

# Prepp

## Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPS



UPTET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

# SSC MTS Previous Year Paper (Held on: 13 Oct 2021 Shift 1)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

## Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	General English	25	25	0.25	1
2	General Intelligence & Reasoning	25	25	0.25	1
3	Numerical Aptitude	25	25	0.25	1
4	General Awareness	25	25	0.25	1

- 1.) A total of 90 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

## General English

1. Select the word which means the same as the group of words given. (+1, -0.25)

To prevent or alter a result or course of events

- a. Interchange
- b. Interrelate
- c. Intervene
- d. Interact

2. Identify the segment in the sentence which contains a grammatical error. (+1, -0.25)

If you could wait for just half an hour you will certain be able to meet her.

- a. If you could wait
- b. you will certain
- c. be able to meet her
- d. for just half an hour

3. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+1, -0.25)

No sooner I get the message, I shall pass it on to you.

- a. As soon as
- b. No substitution required

- c. Although
  - d. Hardly
- 

4. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+1, -0.25)

Karan was so deep effected by the film that he didn't speak a word.

- a. deeply affected
  - b. No substitution required
  - c. deeper affect
  - d. deeply effective
- 

5. Select the most appropriate meaning of the given idiom. (+1, -0.25)

Alive and kicking

- a. To be very good in football
  - b. To be active and healthy
  - c. To be careless and unafraid
  - d. To behave childishly
- 

6. Select the INCORRECTLY spelt word. (+1, -0.25)

- a. Occur
- b. Middyay

- c. Addres
  - d. Cuddle
- 

7. Select the most appropriate idiom to fill in the blank. (+1, -0.25)

Ritu was shocked on learning that her kids had \_\_\_\_\_ somewhere after school.

- a. wandered off
  - b. jumped at
  - c. wondered at
  - d. finished off
- 

8. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+1, -0.25)

The BBC has a wonderful series on gemerence of women novelists in English literature.

- a. the
  - b. No substitution required
  - c. that
  - d. many
- 

9. Select the INCORRECTLY spelt word. (+1, -0.25)

- a. Essence

- b. Tolarence
  - c. Preference
  - d. Insistence
- 

10. Select the word which means the same as the group of words given . (+1, -0.25)

Lasting for only a short time

- a. Permanent
  - b. Transient
  - c. Solitary
  - d. Joyous
- 

11. Select the most appropriate idiom to fill in the blank. (+1, -0.25)

Vidushi liked the cake so much that she \_\_\_\_\_.

- a. pulled at it
  - b. poked with it
  - c. pushed it over
  - d. polished it off
- 

12. Select the most appropriate synonym of the given word. (+1, -0.25)

CRUCIAL

- a. Vital

- b. Menial
  - c. Easy
  - d. Trivial
- 

13. Select the most appropriate ANTONYM of the given word. (+1, -0.25)

RENOWNED

- a. Vain
  - b. Noted
  - c. Obscure
  - d. Glorious
- 

14. Select the most appropriate word to fill in the blank. (+1, -0.25)

During the monsoons it is \_\_\_\_\_ to boost one's immunity with a proper diet and regular exercise.

- a. advisable
  - b. improper
  - c. advising
  - d. imprudent
- 

15. Select the most appropriate word to fill in the blank. (+1, -0.25)

The Blood Finder app is very useful in \_\_\_\_\_ the correct donor.

- a. locating
  - b. unlocking
  - c. starting
  - d. establishing
- 

16. Select the most appropriate meaning of the given idiom . (+1, -0.25)

Chinks in the armour

- a. An old fashioned and useless weapon
  - b. A weakness that can be taken advantage of
  - c. A protective shield with ventilation
  - d. A soldier's inner vest that protects
- 

17. Identify the segment in the sentence which contains a grammatical error. (+1, -0.25)

I was thrilled to going out with my friend for the film.

- a. to going out
  - b. I was thrilled
  - c. with my friend
  - d. for the film
- 

18. Select the most appropriate ANTONYM of the given word. (+1, -0.25)

IRRITATE

---



- a. Shock
  - b. Delight
  - c. Frighten
  - d. Annoy
- 

19. Select the most appropriate synonym of the given word. (+1, -0.25)

INTERROGATE

- a. Meditate
  - b. Answer
  - c. Investigate
  - d. Delay
- 

20. Identify the segment in the sentence which contains a grammatical error. (+1, -0.25)

According to current research by World Health Organisation, a 65-year-old person is then no longest categorised as old.

- a. categorised as old
  - b. a 65 year old person
  - c. According to current research by World Health Organisation
  - d. is then no longest
-

21. In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+1, -0.25)

The pandemic in India occurred at a time (1) \_\_\_\_\_ the crop was standing all ready to be (2) \_\_\_\_\_. If NAFED had not intervened with the initiative (3) \_\_\_\_\_ the stocks of farmers in these circumstances, it (4) \_\_\_\_\_ not only have been devastating for the farmers (5) \_\_\_\_\_ also led to a food emergency later on.

Select the most appropriate option to fill in blank no. 1.

- a. when
- b. during
- c. where
- d. until

22. In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+1, -0.25)

The pandemic in India occurred at a time (1) \_\_\_\_\_ the crop was standing all ready to be (2) \_\_\_\_\_. If NAFED had not intervened with the initiative (3) \_\_\_\_\_ the stocks of farmers in these circumstances, it (4) \_\_\_\_\_ not only have been devastating for the farmers (5) \_\_\_\_\_ also led to a food emergency later on.

Select the most appropriate option to fill in blank no. 2.

- a. picking
- b. harvested

- c. invested
- d. collecting

23. In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+1, -0.25)

The pandemic in India occurred at a time (1) \_\_\_\_\_ the crop was standing all ready to be (2) \_\_\_\_\_. If NAFED had not intervened with the initiative (3) \_\_\_\_\_ the stocks of farmers in these circumstances, it (4) \_\_\_\_\_ not only have been devastating for the farmers (5) \_\_\_\_\_ also led to a food emergency later on.

Select the most appropriate option to fill in blank no. 3.

- a. to earn
- b. to divert
- c. to purchase
- d. to patronise

24. In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+1, -0.25)

The pandemic in India occurred at a time (1) \_\_\_\_\_ the crop was standing all ready to be (2) \_\_\_\_\_. If NAFED had not intervened with the initiative (3) \_\_\_\_\_ the stocks of farmers in these circumstances, it (4) \_\_\_\_\_ not only have been devastating for the farmers (5) \_\_\_\_\_ also led to a food emergency later on.

Select the most appropriate option to fill in blank no. 4.

- a. can't
- b. will
- c. would
- d. must

25. In the following passage, some words have been deleted. Fill in the blanks (+1, -0.25) with the help of the alternatives given. Select the most appropriate option for each blank.

The pandemic in India occurred at a time (1) \_\_\_\_\_ the crop was standing all ready to be (2) \_\_\_\_\_. If NAFED had not intervened with the initiative (3) \_\_\_\_\_ the stocks of farmers in these circumstances, it (4) \_\_\_\_\_ not only have been devastating for the farmers (5) \_\_\_\_\_ also led to a food emergency later on.

Select the most appropriate option to fill in blank no. 5.

- a. but
- b. however
- c. yet
- d. so

## General Intelligence & Reasoning

26. If in a coding system, SHELVES is coded as 100 and TURNING is coded as 87, then how will REDRESS be coded in the same coding system? (+1, -0.25)

- a. 89
- b. 88
- c. 102
- d. 101

27. 'Frogs' is related to 'Croak' in the same way as 'Peacock' is related to (+1, -0.25)

'-----'

- a. Growl
- b. Grunt
- c. Hiss
- d. Scream

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28. Select the option in which the given figure is embedded (rotation is NOT allowed). (+1, -0.25)



a.

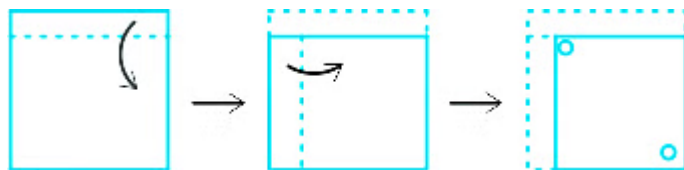


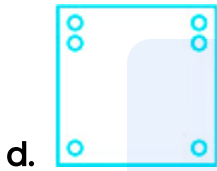
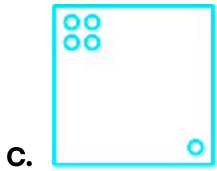
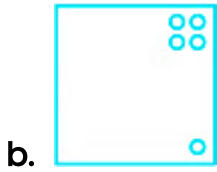
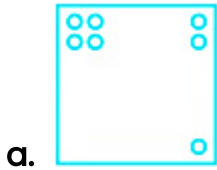
29. Which number will replace the question mark (?) in the following series? (+1, -0.25)

31, 32, 35, 46, 59, 88, 119, ?

- a. 174
- b. 147
- c. 141
- d. 114

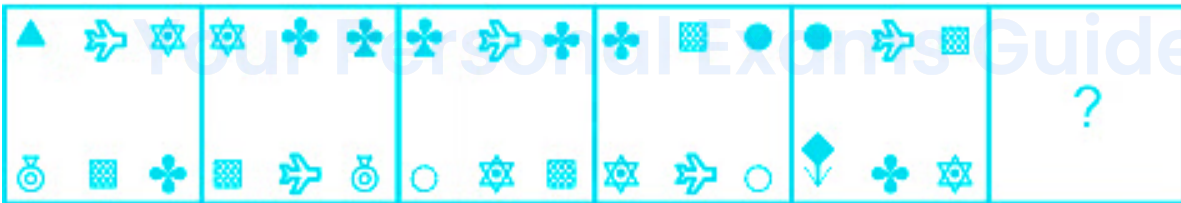
30. A paper is folded and cut as shown below. How will it appear when unfolded? (+1, -0.25)

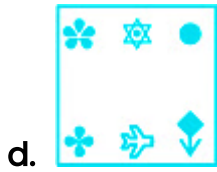




31. Which figure will replace the question mark (?) in the following figure series?

(+1, -0.25)





32. If SHADOW is coded as 184 and TEDIOUS is coded as 384, then how will VALIDATE be coded as? (+1, -0.25)

- a. 486
- b. 468
- c. 568
- d. 586

33. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster. (+1, -0.25)

GEOGRAPHY : OEGARGYHP :: REASONING : ?

- a. NOSGNIAER
- b. AERN OSGNI
- c. SAERONNIG
- d. GNINOSAER



34. Eight members of a family – Archana, Suman, Dheeraj, Meghana, Bindu, Tilak, Rajan and Kiran are sitting in a straight line facing North. They have different ages – 12, 17, 19, 22, 28, 31, 38 and 48 but not necessarily in the same order. (+1, -0.25)

Archana is sitting third to the right of the one who is 22 years old. Meghana and the one who is 22 years old are sitting together. One person is sitting between Kiran and one whose age is 48 years. The difference between the ages of Bindu and Kiran is 5 years. The one who is 10 years older than Meghana is sitting third to the right of Meghana. Rajan and Dheeraj are sitting together and one of them is sitting at the extreme end of the line. Dheeraj is 9 years older than Suman. Archana is sitting in the middle of Kiran and Tilak. Archana is 12 years younger than Dheeraj. Kiran is not 12 years old.

Who is sitting third to the right of Meghana?

- a. Bindu
- b. Dheeraj
- c. Tilak
- d. Kiran

35. Select the option that is related to the third number in the same way as the second number is related to the first number. (+1, -0.25)

24 : 588 :: 26 : \_\_\_\_\_.

- a. 689
- b. 678
- c. 698

d. 687

---

36. Select the option that is related to the third word in the same way as the second word is related to the first word. (+1, -0.25)

Audacious : Courageous :: Deflate : \_\_\_\_\_.

- a. Enlarge
  - b. Entangle
  - c. Collapse
  - d. Attentive
- 

37. Two statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements. (+1, -0.25)

**Statements:**

Some candles are bulbs

Some bulbs are generators

**Conclusions:**

I. Some candles are generators

II. All candles are generators

- a. Only conclusion I follows
- b. Only conclusion II follows
- c. Both conclusions I and II follow

d. Neither conclusion I nor II follows

---

38. The notification for six different posts – Clerk, PRO, Lecturer, Accountant, Watchman and Principal– are to be released on consecutive Fridays. The schedule of the releasing is to be in accordance with the following conditions: (+1, -0.25)

- (i) Clerk post must be released a week before the Watchman post.
- (ii) Lecturer post must not be released immediately after the first release.
- (iii) PRO post must be released on the Friday following the Friday on which the Principal post is released.
- (iv) Accountant post must be released on the fifth Friday and should not be immediately preceded by the PRO post.
- (v) The Watchman post must not be released last.

Which of the following notifications will be released immediately after the PRO post?

- a. Watchman
  - b. Principal
  - c. Clerk
  - d. Lecturer
- 

39. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out. (+1, -0.25)

- a. GCXD
- b. KGT Z

- c. TPLR
- d. NJQW

---

40. Three statements are given, followed by four conclusions numbered I, II, III, IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements. (+1, -0.25)

**Statements:**

Some drums are violins

Some violins are pianos

All the pianos are flutes.

**Conclusions:**

- I. Some flutes are violins.
- II. Some pianos are drums.
- III. No piano is drum.
- IV. Some violins are drums.

- a. Both conclusions I and IV and either II or III follows
- b. Both conclusions II and III follow
- c. Both conclusions II and IV follow
- d. Both conclusions I and II follow

---

41. If '×' stands for 'addition', '÷' stands for 'subtraction', '+' stands for 'multiplication' and '-' stands for 'division', then (+1, -0.25)

$$75 \times 345 + 15 - 23 \div (15 + 18) = ?$$

- a. 10
- b. 20
- c. 40
- d. 30

---

42. In a code language, MAJESTY is written as TEQIZAF. How will DURABLE be written as in that language? (+1, -0.25)

- a. KAYEISI
- b. KBTECT L
- c. KBYEISL
- d. KASECSI

---

43. Which number will replace the question mark (?) in the following series? (+1, -0.25)

8, 26, 73, 157, 284, 464, 705, 1017, ?

- a. 1480
- b. 1840
- c. 1408
- d. 1804

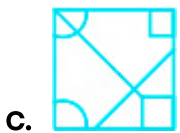
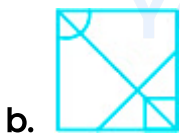
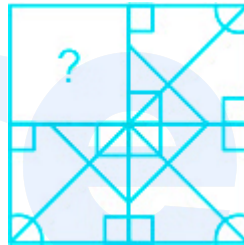
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44. Select the set in which the numbers are related in the same way as are the numbers of the given set. (+1, -0.25)

(105, 6, 27)

- a. (155, 8, 42)
- b. (250, 11, 52)
- c. (145, 8, 37)
- d. (152, 7, 32)

45. Select the option that can replace the question mark (?) and complete the given figure. (+1, -0.25)



46. Select the correct mirror image of the given combination when the mirror is placed to the right side of it. (+1, -0.25)

&VEcTORANaLYsIS2

- a. &VEcTORANaLYsIS2
- b. &VEcTORANaLYsIS2
- c. &VEcTORANaLYsIS2
- d. &VEcTORANaLYsIS2

47. In a certain code language, if MEALTIME is written as TMMLEEEA, then how will PROVINCE be written in the same code language? (+1, -0.25)

- a. ORPNIVEC
- b. VRPONIEC
- c. VPRONEIC
- d. RPVONIEC

48. Select the Venn diagram that best illustrates the relationship between the following classes. (+1, -0.25)

Doctors, Politicians, Men



a.



b.



c.



d.

49. In a row of boys, Karun is 5th from the left and Panth is 6th from right. When they exchange their position, Karun becomes 13th from the left . What is the new position of Panth from the right? (+1, -0.25)

a. 11th

b. 7th

c. 14th

d. 18th

50. Which two signs should be interchanged to make the given equation correct ? (+1, -0.25)

$$110 + 728 \div 28 - 15 \times 413 = 87$$

a. - and +



b.  $\div$  and  $-$

c.  $\div$  and  $+$

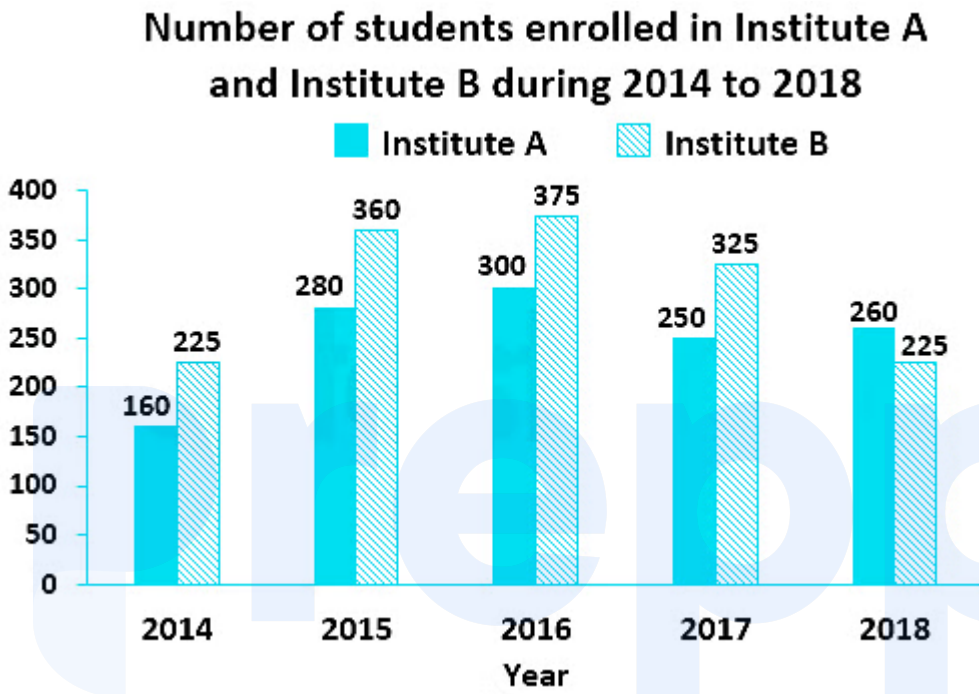
d.  $\times$  and  $-$

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## Numerical Aptitude

51. Study the following bar graph that shows the number of students enrolled for different courses in institutes A and B during 5 years, and answer the question that follows. (+1, -0.25)



What is the ratio of the total numbers of students enrolled in A during 2017 and 2018 to that of students enrolled in B during 2014 and 2015?

