

SBI PO PHASE-I (PRELIMINARY) ONLINE EXAM, 20-06-2015 – PREVIOUS YEAR PAPER

ENGLISH LANGUAGE

Directions (1-5) : Each sentence given below has two blanks. Each blank indicates that something has been omitted. Choose the word that best fits in the meaning of the sentence as a whole.

1. Realistically, however this disconnect cannot..... itself very long, sooner rather than,..... the whole will no doubt converge.
- (1) sustain, later
 - (2) sustained, later
 - (3) submerge, latter
 - (4) harmonize, lately
 - (5) mend, lately

Solution : 1

2. Digitisation will..... a couple of billion dollars in pay revenues, bring more taxes choice and clean out black money cable.
- (1) realise, from
 - (2) replenish, off
 - (3) release, from
 - (4) revive, with
 - (5) supply, with

Solution : 3

3. Public sector infrastructure financing companies could..... of the ambitious 'smart cities' citing..... of guaranteed returns on investments.
- (1) opt for, crisis
 - (2) opt out, lack
 - (3) prefer, excess
 - (4) select, lack
 - (5) opt, cause

Solution : 2

4. Looks like the oil markets are not only showingbetween the physical and the financial perspectives from time to time but also..... between the short term view and the long term realities.

- (1) disconnect, convergence
- (2) disconnect, divergence
- (3) connection, difference
- (4) supply, demand
- (5) similarity, contrast

Solution : 2

5. Top global oil exporter Saudi Arabia..... its crude production in April to a record high..... its flourishing Asian market share.

- (1) rose, feed
- (2) risen, collecting
- (3) raised, lead
- (4) raised, feeding
- (5) increased, healing

Solution : 4

Directions (6 –15) : *Read the following passage carefully and answer the questions given below it. Certain words/phrases are given in **bold** to help you locate them while answering some of the questions.*

Core competencies and focus are now the mantras of corporate strategists in Western economies. But while managers in the West have **dismantled** many conglomerates assembled in the 1960s and 1970s, the large, diversified business group remains the dominant form of enterprise throughout most emerging markets. Some groups operate as holding companies with full ownership in many enterprises, others are collections of publicly traded companies, but all have some degree of central control.

As emerging markets open up to global competition, consultants and foreign investors are increasingly pressuring these groups to **conform to** Western practice by scaling back the scope of their business activities. The conglomerate is the dinosaur of organizational design, they argue, too unwieldy and slow to compete in today's fast-paced markets. Already a number of executives have decided to break up their groups in order to show that they are focusing on only a few core businesses.

There are reasons to worry about this trend. Focus is good advice in New York or London, but

something important gets lost in translation when that advice is given to groups in emerging markets. Western companies take for granted a range of institutions that

support their business activities, but many of these institutions are absent in other regions of the world. Without effective securities regulation and venture capital firms, for example, focused companies may be unable to raise adequate financing; and without strong educational institutions, they will struggle to hire skilled employees. Communicating with customers is difficult when the local infrastructure is poor, and unpredictable government behavior can stymie any operation. Although a focused strategy may enable a company to perform a few activities well, companies in emerging markets must take responsibility for a wide range of functions in order to do business effectively.

In the case of product markets, buyers and sellers usually suffer from a severe **dearth** of information for three reasons. First, the communications infrastructure in emerging markets is often underdeveloped. Even as wireless communication spreads throughout the West, vast stretches in countries such as China and India remain without telephones. Power shortages often render the modes of communication that do exist ineffective. The postal service is typically inefficient, slow, or unreliable; and the private sector rarely provides efficient courier services. High rates of illiteracy make it difficult for marketers to communicate effectively with customers.

Second, even when information about products does get around, there are no mechanisms to corroborate the claims made by sellers. Independent consumer-information organizations are rare, and government watchdog agencies are of little use. The few analysts who rate products are generally less sophisticated than their counterparts in advanced economies.

Third, consumers have no redress mechanisms if a product does not deliver on its promise. Law enforcement is often **capricious** and so slow that few who assign any value to time would resort to it. Unlike in advanced markets, there are few extrajudicial arbitration mechanisms to which one can appeal.

As a result of this lack of information, companies in emerging markets face much higher costs in building credible brands than their counterparts in advanced economies. In turn, established brands wield tremendous power. A conglomerate with a reputation for quality products and services can use its group name to enter new businesses, even if those businesses are completely unrelated to its current lines. Groups also have an advantage when they do try to build up a brand because they can spread the cost of maintaining it across multiple lines of business. Such groups then have a greater incentive not to damage brand quality in any one business because they will pay the price in their other businesses as well.

6. Which of the following sentence(s) is/are correct in the context of the given passage ?

I. Consultants and foreign investors argue that the conglomerate is the dinosaur of organisational design too unvieldly and slow to compete in today's fast-paced

markets.

II. Core competencies and focus are now the mantras of corporate strategists in western economies.

III. Due to lack of information required, companies in emerging markets face much higher costs in building credible brands in comparison to their counterparts in advanced economies.

- (1) Only I
- (2) Only II and III
- (3) Only I and III
- (4) Only I and II
- (5) All I, II and III

Solution : 5

7. What suggestions have been cited by the writer in regard to raising adequate financing and hiring skilled employees ?

- (1) Effective securities regulation
- (2) Effective securities regulation and venture capital firms
- (3) Effective securities regulation and venture capital firms and strong educational institutions
- (4) Both (1) and (3)
- (5) None of these

Solution : 3

8. The writer has cited some hurdles in the case of product markets regarding shortage of information. Which of the following statemen (s) in this regard is/are true ?

I. Communications infrastructure in emerging markets is often under developed.

II. Postal service is typically inefficient, slow or unreliable.

III. High rates of illiteracy make it difficult for marketers to communicate effectively with customers.

- (1) Only I
- (2) Only III
- (3) Only II and III
- (4) Only I and II
- (5) All I, II and III

Solution : 5

9. Which of the following statements is correct in regard to the given passge ?

- (1) The few analysts in emerging markets who rate products are generally less sophisticated than their counterparts in advanced economies.

- (2) Unlike in advanced markets there are few extrajudicial arbitration mechanisms in emerging markets to which one can appeal.
- (3) Even as wireless communication spreads throughout the West, vast regions of China and India remain without telephones.
- (4) Unpredictable government behaviour can stymie any operation.
- (5) All are correct

Solution : 5

10. Established brands can wield tremendous power in emerging markets because
- (1) a conglomerate with a reputation for quality products and services can use its group name to enter new businesses.
 - (2) they have much political nexus and strong man power
 - (3) they have excess of money and customers
 - (4) they have greater incentive to damage brand quality in any one business
 - (5) None of these

Solution : 1

11. What should be the most appropriate title of this passage ?
- (1) Hurdles in Emerging markets
 - (2) What is an Emerging market
 - (3) Lack of Information in Emerging Markets
 - (4) Advanced Markets Eat Emerging Markets
 - (5) None of these

Solution : 1

Directions (12-13) : Choose the word/group of words which is most similar in meaning to the word/group of words printed in bold as used in the passage.

12. **CONFORM TO**
- (1) comply
 - (2) conflict between
 - (3) confirm
 - (4) confiscate
 - (5) confine to

Solution : 1

13. **DISMANTLE**
- (1) take together
 - (2) hold
 - (3) take apart
 - (4) disorder

(5) dismount

Solution : 3

Directions (14 – 15) : Choose the word which is **MOST OPPOSITE** in meaning to the word printed in bold as used in the passage.

14. **CAPRICIOUS**

- (1) unpredictable
- (2) predictable
- (3) changeable
- (4) captive
- (5) reasonable

Solution : 2

15. **DEARTH**

- (1) scarcity
- (2) Shortage
- (3) paucity
- (4) abundance
- (5) debility

Solution : 4

Directions (16 – 20) : Rearrange the following six sentences (A), (B), (C), (D), (E) and (F) in the proper sequence to form meaningful paragraph; then answer the questions given below them.

