$

$\Rightarrow 7y^2 + 28y + 4y + 16 = 0$

$\Rightarrow 7y(y+4) + 4(y+4) = 0$

$\Rightarrow (y+4)(7y+4) = 0$

$\Rightarrow y = -4, -\frac{4}{7}$

$\therefore y > x$

10. I. $25x^2 + 20x + 3 = 0$

II. $4y^2 + 11y + 6 = 0$

Solution : 3

(3) ; **I.** $25x^2 + 20x + 3 = 0$

$\Rightarrow 25x^2 + 15x + 5x + 3 = 0$

$\Rightarrow 5x(5x + 3) + 1(5x + 3) = 0$

$\Rightarrow (5x + 3)(5x + 1) = 0$

$\Rightarrow x = -\frac{3}{5}, -\frac{1}{5}$

II. $4y^2 + 11y + 6 = 0$

$\Rightarrow 4y^2 + 8y + 3y + 6 = 0$

$\Rightarrow 4y(y + 2) + 3(y + 2) = 0$

$\Rightarrow (y + 2)(4y + 3) = 0$

$\Rightarrow y = -2, -\frac{3}{4}$

$\therefore x > y$

11. A number is such that when it is multiplied by 6, it gives another number which is more than 168 as the original number itself is less than 168. What is 15% of the original number ?

(1) 8.4

(2) 7.8

(3) 6.6

(4) 8.8

(5) 7.2

Solution : 5

(5) ; Let the original number = x

According to question,

$6x - 168 = 168 - x$

$7x = 336$

$x = 48$

$\therefore$ 15% of the original number $= 48 \times \frac{15}{100} = 7.2$

12. Dharma invested P for 3 years in scheme A which offered 12% p.a. simple interest. She also invested

P + 400 in scheme B which offered 10% compound interest (compounded annually), for 2 years. If the amount received from scheme A was less than that received from scheme B, by Rs.304/-, what is the value of P?

(1) Rs.1,400/-

(2) Rs.1,000/-

(3) Rs.1,500/-
(4) Rs.960/-
(5) Rs.1,200/-

Solution : 5

(5) ; According to question,

$$(P+400)\left[1+\frac{10}{100}\right]^2 - P - \frac{P\times 12\times 3}{100} = 304$$

$$\Rightarrow \quad (P+400)\left[\frac{121}{100}\right] - \frac{136P}{100} = 304$$

$$\Rightarrow \quad \frac{121P}{100} + 484 - \frac{136P}{100} = 304$$

$$\Rightarrow \quad \frac{15P}{100} = 180$$

$$\Rightarrow \quad P = ₹1,200/-$$

Directions (13-17) : *Study the following table carefully and answer the questions.*

Dance School	Total number of students who have enrolled in the schools	Percentage of enrolled students who are learning freestyle dance	Respective ratio of male and female students learning freestyle dance
A	200	25	2 : 3
B	400	28	7 : 9
C	150	30	2 : 7
D	300	24	9 : 3

13. The number of students (both male and female) who are learning freestyle in schools C and D together is what percent less than the number of students (both male and female) who are learning the same in schools A and B together ?
(1)24 6/5%
(2) 23 2/3%
(3) 26 1/9%
(4)27 7/9%
(5) 28 1/6%

Solution : 4

(4) ; Number of students (both male and female) who are learning freestyle dance in schools C and D together $= 150 \times \frac{30}{100} + 300 \times \frac{24}{100} = 45 + 72 = 117$

Number of students (both male and female) who are learning freestyle dance in school A and B $= 200 \times \frac{25}{100} + 400 \times \frac{28}{100} = 50 + 112 = 162$

$\therefore$ Required percentage $= \frac{162 - 117}{162} \times 100$

$= \frac{45}{162} \times 100 = 27\frac{7}{9}\%$

14. . What is the average number of students learning dance forms (other than freestyle) in schools B, C and 13 ?