- a. 34 : 39
  - b. 17 : 39
  - c. 39 : 17
  - d. 39 : 34
- 
52. If  $x$  is subtracted from each of 52, 47, 20 and 19, the number so obtained in this order are in proportion. What is the mean proportional between  $(x + 13)$  and  $(x - 8)$ ? (+1, -0.25)

- a. 12
- b. 10
- c. 15
- d. 9

---

53. The marked price of an article is ₹400. After allowing a discount of 20% on the marked price, a shopkeeper makes a profit of ₹48. His gain percentage is: (+1, -0.25)

- a.  $15 \frac{11}{17} \%$
- b.  $19 \frac{11}{17} \%$
- c.  $17 \frac{11}{17} \%$
- d.  $14 \frac{11}{17} \%$

---

54. 'A' is 3 times as good a workman as 'B' and therefore is able to complete a job in 36 days less than 'B'. In how many days will they finish it working together? (+1, -0.25)

- a.  $12 \frac{1}{2}$
- b.  $15 \frac{1}{2}$
- c.  $14 \frac{1}{2}$
- d.  $13 \frac{1}{2}$

---

55. The median of a set of 11 distinct observations is 17.5. If each of the largest 5 observations of the set is increased by 3, then the median of the new set: (+1, -0.25)

- a. is three times of the original number
- b. is decreased by 3
- c. is increased by 3
- d. remains the same as that of the original set

---

56. A certain sum is divided among A, B, C and D such that B's share is  $\frac{1}{3}$  of A's share, C's share is 40% of B's share. and D's share is 50% of C's share. If the difference between the shares of B and D is Rs. 1,600, then the sum is: (+1, -0.25)

- a. ₹ 9,600
- b. ₹ 9,400
- c. ₹ 9,000
- d. ₹ 9,200

---

57. A boy walked along two adjacent sides of a rectangular field. If he had walked along the diagonal, then he would have saved a distance equal to one-fourth of the larger side. The ratio of the larger to the smaller side is: (+1, -0.25)

- a. 17 : 24
- b. 11 : 18
- c. 24 : 7
- d. 18 : 11

---

58. In a class of 80 students, 60% are girls and the rest are boys. The average weight of boys is 5% more than that of girls. If the average weight of all (+1, -0.25)

the student is 51 kg, then what is the average weight (in kg) of the boys?

- a. 47.5
- b. 55
- c. 52.5
- d. 50

---

59. If 4 men can reap a field in 5 days working 9 hours a day, in how many days can 10 men reap the same field working 6 hours a day? (+1, -0.25)

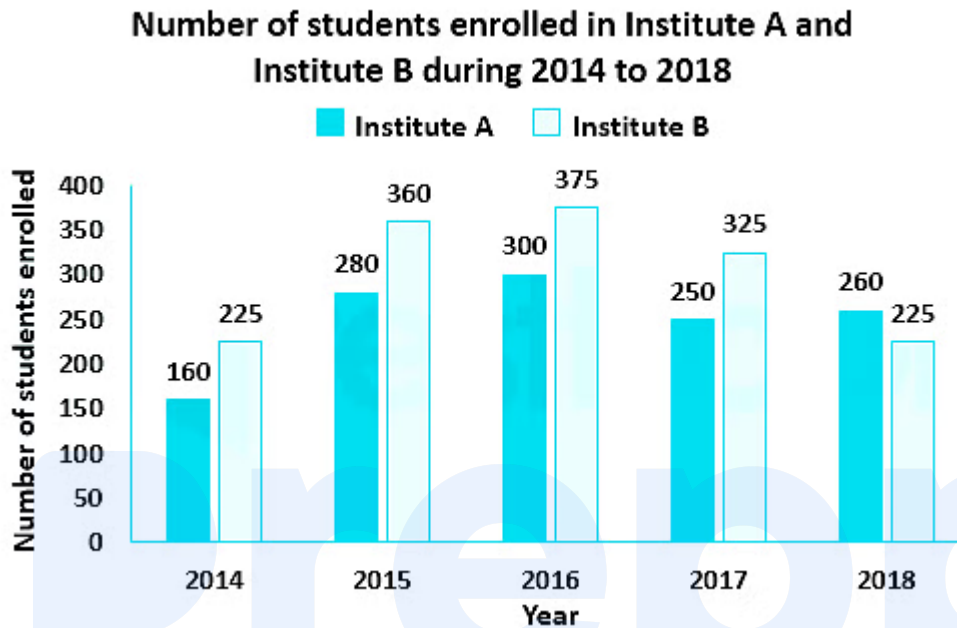
- a. 5
- b. 4
- c. 3
- d. 2

---

60. Sita and Geeta start at the same time to ride from place A to place B, which is 90 km away from A. Sita travels 3 km per hour slower than Geeta. Geeta reaches place B and at once turns back meeting Sita 15 km from place B. Sita's speed (in km/h) is: (+1, -0.25)

- a. 9
- b. 6
- c. 10.5
- d. 7.5

61. Study the following bar graph that shows the number of students enrolled for different courses in institutes A and B during 5 years, and answer the question that follows. (+1, -0.25)



The total number of students enrolled in A during 2014, 2016 and 2018 is what percentage of the total number of average students enrolled in B during the 5 years (correct to one decimal place)?

- a. 238.4%
- b. 276.5%
- c. 285.7%
- d. 237.6%
- 
62. What is the sum of the numbers between 300 and 500 such that when they are divided by 6, 12 and 16, it leaves no remainder? (+1, -0.25)
- a. 1586

b. 1632

c. 1764

d. 1618

---

63. ₹ 63,800 is to be divided between A and B in the ratio 4 : 7. The difference (+1, -0.25)  
between their share (in ₹) is:

a. 23,200

b. 40,600

c. 25,000

d. 17,400

---

64. The length of a rectangle is three-fifth of the radius of a circle. The radius (+1, -0.25)  
of the circle is equal to the side of a square whose area is  $6400 \text{ m}^2$ . The  
area (in  $\text{m}^2$ ) of the rectangle, if the breadth is 20 m is:

a. 1200

b. 480

c. 960

d. 1000

---

65. Due to 20% reduction in the price of wheat per kg. Ram is able to buy 5 kg (+1, -0.25)  
more for ₹ 800. What is the original price (in ₹) of wheat per kg?

a. 30

b. 55

c. 50

d. 40

---

66. A rectangular room has an area of  $60 \text{ m}^2$  and perimeter of 34 m. The length of the diagonal of the rectangular room is same as the side of a square. The area of the square (in  $\text{m}^2$ ) is: (+1, -0.25)

a. 169

b. 144

c. 300

d. 244

---

67. A person borrows ₹ 75,000 for 3 years at 5% simple interest. He lends it to B at 7% for 3 years. What is his gain (in ₹)? (+1, -0.25)

a. 6,000

b. 4,500

c. 3,500

d. 5,000

---

68. In an election, the votes cast for two candidates were in the ratio 4 : 9. If the successful candidate received 984321 votes, then the total votes polled were: (+1, -0.25)

a. 1712597

b. 1421797



c. 1912577

d. 1571279

---

69. A train takes 1 hour 20 minutes to travel between two stations, P and Q. If it travels at  $\frac{5}{6}$  of its usual speed, how long will it take to travel between P and Q? (+1, -0.25)

a. 1 h 24 min

b. 1 h 48 min

c. 1 h 36 min

d. 1 h 12 min

---

70. There are four different numbers. The average of the first three numbers is three times the fourth number, and the average of all the four numbers is 55. What is the average of the first three numbers? (+1, -0.25)

a. 72

b. 63

c. 60

d. 66

---

71. The value of  $\frac{13}{2} \left[ 15 \div \frac{3}{5} \text{ of } \frac{1}{2} + 76 + 1 \frac{1}{2} \times 4 \frac{1}{2} \div 3 \frac{1}{4} \right]$  is: (+1, -0.25)

a. 832

b. 830.5

c. 832.5

d. 732.5

---

72. A certain sum amounts to ₹ 29,282 in 4 years at 10% p.a. when the interest is compounded yearly. What is the simple interest (in ₹) on the same sum for 5 years at the same rate? (+1, -0.25)

a. 10,000

b. 11,500

c. 7,000

d. 9,000

---

73. A man bought two articles for ₹ 3,000 each. He sold one article at 10% profit and the other at 5% loss. What is the total profit or loss percentage? (+1, -0.25)

a. Profit 10%

b. Profit 2.5%

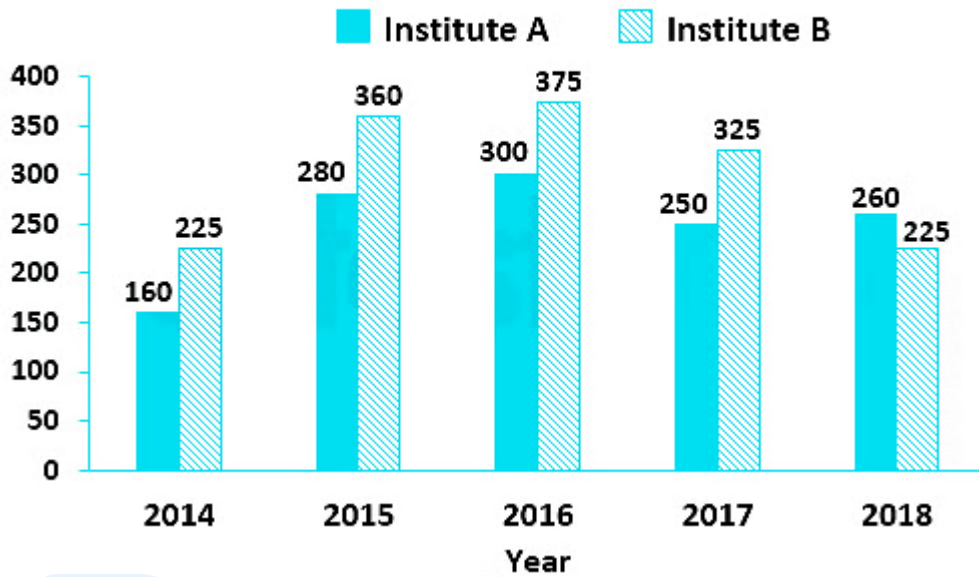
c. No profit no loss

d. Loss 7.5%

---

74. Study the following bar graph that shows the number of students enrolled for different courses in institutes A and B during 5 years, and answer the question that follows. (+1, -0.25)

### Number of students enrolled in Institute A and Institute B during 2014 to 2018



The average number of students (per year) enrolled in B during 2015, 2016 and 2018 is what percentage more than the number of students enrolled in A during 2016 (correct to one decimal place)?

- a. 7.6%
- b. 8.5%
- c. 5.8%
- d. 6.7%

75. What is the value of  $x$ , if  $[0.9 \{1.1 - 0.3(0.3 - 0.2 \div 0.5) + 0.4\}] \div 0.81 = x+1$ ? (+1, -0.25)

- a. -0.8
- b. 0.7
- c. 1
- d. -0.5

## General Awareness

76. The impression of the body part of a dead insect on hardened mud is an example of a/an \_\_\_\_\_ **(+1, -0.25)**
- a. sediment
  - b. artifact
  - c. compost
  - d. fossil
- 
77. As of July 2020, who among the following is the Union Minister of Law and Justice in India? **(+1, -0.25)**
- a. Ravishankar Prasad
  - b. Smriti Irani
  - c. Mahendra Nath Pandey
  - d. Gajendra Singh Shekhawat
- 
78. Who among the following Indian footballers was NOT a goalkeeper? **(+1, -0.25)**
- a. Bhaskar Ganguly
  - b. Peter Thangaraj
  - c. Bidesh Bose
  - d. Brahmanand Salgaocar
- 
79. Who among the following was the last ruler of Lodi dynasty of Delhi? **(+1, -0.25)**

- a. Ibrahim Lodi
- b. Sikander Lodi
- c. Barbak Shah
- d. Bahlul Lodi

---

80. What is the Steam Point on the Fahrenheit scale? (+1, -0.25)

- a. 32° F
- b. 100° F
- c. 212° F
- d. 80° F

---

81. As of July 2020, how many fundamental duties are meant for a citizen of India? (+1, -0.25)

- a. 11
- b. 12
- c. 10
- d. 16

---

82. Who among the following is the author of the book 'Waiting for the Mahatma'? (+1, -0.25)

- a. Anita Desai
- b. Srilal Shukla

- c. Gopinath Bordoloi
- d. RK Narayan

---

83. Which of the following does NOT figure among the main objectives of the Self Help Groups in India? (+1, -0.25)

- a. To provide loans with collateral
- b. To provide a platform to discuss and act on domestic violence
- c. To collect savings of their members
- d. To organise the rural poor into formation of groups

---

84. Which of the following ports is in Gujarat ? (+1, -0.25)

- a. Paradip
- b. Kandla
- c. Mormugao
- d. Panambur

---

85. What does 'p' stand for in 'pH'? (+1, -0.25)

- a. Precipitation
- b. Percentage
- c. Potency
- d. Potenz

86. As of July 2020, which of the following is NOT a UNESCO World Heritage Site? (+1, -0.25)

- a. Jantar Mantar, Delhi
- b. Jantar Mantar, Rajasthan
- c. Elephanta Caves, Maharashtra
- d. Rani Ki Vav, Gujarat

87. 'Produnova' is related to which of the following women's sports event? (+1, -0.25)

- a. Cycling
- b. Gymnastics
- c. Diving
- d. One-time swim

88. With reference to the early Indian history, who among the following was famous in the field of medicine? (+1, -0.25)

- a. Banabhatta
- b. Visakhadatta
- c. Harisena
- d. Charaka

89. Muhammad-bin-Tughlaq transferred his capital from Delhi to \_\_\_\_\_. (+1, -0.25)

- a. Chunar

- b. Jaunpur
- c. Murshidabad
- d. Daulatabad

---

90. In the context of the banking sector in India, what does 'G' stand for in 'RTGS'? (+1, -0.25)

- a. Gradual
- b. Grand
- c. Gross
- d. Gain

---

91. Which of the following is equivalent to coulomb per second? (+1, -0.25)

- a. Faraday
- b. Ohm
- c. Volt
- d. Ampere

---

92. Who among the following was the 49<sup>th</sup> recipient of the Dadasaheb Phalke Award? (+1, -0.25)

- a. Gulzar
- b. Vinod Khanna
- c. Amitabh Bachchan



d. Manoj Kumar

---

93. When the process of formation of hydrogen by passing steam over red hot iron is presented in the form of a balanced chemical equation, then the number of water molecules on the left hand side of the equation is ----- ( +1, -0.25)

- a. three
- b. two
- c. one
- d. four

---

94. Which schedule of the Constitution of India deals with the allocation of seats in the Council of States? ( +1, -0.25)

- a. Fifth
- b. Fourth
- c. Eighth
- d. Sixth

---

95. The Hemkund Sahib Gurudwara is located in the state of : ( +1, -0.25)

- a. Uttarakhand
- b. Bihar
- c. Himachal Pradesh
- d. Punjab

96. The Economic Survey (of India) 2019-20 introduced the idea of " \_\_\_\_\_ " (+1, -0.25)  
as a public good that gets enhanced with greater use."