(A) Colony losses last year weren't as dramatic as the declines associated with Colony Collapse Disorder (CCD), which was first identified in October 2006.

(B) Beekeepers tapped for the survey manage a total of 400,000 colonies, representing about 14.5 percent of the United States' honeybee colonies.

(C) Overall, colony losses during the 12-month period that ended in April reached 42.1 percent — the second-highest annual loss to date.

(D) Summer colony losses reached 27.4 percent, exceeding winter losses that came in at 23.7 percent.

(E) For the first time, beekeepers watched more of their colonies disappear during the summer than in winter.

(F) A new survey outlining honeybee colony losses in the U.S. has scientists scratching their heads.

16. Which of the following should be the **FIRST** sentence after rearrangement ?

- (1) A
- (2) B
- (3) F

(4) E

(5) D

Solution : 3

17. Which of the following should be the **SECOND** sentence after rearrangement ?

(1) E

(2) F

(3) A

(4) B

(5) C

Solution : 1

18. Which of the following should be the **SIXTH** sentence after rearrangement.

(1) A

(2) B

(3) C

(4) D

(5) E

Solution : 1

19. Which of the following should be the **FOURTH** sentence after rearrangement ?

(1) A

(2) B

(3) C

(4) D

(5) E

Solution : 3

20. Which of the following should be the **FIFTH** sentence after rearrangement ?

(1) A

(2) B

(3) C

(4) D

(5) E

Solution : 2

Directions (21-25) : Read each sentence to find out whether there is any grammatical error or idiomatic error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is no error, the answer is (5). (Ignore errors of punctuation, if any.)

21. Profitability of fleet operators (1)/ have improved due to a decline (2)/ in fuel prices during (3)/ the last two months. (4)/ No error (5).

Solution : 2

22. We are a young country, (1)/ a brash country, a forward (2)/ looking country, and (3)/ true history interest us a lot. (4)/ No error (5).

Solution : 4

23. The joint statement included (1)/ just three lines on military (2)/ cooperation, restriction itself for (3)/ exercise and ship visits. (4)/ No error (5).

Solution : 3

24. In a country currently there is (1)/ absolute no shortage in fact (2)/ there is an abundance of pilots holding (3)/ a valid licence but unable to find a job. (4)/ No error (5).

Solution : 2

25. WPI might have turned negative primarily (1)/ due to a steep decline in the prices (2)/ of non-food articles (3)/ raising vegetable prices keep food articles firm during this month. (4)/ No error (5).

Solution : 4

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 are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

There is plenty written about the wealth divide in the U.S. economy. But there is another important divide the one between consumers and corporations. If you look at how U.S. households have been behaving 1261 you'd think it was all blue skies. Consumer confidence is at a five-year high, thanks to higher stock prices and a (271 in the housing market. Home prices have had their biggest jump since 2005. Consumers, finally feeling more 1281 are buying that new car or electronic gadget and bolstering GDP growth a bit. The wealth gap between America's high income group and everyone else has 1291 record high levels since the economic recovery from the Great Recession of 2007-09, with a clear 1301 of increasing wealth for the upper-income families and no wealth growth for the middle- and lower-income families.

26. (1) late
(2) lately
(3) uniformly

- (4) eager
- (5) earnestly

Solution : 2

27. (1) discovery
(2) growing
(3) recovery
(4) delivery
(5) depletion

Solution : 3

28. (1) flush
(2) happy
(3) satisfied
(4) flung
(5) flunk

Solution : 1

29. (1) reach
(2) reached
(3) delivered
(4) targeted
(5) subjugated

Solution : 2

30. (1) target
(2) projection
(3) trajectory
(4) tarnation
(5) temptation

Solution : 3

QUANTITATIVE APTITUDE

Directions (1-5) : Study the following table carefully and answer the questions given below it.

Number of students enrolled in 4 different courses of a college during the given years

Years	2010		2011		2012	
Courses	Total No. of Students	Total Female Students	Total No. of Students	Total Femal Students	Total No. of Students	Total Female Students
A	840	378	820	553	800	432
B	1200	660	1200	660	1250	750
C	952	342	900	360	980	441
D	900	540	860	602	700	525

1. What was the average number of boys studying in all four courses of the college in the year 2010?
 - (1) 493
 - (2) 480
 - (3) 439
 - (4) 468
 - (5) None of these

Solution : 1

(1) Number of boys in 2010 :

Course A $\Rightarrow 840 - 378 = 462$

Course B $\Rightarrow 1200 - 660 = 540$

Course C $\Rightarrow 952 - 342 = 610$

Course D $\Rightarrow 900 - 540 = 360$

\therefore Required average

$$= \frac{462 + 540 + 610 + 360}{4}$$

$$= \frac{1972}{4} = 493$$

2. What was the average number of female students studying in all four courses of

the college in the year 2012 ?

- (1) 573
- (2) 537
- (3) 437
- (4) 473
- (5) None of these

Solution : 2

(2) Required average

$$= \frac{432 + 750 + 441 + 525}{4}$$

$$= \frac{2148}{4} = 537$$

3. By what percent **approximately** is the number of boys studying in all four courses of the college in the year 2011 less than that of the girl students studying in all four courses in the same year ?

- (1) 32
- (2) 30
- (3) 26
- (4) 22
- (5) None of these

Solution : 3

(3) Number of boys in 2011 :

Course A $\Rightarrow 820 - 553 = 267$

Course B $\Rightarrow 1200 - 660 = 540$

Course C $\Rightarrow 900 - 360 = 540$

Course D $\Rightarrow 860 - 602 = 258$

Their total number = $267 + 540 + 540 + 258 = 1605$

Total number of girls = $553 + 660 + 360 + 602 = 2175$

Required percent

$$= \frac{2175 - 1605}{2175} \times 100$$

$$= \frac{57000}{2175} \approx 26$$

4. What is the difference between the number of girls studying in all four courses in the year 2010 and that of boys studying in all four courses in the year 2011 ?
- (1) 205
(2) 215
(3) 305
(4) 315
(5) None of these

Solution : 4

(4) Total number of girls in 2010
 $= 378 + 660 + 342 + 540 = 1920$
Total number of boys in 2011
 $= 1605$
Required difference
 $= 1920 - 1605 = 315$

5. what is the respective ratio between the total number of boys in courses B and D together in 2010 and that of all students in courses A and D in 2012 ?
- (1) 3 : 5
(2) 1 : 3
(3) 3 : 7
(4) 4 : 5
(5) None of these

Solution : 1

(1) Number of boys in courses B and D in 2010
 $= (1200 - 660) + (900 - 540)$
 $= 540 + 360 = 900$
 \therefore Required ratio
 $= 900 : (800 + 700)$
 $= 900 : 1500 = 3 : 5$

6. A dealer allowed a discount of 25% on the marked price of Rs. 12000 on an article and incurred a loss of 10%. What discount should he allow on the marked price so

that he gains Rs. 440 on the article ?