(1) 206

(2) 207

(3) 204

(4) 205

(5) 201

Solution : 2

(2) ; Number of students learning dance forms other than freestyle in school B $= 400 \times \frac{72}{100} = 288$

Number of students learning dance forms other than freestyle in school C $= 150 \times \frac{70}{100} = 105$

Number of students learning dance forms other than freestyle in school D $= 300 \times \frac{76}{100} = 228$

$\therefore$ Required average $= \frac{288 + 105 + 228}{3}$

$= \frac{621}{3} = 207$

15. Out of the number of students (both male and female learning freestyle in school B, 5/8 are 15 years or above.

If out of the total students who are 15 years or above, 30% are females, what is the number, of female students learning freestyle who are below 15 years ?

(1) 35

(2) 42
(3) 32
(4) 46
(5) 40

Solution : 2

(2) ; Number of students (both male and female) learning freestyle in school B $= 400 \times \frac{28}{100} = 112$

Number of students (both male and female) who are 15 years or above $= 112 \times \frac{5}{8} = 70$

Number of female students who are 15 years or above $= 70 \times \frac{30}{100} = 21$

Number of female students learning freestyle in school B $= 112 \times \frac{9}{16} = 63$

$\therefore$ Number of female students learning freestyle who are below 15 years $= 63 - 21 = 42$

16. What is the respective ratio between the total number of male students learning freestyle in schools A and C together and the total number of female students learning the same in the same schools together ?

(1) 6 : 39
(2) 6 : 13
(3) 12 : 13
(4) 6 : 11
(5) 12 : 35

Solution : 2

(2) ; Total number of male students learning freestyle in school A and C together

$= 200 \times \frac{25}{100} \times \frac{2}{5} + 150 \times \frac{30}{100} \times \frac{2}{9}$

$= 20 + 10 = 30$

Total number of female students learning freestyle in school A and C together

$= 200 \times \frac{25}{100} \times \frac{3}{5} + 150 \times \frac{30}{100} \times \frac{7}{9} = 30 + 35 = 65$

$\therefore$ Required ratio $= 30 : 65 = 6 : 13$

17. What is the difference between the number of male students studying freestyle in schools B and D together and the total number of female students studying the same in the same schools together?

(1) 22
(2) 18
(3) 26
(4) 18
(5) 12

Solution : 1

(1) ; Total number of male students learning freestyle in schools B and D together

$$= 400 \times \frac{28}{100} \times \frac{7}{16} + 300 \times \frac{24}{100} \times \frac{9}{12}$$

$$= 49 + 54 = 103$$

Total number of female students learning freestyle in schools B and D together

$$= 400 \times \frac{28}{100} \times \frac{9}{16} + 300 \times \frac{24}{100} \times \frac{3}{12}$$

$$= 63 + 18 = 81$$

$\therefore$ Required difference $= 103 - 81 = 22$

18. Percent profit earned when an article is sold for Rs.558/-is double the percent profit earned when the same article is sold for Rs.504/-. If the marked price of the article is 30% above the cost price, what is the marked price of the article ?

(1) 585/-
(2) 595/-
(3) 624/-
(4) 590/-
(5) 546/-

Solution : 1

(1) ; Let the cost price of the article $= ₹ x$

According to question,

$$\frac{558 - x}{x} \times 100 = 2\left[\frac{504 - x}{x} \times 100\right]$$

$$558 - x = 1008 - 2x$$

$$2x - x = 1008 - 558$$

$$\Rightarrow \quad x = ₹ 450/-$$

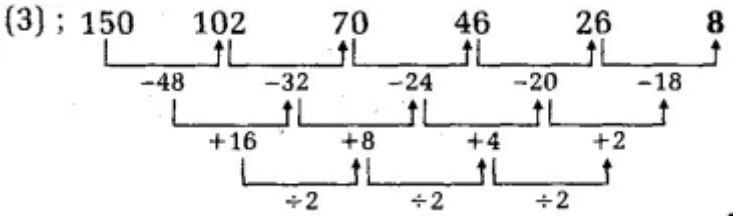
$\therefore$ Marked price of the article

$$= 450 \times \frac{130}{100} = ₹ 585/-$$

Directions (19-23) : *What will come in place of question mark (?) in the given number series ?*