- a. employment
- b. trust
- c. entrepreneurship
- d. honesty

97. With which of the following sports disciplines is Dhanraj Pillay associated? (+1, -0.25)

- a. Basketball
- b. Shooting
- c. Tennis
- d. Hockey

98. The town of Paro is a famous tourism destination of \_\_\_\_\_. (+1, -0.25)

- a. Sri Lanka
- b. Bangladesh
- c. Bhutan
- d. India

99. Which of the following is NOT a tributary of the river Ganga? (+1, -0.25)

- a. Son
- b. Ramganga

- c. Kali
- d. Penganga

---

100. Which of the following terms is associated with the 'Bharatnatyam' dance form? (+1, -0.25)

- a. Mangalacharan
- b. Tillana
- c. Batu nritya
- d. Tharijham

prepp

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## Answers

### 1. Answer: c

#### Explanation:

The correct answer is 'intervene'

#### ★ Key Points

- Let's look at the meaning of the word and some examples of the marked option:
  - **Intervene** : to participate in something so as to prevent or alter a result or course of events.
- Let's see an example:
  - The United Nations decided to intervene in the Russia-Ukraine war for world peace.

#### ★ Additional Information

- The etymology of the word intervene is derived from the Latin word 'intervenire': inter(between) + venire(come)
- It can be used as both transitive and intransitive verbs.
- An example of a transitive verb(sentence with subject, object, and verb)
  - "The time is up!" announced the quizmaster as she intervened to declare the scores for the round.
- An example of the intransitive verb(sentence with subject and verb)
  - The police decided to intervene in the fight between residents of a commercial complex.

---

### 2. Answer: b

#### Explanation:

The correct answer is 'you will certain'

★ Key Points

- The statement has '**certain**' which is an **adverb** since it gives an affirmative tone to the sentence. it is also known **adverb of affirmation** .
- Adverbs usually end with the suffix -ly.

**Thus, the correct sentence is:** *If you could wait for just half an hour you will **certainly** be able to meet her .*

★ Additional Information

- Adverbs usually end with the suffix -ly. But there are exceptions to this rule depending on whether the word is a flat adverb.
- Flat adverbs: similar in form to that of an adjective and may not necessarily have a suffix -ly in the end. Examples: fast, often, hard, very.
- Example in a sentence:
  - Raju worked **hard** for the upcoming Maths exam.
  - Raju worked **hardly** for the upcoming Maths exam.

★ Confusion Points

- Adjectives also end with the suffix -ly. Example: friendly, lonely, elderly, chilly.
- Example in a sentence:
  - Kriti felt her office colleagues were **friendly** and welcoming.

★ Hint

- Noticing whether the word in question is an **adverb** or **adjective** . if it is an adverb is it a **flat adverb** that might help answer the question

---

3. **Answer: a**

**Explanation:**

The answer is 'As soon as'

★ Key Points

- In the given sentence, we are talking about two events happening one after another.
- The first part is in the present tense while the second part is in the future tense .
- Since we are talking about an event in the future . it will be suitable to use the conjunction 'as soon as'.

Hence the correct sentence is: As soon as I get the message, I shall pass it on to you.

★ Additional Information

- No sooner is often used with past perfect or simple past but never with present and future tense.
- Example in a sentence:
  - No sooner had I stepped outside for lunch break than I received a call from my supervisor .

★ Alternate Method

- the usage of 'As soon as' in a sentence is followed by a noun or adjective immediately.
- The usage of 'No sooner' in a sentence is followed by a verb immediately.

★ Hint

- The choice of conjunction in a sentence can be decided by noticing the tense following and preceding the conjunction

---

4. Answer: a

**Explanation:**

The correct answer is '**deeply effected**'

★ Key Points

- The verb in the sentence is the **affect** that the film has on Karan. so the **adverb** is **deep** since it **describes** the affect.

- Adverbs usually end with the suffix -ly. So the correct form of the adverb in the sentence should be '**deeply**'.
- The given sentence talks about the **impact** of the film and affect means impact. So the correct form here should be **affected**.

Hence, the correct sentence is: *Karan was so deeply affected by the film that he didn't speak a word.*

★ Additional Information

- Affect is a **verb** and **effect** is a **noun** usually. Affect stands for **action**.
- For example:
  - Lack of sleep affected her performance on the IQ test.
- Effect is the noun. It can be understood as the **result** or **consequence** of a change or action.
- For example:
  - The cheat meals had an effect on the weight loss program.

★ Alternate Method

- An adverb modifies the verb in the sentence
- Example: She ate her dinner quickly.
- An adjective modifies the noun in the sentence
  - Example: Anam wore a **beautiful** gown at the wedding.

5. Answer: b

**Explanation:**

The correct answer is ' **To be active and healthy**'

★ Key Points

- The idiom ' **Alive and Kicking** ' means to be **physically active** and to be **healthy** .
- An example in a sentence:
  - *When a friend asked Richie about his father's health. He responded by saying that "He was alive and kicking".*

★ Additional Information

- It sometimes has a negative connotation attached to it.
    - Example: John informed his colleagues that he was alive and kicking post his cardiac operation.
- 

6. Answer: c

**Explanation:**

The erroneous spelling is 'Addres '

★ Key Points

- Let's look at the correct spelling and meanings of the word.
- **Address** (noun) :the particulars of the place or organization where someone resides or an organization is based.
  - Example: *The driver's license was sent to my residential address.*
- **Address** (verb): to speak or write to someone.
  - Example: *The Prime Minister will address the nation at 8 pm today.*

★ Hint

- Notice whether the word has been used as a **verb** or **noun** in the given context.
- 

7. Answer: a

**Explanation:**

The correct answer is 'wandered off'.

★ Key Points

- Let's look at the idiom wandered off and its meaning:
- **Wandered off** : to stray or roam from someone or something.



- The idiom 'wandered off' is a phrasal verb. Phrasal verbs consist of verbs and adverbs.
- **off** is an adverb signifying **separation/getting away** from somewhere.

Hence, the correct sentence is: *Ritu was shocked on learning that her kids had **wandered off** somewhere after school .*

★ Confusion Points

- The word 'off' can be a preposition, adverb, and adjective depending on how it is used.
- Example:
  - He took his foot off the accelerator as soon as he saw the speed breaker. ( **preposition** )
  - The food smelled a bit off. ( **adjective** )
  - He went off the pitch in frustration after the loss. ( **adverb** )

---

8. Answer: a

**Explanation:**

The correct answer is '**the**'

★ Key Points

- In the given, article '**the**' is used before a **collective noun** .
- The collective noun here is a **group** of **women novelists** .

Hence, the correct sentence is: *The BBC has a wonderful series on **the** emergence of women novelists in English literature .*

---

9. Answer: b

**Explanation:**

The erroneous spelling is 'Tolerance'

★ Key Points

- The correct spelling of a word is **tolerance**
- Meaning of **tolerance**: the ability or willingness to accept opposing opinions, habits, or beliefs
  - Example: *FIFA decided that there would be no tolerance for racism in football.*

10. Answer: b

**Explanation:**

The correct answer is 'Transient'

★ Key Points

- Let's look at the meaning of the word and its usage:
- **Transient**: lasting for only a short period of time or temporary.
  - Example: *The cold shower had a transient soothing effect on me.*

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11. Answer: d

**Explanation:**

The correct answer is 'polished it off'

★ Key Points

- To **polish it off** means to **finish off** or **consume** something quickly
- It's a **phrasal verb** (verb and adverb). In the given sentence, it describes the **manner** in which Vidushi ate the cake.

Hence, the correct answer is: *Vidushi liked the cake so much that she **polished it off**.*

12. Answer: a

**Explanation:**

The correct answer is ' **Vital** '

★ Key Points

- The word **crucial** means **decisive** or **critical** especially in the success or failure of something.
- The word **vital** meaning absolutely **necessary** or **essential** is closest to that meaning.
  - Example: *it's absolutely vital to keep a steady oxygen flow for the ICU patient.*
- Hence, **Vital** is the synonym for **crucial**

---

13. Answer: c

**Explanation:**

The correct answer is ' **Obscure** '

★ Key Points

- Renowned means **famous** or **well known**
- Obscure means **not discovered** or known about. it's exactly the opposite of renowned.
  - Example: *Rakesh was an obscure writer until a big publisher read his novel.*

★ Additional Information

- **Vain**: having or showing an excessively high opinion of one's appearance, abilities, or worth.
- **Noted**: notice or pay particular attention to (something).
- **Glorious**: having, worthy of, or bringing fame or admiration.

14. Answer: a

**Explanation:**

The correct answer is 'advisable'

★ Key Points

- Since advisable is an adjective, it is followed by the to-infinitive as given in the sentence.
- Let's see the meanings of the given words-
  - Advisable- (of a course of action) to be recommended; sensible.
  - Improper- not in accordance with accepted standards, especially of morality or honesty.
  - Advising- offer suggestions about the best course of action to someone.
  - Imprudent- not showing care for the consequences of an action; rash.

Hence, the correct sentence is: *During the monsoons it is advisable to boost one's immunity with a proper diet and regular exercise.*

---

15. Answer: a

**Explanation:**

The correct answer is 'locating'

★ Key Points

- The first clause of the sentence is in the present tense so **locating** is the **present continuous form** which gives coherent meaning .
- Let's see the meanings of the given words-
  - **Locating**- discover the exact place or position of. or situate in a particular place.
  - **Unlocking**- undo the lock of (something), typically with a key.

- **Starting**- begin or be reckoned from a particular point in time or space.
- **Establishing**- set up on a firm or permanent basis.

Hence, the correct sentence is: *The Blood Finder app is very useful in locating the correct donor.*

---

16. Answer: b

**Explanation:**

The correct answer is 'A weakness that can be taken advantage of'

★ Key Points

- Chinks in the armour means **vulnerability** or a **weakness** that can be taken advantage of
  - Example: *The presidential candidate had a chink in his armour.*

*Hence, the correct answer is Option 2.*

---

17. Answer: a

**Explanation:**

The correct answer is 'to going out'

★ Key Points

- The sentence has the adjective **thrilled** which should be followed by an infinitive over a gerund .
- So the infinitive 'to go' will come after the adjective.

Hence, the correct sentence is: *I was thrilled to go out with my friend for the film.*

★ Additional Information

- if there was a verb in place of the adjective in the sentence. We could have used a gerund which could be identified by adding suffix-ing.
  - Example: *I enjoy painting the walls of my house.*

---

18. Answer: b

**Explanation:**

The correct answer is 'Delight'

★ Key Points

- Let's see the meanings of the given words
- **Irritate** : means to **annoy someone** or make a person angry
- **Delight** : means to **please someone** greatly. This is exactly the opposite of the meaning of the word irritate.
  - Example: *it was a **delight** to hear the lecture by Prof. Roy.*

Hence, the correct answer is Option 2.

---

19. Answer: c

**Explanation:**

The correct answer is 'investigate'

★ Key Points

- Let's see the meanings of the given words-
- **Mediate**- intervene in a dispute in order to bring about an agreement or reconciliation.
- **Answer**- a thing that is said, written, or done as a reaction to a question, statement, or situation.
- **Delay**- make (someone or something) late or slow.
- **Interrogate** : means to **ask questions** of (someone) closely or formally

- **Investigate** : means to conduct a formal **inquiry** to ascertain the facts of the matter. it is closest to the word interrogate.
  - *The police **investigation** revealed that the crime scene was wiped clean after the incident.*

Hence, the correct answer is Option 3.

---

## 20. Answer: d

### Explanation:

The erroneous part is 'is then no longest'

#### ★ Key Points

- The phrase 'no longest' is an **irregular** verb usage.
- The correct form of the phrase is 'no longer ' implying the action is **not continuing** in the present.
- The phrase ' **then** ' refers to a particular moment in time. The use of 'then' in this case is needless as the statement is in the present tense.

**Hence, the correct sentence is:** *According to current research by World Health Organisation, a 65-year-old person is **no longer** categorised as old.*

---

## 21. Answer: a

### Explanation:

The correct answer is 'when'

#### ★ Key Points

- The word 'when' is used as a **conjunction** in a statement. it is also used to denote '**at that time**' .
- when is usually used with the simple past tense and present tense.

- In the given sentence, **when** is used as a conjunction to mark **two simultaneous events** happening in the **past**

So the complete passage is:- *The pandemic in India occurred at a time (1) when the crop was standing all ready to be (2) harvested. If NAFED had not intervened with the initiative (3) to purchase the stocks of farmers in these circumstances, it (4) would not only have been devastating for the farmers (5) but also led to a food emergency later on.*

★ Additional Information

- **When** can be used as subordinate conjunction to join independent and dependent clause.
  - Example: *It was raining outside when he entered the store .*

---

22. Answer: b

Explanation:

The correct answer is ' harvested '

★ Key Points

- The first part of the sentence is in the past tense and the verb-ed modifier continues the past tense
- the correct verb form associated with crops is **harvested**

Hence, the correct sentence is :*the crop was standing all ready to be harvested.*

So the complete passage is:- *The pandemic in India occurred at a time (1) when the crop was standing all ready to be (2) harvested. If NAFED had not intervened with the initiative (3) to purchase the stocks of farmers in these circumstances, it (4) would not only have been devastating for the farmers (5) but also led to a food emergency later on.*



23. Answer: c

**Explanation:**

The correct answer is 'to purchase'

★ Key Points

- To is a prepositional verb. it indicates a **goal** or **direction** .
- in the given sentence, **to** is followed by the **verb 'purchase'**

So the complete passage is:- *The pandemic in India occurred at a time (1) when the crop was standing all ready to be (2) harvested. If NAFED had not intervened with the initiative (3) to purchase the stocks of farmers in these circumstances, it (4) would not only have been devastating for the farmers (5) but also led to a food emergency later on.*

24. Answer: c

**Explanation:**

The correct answer is 'would'

★ Key Points

- Would is the **past tense** form of will. it is used to denote an **action in the past** and also **conditional statements** .
- The presence of have been in the sentence denotes action started in the past.

So the complete passage is:- *The pandemic in India occurred at a time (1) when the crop was standing all ready to be (2) harvested. If NAFED had not intervened with the initiative (3) to purchase the stocks of farmers in these circumstances, it (4) would not only have been devastating for the farmers (5) but also led to a food emergency later on.*

25. Answer: a

Explanation:

The correct answer is ' but '

★ Key Points

- But is used as a conjunction in the given sentence to link two ideas
- The use of conjunction needs to be in agreement with the two clauses.

So the complete passage is:- *The pandemic in India occurred at a time (1) when the crop was standing all ready to be (2) harvested. If NAFED had not intervened with the initiative (3) to purchase the stocks of farmers in these circumstances, it (4) would not only have been devastating for the farmers (5) but also led to a food emergency later on.*

26. Answer: c

Explanation:

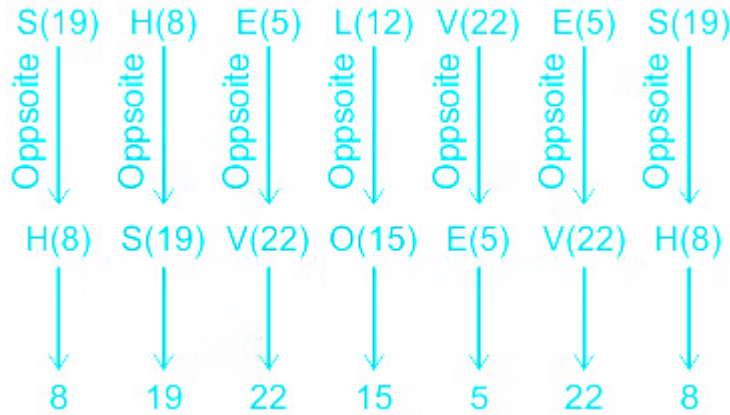
The table is alphabets place value:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is:

Sum of the opposite alphabets place value + 1 = number.

SHELVES is coded as 100

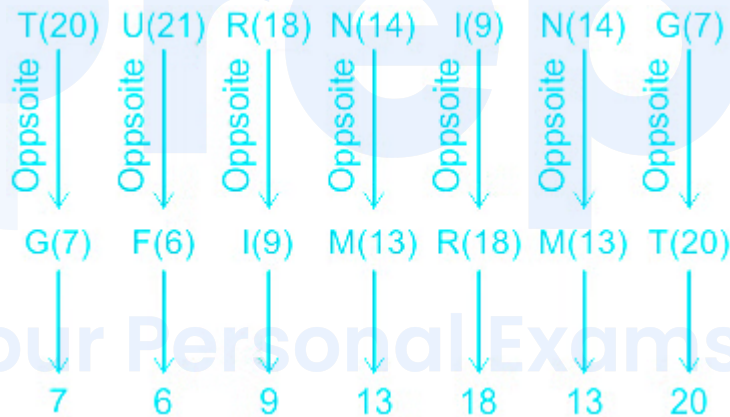


Sum of the opposite alphabets place value + 1 = number.

$$\Rightarrow (8 + 19 + 22 + 15 + 5 + 22 + 8) + 1 = 99 + 1 = 100$$

And,

TURNING is coded as 87

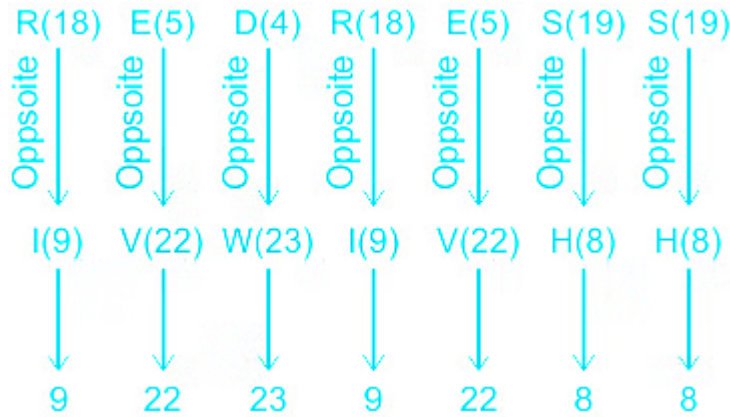


Sum of the opposite alphabets place value + 1 = number.

$$\Rightarrow (7 + 6 + 9 + 13 + 18 + 13 + 20) + 1 = 86 + 1 = 87$$

Similarly,

REDRESS = ?