- (1) 11%
- (2) 13%
- (3) 19%
- (4) 15%
- (5) None of these

Solution : 2

(2) C.P. of article = Rs. x (let).

$$\therefore \frac{12000 \times 75}{100} = \frac{x \times 90}{100}$$

$$\Rightarrow x = \frac{12000 \times 75}{90}$$

= Rs. 10000

Again, profit = Rs. 440

$$\therefore \text{S.P.} = 10000 + 440$$

= Rs. 10440

$$\text{Discount} = 12000 - 10440$$

= Rs. 1560

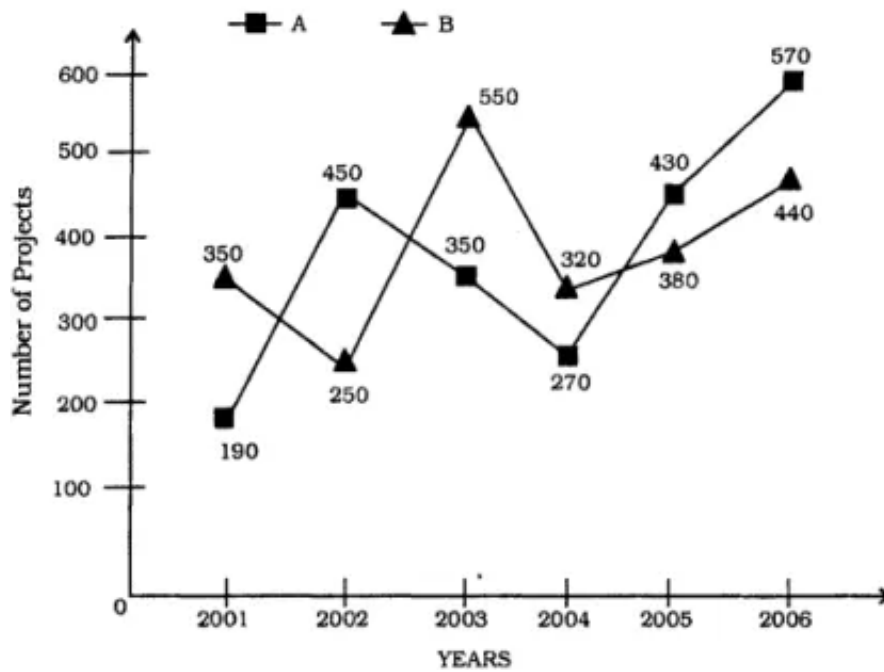
If discount = $x\%$, then

$$\frac{12000 \times x}{100} = 1560$$

$$\Rightarrow x = \frac{1560 \times 100}{12000} = 13\%$$

Directions (7-11) : Study the following line graph carefully to answer the given questions.

Number of projects handled by 6 companies during 6 years



7. What is the average number of projects handled by company A during all the given years ?

(1) $370\frac{2}{3}$

(2) $376\frac{2}{3}$

(3) $376\frac{1}{3}$

(4) $367\frac{2}{3}$

(5) None of these

Solution : 2

(2) Number of projects handled by company A

$$\frac{190 + 450 + 350 + 270 + 430 + 570}{6}$$

$$= \frac{2260}{6} = 376\frac{2}{3}$$

8. What is the respective ratio between the total number of projects handled by both companies in the years 2002 and 2003 ?

(1) 4 : 5

- (2) 5 : 9
- (3) 7 : 9
- (4) 5 : 7
- (5) None of these

Solution : 3

$$\begin{aligned} & \text{(3) Required ratio} \\ &= (450 + 250) : (550 + 350) \\ &= 700 : 900 = 7 : 9 \end{aligned}$$

9. By what per cent is the number of projects handled by company B in the year 2006 more than that handled in the year 2002 by the same company ?

- (1) 84%
- (2) 86%
- (3) 72%
- (4) 76%
- (5) None of these

Solution : 4

$$\begin{aligned} & \text{(4) Required percent} \\ &= \frac{440 - 250}{250} \times 100 \\ &= \frac{1900}{25} = 76\% \end{aligned}$$

10. What is the average number of projects handled by company B during all the given years ?

- (1) $381\frac{2}{3}$
- (2) $381\frac{1}{3}$
- (3) $318\frac{2}{3}$
- (4) $376\frac{1}{3}$

- (5) None of these

Solution : 1

(1) Average number of projects handled by company B

$$= \frac{350 + 250 + 550 + 320 + 380 + 440}{6}$$
$$= \frac{2290}{6} = 381 \frac{2}{3}$$

11. What is the difference between the total number of projects handled by company A and company B in the years 2001, 2003 and 2006 taken together ?
- (1) 250
(2) 230
(3) 260
(4) 240
(5) None of these

Solution : 2

(2) Number of projects handled in the years 2001, 2003 and 2006 :

$$\text{Company A} \Rightarrow 190 + 350 + 570$$
$$= 1110$$

$$\text{Company B} \Rightarrow 350 + 550 + 440$$
$$= 1340$$

12. A man gave 20% of his salary to his only son and only daughter. The ratio of amount given to son and daughter is 3 : 2 respectively. Twice the amount what he gave to his daughter, he invested in LIC. Out of the remaining amount he gave one-fourth to his wife. After that he was left with Rs. 16800. Find out the amount invested in LIC.
- (1) Rs. 5600
(2) Rs. 5400
(3) Rs. 5800
(4) Rs. 6200
(5) None of these

Solution : 1

(1) Initial amount with the person = Rs. x (let)

Amount given to the son and the daughter

$$= \frac{20x}{100} = \text{Rs. } \frac{x}{5}$$

Amount given to daughter

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

$$= \text{Rs. } \frac{2x}{25}$$

Amount invested in LIC

$$= \text{Rs. } \frac{4x}{25}$$

Remaining amount

$$= \text{Rs. } \left(x - \frac{x}{5} - \frac{4x}{25} \right)$$

$$= \text{Rs. } \left(\frac{25x - 5x - 4x}{25} \right)$$

$$= \text{Rs. } \frac{16x}{25}$$

Amount given to wife

$$= \frac{1}{4} \times \frac{16x}{25} = \text{Rs. } \frac{4x}{25}$$

Remaining amount

$$= \frac{16x}{25} - \frac{4x}{25}$$

$$= \text{Rs. } \frac{12x}{25}$$

$$\therefore \frac{12x}{25} = 16800$$

$$\Rightarrow x = \frac{16800 \times 25}{12} = \text{Rs. } 35000$$

\therefore Amount invested in LIC

$$= \frac{4x}{25} = \frac{4 \times 35000}{25} = \text{Rs. } 5600$$

13. In a vessel there is 40 litres mixture of milk and water. There is 15% water in the mixture. The milkman sells 10 litres of mixture to a customer and thereafter adds 12.5 litres of water to the remaining mixture. What is the respective ratio of milk and water in the new mixture ?
- (1) 2 : 3
(2) 3 : 2
(3) 3 : 4
(4) 4 : 3
(5) None of these

Solution : 2

(2) In 30 litres of mixture,

$$\text{Milk} = \frac{30 \times 85}{100} = 25.5 \text{ litres}$$

$$\text{Water} = 30 - 25.5 = 4.5 \text{ litres}$$

On adding 12.5 litres of water

Total quantity of water

$$= 4.5 + 12.5$$

$$= 17 \text{ litres}$$

∴ Required ratio of milk and water

$$= 25.5 : 17 = 1.5 : 1 = 3 : 2$$

14. A boat covers a distance of 2.75 km upstream in 11 minutes. The ratio between speed of current and that of boat downstream is 1 : 7 respectively. The boat covers distance between A and B downstream in 52 minutes. What is the distance between point A and point B ?
- (1) 19.2 km.
(2) 17.2 km.
(3) 18.2 km.
(4) 16.5 km.
(5) None of these

Solution : 3

(3) Speed of boat in still water
 $= x$ kmph
 Speed of current $= y$ kmph.
 \therefore Rate downstream
 $= (x + y)$ kmph.
 Rate upstream $= (x - y)$ kmph.

$$\therefore \frac{y}{x+y} = \frac{1}{7}$$

$$\Rightarrow 7y = x + y$$

$$\Rightarrow x = 6y$$

$$\text{Again, } \frac{2.75}{x-y} = \frac{11}{60}$$

$$\Rightarrow 11(x-y) = 2.75 \times 60 = 165$$

$$\Rightarrow x - y = \frac{165}{11} = 15$$

$$\Rightarrow 6y - y = 15$$

$$\Rightarrow 5y = 15$$

$$\Rightarrow y = 3 \text{ kmph.}$$

$$\therefore x = 6 \times 3 = 18 \text{ kmph}$$

$$\therefore x + y = \text{Rate downstream}$$

$$= 18 + 3 = 21 \text{ kmph}$$

Distance between points A and
 B = Rate downstream \times Time

$$= \frac{21 \times 52}{60} = 18.2 \text{ km.}$$

Directions (15-19) : What will come in place of the question mark (?) in each of the following number series ?