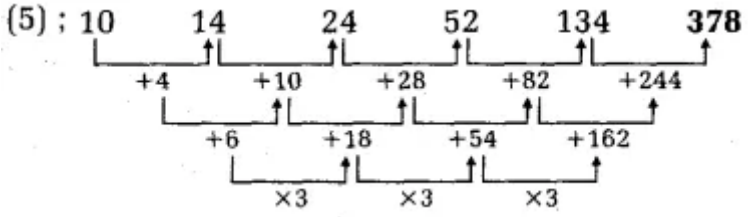
19. 150 102 70 46 26 ?
(1) 7
(2) 13
(3) 8
(4) 2
(5) 12

Solution : 3



20. 10 14 24 52 134 ?
(1) 351
(2) 302
(3) 368
(4) 841
(5) 378

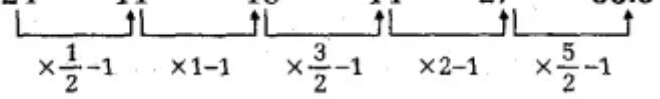
Solution : 5



21. 24 11 10 14 27 ?
(1) 67.5
(2) 60.5
(3) 66.5
(4) 61.5
(5) 62.25

Solution : 3

(3) ; 24 11 10 14 27 **66.5**

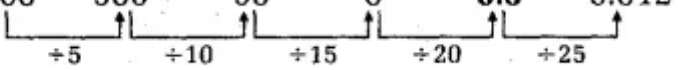


22. 4500 900 90 6 ? 0.012

(1) 0.3
(2) 0.09
(3) 0.9
(4) 0.015
(5) 0.03

Solution : 1

(1) ; 4500 900 90 6 **0.3** 0.012

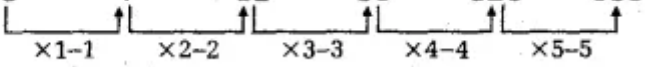


23. 8 7 12 33 128 ?

(1) 672
(2) 684
(3) 635
(4) 620
(5) 692

Solution : 3

(3) ; 8 7 12 33 128 **635**



Directions (24-28) : *What approximate value will come in place of question mark (?) in the given questions ? (You am not expected to calculate the exact value).*

24. $3^{?} \times \sqrt{170} = 183.998 \div 8.001 + 328.02$

(1) 2
(2) 4
(3) 1
(4) 5
(5) 3

Solution : 5

(5) ; $3^{?} \times \sqrt{170} = 183.998 \div 8.001 + 328.02$

$3^{?} \times 13 \approx 184 \div 8 + 328$

$3^{?} \times 13 \approx 23 + 328$

$3^{?} \times 13 \approx 351$

$3^{?} \approx 27$

$3^{?} \approx 3^{3}$

$\therefore \quad ? \approx 3$

25. ? % of (230.02 × 7.89 – 559.85) = 960

(1) 20

(2) 80

(4) 70

(5) 75

Solution : 5

(5) ; ? % of $(230.02 \times 7.89 - 559.85) = 960$

$$(230 \times 8 - 560) \times \frac{?}{100} \approx 960$$

$$(1840 - 560) \times \frac{?}{100} \approx 960$$

$$1280 \times \frac{?}{100} \approx 960.$$

$\therefore \quad ? \approx 75$

26. $518.002 - 44.99 + 8.998 - 8.01^2 = ?$

(1) 650

(2) 350

(4) 550

(5) 600

Solution : 3

(3) ; $518.002 - 44.99 + 8.998 - 8.01^2 = ?$

$518 - 45 + 9 - (8)^2 \approx ?$

$473 + 9 - 64 \approx ?$

$\therefore \quad 418 \approx ?$

27. 358.98 ÷ 15.02 + 450.15 ÷ 8.992 + 56.02 =?