Sum of the opposite alphabets place value + 1 = number.

$$\Rightarrow (9 + 22 + 23 + 9 + 22 + 8 + 8) + 1 = 101 + 1 = 102$$

Hence, ' REDRESS ' is coded as "102".

27. Answer: d

Explanation:

The logic followed here is:

'Frogs' is related to 'Croak' → A **croak** is the low, hoarse **sound** a **frog** makes.

Similarly,

Scream → A **scream** is the high-pitched **sound** a **peacock** makes.

Hence, 'Scream' is the correct answer.

★ Important Points







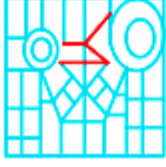
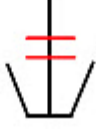
Now check all the options:

1. Growl → A **growl** is the high-pitched **sound** bear, lion, tiger, or wolf makes.
2. Grunt → A **grunt** is the **sound** a pig makes.
3. Hiss → A **hiss** is the **sound** a snake makes.

28. Answer: b

Explanation:

The embedded part of this image is:

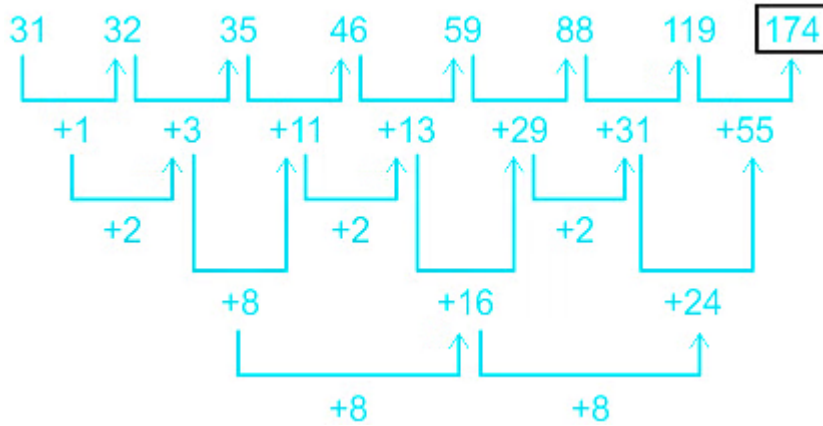
No.	Option	Question	Answer
1.			Not Embedded
2.			Embedded
3.			Not Embedded
4.			Not Embedded

Hence, option (2) is the correct answer.

29. Answer: a

Explanation:

The pattern follows here is:

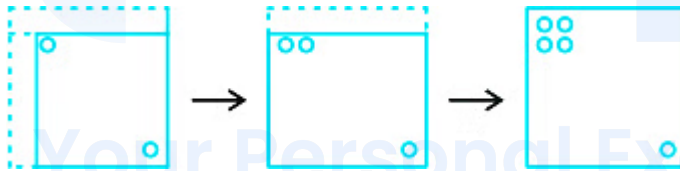


Hence, correct answer is "174"

30. Answer: c

Explanation:

The image obtained when the paper is unfolded is,



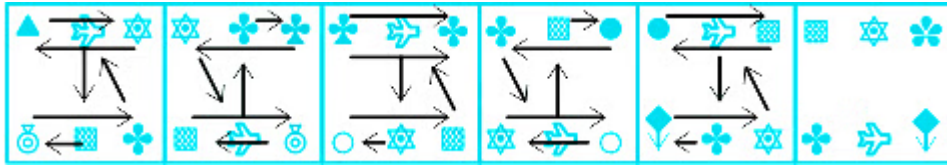
Hence, option 3 is the correct answer.

31. Answer: a

Explanation:

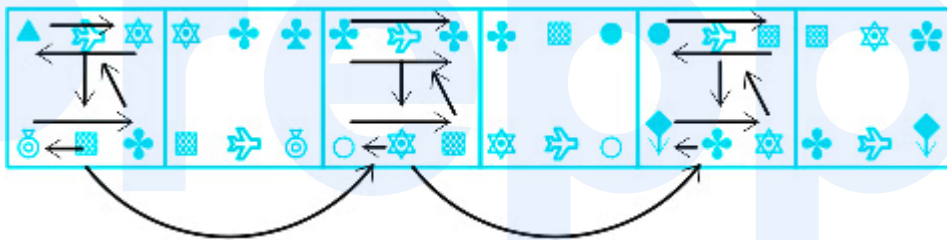
The figure that will replace the question mark (?) in the following figure series is shown below:

The aeroplane's small figure moves up and down respectively. Two cases generate



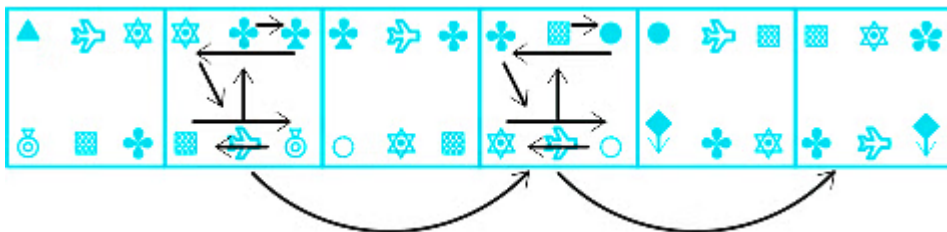
Case I:- when an aeroplane small figure goes downward.

- 1) Upper left side triangle figure shifted to the upper right side and this figure shape changed.
- 2) Upper right side figure shifted to the upper left side.
- 3) Lower left side figure shifted to the lower right side.
- 4) Lower middle figure shifted to the lower left side.
- 5) Lower right side figure shifted to the upper middle.



Case II:- when an aeroplane small figure goes upward.

- 1) Upper left side figure shifted to the lower middle.
- 2) Upper middle figure shifted to the upper right side.
- 3) Upper right side figure shifted to the upper left side.
- 4) Lower left side figure shifted to the lower right side.
- 5) Lower right side figure shifted to the lower left side and this figure shape changed.



Final series is



Hence, 'option 1' is the correct answer.

32. Answer: c

Explanation:

The table is alphabets place value:

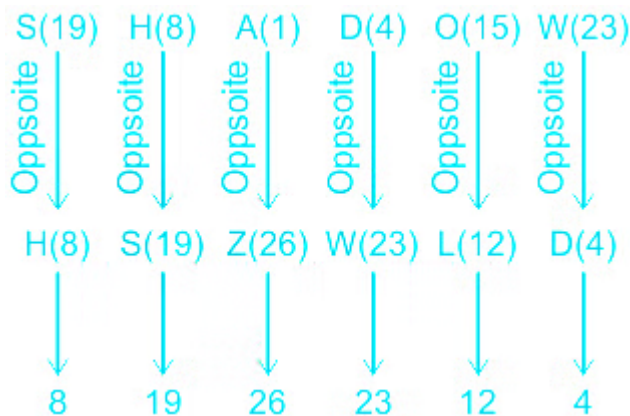
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is:

Sum of the opposite alphabets places value × number of vowels = number.

SHADOW is coded as 184

- SHADOW → Total number of vowels (A, O) is 2.



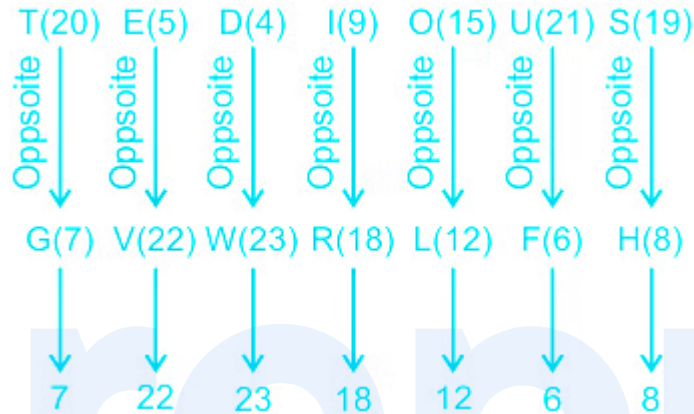


- Sum of the opposite alphabets place value  $\times$  number of vowels = number.
- $\Rightarrow (8 + 19 + 26 + 23 + 12 + 4) \times 2 = 92 \times 2 = 184$

And,

TEDIOUS is coded as 384

- **TEDIOUS**  $\rightarrow$  Total number of vowels (E, I, O, U) is 4.

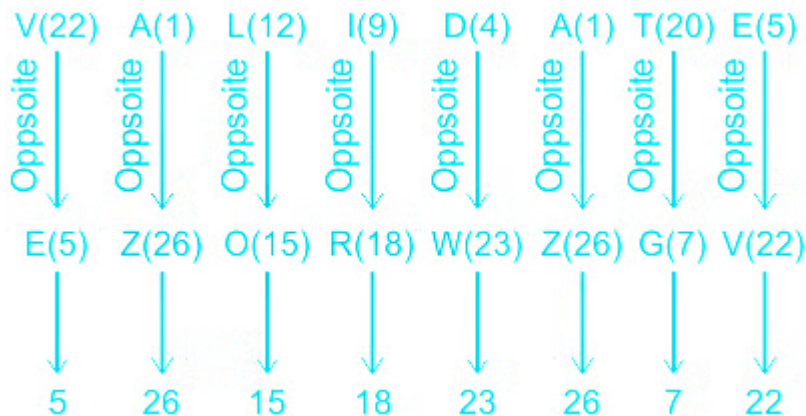


- Sum of the opposite alphabets place value  $\times$  number of vowels = number.
- $\Rightarrow (7 + 22 + 23 + 18 + 12 + 6 + 8) \times 4 = 96 \times 4 = 384$

Similarly,

**VALIDATE = ?**

- **VALIDATE**  $\rightarrow$  Total number of vowels (A, I, A, E) is 4.



- Sum of the opposite alphabets place value  $\times$  number of vowels = number.
- $\Rightarrow (5 + 26 + 15 + 18 + 23 + 26 + 7 + 22) \times 4 = 142 \times 4 = 568$

Hence, 'VALIDATE' is coded as "568".

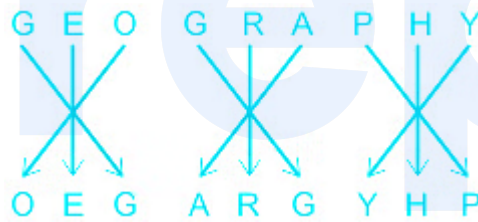
33. Answer: b

Explanation:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic here is,

GEOGRAPHY : OEGARGYHP



Similarly,

REASONING : ?



Hence, "AERN OSGNI" is the correct answer.

34. Answer: c

**Explanation:**

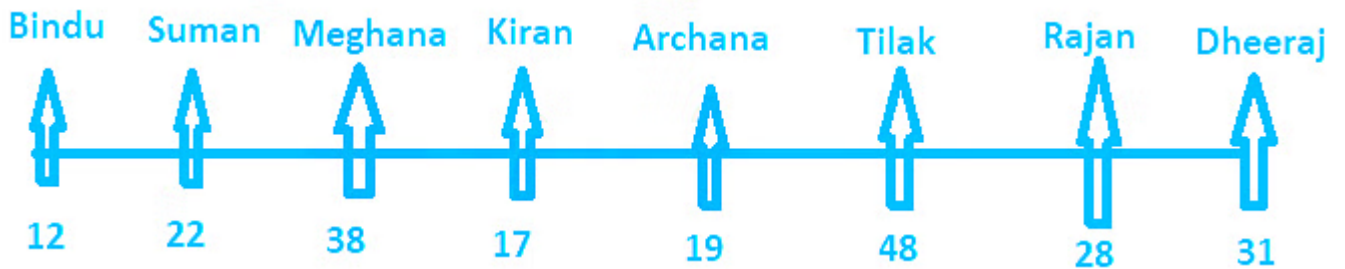
Given,

Eight members of a family – Archana, Suman, Dheeraj, Meghana, Bindu, Tilak, Rajan and Kiran are sitting in a straight line facing North.

They have different ages – 12,17, 19, 22, 28, 31, 38 and 48

- 1) Archana is sitting third to the right of the one who is 22 years old.
- 2) Archana is sitting in the middle of Kiran and Tilak. Archana is 12 years younger than Dheeraj.
- 3) Rajan and Dheeraj are sitting together and one of them is sitting at the extreme end of the line.
- 4) Kiran is not 12 years old.
- 5) One person is sitting between Kiran and one whose age is 48 years.
- 6) The difference between the ages of Bindu and Kiran is 5 years.
- 7) Meghana and the one who is 22 years old are sitting together.
- 8) The one who is 10 years older than Meghana is sitting third to the right of Meghana.

Final arrangement:



From the arrangement;

**Tilak** is sitting **third to the right of Meghana**.

Hence, the correct answer is "Tilak".

---

**35. Answer: a**

**Explanation:**

The pattern followed here is,

Let (1st number : 2nd number)

$$(1^{\text{st}} \text{ number})^2 + (1^{\text{st}} \text{ number} \div 2) = 2^{\text{nd}} \text{ number}$$

Now follow the steps:

$$24 : 588$$

$$\Rightarrow 24^2 + (24 \div 2) = 576 + 12 = 588 = 2^{\text{nd}} \text{ number}$$

Similarly,

$$26 : ?$$

$$\Rightarrow 26^2 + (26 \div 2) = 676 + 13 = 689 = 2^{\text{nd}} \text{ number}$$

Hence, "689" is correct answer.

---

**36. Answer: c**

**Explanation:**

The logic followed here is:

Audacious : Courageous → **Audacious** is the **synonym** of **Courageous** .

Similarly,

**Deflate** : **Collapse** → **Deflate** is the **synonym** of **Collapse** .

Hence, 'Collapse' is the correct answer.

---

**37. Answer: d**

**Explanation:**

Statements:

Some candles are bulbs

Some bulbs are generators

The least possible diagram for the given statements is as follows



Conclusions:

I. Some candles are generators → False (No direct relation given between candles and generators so it may be possible but not defined)

II. All candles are generators → False (No direct relation given between candles and generators so it may be possible but not defined)

Hence, "Neither conclusion I nor II follows" is the correct answer.

---

**38. Answer: c**

**Explanation:**

Given: The notification for six different posts – Clerk, PRO, Lecturer, Accountant, Watchman and Principal- are to be released on consecutive Fridays.

(i) Accountant post must be released on the fifth Friday and should not be immediately preceded by the PRO post.

(ii) The Watchman post must not be released last.

(iii) Lecturer posts must not be released immediately after the first release.

<b>Fridays</b>	<b>Post</b>	<b>Not should be released</b>
1		
2		Lecturer
3		
4		
5	Accountant	
6		Watchman, PRO

(iv) Clerk post must be released a week before the Watchman post.

(v) PRO post must be released on the Friday following the Friday on which the Principal post is released.

Clerk and watchman are on pair and PRO and Principal are also on pair only starting four weeks for this post notification.

So, Lecturer is in the last position.

Two cases are generated:

Fridays	Case I	Case II
1	Principal	Clerk
2	PRO	Watchman
3	Clerk	Principal
4	Watchman	PRO
5	Accountant	Accountant
6	Lecturer	Lecturer

In case I Clerk notifications will be released immediately after the PRO post and,

In case II Accountant notifications will be released immediately after the PRO post .

But Accountant is not given in Options.

Hence, "Clerk" is the correct answer.

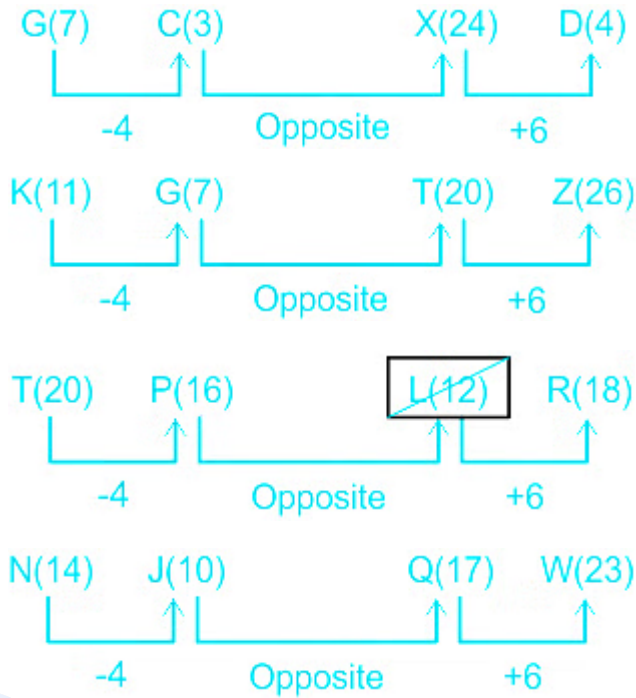
39. Answer: c

**Explanation:** Your Personal Exams Guide

Table show alphabet serial number –

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed is,



All follow the same pattern, except 'TPLR'.