15. 125 128 119 146 65 ?

(1) 308

(2) 316

(3) 298

(4) 294

(5) 264

Solution : 1

(1) The pattern is :

$$125 + 3 = 128$$

$$128 - 3^2 = 128 - 9 = 119$$

$$119 + 3^3 = 119 + 27 = 146$$

$$146 - 3^4 = 146 - 81 = 65$$

$$65 + 3^5 = 65 + 243 = \boxed{308}$$

16. 8 17 30 47 68 ?

(1) 83

(2) 93

(3) 98

(4) 95

(5) 96

Solution : 2

(2) The pattern is :

$$8 + 9 = 17$$

$$17 + 13 (= 9 + 4) = 30$$

$$30 + 17 (= 13 + 4) = 47$$

$$47 + 21 (= 17 + 4) = 68$$

$$68 + 25 (= 21 + 4) = \boxed{93}$$

17. 24 12 12 18 ? 90

(1) 40

(2) 38

(3) 36

(4) 45

(5) None of these

Solution : 3

(3) The pattern is :

$$24 \times \frac{1}{2} = 12$$

$$12 \times 1 = 12$$

$$12 \times \frac{3}{2} = 18$$

$$18 \times 2 = \boxed{36}$$

$$36 \times \frac{5}{2} = 90$$

18. 5 16 49 104 ? 280

(1) 165

(2) 160

(3) 171

(4) 181

(5) 175

Solution : 4

(4) The pattern is :

$$5 + 11 (= 11 \times 1) = 16$$

$$16 + 33 (= 11 \times 3) = 49$$

$$49 + 55 (= 11 \times 5) = 104$$

$$104 + 77 (= 11 \times 7) = \boxed{181}$$

$$181 + 99 (= 11 \times 9) = 280$$

19. 13 19 30 48 75 ?

(1) 107

(2) 108

(3) 116

(4) 112

(5) 113

Solution : 5

(5) The pattern is :

$$13 + 6 = 19$$

$$19 + 11 (= 6 + 5) = 30$$

$$30 + 18 (= 11 + 7) = 48$$

$$48 + 27 (= 18 + 9) = 75$$

$$75 + 38 (= 27 + 11) = \boxed{113}$$

20. A and B together can complete a piece of work in $10\frac{2}{7}$ days while B and C together can complete the same work in $13\frac{1}{3}$ days. B is 25% more efficient than C. In how many days will A and C together complete the same work ?

(1) $11\frac{1}{4}$

(2) $12\frac{1}{4}$

(3) $11\frac{1}{3}$

(4) $12\frac{1}{3}$

(5) None of these

Solution : 1

(1) B is 25% more efficient than C.

$$\therefore \text{Ratio of time taken by B and C} \\ = 100 : 125 = 4 : 5$$

Time taken by B = $4x$ days

Time taken by C = $5x$ days

$$\therefore \frac{1}{4x} + \frac{1}{5x} = \frac{3}{40}$$

$$\Rightarrow \frac{5+4}{20x} = \frac{3}{40}$$

$$\Rightarrow \frac{9}{20x} = \frac{3}{40}$$

$$\Rightarrow \frac{3}{x} = \frac{1}{2}$$

$$\Rightarrow x = 6$$

Time taken by B = 24 days

Time taken by C = 30 days

If the time taken by A be y days, then

$$\frac{1}{y} + \frac{1}{24} = \frac{7}{72}$$

$$\Rightarrow \frac{1}{y} = \frac{7}{72} - \frac{1}{24} = \frac{7-3}{72}$$

$$= \frac{4}{72} = \frac{1}{18}$$

$$\therefore y = 18$$

\therefore (A + C)'s 1 day's work

$$= \frac{1}{18} + \frac{1}{30} = \frac{5+3}{90}$$

$$= \frac{8}{90} = \frac{4}{45}$$

\therefore Time taken by A and C together

$$= \frac{45}{4} = 11\frac{1}{4} \text{ days}$$

21. The sum of present ages of Ria and Abby is 48 years. Today Abby is 4 years older than Shweta. The respective ratio of the present ages of Ria and Shweta is 4 : 7.

What was Abby's age two years ago ?

- (1) 32 years
- (2) 30 years
- (3) 28 years

(4) 34 years

(5) None of these

Solution : 2

(2) Ria's present age = $4x$ years

Shweta's present age = $7x$ years

$$\therefore 4x + 7x + 4 = 48$$

$$\Rightarrow 11x = 48 - 4 = 44$$

$$\Rightarrow x = \frac{44}{11} = 4$$

\therefore Abby's present age = $7x + 4$

$$= (7 \times 4 + 4) = 32 \text{ years}$$

\therefore Abby's age 2 years ago

$$= 30 \text{ years}$$

Directions (22-26) : What **approximate** value will come in place of the question mark (?) in the following questions ? (You are not expected to calculate the exact value).

22. $52.02\% \text{ of } 749 + 45\% \text{ of } 419.98 - ? = 15^2$

(1) 354

(2) 364

(3) 370

(4) 368

(5) None of these

Solution : 1

$$(1) \frac{750 \times 52}{100} + \frac{420 \times 45}{100} - ?$$

$$\approx 225$$

$$\Rightarrow 390 + 189 - ? \approx 225$$

$$\Rightarrow 579 - ? \approx 225$$

$$\Rightarrow ? \approx 579 - 225 \approx 354$$

23. $349.98 \times 19.99 + ?^2 \times 180.16 = 11500$

(1) 3

(2) 5

- (3) 4
(4) 9
(5) 25

Solution : 2

$$\begin{aligned}(2) \quad & 350 \times 20 + ?^2 \times 180 \approx 11500 \\ \Rightarrow & 7000 + ?^2 \times 180 \approx 11500 \\ \Rightarrow & ?^2 \times 180 \approx 11500 - 7000 \\ & \approx 4500 \\ \Rightarrow & ?^2 = \frac{4500}{180} \approx 25 \\ \Rightarrow & ? = \sqrt{25} \approx 5\end{aligned}$$

24. $(1800 \div \sqrt{?} \times 29.99) \div 15.02 = 144$

- (1) 12
(2) 25
(3) 625
(4) 144
(5) 169

Solution : 3

$$\begin{aligned}(3) \quad & \frac{1800}{\sqrt{?}} \times \frac{30}{15} = 144 \\ \Rightarrow & \frac{3600}{\sqrt{?}} = 144 \\ \Rightarrow & 144 \times \sqrt{?} = 3600 \\ \Rightarrow & \sqrt{?} = \frac{3600}{144} = 25 \\ \Rightarrow & ? = 25 \times 25 = 625\end{aligned}$$

25. $(52.02^2 - 34.01^2) \div 17.99 \times \sqrt{?} = 1720$

- (1) 400
(2) 20
(3) 25
(4) 625

(5) None of these

Solution : 1

$$(1) (52^2 - 34^2) \div 18 \times \sqrt{?} \approx 1720$$

$$\Rightarrow \frac{(52 + 34)(52 - 34)}{18} \times \sqrt{?}$$

$$\approx 1720$$

$$\Rightarrow \frac{86 \times 18}{18} \times \sqrt{?} \approx 1720$$

$$\Rightarrow \sqrt{?} \approx 1720 \div 86 \approx 20$$

$$\therefore ? = 20 \times 20 = 400$$

26. $(340 \times 9.98) \div 6.4001 + 1245.15 = ?$

(1) 1766

(2) 1776

(4) 1876

(3) 1676

Solution : 2

$$(2) ? \approx (340 \times 10) \div 6.4 + 1245$$

$$\approx 531 + 1245 \approx 1776$$

27. A, B and C together start a business. The ratio of the investments of A, B and C is 0.125 : 0.75 : 0.25. After 8 months A adds thrice amount of his earlier investment and C withdraws half of his earlier investment. At the end of the year, they earn a total profit of Rs. 5800. What is B's share in the profit ?