(1) 230

(2) 200

(3) 180

(4) 150

(5) 130

Solution : 5

(5) ; 358.98 ÷ 15.02 + 450.15 ÷ 8.992 + 56.02 = ?

$360 \div 15 + 450 \div 9 + 56.02 \approx ?$

$24 + 50 + 56 \approx ?$

$\therefore \quad 130 \approx ?$

28. 25% of 459 + 65.01 ÷ 5.02 = ?

(1) 109

(2) 128

(3) 234

(4) 80

(5) 186

Solution : 2

(2) ; 25% of 459 + 65.01 ÷ 5.02 = ?

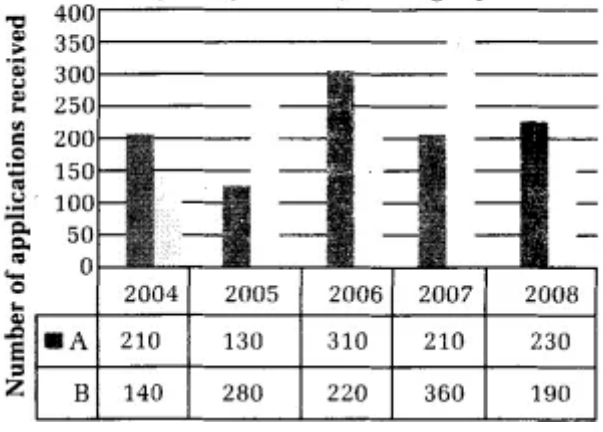
$460 \times \frac{25}{100} + 65 \div 5 \approx ?$

$115 + 13 \approx ?$

$\therefore \quad 128 \approx ?$

Directions (29-33) : *Refer to the bar graph and answer the given questions.*

Data related to the number of applications received by a University for Masters program for two subjects (A and B) during 5 years



	2004	2005	2006	2007	2008
A	210	130	310	210	230
B	140	280	220	360	190

29. In 2005, out of the total number of applications received for subjects A and B together, only 30% were accepted. What was the total number of applications accepted for subjects A and B together in 2005 ?
(1) 121
(2) 123
(3) 129
(4) 138
(5) 132

Solution : 2

(2) ; Total number of applications accepted for subjects A and B together in 2005

$$= (130 + 280) \times \frac{30}{100}$$

$$= 410 \times \frac{30}{100} = 123$$

30. In 2004, 30% of applications received for subject A and 20% of applications received for subject B were from international students. What was the total number of International applicants for subjects A and B together in 2004 ?
(1) 91
(2) 97
(3) 89
(4) 93
(5) 87

Solution : 1

(1) ; Total number of International applicants for subjects A and B together in 2004

$$= 210 \times \frac{30}{100} + 140 \times \frac{20}{100}$$

$$= 63 + 28 = 91$$

31. If the respective ratio of total number of applications received for subjects A and B together in 2008 and 2009 is 3 : 4 what was the total number of applications received for subjects A and B together in 2009 ?
(1) 500
(2) 560
(3) 400

(4) 520
(5) 500

Solution : 2

(2) ; Total number of applications received for subjects A and B together in 2008 = 230 + 190 = 420

∴ Total number of applications received for subjects A and B together in 2009 = $420 \times \frac{4}{3} = 560$

32. What is the average number of applications received for subject A in 2005, 2007 and 2008 ?
(1) 190
(2) 180
(3) 170
(4) 200
(5) 160

Solution : 1

(1) ; Average number of applications received for subject A in 2005, 2007 and 2008

$$= \frac{130 + 210 + 230}{3} = 190$$

33. Number of applications received for subject B increased by what percent from 2004 to 2006 ?
(1) 54 2/7%
(2) 42 6/7%
(3) 57 1/7%
(4) 48 4/7%
(5) 58 4/7%

Solution : 3

(3) ; Required percentage $= \frac{220 - 140}{140} \times 100$

$$= \frac{80}{7} \times 5 = \frac{400}{7}$$

$$= 57\frac{1}{7}\%$$

34. In a bag, there are 8 ted balls and 7 green balls. Three balls are picked at random. What is the probability that two balls are red and one ball is green in colour ?