Hence, "TPLR" is the odd one.

40. Answer: a

**Explanation:**

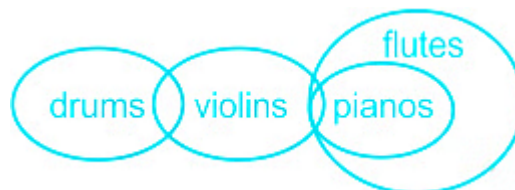
Statements:

Some drums are violins

Some violins are pianos

All the pianos are flutes.

The least possible diagram for the given statements is as follows





Conclusions:

I. Some flutes are violins → True (because some violins are pianos and all pianos are flutes so some flutes are also violins)

II. Some pianos are drums → False (there is no relationship given between drums and pianos so it may be possible but not defined)

III. No piano is drum → False (there is no relationship given between drums and pianos so it may be possible but not defined)

IV. Some violins are drums → True (because some violins are pianos so some pianos are also violins)

Here Conclusion II and III are complementary pairs.

Hence, "Both conclusions I and IV and either II or III follows".

41. Answer: d

Explanation:

BODMAS rule:

<b>B</b>	Brackets in order {}, {}, []	ब्रकेट {}, {}, [] क्रम में
<b>O</b>	of	का
<b>D</b>	Division (÷)	विभाजन (÷)
<b>M</b>	Multiplication (×)	गुणा (×)
<b>A</b>	Addition (+)	जोड़ (+)
<b>S</b>	Subtraction (-)	घटाव (-)

Decoding the information,

Symbol	Meaning
×	Addition (+)
÷	Subtraction (-)
+	Multiplication (×)
-	Division (÷)

Given:

$$75 \times 345 + 15 - 23 \div (15 + 18)$$

After replacing the signs from left to right and using the BODMAS rule,

$$75 + 345 \times 15 \div 23 - (15 \times 18)$$

$$= 75 + 345 \times 15 \div 23 - 270$$

$$= 75 + 345 \times 0.652 - 270$$

$$= 75 + 225 - 270$$

$$= 300 - 270$$

$$= 30$$

Hence, "30" is the correct answer.

42. Answer: a

**Explanation:**

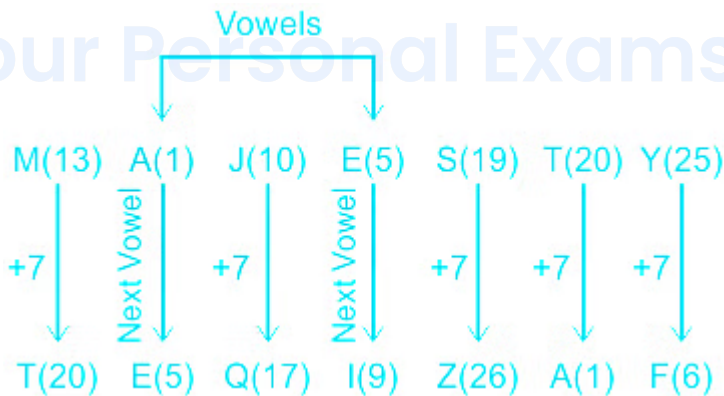
The table is alphabets place value:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is:

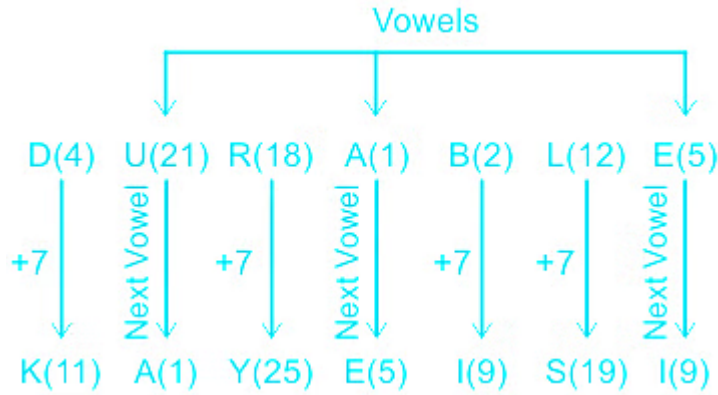
- Consonants are increased by +7.
- Vowels are coded as their next vowel.
- A → E → I → O → U.
- A is coded as E
- E is coded as I
- I is coded as O
- O is coded as U
- U is coded as A

MAJESTY is written as TEQIZAF



Similarly,

'DURABLE' = ?

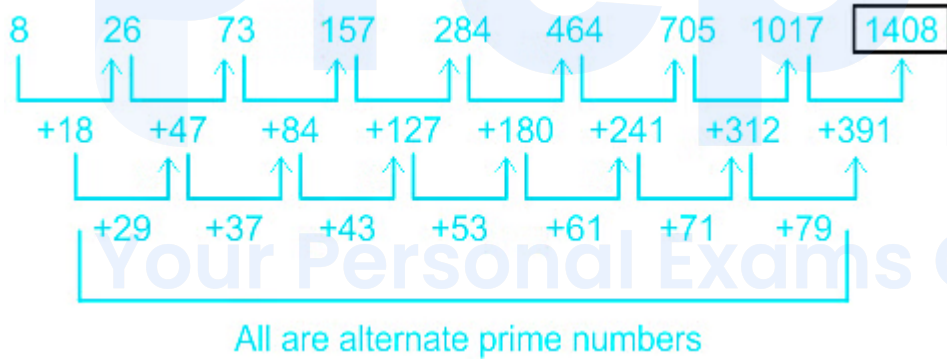


Hence, ' DURABLE ' is coded as "KAYEISI".

**43. Answer: c**

**Explanation:**

The pattern followed here is:



The prime number is 29,31, 37,41, 43,47, 53,59, 61,67, 71,73, 79.

Here skipped prime numbers are **31**, 41, 47, **59**, 67, 73

Hence, "1408" is the correct answer.

**44. Answer: c**

**Explanation:**

The Logic followed here is:

$$(1 \text{ st Number} \div 5) + 2 \text{ nd number} = 3 \text{ rd Number}$$

In (105, 6, 27):

$$= (105 \div 5) + 6$$

$$= 21 + 6$$

$$= 27 = \text{Second Number}$$

Similarly,

In Option (3): (145, 8, 37):

$$(1 \text{ st Number} \div 5) + 2 \text{ nd number}$$

$$= (145 \div 5) + 8$$

$$= 29 + 8$$

$$= 37 = \text{Second Number}$$

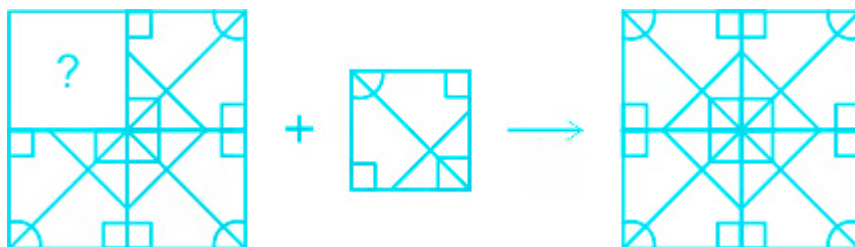
Hence, the correct answer is " (145, 8, 37) ".

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### 45. Answer: a

#### Explanation:

The figure that will replace the question mark (?) in the following figure series is shown below:



Hence, ' option 1 ' is the correct answer.

**46. Answer: d**

**Explanation:**

The correct mirror image of the given figure when the mirror is held at the right side is:



Detailed Explanation:

- The line PQ is the mirror
- The given word "&VEcTORANaLYsIS2" ends with '2' . So the mirror image will start with "

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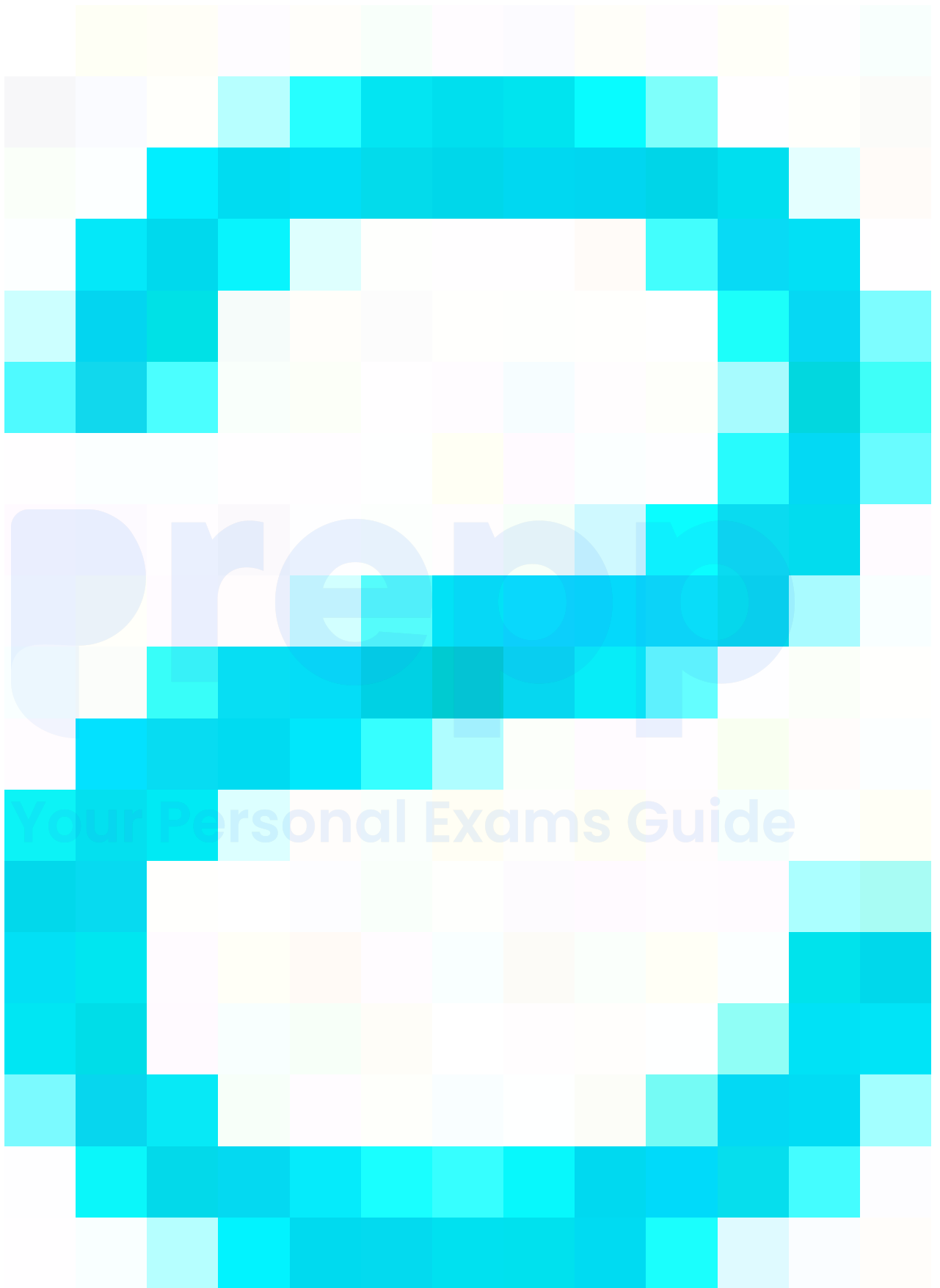
" → Options 1 and 3 are eliminated.

- The given word " &VEcTORANaLYsIS2 " second last ends with 'S' . So the mirror image will start with "

prepp

Your Personal Exams Guide





" → Options 2 is eliminated.

Hence, "option (4)" is the correct answer

**47. Answer: b**

**Explanation:**

The table is alphabets place value:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is:

MEALTIME is written as TMMLEEAA

M(13) E(5) A(1) L(12) T(20) I(9) M(13) E(5)

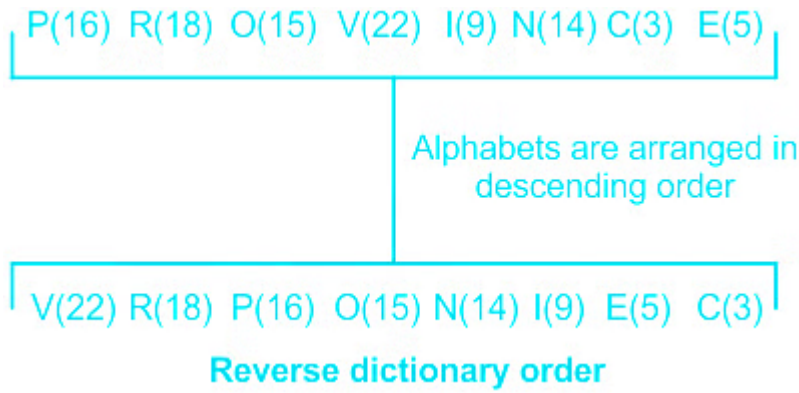
Alphabets are arranged in descending order

T(20) M(13)M(13) L(12) I(9) E(5) E(5) A(1)

**Reverse dictionary order**

Similarly,

PROVINCE is written as



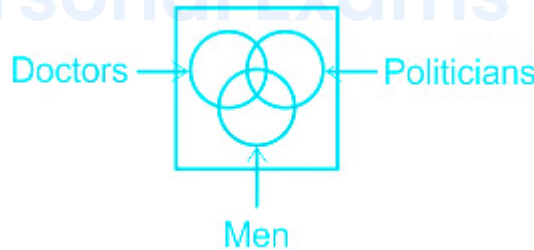
Hence, ' PROVINCE ' is coded as "VRPONIEC".

**48. Answer: b**

**Explanation:**

The Venn diagrams best represent the relationship between - Teachers, Graduates, Tennis players figures are shown below:

- Some doctors are politicians.
- Some doctors are men.
- Some politicians are men.
- Some men are both doctors and politicians.

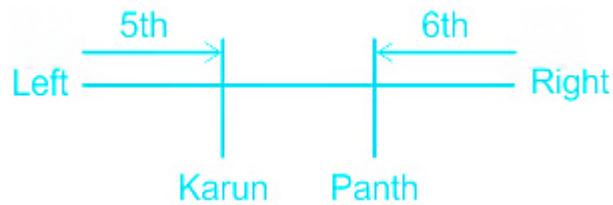


Hence, ' option 2 ' is the correct answer.

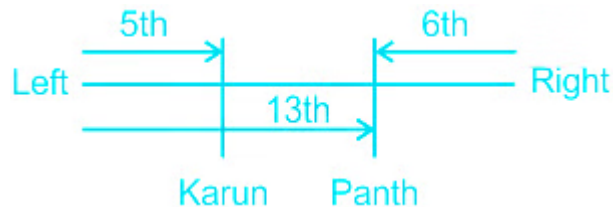
**49. Answer: c**

**Explanation:**

1) Karun is 5th from the left and Panth is 6th from the right.



2) When they exchange their position, Karun becomes 13th from the left.



=> The number of boys in the row = Karun position from the left + Karun position from the right - 1

=> The number of boys in the row =  $13 + 6 - 1 = 19 - 1 = 18$

**Position of Panth from the right:**

=> The number of boys in the row = Panth position from the left + Panth position from the right - 1

=> Panth position from the right = The number of boys in the row - Panth position from the left + 1

=> Panth position from the right =  $18 - 5 + 1 = 19 - 5 = 14$

Hence, total "14" students in the row.

50. Answer: d

**Explanation:**

According to the BODMAS rule:

<b>B</b>	Brackets in order (), {}, []	ब्रैकेट (), {}, [] क्रम में
<b>O</b>	of	का
<b>D</b>	Division (÷)	विभाजन (÷)
<b>M</b>	Multiplication (×)	गुणा (×)
<b>A</b>	Addition (+)	जोड़ (+)
<b>S</b>	Subtraction (-)	घटाव (-)

**Option 1 : - and +**

Given:

$$110 + 728 \div 28 - 15 \times 413 = 87$$

After interchange the signs;

$$110 - \underline{728 \div 28} + 15 \times 413 = 87$$

By BODMAS rule

$$110 - 26 + \underline{15 \times 413} = 87$$

$$\underline{110} - 26 + \underline{6195} = 87$$

$$\underline{6305} - 26 = 87$$

$$6279 = 87 \text{ (LHS } \neq \text{ RHS)}$$

**Option 2 : ÷ and -**

Given:

$$110 + 728 \div 28 - 15 \times 413 = 87$$

After interchange the signs;

$$110 + 728 - \underline{28 \div 15} \times 413 = 87$$

By BODMAS rule

$$110 + 728 - \underline{1.87 \times 413} = 87$$

$$\underline{110 + 728} - 770.94 = 87$$

$$\underline{838 - 770.94} = 87$$

$$67.60 = 87 \text{ (LHS } \neq \text{ RHS)}$$

Option 3:  $\div$  and  $+$

Given:

$$110 + 728 \div 28 - 15 \times 413 = 87$$

After interchange the signs;

$$\underline{110 \div 728} + 28 - 15 \times 413 = 87$$

By BODMAS rule

$$0.151 + 28 - \underline{15 \times 413} = 87$$

$$\underline{0.151 + 28} - 6195 = 87$$

$$\underline{28.151 - 6195} = 87$$

$$-6166.849 = 87 \text{ (LHS } \neq \text{ RHS)}$$

Option 4:  $\times$  and  $-$

Given:

$$110 + 728 \div 28 - 15 \times 413 = 87$$

After interchange the signs;

$$110 + \underline{728 \div 28} \times 15 - 413 = 87$$

By BODMAS rule

$$110 + \underline{26 \times 15} - 413 = 87$$

$$\underline{110 + 390} - 413 = 87$$

$$\underline{500 - 413} = 87$$

$$87 = 87(\text{LHS} = \text{RHS})$$

Hence, the answer is " × and −".