(1) Rs. 3400

(2) Rs. 3200

(3) Rs. 3600

(4) Rs. 3800

(5) None of these

Solution : 3

(3) Initial investments of A, B and C respectively

= Rs. 125, Rs. 750 and Rs. 250 (let)

Ratio of their equivalent capitals for 1 month

= $(125 \times 8 + 500 \times 4) : (750 \times 12) : (250 \times 8 + 125 \times 4)$

= $(1000 + 2000) : (9000) : (2000 + 500)$

= 3000 : 9000 : 2500

= 30 : 90 : 25

= 6 : 18 : 5

Sum of ratios = $6 + 18 + 5 = 29$

\therefore B's share = $\frac{18}{29} \times 5800$

= Rs. 3600

28. In a bag there are 4 white, 4 red and 2 green balls. Two balls are drawn at random. What is the probability that at least one ball is of green colour ?

(1) $\frac{4}{5}$

(2) $\frac{3}{5}$ (3) $\frac{1}{5}$

(4) $\frac{2}{5}$

(5) None of these

Solution : 4

(4) Total number of balls in the bag = $4 + 4 + 2 = 10$

Total possible outcomes = Selection of 2 balls out of 10 balls

$$= {}^{10}C_2 = \frac{10 \times 9}{1 \times 2} = 45$$

Favourable outcomes = 1 green ball and 1 ball of other colour + 2 green balls

$$= {}^2C_1 \times {}^8C_1 + {}^2C_2$$

$$= 2 \times 8 + 2 = 18$$

\therefore Required probability

$$= \frac{18}{45} = \frac{2}{5}$$

29. Equal amounts are invested in two schemes A and B for 6 years and 8 years respectively. Scheme A offers interest at the rate of 12% per annum and scheme B offers interest at the rate of 8% per annum. The difference between the interests earned is Rs. 1280. What is the amount invested in each scheme ?

- (1) Rs. 16000
- (2) Rs. 16500
- (3) Rs. 17000
- (4) Rs. 18000
- (5) None of these

Solution : 1

(1) Invested amount = Rs. x (let)

$$\text{S.I.} = \frac{\text{Principal} \times \text{Time} \times \text{Rate}}{100}$$

According to the question,

$$\frac{x \times 6 \times 12}{100} - \frac{x \times 8 \times 8}{100} = 1280$$

$$\Rightarrow \frac{72x}{100} - \frac{64x}{100} = 1280$$

$$\Rightarrow \frac{8x}{100} = 1280$$

$$\Rightarrow x = \frac{1280 \times 100}{8} = \text{Rs. } 16000$$

30. The area of a rectangle is equal to the area of a square whose diagonal is $12\sqrt{6}$ metre. The difference between the length and the breadth of the rectangle is 6 metre. What is the perimeter of rectangle ? (in metre).

- (1) 160 metre
- (2) 80 metre
- (3) 82 metre
- (4) 84 metre
- (5) None of these

Solution : 2

(2) Area of square

$$= \frac{(\text{Diagonal})^2}{2}$$

$$= \frac{12\sqrt{6} \times 12\sqrt{6}}{2}$$

$$= 432 \text{ sq. metre}$$

\therefore Area of rectangle

$$= 432 \text{ sq. metre}$$

Breadth of rectangle = x metre

$$\therefore \text{Length} = (x + 6) \text{ metre}$$

$$\therefore (x + 6) \times x = 432$$

$$\Rightarrow (x + 6) \times x = 24 \times 18$$

$$\Rightarrow x = 18 \text{ metre}$$

\therefore Perimeter of rectangle

$$= 2(x + 6 + x)$$

$$= 4x + 12$$

$$= 4 \times 18 + 12 = 72 + 12$$

$$= 84 \text{ metre}$$

Directions (31-35) : In the following questions two equations numbered I and II are given. You have to solve both the equations and —

Give answer (1) if $x > y$

Give answer (2) if $x \geq y$

Give answer (3) if $x < y$

Give answer (4) if $x \leq y$

Give answer (5) if $x = y$ or the relationship cannot be established.

31. I. $3x^2 + 14x + 15 = 0$

II. $6y^2 + 17y + 12 = 0$

Solution : 3

(3) I. $3x^2 + 14x + 15 = 0$

$$\Rightarrow 3x^2 + 9x + 5x + 15 = 0$$

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

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

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

II. $6y^2 + 17y + 12 = 0$

$$\Rightarrow 6y^2 + 9y + 8y + 12 = 0$$

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

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

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

Clearly, $x < y$

32. I. $3x^2 - 17x + 24 = 0$

II. $4y^2 - 15y + 14 = 0$

Solution : 1

(1) I. $3x^2 - 17x + 24 = 0$

$$\Rightarrow 3x^2 - 9x - 8x + 24 = 0$$

$$\Rightarrow 3x(x - 3) - 8(x - 3) = 0$$

$$\Rightarrow (3x - 8)(x - 3) = 0$$

$$\Rightarrow x = \frac{8}{3} \text{ or, } 3$$

II. $4y^2 - 15y + 14 = 0$

$$\Rightarrow 4y^2 - 8y - 7y + 14 = 0$$

$$\Rightarrow 4y(y - 2) - 7(y - 2) = 0$$

$$\Rightarrow (4y - 7)(y - 2) = 0$$

$$\Rightarrow y = \frac{7}{4} \text{ or, } 2$$

Clearly, $x > y$

33. I. $2x^2 + 11x + 14 = 0$

II. $2y^2 + 17y + 33 = 0$

Solution : 1

(1) I. $2x^2 + 11x + 14 = 0$

$$\Rightarrow 2x^2 + 4x + 7x + 14 = 0$$

$$\Rightarrow 2x(x + 2) + 7(x + 2) = 0$$

$$\Rightarrow (x + 2)(2x + 7) = 0$$

$$\Rightarrow x = -2 \text{ or } -\frac{7}{2}$$

II. $2y^2 + 17y + 33 = 0$

$$\Rightarrow 2y^2 + 6y + 11y + 33 = 0$$

$$\Rightarrow 2y(y + 3) + 11(y + 3) = 0$$

$$\Rightarrow (2y + 11)(y + 3) = 0$$

$$\Rightarrow y = \frac{-11}{2} \text{ or } -3$$

Clearly, $x > y$

34. I. $3x^2 + 13x + 12 = 0$

II. $2y^2 + 15y + 27 = 0$

Solution :2

(2)

I. $3x^2 + 13x + 12 = 0$

$$\Rightarrow 3x^2 + 9x + 4x + 12 = 0$$

$$\Rightarrow 3x(x + 3) + 4(x + 3) = 0$$

$$\Rightarrow (3x + 4)(x + 3) = 0$$

$$\Rightarrow x = \frac{-4}{3} \text{ or } -3$$

$$\begin{aligned}\text{II. } 2y^2 + 15y + 27 &= 0 \\ \Rightarrow 2y^2 + 6y + 9y + 27 &= 0 \\ \Rightarrow 2y(y + 3) + 9(y + 3) &= 0 \\ \Rightarrow (y + 3)(2y + 9) &= 0\end{aligned}$$

$$\Rightarrow y = -3 \text{ or, } -\frac{9}{2}$$

Clearly, $x \geq y$

35. I. $x^2 - 22x + 121 = 0$

II. $y^2 = 121$

Solution :5

(5)

