

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 GD Constable 2021 (English) Prev. Year Paper (02-Dec-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 Intelligence and Reasoning	25	25	0.25	1
2	General Knowledge and General Awareness	25	25	0.25	1
3	Elementary Mathematics	25	25	0.25	1
4	English	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 Intelligence and Reasoning

1. Eight boys, P, Q, R, S, T, U, V and W, are seated around a round table, not necessarily in same order, but with equal spacing between them and all facing the centre of the table. S is seated exactly opposite to P, who has U and R as his immediate neighbours. T is seated immediately next to V, who is to the immediate right of S. Q is exactly opposite to T and does not have R as his immediate neighbour. With this information, which of the following statements is correct? (+1, -0.25)
- a. R is seated exactly opposite to W
 - b. S and U are the immediate neighbours of W.
 - c. Q and U are not the neighbours of each other.
 - d. T is seated immediately next to V but not next to R.
-
2. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different. (+1, -0.25)
- a. NHDB
 - b. PLFH
 - c. ZTJM
 - d. BXJC
-
3. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series. (+1, -0.25)
- AEO, DHR, GKU, JNX, ?

- a. KPA
 - b. ORZ
 - c. MQA
 - d. MPA
-

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

15, 104, 11

- a. 18, 160, 16
 - b. 13, 48, 10
 - c. 17, 112, 11
 - d. 14, 154, 8
-

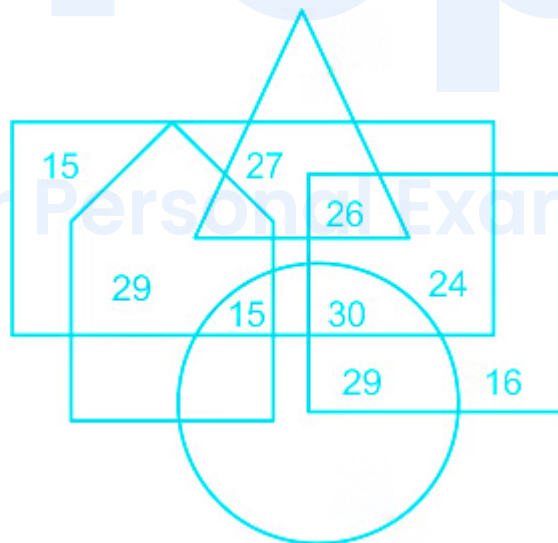
5. L, M, N, O, P and Q families are living in houses in a row of a colony. Q and O are neighbours of M. L and N are neighbours of P. If O is not the nearest neighbour of L, then who is the nearest neighbour of Q from the given options?

- a. P
 - b. L
 - c. M
 - d. O
-

6. Select the option that is related to the third term in the same way as the second term is related to the first term. (+1, -0.25)
- CAPSULE : PACSELU :: PINDROP : ?

- a. NIPPIODR
- b. INPDPRO
- c. NIPDPOR
- d. NIDPPRO

7. In the following figure, the circle represents virus, the triangle represents wild, the pentagon represent healthy, the rectangle represents bacteria and the square represents animals. Select the number that represents wild animals which are infected by bacteria. (+1, -0.25)



- a. 26
- b. 30
- c. 27

d. 15

8. If 'A B' means 'A is the mother of B', 'A @ B' means 'A is the brother of B', 'A + B' means 'A is the husband of B', then how is E related to K in the expression 'E G \$ Y @ K + W'?

(+1, -0.25)

- a. Paternal grandmother
 - b. Maternal aunt
 - c. Maternal grandmother
 - d. Paternal aunt
-

9. If 'A' denotes 'addition', 'B' denotes 'multiplication', 'C' denotes 'subtraction' and 'D' denotes 'division', then what will be the value of the following expression?

(+1, -0.25)

625 D 5 A 93 C 22 B 8

- a. 24
 - b. 26
 - c. 42
 - d. 62
-

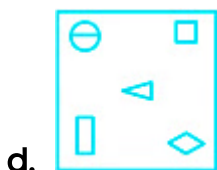
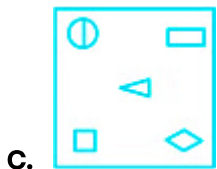
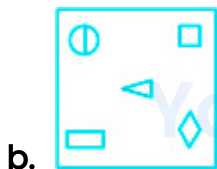
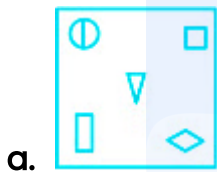
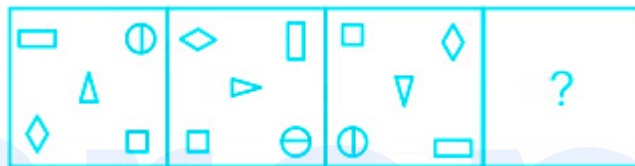
10. Select the option that is related to the third number in the same way as the second number is related to the first number and the sixth number is related to the fifth number.

(+1, -0.25)

7 : 9 :: 8 : ? :: 6 : 2

- a. 25
- b. 28
- c. 22
- d. 26

11. Select the figure from among the given options that can replace the question mark (?) in the following series. (+1, -0.25)



12. Read the given statements and conclusions carefully, Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements. (+1, -0.25)

Statements:

All burgers are cakes.

Some sweets are fruits.

All sweets are burgers.