---

**51. Answer: a**

**Explanation:**

Calculation:

Total number of students enrolled in A during 2017 and 2018 = 250 + 260

⇒ 510

Total number of students enrolled in B during 2014 and 2015 = 225 + 360

⇒ 585

Ratio = 510 : 585

⇒ 34 : 39

∴ Required answer is 34 : 39

---

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**52. Answer: b**

**Explanation:**

Given:

x is subtracted from each of 52, 47, 20 and 19 the numbers so obtained in this order are in proportion

Formula Used:

when four numbers a, b, c & d are in proportion

then  $a/b = c/d$  or  $ad = bc$

Mean Proportion of  $a$  and  $b = \sqrt{ab}$

**Calculation:**

According to question,

$$(52 - x)/(47 - x) = (20 - x)/(19 - x)$$

$$\Rightarrow 988 - 52x - 19x + x^2 = 940 - 47x - 20x + x^2$$

$$\Rightarrow 4x = 48$$

$$\Rightarrow x = 12$$

Now,

$$(x + 13) \text{ and } (x - 8) = 25 \text{ and } 4$$

$$\text{So, mean proportion} = \sqrt{(25 \times 4)} = 10$$

$\therefore$  Required answer is 10

53. Answer: c

**Explanation:**

**Given:**

M.P = Rs. 400 and discount = 20%

**Concept used:**

$$\text{Gain\%} = [(S.P. - C.P)/C.P] \times 100$$

$$S.P = [(100 - D\%)/M.P] \times 100$$

$$\text{Profit} = S.P - C.P$$



Where C.P = Cost Price, S.P = Selling Price, M.P = Marked Price, D% = Discount %

**Calculation:**

According to the question,

$$S.P = [(100 - D\%)/M.P] \times 100$$

$$S.P = M.P. \times 80/100$$

$$\Rightarrow 400 \times 80/100$$

$$\Rightarrow \text{Rs. } 320$$

$$C.P. = S.P. - \text{Profit}$$

$$\Rightarrow 320 - 48$$

$$\Rightarrow \text{Rs. } 272$$

$$\text{Gain percentage} = (48/272) \times 100 = 17 \frac{11}{17} \%$$

$\therefore$  Required gain percentage is  $17 \frac{11}{17} \%$

54. Answer: d

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**Explanation:**

**Given:**

A' is 3 times as good a workman as 'B' and therefore is able to complete a job in 36 days less than 'B'

**Concept used:**

Total work = LCM of time taken by the workers

Efficiency of work is inversely proportional to the time

**Calculation:**

Ratio of efficiency of A and B = 3 : 1

So,

Ratio of time taken by A and B = 1 : 3

Let time taken by A and B be  $x$  days and  $3x$  days

According to the question,

$$3x - x = 36 \text{ days}$$

$$\Rightarrow 2x = 36$$

$$\Rightarrow x = 18$$

So,

$$A = 18 \text{ days}$$

$$B = 54 \text{ days}$$

Now,

Total work = 54 units

$$\text{So, time taken by them} = 54/4 = 13 \frac{1}{2} \text{ days}$$

$\therefore$  Required time is  $13 \frac{1}{2}$  days

---

**55. Answer: d**

**Explanation:**

**Given:**

The median of the set of 11 distinct observations is 17.5.

**Concept used:**

Median of set of n observation =  $[(n + 1)/2]^{\text{th}}$  observation

**Calculation:**

$[(n + 1)/2]^{\text{th}}$  observation = 6th observation

∴ The 6th observation is not changed.

∴ The median of the new set remains the same.

**56. Answer: d**

**Explanation:**

**Given:**

Difference between the shares of B and D is Rs. 1,600

$$A : B = 3 : 1$$

$$B : C = 5 : 2$$

$$C : D = 2 : 1$$

**Calculation:**

Ratio of shares of A, B, C, and D is calculated as below,

$$\begin{array}{r} A : B : C : D \\ \hline 3 : 1 : 1 : 1 \\ 5 : 5 : 2 : 2 \\ 2 : 2 : 2 : 1 \\ \hline 30 : 10 : 4 : 2 \\ 15 : 5 : 2 : 1 \end{array}$$

Now,

$$(5 - 1) \text{ units} = 4$$

Here 4 units = 1600

⇒ 1 unit = 400

⇒ 23 units = 9200

∴ The sum is Rs. 9200

**57. Answer: c**

**Explanation:**

**Formula used:**

$$\text{Base}^2 + \text{Perpendicular}^2 = \text{Hypotenuse}^2$$

**Calculation:**

Let the Length, breadth, and diagonal of the rectangular field be  $l$ ,  $b$ , and  $d$

Letting that  $l > b$

In the right-angle triangle ABC.

By using Pythagoras Theorem we have:

$$l^2 + b^2 = d^2 \dots (1)$$

$$l + b - d = \frac{1}{4} \times l$$

$$\Rightarrow l + b - \frac{l}{4} = d$$

$$\Rightarrow \frac{3l}{4} + b = d \dots (2)$$

Putting the value of  $d$  in equation (1), we get:

$$l^2 + b^2 = \left(\frac{3l}{4} + b\right)^2$$

$$\Rightarrow l^2 + b^2 = \frac{9l^2}{16} + b^2 + 2 \times \frac{3l}{4} \times b$$

$$\Rightarrow l^2 - 9l^2/16 = 3lb/2$$

$$\Rightarrow 7l/8 = 3b$$

$$\Rightarrow l/b = 3 \times 8/7$$

$$\Rightarrow l/b = 24/7$$

$\therefore$  The ratio of the larger to the smaller side is 24 : 7

**58. Answer: c**

**Explanation:**

**Given:**

Total number of students = 80

Part of the students who are girls = 60%

The average weight of boys = 5% more than the average weight of girls

The average weight of all the students = 51 kg

**Formula used:**

Average weight = Sum of the weight/ No of students

**Calculation:**

Number of girls =  $80 \times 60/100 = 48$

Number of boys =  $80 \times 40/100 = 32$

Let the average weight of the girls be  $b$

Average weight of the boys =  $b \times 105/100 = 21b/20$

Now,

$$51 \text{ kg} = (48 \times b + 21b/20 \times 32)/80$$

$$\Rightarrow 51 \times 80 = (240b + 168b)/5$$

$$\Rightarrow b = 20400/408$$

$$\Rightarrow b = 50 \text{ kg}$$

Average of girls = 50 kg

So, average of boys =  $50 \times 105/100 = 52.5$

$\therefore$  The average weight of the girls is approximately 52.5 kg

59. Answer: c

Explanation:

Given:

4 men can reap a field in 5 days working 9 hours a day

Formula used:

$$(M_1 \times D_1 \times H_1)/W_1 = (M_2 \times D_2 \times H_2)/W_2$$

Calculation:

$$(4 \times 5 \times 9)/1 = (10 \times D_2 \times 6)/1$$

$$\Rightarrow D_2 = (4 \times 5 \times 9)/(10 \times 6)$$

$$\Rightarrow D_2 = 3$$

$\therefore$  The required number of days are 3.

60. Answer: d

### Explanation:

Given:

Distance between place A and B = 90 km

Speed of Sita = Speed of Geeta - 3 km/h

Formula used:

Ratio of distance = Ratio of speed (When the time is equal)

Calculation:

Distance travelled by Sita = 75 km

Distance travelled by Geeta = 90 + 15 = 105 km

Ratio of Distance in a certain time travelled by Sita and Geeta is equal to the ratio of the speed = 75 : 105

⇒ 5 : 7

⇒ 7 - 5 = 2 units = 3 km/h

⇒ 1 unit = 1.5 km/h

⇒ 5 = 5 × 1.5 = 7.5 km/h

∴ The speed of Sita is 7.5 km/h.

---

61. Answer: a

Explanation:

Calculation:

Total number of students enrolled in A during 2014, 2016 and 2018 = 160 + 300 + 260

⇒ 720

Total number of students enrolled in B during five years = 225 + 360 + 375 + 325 + 225

⇒ 1510

Average =  $1510/5 = 302$

Required % =  $720/302 \times 100$

⇒  $238.410\% \approx 238.4\%$

∴ Required answer is 238.4%

---

62. Answer: b

Explanation:

Calculation:

LCM of 6, 12 and 16 = 48

Multiples of 48 which lie between 300 and 500 are 336, 384, 432 and 480

Sum of all the numbers =  $336 + 384 + 432 + 480 = 1632$

∴ Required sum is 1632

---

63. Answer: d

Explanation:

Given:

Ratio of Rs.63800 to be shared between A and B = 4 : 7



**Calculation:**

Let share of A and B be  $4x$  and  $7x$

According to the question,

$$11x = 63800$$

$$\Rightarrow x = 5800$$

Now, difference between them =  $7x - 4x = 3x$

$$\text{So, } 3x = 3 \times 5800$$

$$\Rightarrow 17400$$

$\therefore$  The difference between their share (in ₹) is 17400

★ Shortcut Trick

The difference between the ratio of A and B is  $(7 - 4) = 3$ . Hence, our answer should be divisible by 3, Only 17400 among the options is divisible by 3. Hence, the difference between the share is Rs. 17400.

**64. Answer: c****Explanation:**

Given:

Length of rectangle =  $\frac{3}{5}$  of radius of circle

Radius of circle = Side of square with area  $6400 \text{ m}^2$

Breadth of rectangle = 20 m

Formulas used:

Area of square =  $(\text{Side})^2$

Area of rectangle = Length  $\times$  Breadth

**Calculation:**

Area of square =  $6400 \text{ m}^2$

$\Rightarrow \text{Side}^2 = 6400$

$\Rightarrow \text{Side} = \sqrt{6400} = 80 \text{ m}$

Radius of circle =  $80 \text{ m}$

$\Rightarrow \text{Length of rectangle} = \frac{3}{5} \times 80 = 48 \text{ m}$

Area of the rectangle =  $48 \times 20 \text{ m}^2$

$\Rightarrow 960 \text{ m}^2$

$\therefore$  The area (in  $\text{m}^2$ ) of the rectangle is **960**

---

**65. Answer: d**

**Explanation:**

**Given:**

Reduction in the price of wheat is 20%

Quantity of wheat (more) purchased 5 kg for Rs. 800

**Concept Used:**

It is based on the inverse proportion or product constancy concept.

**Calculation:**

Let the original price per be Rs.  $100x$  per kg

So, the reduced price will be  $100x \times 80\% = \text{Rs. } 80x$  per kg

$$(800/80x) - (800/100x) = 5$$

$$\Rightarrow 10/x - 8/x = 5$$

$$\Rightarrow 2/x = 5$$

$$\Rightarrow x = 2/5$$

So, original price =  $100 \times 2/5 = \text{Rs. } 40 \text{ per/kg}$

$\therefore$  The original price (in ₹) of wheat per kg is 40

★ Alternate Method

20% reduction = 5 kg more

If 100% reduction = 25 kg total new quantity

Original Quantity =  $25 - 5 = 20 \text{ kg}$

So, original price =  $800/20$

$\Rightarrow 40 \text{ per/kg.}$

$\therefore$  The original price (in ₹) of wheat per kg is 40

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66. Answer: a

**Explanation:**

**Given:**

Area of the rectangular room =  $60 \text{ m}^2$

**Formula used:**

Area of rectangle =  $a \times b$ , Where a and b are length and breadth of the rectangle respectively.

Perimeter of rectangle =  $2(a + b)$

Area of the square = side <sup>2</sup>

**Calculation:**

$$ab = 60$$

$$2(a + b) = 34$$

$$\Rightarrow a + b = 17$$

Squaring on both sides,

$$a^2 + b^2 + 2ab = 289$$

$$\Rightarrow a^2 + b^2 + 2 \times 60 = 289$$

$$\Rightarrow a^2 + b^2 = 169$$

$$\Rightarrow \sqrt{a^2 + b^2} = \text{Diagonal of the rectangle} = \text{Side of the square} = \sqrt{169}$$

$$\Rightarrow \text{Side of the square} = 13 \text{ cm}$$

$$\text{Area of the square} = 13 \times 13 = 169 \text{ cm}^2$$

67. **Answer: b**

**Explanation:**

**Given:**

Principal = Rs. 75000

Rate of interest are 5% and 7%

Time = 3 years

**Formula used:**

Simple Interest =  $\frac{PTR}{100}$

**Calculation:**

$$\text{Simple interest payable} = 75000 \times 5/100 \times 3$$

$$\Rightarrow \text{Rs. 11250}$$

$$\text{Simple interest Receivable} = 75000 \times 7/100 \times 3$$

$$\Rightarrow \text{Rs. 15750}$$

$$\text{Gain} = 15750 - 11250 = 4500$$

$\therefore$  His gain (in ₹) 4500

★ **Shortcut Trick**

$$\text{Gain} = 75000 \times (7 - 5)\% \times 3$$

$$\Rightarrow 75000 \times 2/100 \times 3$$

$$\Rightarrow \text{Rs.4500}$$

---

**68. Answer: b**

**Explanation:**

Given:

Ratio of the votes cast for two candidates = 4 : 9

The successful candidate received 984321 votes

**Calculation:**

Let the votes cast for two candidates be  $4a$  and  $9a$

According to the question,

$$9a = 984321$$

$$\Rightarrow a = 984321/9 = 109369$$

$$\text{Total votes polled} = 4a + 9a = 13a$$

$$\Rightarrow 13a = 13 \times 109369 = 1421797$$

**$\therefore$  The total votes polled were 1421797**

**69. Answer: c**

**Explanation:**

**Given:**

Time taken by the train to travel from P and Q = 1 hour 20 minutes

**Concept used:**

$$\text{Distance/Speed} = \text{Time}$$

$$\text{Time} = 1/\text{speed}$$

**Calculation:**

Let the usual speed be 6 units/h

$$\Rightarrow \text{Reduced speed} = 6 \times 5/6 = 5 \text{ units/h}$$

Total distance covered by the train with usual speed =  $4/3 \times 6 = 8$  units [1 hour 20 minutes =  $4/3$  hours]

So,

With reduced speed

$$\Rightarrow 8/5 \text{ hours}$$

$$\Rightarrow 60 \times 8/5 = 96 \text{ minutes or 1 hour 36 minutes}$$

**$\therefore$  Time taken to travel from P to Q with reduced speed is 1 hour 36 minutes.**

★ Alternate Method

$$s_1/s_2 = t_2/t_1$$

$$s_1 = 6 \text{ units, and } s_2 = 5 \text{ units}$$

$$t_1 = 4/3 \text{ hours}$$

$$\Rightarrow 6/5 = t_2/4/3$$

$$\Rightarrow 8/5 \text{ hours} = 1 + 3/5 \text{ hours}$$

$$\Rightarrow 1 \text{ hour} + 3/5 \times 60 \text{ minutes}$$

$$\Rightarrow 1 \text{ hour } 36 \text{ minutes}$$

---

70. **Answer: d**

**Explanation:**

**Given:**

The average of the first three numbers is three times the fourth number

Average of all the four numbers is 55

**Concept used:**

Average = Sum of elements/No. of elements

**Calculation:**

Let fourth number be  $x$

Average of first 3 numbers =  $3x$

Sum of first 3 numbers =  $3 \times 3x = 9x$

Total of 4 numbers =  $55 \times 4$

$$\Rightarrow 220$$

According to the question,

$$9x + x = 220$$

$$\Rightarrow x = 220/10 = 22$$

$$\text{Average of first three numbers} = 3 \times 22 = 66$$

$\therefore$  Required answer is 66

### 71. Answer: c

**Explanation:**

**Given:**

$$\frac{13}{2} \left[ 15 \div \frac{3}{5} \text{ of } \frac{1}{2} + 76 + 1 \frac{1}{2} \times 4 \frac{1}{2} \div 3 \frac{1}{4} \right]$$

**Concept used:**

<b>B</b>	Brackets in order {}, {}, []	ब्रैकेट {}, {}, [] क्रम में
<b>O</b>	of	का
<b>D</b>	Division (÷)	विभाजन (÷)
<b>M</b>	Multiplication (×)	गुणा (×)
<b>A</b>	Addition (+)	जोड़ (+)
<b>S</b>	Subtraction (-)	घटाव (-)