(1) 28/65

(2) 22/65

(3) 37/65

(4) 3/13

(5) 1/13

Solution : 1

(1) ; Required probability $= \frac{{}^{8}C_2 \times {}^{7}C_1}{{}^{15}C_3} = \frac{28}{65}$

35. A vessel contains 120 litre of mixture of milk and water in the respective ratio of 11 : 4. Forty-five litre of this mixture was taken out and replaced with 5 litre of water. What is the percentage of water in the resultant mixture ?

(1) 35

(2) 31.25

(3) 25

(4) 20

(5) 15

Solution : 2

(2) ; Quantity of milk in the mixture

$$= 120 \times \frac{11}{15} = 88 \text{ litre}$$

Quantity of water in the mixture

$$= 120 - 88 = 32 \text{ litre}$$

Quantity of milk after 45 litre of this mixture was taken out $= 88 - 45 \times \frac{11}{15} = 55$ litre

Quantity of water after 45 litre of this mixture was taken out and replaced with 5 litre of water

$$= 32 - 45 \times \frac{4}{15} + 5 = 25 \text{ litres}$$

Remaining total mixture $= 55 + 25 = 80$ litre

$\therefore$ Required percentage $= \frac{25}{80} \times 100 = 31.25\%$

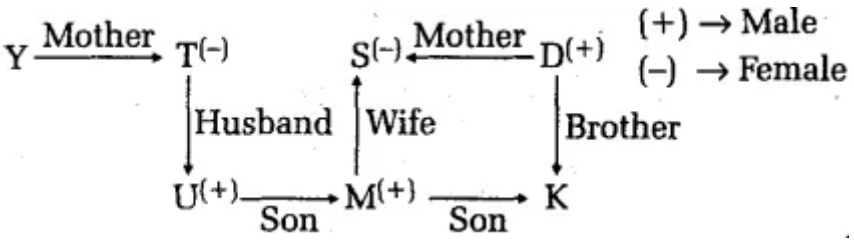
REASONING

Directions (1-3) : *Study the following information and answer the given questions.*

S is the mother of D. K is the brother of D. K is the only son of M. M is the son of U. U is the husband of T. T is the mother of Y.

1. If D is married to X, then how is X related to M ?
   (1) Son-in-law
   (2) Daughter-in-law
   (3) Son
   (4) Niece
   (5) Daughter

Solution : 1
Answer (1-3)



2. How is T related to K ?
   (1) Mother
   (2) Aunt
   (3) Granddaughter
   (4) Grandmother
   (5) Mother-in-law

Solution : 4

3. How is S related to Y ?
   (1) Sister
   (2) Cousin
   (3) Mother-in-law
   (4) Niece
   (5) Sister-in-law

Solution : 5

Directions (4-8) : *In these questions, relationship between different elements is shown in the statements. The statements are followed by conclusions. Study the conclusions based on the given statements and select the appropriate answer.*

Give answer :

(1) **Both** conclusions I and II are true

(2) **Only** conclusion I is true

(3) **Neither** conclusion I nor II is true

(4) **Only** conclusion II is true

(5) **Either** conclusion II or conclusion is true

4. **Statements :** R>S=T ≥U; S ≥ A >V

Conclusions

I. A < R

II. V ≤U

Solution : 2

(2) ; $R > S = T \geq U; S \geq A > V$

$R > S \geq A > V$

Conclusions : I. $A < R \rightarrow$ True

II. $V \leq U \rightarrow$ False

5. **Statements :** B> E ≥ A ≥ T = H ≤ I ≤ M

Conclusions :