I. $x^2 - 22x + 121 = 0$

$$\Rightarrow (x - 11)^2 = 0$$

$$\Rightarrow x - 11 = 0$$

$$\Rightarrow x = 11$$

II. $y^2 = 121$

$$\Rightarrow y = \sqrt{121} = \pm 11$$

REASONING

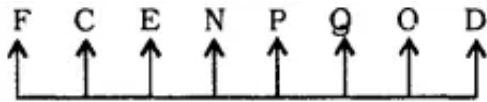
Directions (1-5) : Study the following information carefully and answer the questions given below :

Eight friends — C, D, E, F, N, o, P and Q — are sitting in a straight line facing north but not necessarily in the same order. o is sitting second to the right of P. E is sitting third to the left of Q. F is sitting fourth to the left of P. E does not sit on the extreme end of the line. D is immediate neighbour of neither F nor P. C is not an immediate neighbour of P.

1. Which of the following pairs represents the two persons sitting at the extreme ends of the line ?
 - (1) F, C
 - (2) D, F
 - (3) C, Q
 - (4) N, D
 - (5) O, F

Solution : 2

(1-2)



(2) D and F are sitting at the extreme ends of the line,

2. Which of the following statements is definitely true as per the given arrangement ?
 - (1) F and E are immediate neighbours of P.
 - (2) C is sitting third to the right of Q.
 - (3) There are only three persons between D and E.
 - (4) N is sitting to the immediate left of P.
 - (5) All the given statements are true

Solution : 4

(4) N and Q are immediate neighbours of P.

C is sitting fourth to the left of Q.

There are four persons between D and E.

3. Who among the following is sitting third to the right of N ?

- (1) O
- (2) D
- (3) C
- (4) E
- (5) Q

Solution : 1

(1) O is sitting third to the right of N.

4. What is the position of C with respect to Q ?

- (1) Fourth to the right
- (2) Third to the right
- (3) Fourth to the left
- (4) Third to the left
- (5) Second to the right

Solution :3

(3) C is sitting fourth to the left of Q.

5. Four of the following five are alike in a certain way based on the given arrangement and hence they form a group. Which one of the following does not belong to that group ?

- (1) FN
- (2) PD
- (3) EQ
- (4) CP
- (5) NQ

Solution : 5

(5) Except in the pair NQ, in all others there are two persons between the given pair of persons.

Directions (6-8) : Study the following information carefully and answer the questions given below :

S is the daughter of U. V has only two children- S and Y. Y is married to D. P is the brother of B. V has only two daughters. J is the mother of U. J is married to L P is married to S. V is the son of T.

6. Who among the following is the sister-in-law of B ?

- (1) Y

- (2) S
- (3) U
- (4) J
- (5) T

Solution : 2

(6-9) :

S is the daughter of U and V.
Y is also daughter of U and V.
Y is the wife of D.
P is the husband of S.
S is the sister-in-law of B.
V is the husband of U.
L is the husband of J.
L is the father of U.

6.

(2) S is the sister-in-law of B.

7. Who among the following is the father of U ?

- (1) J
- (2) T
- (3) V
- (4) L
- (5) None of these

Solution : 4

(4) L is the father of U.

8. How is V related to P ?

- (1) Father-in-law
- (2) Mother-in-law
- (3) Father
- (4) Mother
- (5) Brother

Solution : 1

(1) P is the husband of S. V is the father of S.
Therefore, V is the father-in-law of P.

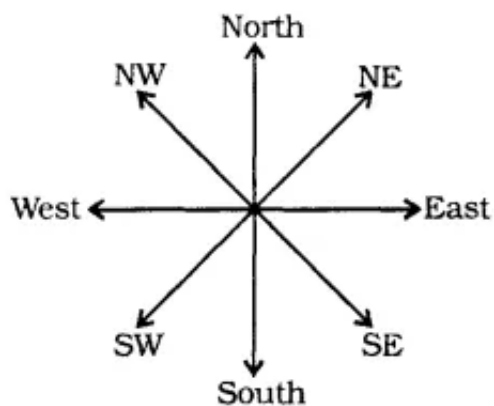
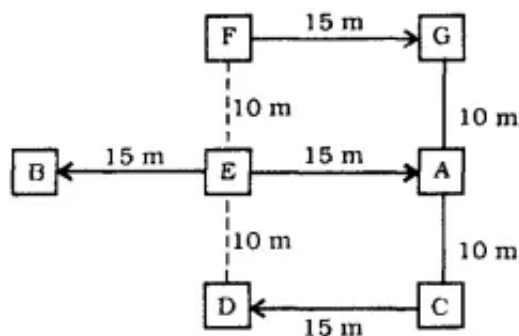
9. Point A is 30 metres to the east of point B. Point C is 10 metres to the south of Point A. Point D is 15 metres to the west of Point C. Point E is exactly in the middle

of the Points D and F. Points D, E and F lie in a straight line. The length of the line DEF is 20 metres. Point F is to the north of Point D. Point G is 15 metres to the east of Point F. How far and in which direction is Point G from Point A ?

- (1) 10 metres, South
- (2) 15 metres. North
- (3) 10 metres, North
- (4) 15 metres, South
- (5) 10 metres, East

Solution : 3

(3)



It is clear from the diagram that point G is 10 metres to the north of point A.

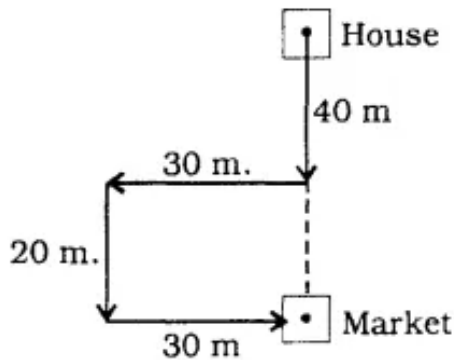
10. A person starts from his house and moves towards the market. He walks 40 metres towards south and takes a right turn. After walking 30 metres he takes a left turn and walks 20 metres. Finally he takes a left turn and reach the market after walking 30 metres. How far and in which direction is his house from the market ?
- (1) 60 metres, South
- (2) 60 metres, North
- (3) 70 metres. North

(4) 70 metres, South

(5) 90 metres, North

Solution : 2

(2)



Required distance

= (40 + 20) metres

= 60 metres

Person's house is to the north
of market.

Directions (11-15) : In each question given below two or three statements followed by two Conclusions numbered I and II have been given. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts and then decide which of the following Conclusions logically follows from the given statements, disregarding commonly known facts.

Give answer (1) if only Conclusion I follows

Give answer (2) if only Conclusion II follows

Give answer (3) if either Conclusion I or Conclusion II follows

Give answer (4) if neither Conclusion I nor Conclusion H follows

Give answer (5) if both the Conclusions I and II follow

(11-12) : Statements

All magazines are journals.

Some journals are periodicals.

All periodicals are bulleteins.

11. Conclusions

I. Some periodicals are definitely not journals.

II. All periodicals being magazines is a possibility.

Solution : 2

(11-15)

- (i) All journals are periodicals → Universal Affirmative (A-type).
- (ii) Some journals are periodicals → Particular Affirmative (I-type).
- (iii) No journal is a periodical → Universal Negative (E-type).
- (iv) Some journals are not periodicals → Particular Negative (O-type).