**Calculation:**

$$\frac{13}{2} \left[ 15 \div \frac{3}{5} \text{ of } \frac{1}{2} + 76 + 1 \frac{1}{2} \times 4 \frac{1}{2} \div 3 \frac{1}{4} \right]$$

$$\Rightarrow \frac{13}{2} \left[ 15 \div \frac{3}{10} + 76 + 1 \frac{1}{2} \times 4 \frac{1}{2} \div 3 \frac{1}{4} \right]$$



$$\Rightarrow \frac{13}{2} \left[ 15 \times \frac{10}{3} + 76 + \frac{3}{2} \times \frac{9}{2} \times \frac{4}{13} \right]$$

$$\Rightarrow \frac{13}{2} \left[ 50 + 76 + \frac{27}{13} \right]$$

$$\Rightarrow \frac{13}{2} \left[ \frac{650 + 988 + 27}{13} \right]$$

$$\Rightarrow 832.5$$

$\therefore$  Required answer is 832.5

## 72. Answer: a

### Explanation:

Given:

Rate of interest = 10%

Amount = Rs. 29282

Time for C.I = 4 years

Time for S.I = 5 years

Concept used:

$$A = P(1 + r/100)^n$$

Where, A = Amount P = Principal r = rate of interest n = time period in years

$$S.I. = PRT/100$$

Calculation:

$$29282 = P(1 + 10/100)^4$$

$$\Rightarrow 29282 = P(11/10)^4$$

$$\Rightarrow P = 29282 \times 10/11 \times 10/11 \times 10/11 \times 10/11$$

$$\Rightarrow P = \text{Rs. } 20000$$

$$\text{S.I.} = (20000 \times 10 \times 5)/100$$

$$\Rightarrow \text{S.I.} = \text{Rs. } 10000$$

$\therefore$  Required simple interest is Rs. 10000

### 73. Answer: b

#### Explanation:

Given:

Cost Price of two articles = Rs.3000 each

Profit on one article = 10%

Loss on the other article = 5%

Formulas used:

$$\text{Selling Price} = \text{Cost Price} \times (100 + \text{Profit})/100\%$$

$$\text{Profit} = \text{Selling Price} - \text{Cost Price}$$

$$\text{Profit percent} = \text{Profit}/\text{Cost Price} \times 100$$

Calculation:

$$\text{Total Cost Price of both articles} = \text{Rs.}3000 + \text{Rs.}3000 = \text{Rs.}6000$$

$$\text{Selling Price of one article at 10\% profit} = 3000 \times 110/100 = \text{Rs.}3300$$

$$\text{Selling Price of another article at 5\% loss} = 3000 \times 95/100 = \text{Rs.}2850$$

$$\text{Total Selling Price of both articles} = 3300 + 2850 = \text{Rs.}6150$$

$$\text{Profit on both articles} = \text{Rs.}6150 - \text{Rs.}6000 = 150$$

Profit Percent on both articles =  $150/6000 \times 100$

$\Rightarrow 2.5\%$

$\therefore$  The total profit percentage is 2.5

★ Shortcut Trick

If the cost price of two articles is the same.

Profit/Loss % =  $(+10 - 5)/2 = 2.5\%$

Positive sign indicates profit and negative sign indicates loss.

---

**74. Answer: d**

**Explanation:**

**Calculation:**

Total number of students enrolled in B during 2015, 2016 and 2018 =  $360 + 375 + 225$

$\Rightarrow 960$

Average =  $960/3 = 320$

Total number of students enrolled in A during 2016 = 300

Difference =  $320 - 300 = 20$

Required % =  $20/300 \times 100$

$\Rightarrow 6.66\% \approx 6.7\%$

$\therefore$  Required answer is 6.7%

---

**75. Answer: b**

### Explanation:

Given:

$$[0.9 \{1.1 - 0.3(0.3 - 0.2 \div 0.5) + 0.4\}] \div 0.81 = x + 1$$

Concept used:

<b>B</b>	Brackets in order (), {}, []	ब्रैकेट (), {}, [] क्रम में
<b>O</b>	of	का
<b>D</b>	Division (÷)	विभाजन (÷)
<b>M</b>	Multiplication (×)	गुणा (×)
<b>A</b>	Addition (+)	जोड़ (+)
<b>S</b>	Subtraction (-)	घटाव (-)

Calculation:

$$[0.9 \{1.1 - 0.3(0.3 - 0.2 \div 0.5) + 0.4\}] \div 0.81$$

$$\Rightarrow [0.9 \{1.1 - 0.3(0.3 - 0.4) + 0.4\}] \div 0.81$$

$$\Rightarrow [0.9 \{1.1 + 0.03 + 0.4\}] \div 0.81$$

$$\Rightarrow [0.9 \times 1.53] \div 0.81$$

$$\Rightarrow 1.377 \div 0.81$$

$$\Rightarrow 1.7$$

Here  $1.7 = x + 1$

So,  $x = 1.7 - 1 = 0.7$

∴ Required answer is 0.7

76. Answer: d

**Explanation:**

The correct answer is fossil.

★ Key Points

- The impression of the body part of a dead insect on hardened mud is an example of fossil.
- Fossils are the preserved traces, impressions, and remains of ancient living things or organisms from a past geological age.
- The earth's crust is made up of various types of rocks .
- Any natural mass of mineral matter that makes up the earth's crust is called a rock .
- Rocks can be of different colors, sizes, and textures.
- Fossils are generally found in the sedimentary rocks of many continents.
- The reason is pretty much understood with the name ' sedimentary ' which means that these rocks have settled and remained in the same state and place over the centuries.

★ Additional Information

- Rocks roll down, crack, and hit each other and are broken down into small fragments.
  - These smaller particles are called sediments .
  - These sediments are transported and deposited by wind, water, etc.
- These loose sediments are compressed and hardened to form layers of rocks.
  - These types of rocks are called sedimentary rocks.
- A mass of rotted organic matter made from waste is called **compost**.
- The compost made from waste like sugarcane trash, paddy straw, weeds, and other plants and other waste is called farm **compost**.
  - It is used to increase the productivity of the soil.

77. Answer: a

### Explanation:

The correct answer is Ravishankar Prasad.

- **Ravishankar Prasad** is the Union Minister of Law and Justice in India. (July 2020)

### ★ Confusion Points

- **Kiren Rijju** is currently the Cabinet Minister of Law and Justice of India. (March 2022)

### ★ Additional Information

- List of cabinet ministers: (March 2022)

Prepp

Your Personal Exams Guide

<b>Shri Amit Shah</b>	<ol style="list-style-type: none"> <li>1. Ministry of Home Affairs</li> <li>2. Ministry of Cooperation</li> </ol>
<b>Shri Rajnath Singh</b>	Ministry of Defence
<b>Shri Nitin Jairam Gadkari</b>	1. Ministry of Road Transport and Highways
<b>Shri Narayan Tatu Rane</b>	Ministry of Micro, Small and Medium Enterprises
<b>Smt. Nirmala Sitharaman</b>	<ol style="list-style-type: none"> <li>1. Ministry of Finance</li> <li>2. Ministry of Corporate Affairs</li> </ol>
<b>Shri Narendra Singh Tomar</b>	1. Ministry of Agriculture & Farmers Welfare
<b>Shri Sarbananda Sonowal</b>	<ol style="list-style-type: none"> <li>1. Ministry of Ports, Shipping and Waterways</li> <li>2. Ministry of AYUSH</li> </ol>
<b>Dr. Virendra Kumar</b>	Ministry of Social Justice and Empowerment
<b>Dr. Subrahmanyam Jaishankar</b>	Ministry of External Affairs
<b>Shri Ramchandra Prasad</b>	Ministry of Steel
<b>Shri Arjun Munda</b>	Ministry of Tribal Affairs

<p><b>Smt. Smriti Zubin Irani</b></p>	<p>1. Ministry of Women and Child Development</p>
<p><b>Mansukh Mandaviya</b></p>	<p>1. Ministry of Health and Family Welfare 2. Ministry of Chemical Fertilizers</p>
<p><b>Shri Ashwini Vaishnav</b></p>	<p>1. Ministry of Railways 2. Ministry of Communications 3. Ministry of Electronics and Information Technology</p>
<p><b>Shri Piyush Goyal</b></p>	<p>1. Ministry of Textiles 2. Ministry of Commerce and Industry 3. Ministry of Consumer Affairs, Food and Public Distribution</p>
<p><b>Shri Dharmendra Pradhan</b></p>	<p>1. Ministry of Education 2. Ministry of Skill Development and Entrepreneurship</p>
<p><b>Shri Mukhtar Abbas Naqvi</b></p>	<p>Ministry of Minority Affairs</p>
<p><b>Shri Pralhad Joshi</b></p>	<p>1. Ministry of Parliamentary Affairs 2. Ministry of Coal 3. Ministry of Mines</p>



<b>Shri Jyotiraditya M. Scindia</b>	Ministry of Civil Aviation
<b>Shri Giriraj Singh</b>	<ol style="list-style-type: none"> <li>1. Ministry of Rural Development</li> <li>2. Ministry of Panchayati Raj</li> </ol>
<b>Shri Gajendra Singh Shekhawat</b>	Ministry of Jal Shakti
<b>Shri Pashu Pati Kumar Paras</b>	Ministry of Food Processing Industries
<b>Shri Kiren Rijju</b>	Ministry of Law and Justice
<b>Shri Raj Kumar Singh</b>	<ol style="list-style-type: none"> <li>1. Ministry of Power</li> <li>2. Ministry of New and Renewable Energy</li> </ol>
<b>Shri Hardeep Singh Puri</b>	<ol style="list-style-type: none"> <li>1. Ministry of Petroleum and Natural Gas</li> <li>2. Ministry of Housing and Urban Affairs</li> </ol>
<b>Shri Bhupender Yadav</b>	<ol style="list-style-type: none"> <li>1. Ministry of Environment, Forest and Climate Change</li> <li>2. Ministry of Labour and Employment</li> </ol>
<b>Dr. Mahendra Nath Pandey</b>	Ministry of Heavy Industries
<b>Shri Parshottam Rupala</b>	Ministry of Fisheries, Animal Husbandry and Dairying

Shri G. Kishan Reddy	<ol style="list-style-type: none"> <li>1. Ministry of Culture</li> <li>2. Ministry of Tourism</li> <li>3. Ministry of Development of North Eastern Region</li> </ol>
Shri Anurag Singh Thakur	<ol style="list-style-type: none"> <li>1. Ministry of Information and Broadcasting</li> <li>2. Ministry of Youth Affairs and Sports</li> </ol>

78. Answer: c

**Explanation:**

The correct answer is Bidesh Bose.

- **Bidesh Ranjan Bose** , also known as Bidesh Bose or Bidesh Basu, is a former Indian Bengali international footballer and politician from West Bengal.
- Bose, was a crucial **forward position player** in the Indian football team of the 1978 Asian Games.
- Hence **Bidesh Bose is not the goalkeeper.**

★ Additional Information

- **Bhaskar Ganguly** is a former Indian football goalkeeper from West Bengal.
  - He was the captain of India's national football team which participated in the 1982 Asian Games.
- **Havildar Peter Thangaraj** was an Indian football player and a Non-Commissioned Officer in Indian Army.
  - Thangaraj played for the Indian national side at the 1956 Melbourne and 1960 Rome Olympics.
  - He was voted Asia's best goalkeeper in 1958.
- **Brahmanand Sagoon Kamat Sankhwalkar** is a former Indian footballer and a captain of the Indian team from 1983 to 1986, who played as a goalkeeper.

79. Answer: a

### Explanation:

The correct answer is Ibrahim Lodi.

#### ★ Key Points

- **Ibrahim Lodi** was the last ruler of the Lodi dynasty who was defeated and killed by Babur in the Battle of Panipat in 1526.
- The Tomb Of Ibrahim Lodi is situated in **Panipat in Haryana**.

#### ★ Additional Information

- The Lodi dynasty was founded by Bahlul Khan Lodi.
  - The Lodi dynasty was an Afghan dynasty.
  - The Lodi dynasty was the last dynasty in Delhi Sultanate, ruled from 1451 to 1526.
  - Sikandar Lodi was the son of Bahlul founded Agra in 1504.
  - Ibrahim Lodi was the son of Sikandar Lodi and he was the last Lodi Sultan of Delhi.

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## Your Personal Exams Guide

80. Answer: c

### Explanation:

The correct answer is 212° F.

#### ★ Key Points

- The Steam Point on the Fahrenheit scale is **212° F**.
- The temperature at which water vapour condenses at a pressure of one atmosphere, is represented by **100°C and 212°F**.

#### ★ Additional Information

- Celsius scale:
  - In this scale, a lower fixed point (ice point) is designated as  $0^{\circ}$  and the upper fixed point (steam point) is designated as  $100^{\circ}$ .
  - The temperature measured on this scale was all in degrees Celsius ( $^{\circ}\text{C}$ ).
- Fahrenheit scale:
  - On this scale of the temperature scale, the melting point of ice is considered to be  $32^{\circ}\text{F}$  and the boiling point of water is  $212^{\circ}\text{F}$ .
  - The change in temperature of  $1^{\circ}\text{F}$  corresponds to a change of less than  $1^{\circ}\text{C}$  on the Celsius scale.
- Kelvin scale:
  - We also know the Kelvin temperature scale as the thermodynamic scale.
  - On the Kelvin scale, the boiling point of the water is considered to be  $373.15\text{ K}$  and its freezing point is  $273.15\text{ K}$ .

---

81. Answer: a

Explanation:

The correct answer is 11.

- There are 11 Fundamental Duties.
- The idea of Fundamental Duties is inspired by the Constitution of the USSR.
- These were incorporated in Part IV-A of the Constitution by the 42<sup>nd</sup> Constitutional Amendment Act, 1976 on the recommendations of the Swaran Singh Committee.
- Originally 10 in number, one more duty was added through the 86<sup>th</sup> Constitutional Amendment Act, 2002. All the eleven duties are listed in Article 51-A of the Constitution (the sole Article in Part-IV-A).
- The fundamental duties serve as a reminder to citizens that while enjoying their rights, they have also to be quite conscious of the duties they owe to their country, their society and to their fellow citizens.
- However, like the Directive Principles, the duties are also non-justiciable in nature.

### ★ Additional Information

- List of Fundamental Duties:
  - To abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
  - To cherish and follow the noble ideals that inspired the national struggle for freedom;
  - To uphold and protect the sovereignty, unity and integrity of India;
  - To defend the country and render national service when called upon to do so;
  - To promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities and to renounce practices derogatory to the dignity of women;
  - To value and preserve the rich heritage of the country's composite culture;
  - To protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures;
  - To develop scientific temper, humanism and the spirit of inquiry and reform;
  - To safeguard public property and to abjure violence;
  - To strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement; and
  - To provide opportunities for education to his child or ward between the age of six and fourteen years (added by the 86 th Constitutional Amendment Act, 2002).

---

82. Answer: d

### Explanation:

The correct answer is RK Narayan.

### ★ Key Points

- The author of *Waiting for the Mahatma* is **R.K. Narayan**.
- This book is written in his gentle comic style where a character Sriram is attracted to **Bharti who is active in Quit India Movement**, and he too becomes an activist himself.
- R.K. Narayan, one of the most celebrated Indian novelists writing in English has won numerous awards.
- These include the **Sahitya Akademi Award in 1958, the Padma Bhushan in 1964, the AC Benson Medal by the Royal Society of Literature in 1980, besides the Padma Vibhushan in 2000.**

★ Additional Information

- **Anita Desai** is a writer and has been shortlisted for the Booker Prize three times; she received a Sahitya Academy Award in 1978.
- Sri Lal Sukla was the 45 th winner of the Jnanpith Award in 2009.
- **Gopinath Bordoloi** was a politician and Indian independence activist who served as the first Chief Minister of Assam.

---

83. Answer: a

**Explanation:**

The correct answer is To provide loans with collateral.

★ Key Points

- **Objectives of SHG:**
  - To inculcate the savings and banking habits among members.
  - To secure them from financial, technical and moral strengths.
  - To enable availing of loans for productive purposes.
  - **To gain economic prosperity through loans/credit.**
  - To gain from collective wisdom in organising and managing their own finance and distributing the benefits among themselves.
  - To sensitize women of the target area to the need for SHG and its relevance in their empowerment.
  - To create group feelings among women.

- To enhance the confidence and capabilities of women.
- To develop collective decision making among women.
- To encourage the habit of saving among women and facilitate the accumulation of their own capital resource base.
- To motivate women to take up social responsibilities particularly related to women's development.
- It acts as a forum for members to provide space and support to each other.
- Hence "To provide loans with collateral" is not the objective of SHG.

★ Additional Information

- About Self-Help Groups:-
  - They are voluntary organizations .
  - In this, backward and poor people coming from almost the same socio-economic background solve their common problems through each other's cooperation.

---

84. Answer: b

**Explanation:**

The correct answer is Kandla.