I. H ≤ E

II. B >T

Solution : 1

(1) ; $B > E \geq A \geq T = H < I \leq M$

Conclusions : I. $H \leq E \rightarrow$ True

II. $B > T \rightarrow$ True

6. Statements : S<M<I<T; R≥J>I

Conclusions :

I. R = S

II. S < R

Solution : 4

(4) ; $S < M < I < T; R \geq J > I$

$S < M < I < J \leq R$

Conclusions : I. $R = S \rightarrow$ False

II. $S < R \rightarrow$ True

7. **Statements :** B>E≥A≥T=H<I≤M

Conclusions :

I. E<I

II.M≥S

Solution : 3

(3) ; $B > E \geq A \geq T = H < I \leq M$

Conclusions : I. $E < I \rightarrow$ False

II. $M \leq A \rightarrow$ False

8. **Statements :** $D \leq O \leq L > C \geq E$

Conclusions :

I. O < E

II. L ≥ D

Solution : 4

(4) ; $D \leq O \leq L > C \geq E$

Conclusions : I. $O < E \rightarrow$ False

II. $L \geq D \rightarrow$ True

Directions (9-10) : *Read the following information and answer the given questions.*

Vansh starts walking from Point E and walks 25m towards the north.

He then takes a right turn and walks for 15m.

He Makes a left turn and stops at Point M after walking for 20m.

Point K is 30m to the west of Point M.

Point K is 45m to the north of Point J.

Point J is 10m to the east of Point L.

9. How far and in which direction is Point E with respect to Point L ?

(1) 30 m towards West

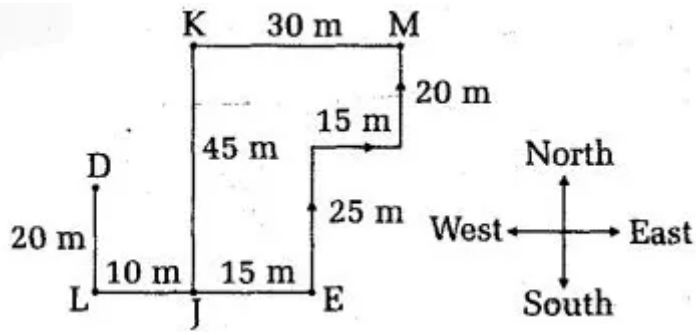
(2) 25 in towards East

(3) 20 in towards East

(4) 20 m towards West

(5) 25m towards West

Solution : 2



10. If Neha is standing at Point D which is 20m to the north of Point L, in which direction will she have to walk in order to reach Point M ?
(1) North-west
(2) East
(3) South-east
(4) North-east
(5) North

Solution : 4

Directions (11-13) : *Read the given information carefully and answer the questions.*Each of the six sections, U, V, W, X, Y and Z of the same class has different number of students. Only Z has more number of students than X. V has more number of students than Y but less than U. W has more number of students than both Y and U. The section having the third highest number of students has 39 students. Y has 24 students.

11. If the number of students in sections W + Z is sixty-six more than the number of students in section Y, how many of students are there in section Z ?
(1) 31
(2) 46
(3) 51
(4) 55
(5) 45

Solution : 3
Answer(11-13)

$$Z > X > W > U > V > Y$$
$$\downarrow \qquad \downarrow$$
$$39 \qquad 24$$

(3) ; According to question,

$$W + Z - Y = 66$$
$$39 + Z - 24 = 66$$
$$Z + 15 = 66$$
$$Z = 51$$

12. How many students does section V possibly have ?
(1) 39
(2) 43
(3) 55
(4) 31
(5) 14

Solution : 4

13. Which of the following is true regarding the number of students in section U ?
(1) No other section has less students than U.
(2) X has more number of students than U.
(3) U possibly has 45 students.
(4) U has more number of students than only three sections.
(5) None of the given options is true