(11-12)

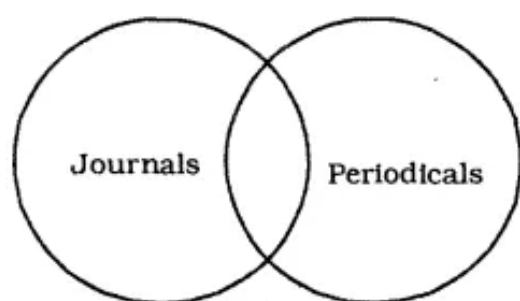
Some journals are periodicals.

All periodicals are bulletins.

I + A ⇒ I - type of Conclusion
"Some journals are bulletins." (P)

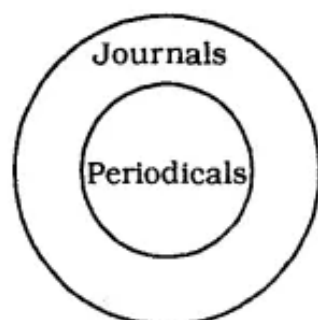
11.

(2) Venn diagrams of "Some journals are periodicals."



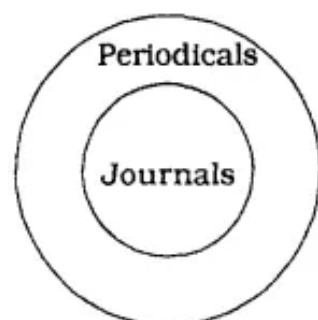
I

or



II

or



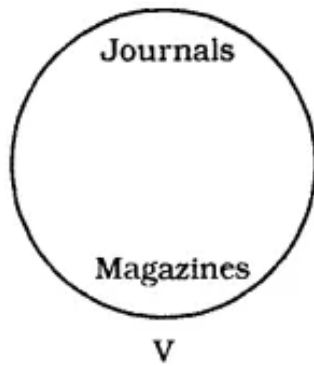
III

Diagram II contradicts Conclusion I.

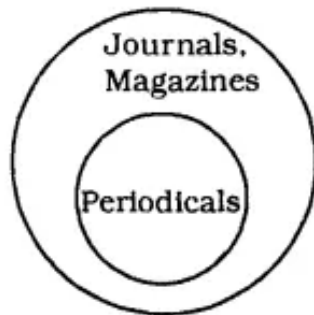


IV

or



Combine diagrams II and V :



This diagram supports Conclusion II.

12. Conclusions

I. At least some bulletins are journals.

II. No bulletin is a magazine.

Solution : 1

(1) Conclusion I is the Converse of Conclusion (P).

13. Statements

All turns are loops.

No loop is a bend.

Some bends are curves.

Conclusions

I. At least some curves are loops.

II. No bend is a turn.

Solution : 2

i. (2) All turns are loops.

No loop is a bend.

$A + E \Rightarrow E$ - type of Conclusion

"No turn is a bend."

Conclusion II is the Converse of it.

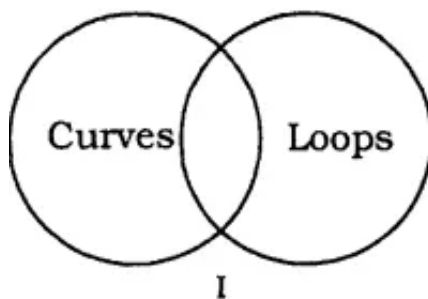
No loop is a bend.

Some bends are curves.

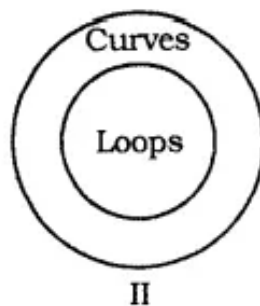
$E + I \Rightarrow O_1$ - type of Conclusion

"Some curves are not loops."

Its venn diagrams



or



or

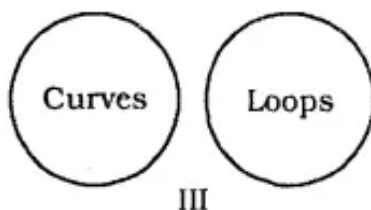


Diagram III contradicts the Conclusion I.

No country is a village.

All villages are districts.

Conclusions

I. All countries are districts.

II. All districts are villages.

Solution : 4

(4) No country is a village.

All villages are districts.

$E + A \Rightarrow O_1$ - type of Conclusion

"Some districts are not countries."

15. Statements

All progress are growth.

All developments are growth.

No growth is an evolution.

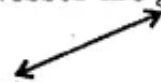
Conclusions

I. All developments being progress is a possibility.

II. No evolution is a progress.

(5)

All progresses are growth.



No growth is an evolution.

$A + E \Rightarrow E$ - type of Conclusion

"No progress is an evolution."

Conclusion II is the Converse of it.

Venn diagrams of "All progresses are growth" :

Solution : 5



I
or



II

"Venn diagrams of "All developments are growth" :



III

or



IV

Combine diagrams II and IV :



This diagram suggests that all developments being progress is a possibility.

Directions (16-20) : In each of the following questions, relationship between different elements is shown in the statements. The statements are followed by two Conclusions numbered I and II. Study the Conclusions based on the given statements and select the appropriate answer :

Give answer (1) if only Conclusion I is true.

Give answer (2) if only Conclusion II is true

Give answer (3) if either Conclusion I or Conclusion II is true

Give answer (4) if neither Conclusion I nor Conclusion II is true

Give answer (5) if both the Conclusions I and II are true.

(16-17) : Statements

$Y = K < D = S : D < V < O ; G = D < Q$

16. **Conclusions**

I. $G > V$

II. $Y < Q$

Solution : 2

(16-17)

$$Y \leq K < D = S$$

$$D < V < O$$

$$G \geq D < Q$$

$$Y \leq K < D = S < V < O$$

$$Y \leq K < D \leq G$$

$$Y \leq K < D = S < Q$$

$$G \geq D < V < O$$

16.

(2) Conclusions

I. $G > V$: Not True

II. $Y < Q$: True

17. **Conclusions**

I. $K < O$

II. $G = V$

Solution : 1

(1) Conclusions

I. $K < O$: True

II. $G = V$: Not True

18. **Statements**

$$D < L = F = N ; L = A$$

Conclusions

I. $N > D$

II. $A = F$

Solution : 5

$$(5) D < L = A \leq F = N$$

Conclusions

I. $N > D$: True

II. $A \leq F$: True

(19-20) : Statements

$B > Z = R = M < J = H ; J > P ; K < Z$

19. Conclusions

I. $H < P$

II. $B > M$

Solution : 2

(19-20)

$B > Z = R \geq M < J \leq H$

$J > P ; K < Z$

$P < J \leq H$

$K < Z = R \geq M < J$

19.

(2) Conclusions

I. $H < P$: Not True

II. $B > M$: True

20. Conclusions

I. $K < J$

II. $R = H$

Solution : 4

(4) Conclusions

I. $K < J$: Not True

II. $R \geq H$: Not True

Directions (21-25) : Study the following information carefully and answer the questions given below :

In a certain code language,

‘good time to buy’ is written as ‘sy bo nj kw’.

‘invest money and time’ is written as ‘sy ta ge mr’.

‘only work and money’ is written as ‘ta fp mr ux’.

‘buy good stuff only’ is written as ‘kw bo rd fp’.