★ Key Points

List of 13 Major Ports of India:

S.No.	State	Name of Port
1.	Tamil Nadu	Chennai
2.	Tamil Nadu	Tuticorin
3.	Andhra Pradesh	Vishakapatnam
4.	Odisha	Paradip
5.	Maharashtra	Jawaharlal Nehru
6.	Maharashtra	Mumbai
7.	Karnataka	Mangalore
8.	Goa	Mormugao
9.	<b>Gujarat</b>	<b>Kandla</b>
10.	West Bengal	Kolkata Port
11.	West Bengal	Haldia
12.	Tamil Nadu	Ennore
13.	. Kerala	Kochi Port or Cochin Port

- Hence Kandla is in Gujarat.

★ Additional Information

- India has about 190 ports, with 13 major and the rest intermediate and minor.
- The largest port in India is Jawaharlal Nehru Port in Mumbai.
- The largest natural port is in Vishakhapatnam .
- Mumbai Port is the busiest port in India.



- Large ports are maintained by the Central Government whereas small ports are included in the concurrent list and are managed by the State Government .
  - Tuticorin is an artificial deep-sea dock and is also known as VO Chidambaranar Port.
  - Ennore Port is also known as Kamarajar Port Limited.
- 

85. Answer: d

**Explanation:**

The correct answer is Potenz.

★ Key Points

- p stands for **Potenz**, Which means power in German.
- pH is the negative log of hydrogen ion concentration in a water-based solution.
  - pH is an abbreviation for "power of hydrogen" where "p" is short for the German word for power, potenz and H is the element symbol for hydrogen.

★ Additional Information

- The "pH" value is an approximate number between 0 and 14 that indicates whether a solution is acidic, basic, or neutral.
    - At pH 7 , the substance or solution is neutral .
    - If  $\text{pH} > 7$  , the solution is basic
    - If  $\text{pH} < 7$  , the solution is acidic .
- 

86. Answer: a

**Explanation:**

The correct answer is Jantar Mantar, Delhi.

★ Key Points

- India has 40 world heritage sites now.
- Recently, Dholavira, Harappan City in the Rann of Kutchh, becomes India's 40th UNESCO World Heritage Site.
- **Jantar Mantar, Delhi is not a UNESCO World Heritage Site while Jantar Mantar, Rajasthan is UNESCO World Heritage Site.**

★ Additional Information

- The World Heritage Committee is composed of representatives of 21 States Parties to the World Heritage Convention who meet annually.
- The Convention Concerning the Protection of the World Cultural and Natural Heritage is an international agreement that was adopted by the General Conference of UNESCO in 1972.
- It is based on the premise that certain places on Earth are of outstanding universal value and should therefore form part of the common heritage of humankind.
- It basically defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List.
- To date, 1,092 sites in 167 countries have been inscribed on the World Heritage List.

87. Answer: b

**Explanation:**

The correct answer is Gymnastics.

★ Important Points

- Produnova is a special type of **artistic gymnastics**.
- It was named after **Yelena Produnova a Russian athlete** who completes this stunt in 1999.

- This is also known as **the 'vault of death'**.
  - The athlete had to take a sprint and catapult into the air followed by two somersaults before landing on their feet.
  - Only five women gymnasts successfully executed Produnova in which **Dipa Karmakar** from India is one of them.
- 

88. Answer: d

**Explanation:**

The correct answer is Charaka.

★ Key Points

- Charaka was the court physician of Kaniska.
- Charaka was one of the principal contributors to **Ayurveda medicine in ancient India**.
- He is best known for his work **Charaka Samhita**.

★ Additional Information

- Ancient Indian scholars:

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Poet	Patron	Contribution
Banabhatta	Harshvardhan	Kadambari, Harsha Charita
Harisena	Samudragupta II	Prayag Prashasti on Allahabad Pillar inscription
Ravikirti	Pulkesin II	Aihole inscription
Kalidasa	Chandragupta II	Kumarasambhava, Raghuvamsa, Meghdoota, Ritusambara. His plays are Abhijnana Shakuntalam Vikramorvasi, and Malvikaganimithram.
Vishakhadatta	Chandragupta II	Mudra Rakshas and Devichandraguptam
Ashvaghosa	Kanishka	Buddha Charitra (a biography of Buddha), Saundarananda
Bharavi	Yasodharman	Kiratarjuniyam (about Kirat and Arjun)
Dandin	Narsimhavarmman	Dasakumaracarita, Kavyadarsa
Bhavabhuti	Yasovarman	Malatimadhava, Mahaviracharita

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89. Answer: d

### Explanation:

The correct answer is Daulatabad.

### ★ Key Points

- Muhammad bin Tughluq was the Sultan of Delhi from 1325 to 1351 .
- Muhammad Bin Tughlaq shifted his capital from Delhi to Daulatabad in 1327 .
- There were two reasons for this shift
  - His desire to have a centrally located capital, and
  - The fear of invasion by Mongols .

- The plan proved to be a failure and the capital was transferred back to Delhi later.

★ Additional Information

- He introduced token currency in India in 1330 .
  - Ibn Battuta , the famous traveller, and jurist from Morocco was a guest at his court.
- 

90. Answer: c

**Explanation:**

The correct answer is Gross.

- RTGS is a Real-Time Gross Settlement.
- Hence G stands for **Gross** .

★ Additional Information

- It is a financial transaction system having a continuous and real-time settlement of fund transfers.
  - The transaction is processed immediately on a transaction by transaction basis throughout the RTGS business hours.
  - The minimum limit is 2 lakh rupees with no maximum limit.
  - The RTGS service is available both in online and offline modes.
- 

91. Answer: d

**Explanation:**

The correct answer is ampere.

★ Key Points

- Coulomb per second is equivalent to ampere .
- One coulomb is the charge flowing through a wire in 1 second if the current is 1 Ampere .
- A coulomb is a unit of electric charge.
- A coulomb is a name given in the memory of French physicist Charles Augustin de Coulomb .

★ Additional Information

- **Faraday** is the SI unit of capacitance.
- **Volts** is the SI unit of Electric Potential.
- **Ohm** is the SI unit of resistance.

---

92. Answer: b

**Explanation:**

The correct answer is Vinod Khanna.

★ Key Points

- Vinod Khanna was posthumously honoured with the **Dadasaheb Phalke Award at the 65th National Film Awards**.
- Vinod Khanna was the **49th recipient** of the Dadasaheb Phalke Award.
- The Dadasaheb Phalke Award is **India's highest award in cinema**.

★ Important Points

- Dadasaheb Phalke is known as the 'Father of Indian Cinema'.
- The Father of Indian Cinema 'Dadasaheb Phalke' was born in Mumbai on 30 April 1870.
- He made the first Indian feature film Raja Harishchandra in the year 1913.
- In his memory, the Government of India introduced the Dadasaheb Phalke Award in 1969.
- The very first recipient of this award was Devika Rani who received it in 1969.

★ Additional Information

- Dadasaheb Phalke Award 2021:

Category	Winner
Best Actor(Male)	Akshay Kumar(Lakshmi)
Best Actor(Female)	Deepika Padukone(Chhapaak)
Best Film	Tanhaji: The Unsung Warrior
Best International Feature Film	Parasite
Best Web Series	Scam:1992
Outstanding Contribution to the Indian Film Industry	Dharmendra
Critics Best Actor(Female)	Kiara Advani(Guilty)
Critics Best Actor(Male)	Sushant Singh Rajput(Dil Bechara)
Best Actress Web Series	Sushmita Sen

93. Answer: d

**Explanation:**

The correct answer is four.

★ Important Points

- When the process of formation of hydrogen by passing steam over red hot iron is presented in the form of a balanced chemical equation, then the number of water molecules on the left hand side of the equation is **four** .
- Iron is found to react with steam when it is red hot.
- **Balanced Chemical equation**
  - $3Fe(s) + 4H_2O(g) \rightarrow Fe_3O_4(s) + 4H_2(g)$
- Theoretically, the reaction of red hot iron with steam is a reversible reaction.

- But in practice, the reaction proceeds continuously from reactants to products because the hydrogen is blown out of contact with iron by the force of the current of the steam.

94. Answer: b

**Explanation:**

The correct answer is Fourth.

★ Key Points

- The Fourth Schedule contains provisions as to the allocation of seats in the Council of States.
- The Number of Members of the Rajya Sabha to be elected from Each state/Union Territory has been fixed by the Fourth Schedule of the Constitution .
- In India , the seats of states/Union territories are dependent on the Larger Size of the population gets more Representatives seats than the states with Smaller Populations.

★ Additional Information

- Schedules of the constitution:
  - The First Schedule contains the list of states and union territories and their territories.
  - The Second Schedule contains provisions of the President, Governors of States, Speaker and the Deputy Speaker of the House of the People and the Chairman and the Deputy Chairman of the Council of States and the Speaker and the Deputy Speaker of the Legislative Assembly and the Chairman and the Deputy Chairman of the Legislative Council of a State, the Judges of the Supreme Court and of the High Courts and the Comptroller and Auditor-General of India.
  - The Third Schedule contains the Forms of Oaths or Affirmations.
  - The Fourth Schedule contains provisions as to the allocation of seats in the Council of States.



- The Fifth Schedule contains provisions as to the Administration and Control of Scheduled Areas and Scheduled Tribes.
- The Sixth Schedule contains provisions as to the Administration of Tribal Areas in the States of Assam, Meghalaya, Tripura, and Mizoram.
- The Seventh Schedule contains the Union list, State list, and the concurrent list.
- The Eighth Schedule contains the list of recognized languages.
- The Ninth Schedule contains provisions as to the validation of certain Acts and Regulations.
- The Tenth Schedule contains provisions as to disqualification on the ground of defection.
- The Eleventh Schedule contains the powers, authority, and responsibilities of Panchayats.
- The Twelfth Schedule contains the powers, authority, and responsibilities of Municipalities.

95. Answer: a

**Explanation:**

The correct answer is Uttarakhand.

★ Key Points

- Hemkund Sahib, formally known as Gurudwara Shri Hemkund Sahib Ji.
- It is a Sikh place of worship and pilgrimage site in **Chamoli district, Uttarakhand, India**.
- It is devoted to Guru Gobind Singh, the **tenth Sikh Guru**.

★ Additional Information

Important points to remember about the 10 Sikh Gurus are:

No.	Sikh Gurus	Important Points
1st	Guru Nanak Dev	<ul style="list-style-type: none"> <li>• 1469 to 1539</li> <li>• Introduced the concept of God.</li> <li>• Started Guru ka Langer.</li> <li>• He was the contemporary of Mughal Emperor - Babur.</li> </ul>
2nd	Guru Angad Dev	<ul style="list-style-type: none"> <li>• 1539 to 1552</li> <li>• Introduced Gurmukhi Script.</li> </ul>
3rd	Guru Amardas Sahib	<ul style="list-style-type: none"> <li>• 1552 to 1574</li> <li>• Introduced Anand Karaj. (Marriage Ceremony)</li> </ul>
4th	Guru Ram Das	<ul style="list-style-type: none"> <li>• 1574-1581</li> <li>• Started construction of Golden Temple at Amritsar.</li> </ul>
5th	Guru Arjan Dev	<ul style="list-style-type: none"> <li>• 1581 to 1606</li> <li>• Compiled Adi Granth.</li> <li>• He became the first martyr in Sikh history when Emperor Jahangir ordered his execution.</li> </ul>
6th	Guru Har Gobind	<ul style="list-style-type: none"> <li>• 1606 to 1644</li> <li>• Also known as Soldier Saint.</li> <li>• He organised a small army.</li> </ul>
7th	Guru Har Rai Sahib	<ul style="list-style-type: none"> <li>• 1644 to 1661</li> <li>• He gave shelter to Dara Shikoh.</li> </ul>

No.	Sikh Gurus	Important Points
8th	Guru Har Krishan Sahib	<ul style="list-style-type: none"> <li>• 1661 to 1664</li> <li>• He was the youngest of the Gurus.</li> </ul>
9th	Guru Tegh Bahadur Sahib	<ul style="list-style-type: none"> <li>• 1665 to 1675</li> <li>• Established the town Anandpur.</li> </ul>
10th	Guru Gobind Singh Sahib	<ul style="list-style-type: none"> <li>• 1675 to 1708</li> <li>• He created Khalsa in 1669.</li> <li>• Last Sikh guru in human form.</li> </ul>

96. Answer: b

**Explanation:**

The correct answer is trust.

★ Key Points

- The economic Survey introduces the idea of “trust as that public good which gets enhanced with greater use”.
- It can be conceptualised as good with the characteristics of the following:
  - Non-excludability: The citizens can enjoy its benefits at no other explicit financial cost.
  - Non-rival consumption: The marginal cost of supplying these goods to an extra citizen is almost zero.
  - Non-rejectable: Collective supply for all citizens of these goods means that they cannot be rejected.

★ Additional Information

- The economic survey is an annual report card of the economy.
- It represents a day before the budget examines the performance of each and every sector and then suggests future moves.

- The economic survey was de-linked from the Budget in 1964.
- And unveiled in advance in order to provide a context of the latter.
- Last year the theme was Saving Lives and Livelihoods .
- The central theme of Economic Survey 2021-22 is the "Agile Approach".
- Another theme highlighted in this Economic Survey relates to the art and science of policy-making under conditions of extreme uncertainty.

## 97. Answer: d

### Explanation:

The correct answer is Hockey.

#### ★ Key Points

- Dhanraj Pillay (born 16 July 1968) is a retired **Indian field hockey player and former captain of the Indian national team** .
- He is currently working with Air India Ltd. as Deputy General Manager (DGM).
- He also looks after the Air India Sports Promotion Board as a Joint Secretary based in Mumbai.
- He is regarded as one of the best Indian players.
- Pillay born to a Tamil family made his debut in 1989 with the national team and in a career spanning over 15 years, appeared for India in four Olympic Games , World Cups, and Champion Trophies each.
- He made 339 appearances for the national team and is recorded, unofficially, to have scored 170 goals.
- He also played for clubs in countries such as Malaysia , France , England, and Germany .
- Recognizing his achievements, he was awarded the Padma Shri by the government of India in 2000.

#### ★ Additional Information

- Field Hockey:
  - No of Players – 11 on each side

- Terms used:- Advancing, Bully, Center pass, Dribble, Flick, Penalty corner, Scoop, Striker, Undercutting, etc.
- Some of the famous Indian Hockey players:
  - Dhyan Chand
  - Balbir Singh Sr.
  - Dhanraj Pillay
  - Mohammed Sahid
  - Sardar Singh
  - Harmanpreet Singh
  - Sandeep Singh

98. Answer: c

Explanation:

The correct answer is Bhutan.

★ Key Points

- Paro is a valley town in **Bhutan, west of the capital, Thimphu**.
- It is the site of the country's only international airport and is also known for the many sacred sites in the area.

★ Additional Information

- Recently 17 Iconic Tourist Sites into world-class tourist destinations, to boost the tourism influx in India.
- The 17 iconic Tourists sites are:
  - Taj Mahal and Fatehpur Sikri (Uttar Pradesh),
  - Ajanta & Ellora (Maharashtra),
  - Humayun's Tomb, Red Fort and Qutub Minar (Delhi),
  - Colva (Goa),
  - Amer Fort (Rajasthan),
  - Somnath and Dholavira (Gujarat),
  - Khajuraho (Madhya Pradesh),
  - Hampi (Karnataka),

- Mahabalipuram (Tamil Nadu),
- Kaziranga (Assam),
- Kumarakom (Kerala) and
- The Mahabodhi Temple (Bihar)
- World Tourism Day is celebrated on **27 September**.

99. Answer: d

**Explanation:**

The correct answer is Penganga.

★ Key Points

- **Tributaries of Ganga:**
- **Left Tributaries:**
  - Ramganga, Garra, Gomti, Ghaghara, Gandak, Koshi, Mahananda.
- **Right Tributaries :**
  - Yamuna, Tamsa, Son, Punpun, Kiul, Karamnasa, Chandan.
- Hence **Penganga** is NOT a tributary of the river Ganga.
- The Penganga River is a tributary of the Wardha River, which is a tributary of the Pranhita River, which flows into the Godavari.

★ Additional Information

- Son River is one of the major southern tributaries of the Ganges (Ganga) River.
  - The place of origin of the Son river is near Amarkantak in Madhya Pradesh.
  - It is the major tributary of the Ganga river which originates from the Peninsular plateau region.
- **Ramganga** originates from the state of Uttarakhand.
  - The length of the river Ramganga is 596 km
  - Ramganga is a tributary of the river Ganga.
  - Ramganga joins Ganga near Kannauj district.
- The Kali River East, a tributary of the Ganges, originates in Antwada village in Muzaffarnagar District.

- It flows through eight districts of Uttar Pradesh before its confluence with the Ganga River near Kannauj.
- 

100. Answer: b

**Explanation:**

The correct answer is Tillana.

★ Key Points

- As a solo dance, Bharatnatyam leans heavily on the abhinaya or **mime aspect of dance – the nritya**, where the dancer expresses the Sahitya through movement and mime.
- It is in the adoration of the Supreme Being.
- It is a vibrant dance performed to the accompaniment of musical syllables with a **few lines of Sahitya**.
- The finale of the piece is a series of well designed rhythmic lines reaching a climax.
- A Bharatnatyam performance ends with a **tillana which has its origin in the Tarana of Hindustani music**.

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