Solution : 2

Directions (14-19) : *Study the following information and answer the questions.*
Seven people, namely, A, B, C, D, E, F and G have an appointment but not necessarily in the same order, on seven different months (of the same year) namely January, February, April, June, August, October and December. Each of them also likes a different activity namely Drawing, Singing, Painting, Boxing, Karate, Craft and Running but not necessarily in the same order. The one who likes Craft has an appointment on one of the months before April. Only two people have an appointment between the one who likes craft and the one who likes painting. Only one person has an appointment between the one who likes painting and the one who likes running The one who likes running has an appointment in a month which has 31 days. Only three people have an appointment between the one who likes running and E. G has an appointment on one of the months before E. G does not have an appointment in the month which has the least number of days. Only three people have an appointment between G and C. Only one person -has an appointment between C and the one who likes Karate. The one who likes Karate has an appointment before C. The one who likes singing has an appointment immediately

before B. B has an appointment in a month which has less than 31 days. Only one person has an appointment between A and F. A has an appointment before F. Only one person has an appointment between F and the one who likes drawing.

14. Who amongst the following has an appointment before the one who has an appointment in December ?
(1) B
(2) E
(3) C
(4) The one who likes Running
(5) The one who likes Boxing

Solution : 5
Answer(14-19)

Person	Month	Activity
G	January	Singing
B	February	Craft
E	April	Karate
A	June	Drawing
C	August	Painting
F	October	Boxing
D	December	Running

15. In which of the following pairs, both the persons have an appointment in months which have less than 31 days ?
(1) A, F
(2) F, D
(3) B, F
(4) E, D

Solution : 5

16. Which of the following combinations is correct ?
(1) G-Singing
(2) A-Painting
(3) F-Running
(4) B-Karate
(5) D-Painting

Solution : 1

17. As per the given arrangement Craft is related to April and Karate is related to June following a certain pattern, which of the following is Drawing related to following the same pattern ?
(1) February
(2) October
(3) December
(4) August
(5) January

Solution : 4

18. Who amongst the following likes Running ?
(1) F
(2) D
(3) A
(4) B
(5) Other than those given as options

Solution : 2

19. How many people have an appointment between the one who has an appointment in February and A ?
(1) Three
(2) None
(3) More than three
(4) One
(5) Two

Solution : 4

Directions (20-24) : *Study the given information carefully to answer the given questions.*
Seven boxes- A, B, C, D, E, F and G are kept one above the other, but not necessarily in the same order. Each box contains different items- Shoes, Papers, Bands, Medicines, Ribbons, Creams and Phones, but not necessarily in the same order. Only three boxes are kept between D and G. The Ribbon box is kept immediately above G. Only one box is kept between the Ribbon box and A. The Ribbon box is not the second from the bottom of the stack, Only one box is kept between E and A. E is kept above A. The Medicine box is kept immediately above E. Only three boxes are kept between the Medicine box and

the Shoe box. The Paper Box is immediately above the Phone box. G is not the Paper box. F is kept immediately below the Cream box. Only one box is kept between B and the Cream box.

20. Four of the following five are alike in a certain way and hence form a group. Which of the following does not belong to the group ?
(1) G-Creams
(2) E-Bands
(3) C-Shoes
(4) D-Papers
(5) A-Bands

Solution : 3
Answer(20-24)

Box	Item
C	Medicine
E	Ribbon
G	Band
A	Cream
F	Shoe
B	Paper
D	Phone

21. Which of the following boxes contains bands ?
(1) D
(2) C
(3) G
(4) A
(5) Other than those given as options

Solution : 3

22. What is the position of F in the given stack of boxes ?
(1) Second from the top
(2) Third from the bottom
(3) First from the top
(4) Fifth from the bottom
(5) Fourth from the top

Solution : 2

23. Which of the following boxes is kept immediately below G ?
(1) A
(2) B
(3) C
(4) The Shoe box
(5) The Paper box

Solution : 1

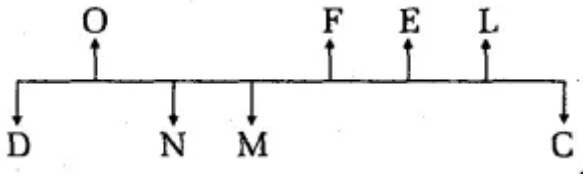
24. How many boxes are kept between B and the Ribbon box ?
(1) Two
(2) One
(3) None
(4) Three
(5) More than three