21. What is the code for “to” in the given code language ?

(1) ge

(2) kw

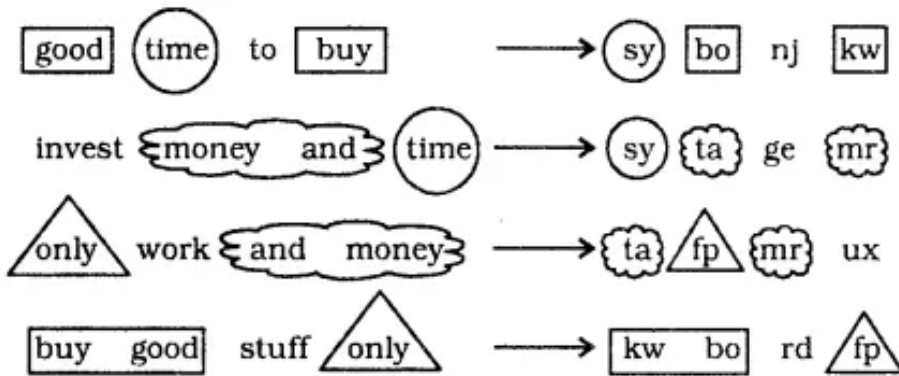
(3) nj

(4) sy

(5) bo

Solution : 3

(21-25)



21.

(3) to ⇒ nj

22. What is the code for “buy good” in the given code language ?

- (1) bo kw
- (2) kw nj
- (3) rd bo
- (4) rd nj
- (5) Cannot be determined

Solution : 1

(1) buy good ⇒ kw bo

23. What is the code for “only time and money” in the given code language ?

- (1) sy bo ux fp
- (2) fp ta rd kw
- (3) ge fp ta bo
- (4) mr ta sy fp
- (5) bo nj ta ge

Solution : 4

(4) only ⇒ fp

time ⇒ sy

and money ⇒ ta mr

24. What is the code for “stuff” in the given code language ?

- (1) ip
- (2) rci
- (3) kw
- (4) bo
- (5) Either 'bo' or 'rd'

Solution : 2

(2) stuff \Rightarrow rd

25. What is the code for “invest time to work” in the given code language ?

- (1) sy bo mr fp
- (2) ta nj kw rd
- (3) ta fp ux nj
- (4) mr sy bo ta
- (5) ux ge nj sy

Solution : 5

(5) invest \Rightarrow ge

time \Rightarrow sy

to \Rightarrow nj

work \Rightarrow ux

Directions (26-30): Study the following information carefully and answer the questions given below :

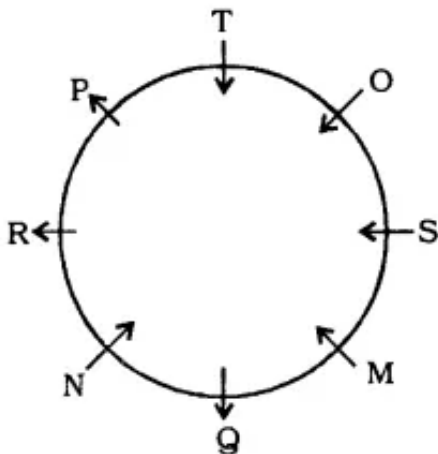
Eight persons — M, N, o, P, S and T — are sitting around a circular table at equal distance between each other, but not necessarily in the same order. Some of them are facing the centre while some others are facing outside (i.e., in a direction opposite to the centre)

Note : Facing the same direction means if one faces the centre then the other also faces the centre and vice-versa. Facing opposite directions means if one person faces the centre then the other person faces outside and vice-versa.

R is sitting second to the right of Q. Only three persons are sitting between R and S. T is sitting second to the right of R. T faces the centre. R and S face opposite directions. P and S face opposite directions. N is sitting second to the left of P. P is not an immediate neighbour of Q. Only one person is sitting between P and o. o is not an immediate neighbour of Q. M is sitting third to the left of T. The immediate neighbours of T face opposite directions. M and R face opposite directions. N faces the same direction as that of o.

26. Which of the following statements is true regarding T according to the given seating arrangement ?
- (1) T is sitting second to the left of S.
 - (2) T is sitting exactly between O and P.
 - (3) T is sitting just opposite to N.
 - (4) There are four persons between T and Q.
 - (5) T faces the opposite direction as that of M.

Solution : 2
(26-30)



(2) S faces the centre. T is sitting second to the right of S. T is sitting just opposite to Q. There are only three persons between T and Q. T and M face the same direction, i.e., towards the centre .

27. How many persons in the given seating arrangement face outside ?
- (1) Three
 - (2) Four
 - (3) Five
 - (4) Six
 - (5) Two

Solution : 1

(1) Three persons – P, Q and R – face outside, i.e., opposite to the centre.

28. Four of the following five are alike in a certain way based on the given seating arrangement and hence they form a group. Which is the one that does not belong to that group ?
- (1) O
 - (2) S
 - (3) M

(4) Q

(5) N

Solution : 4

(4) Except Q, all others face towards the centre.

29. Who among the following sits exactly between S and Q when counted from the left of S ?

(1) None

(2) O

(3) M

(4) N

(5) T

Solution : 3

(3) M sits exactly between S and Q when counted from the left of S.

30. What is the position of M with respect to R ?

(1) Other than those given as options

(2) Third to the right

(3) Second to the left

(4) Second to the right

(5) Third to the left

Solution : 5

(5) R faces outside, i.e., opposite to the centre. M is sitting third to the left of R.

Directions (31-35) : Study the following information carefully and answer the questions given below :

Seven persons – M, N, O, P, Q, R and S – live on separate floors of a seven-storeyed building, but not necessarily in the same order. The ground floor of the building is numbered 1, the floor above it 2 and so on until the topmost floor is numbered 7. Each person likes different cartoon characters, viz, Chipmunk, Flinstone, Jetson, Popeye, Scooby Doo, Simpson and Tweety, but not necessarily in the same order.

The person who likes Popeye lives on floor numbered 4. Only two persons live between P and the one who likes Popeye. M does not live on the lowermost floor. M lives on any odd numbered floor below the one who likes Popeye. S lives on an even numbered floor but neither immediately above nor immediately below the floor of M. Only two persons live between M and the person who likes Tweety.

Only one person lives between N and R. R lives on an even numbered floor and does not like Popeye. Only three persons live between the persons who like Chipmunk and Jetson respectively. The person who likes Chipmunk live on any floor above the N's floor. The person who likes Chipmanuk does not live on the topmost floor. O does not like Chipmnuk or Jet-son. The person who likes Scooby Doo lives on the floor immediately above the floor of the perosn who likes Simpson.

31. How many persons live between the floors on which S and P live ?

- (1) Three
- (2) Two
- (3) Four
- (4) Five
- (5) No One

Solution : 3

(31-35)

Floor Number	Person	Cartoon Character
7	O	Flinstone
6	S	Tweety
5	Q	Chipmunk
4	N	Popeye
3	M	Scooby Doo
2	R	Simpson
1	P	Jetson

(3) Four persons — Q, N, M and R — live between the floors of S and P.

32. Which of the following statements is/are true according to the given information?

- (1) Q lives on floor numbered 5 and he does not like Pop-eye
- (2) M likes Scooby Doo and he does not live on floor numbered 4.
- (3) O likes Flinstone and he lives on the topmost floor
- (4) Only two persons live between the floors of Q and R
- (5) All the statements are true

Solution : 5

(5) All the statements are true.

33. Who among the following lives on the floor immediately above the floor of M ?

- (1) N
- (2) R

- (3) S
- (4) O
- (5) No One

Solution : 1

(1) N lives on the floor immediately above the floor on which M lives.

34. Who among the following lives exactly between the floors on which S and N live ?

- (1) P
- (2) R
- (3) M
- (4) Q
- (5) No one

Solution : 4

(4) Q lives exactly between the floors on which S and N live.

35. Who among the following does like cartoon character Jetson ?

- (1) R
- (2) P
- (3) N
- (4) Q
- (5) S

Solution : 2

(2) P likes cartoon character Jetson.