Solution : 4

Directions (25-29) : *Study the following information to answer the given questions.*
Eight friends, C, D, E, F, L, M, N and O are seated in a straight line, but not necessarily in the same order. Some of them are facing north while some face south. Only three people sit to the right of M. E sits second to the left of M. F sits third to the right of O. O is not an immediate neighbour of M. O does not sit at any of the extreme ends of the line. Both the immediate neighbours of O face south. D sits second to the right of N.
As many people sit between M and D as between M and L. Immediate neighbours of F face opposite directions (i.e. if one person faces north then the other person faces south and vice-versa.) C Faces south
L and F face direction opposite to C (i.e. if C faces north then both L and F face south and vice-versa.)

25. Which of the following is true, based on the given arrangement ?
(1) D faces north.
(2) Only three people face south.
(3) L sits at one of the extreme ends of the line.
(4) O and E face the same directions.
(5) None of the given options is true

Solution : 4
Answer(25-29)



26. How many people sit to the left of O?
(1) Three
(2) More than four
(3) One
(4) Four
(5) Two

Solution : 3

27. Who amongst the following faces South ?
(1) E
(2) M
(3) F
(4) L
(5) O

Solution : 2

28. Who amongst the following sits second to the left of L ?
(1) O
(2) F
(3)D
(4) No one as less than two people sit to the left of L
(5) N

Solution : 2

29. Who amongst the following represent the persons sitting at extreme ends of the line ?
(1) D, N
(2) C, D
(3) L, N
(4) D, L
(5) C, N

Solution : 2

Directions (30-35) : *Study the following information and answer the given questions.*

Seven people, namely A, B, C, D, E, F and G teach seven different subjects namely, Mathematics, English, Chemistry, History, Accountancy, Physics and Biology. Each of them works in either of the three institutes viz. Paramount, Brilliant and Embibe with atleast two of them in a institute.

(**Note** : None of the information given is necessarily in the same order.)

G teaches in Brilliant with the one who teaches Accountancy. The one who teaches Biology works in an institute with only the one who teaches Chemistry. B teaches English. B does not work with G. D works with F but not in Embibe. Neither D nor F teaches Accountancy. F does not teach Chemistry. C works with only the one who teaches Mathematics. E works with the one who teaches History.

30. Who amongst the following teaches Physics ?

(1) F

(2) D

(3) C

(4) E

(5) G

Solution : 4

Answer(30-35)

Institute	Person	Subject
Paramount	D	Chemistry
	F	Biology
Brilliant	G	Mathematics
	C	Accountancy
Embibe	A	History
	B	English
	E	Physics

31. Which of the following combinations represents the institute in which C works and the subject he teaches ?

(1) Brilliant-Accountancy

(2) Embibe-Accountancy

(3) Paramount-Biology

(4) Brilliant-History

(5) Paramount-Chemistry

Solution : 1

32. Which of the following subjects does A teach?
(1) Biology
(2) Chemistry
(3) Mathematics
(4) Accountancy
(5) History

Solution : 5

33. Which of the following statements is true ?
(1) D teaches Biology
(2) None of the given statements is true
(3) Only two people teach in brilliant
(4) Both E and G work in the same institute
(5) A teaches Mathematics.

Solution : 3

34. Which of the following combination represents the combination of people working in Paramount ?
(1) D and the one who teaches English
(2) E, A
(3) G, C, E
(4) F and the one who teaches Chemistry
(5) A, B

Solution : 4

35. Four of the following five are alike in a certain way based on the given arrangement and hence form a group. Which of the following does not belong to that group ?
(1) BE
(2) GC
(3) EA
(4) FG
(5) AB

Solution : 3