Conclusions:

I. Some fruits are burgers.

II. Some cakes are sweets.

- a. None of the conclusions follow
- b. Both the conclusions follow
- c. Only conclusion II follows
- d. Only conclusion I follow

-
13. What was the day of the week on 6 January 2010? (+1, -0.25)

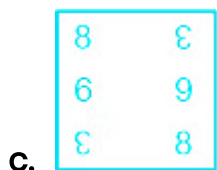
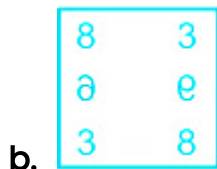
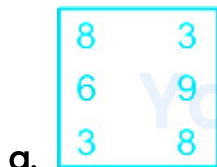
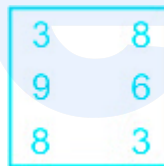
- a. Friday
- b. Thursday
- c. Wednesday
- d. Tuesday

14. Select the number from among the given options that can replace the question mark (?) in the following series. (+1, -0.25)

89, 84, 82, 79, 75, 74, 68, ?

- a. 68
- b. 71
- c. 65
- d. 69

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



8	ε
θ	e
ε	8

d.

16. In a certain code language, NERDS is written as QBUGV, CARING is written as FXUFQJ how will CLOSET be written as in that language? (+1, -0.25)

- a. FOLUCW
- b. FPLVBQ
- c. FOLVBW
- d. FOKVBX

17. Select the number from among the given options that can replace the question mark (?) in the following series. (+1, -0.25)

3, 5, 8, 11, ?, 19, 24

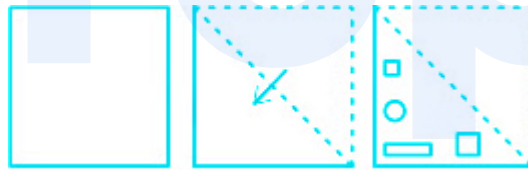
- a. 16
- b. 21
- c. 19
- d. 15

18. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary. (+1, -0.25)

- 1. Abundant
- 2. Abstract

- 3. Abuse
- 4. Abstruse
- 5. Absurd
- a. 3, 1, 5, 4, 2
- b. 2, 4, 5, 1, 3
- c. 2, 4, 1, 5, 3
- d. 2, 5, 1, 3, 4

19. The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded? (+1, -0.25)



- a.
- b.
- c.

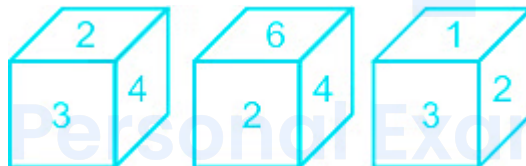


d.

20. In a certain code language, 'PRESENT' is coded as '79510552'. How will 'STATE' be coded in that language? (+1, -0.25)

- a. 120215
- b. 112215
- c. 120425
- d. 102125

21. Three different positions of the same dice are shown. Select the number that will be on the face opposite to the face having the number '3'? (+1, -0.25)



- a. 6
- b. 5
- c. 2
- d. 4

22. In a certain code language, FUTILE is written as UFITEL, and SELDOM is written as ESDLMO. How will CORTEX be written in that language? (+1, -0.25)

- a. XETROC
- b. ROCXET
- c. OCTRXE
- d. OCRTFX

23. 'Shirt' is related to 'Cloth' in the same way as 'Earring' is related to '-----'. (+1, -0.25)

- a. Goldsmith
- b. Gold
- c. Women
- d. Ear

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

Your Personal Exams Guide





25. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series. (+1, -0.25)

K _ H A _ A K O _ A R _ _ O H _ R A

- a. OHRAKA
- b. AOHRAK
- c. ORHAKA
- d. OAHRKA

Your Personal Exams Guide

General Knowledge and General Awareness

26. Who is a consumer as per the Consumer Protection Act, 2019? (+1, -0.25)
- a. A person who obtains goods for resale
 - b. A person who buys any goods or services for consideration
 - c. A person who avails services under contract of service
 - d. A person who obtains goods free of charge
-
27. Itimad-Ud-Daulah's tomb built by the Mughal empress, Nur Jahan in the memory of her father is located in ----- (+1, -0.25)
- a. Gwalior
 - b. Delhi
 - c. Lucknow
 - d. Agra
-
28. Who among the following is the Chief Minister of Tripura as of January 2021? (+1, -0.25)
- a. Neiphiu Rio
 - b. Sarbananda Sonowal
 - c. Biplab Kumar Deb
 - d. Conard Kongkal Sangma
-

29. Labrador Sea and Mediterranean Sea are part of the: (+1, -0.25)
- a. Arctic Ocean
 - b. Atlantic Ocean
 - c. Indian Ocean
 - d. Pacific Ocean
-

30. In which of the following oceans is the Puerto Rico Trench located? (+1, -0.25)
- a. Pacific Ocean
 - b. Atlantic Ocean
 - c. Indian Ocean
 - d. Arctic Ocean
-

31. Which of the following tiger reserves bagged the first ever international award 'TX2' in November for doubling the number of tigers in four years against the target of 10 years? (+1, -0.25)
- a. Pilibhit Tiger Reserve
 - b. Cobett Tiger Reserve
 - c. Buxa Tiger Reserve
 - d. Kanha Tiger Reserve
-

32. Kanaklata Barua was a teenaged freedom fighter from _____. (+1, -0.25)

- a. Nagaland
 - b. Assam
 - c. Sikkim
 - d. Mizoram
-

33. Which of the following statements about the Reserve Bank of India (RBI) is NOT correct? (+1, -0.25)

- a. RBI is a banker's bank.
 - b. RBI formulates the annual budget for the central government.
 - c. RBI is the banker to the government.
 - d. RBI is the custodian of the country's foreign exchange reserves.
-

34. Which of the following cricketers was adjudged the 'Player of the Tournament' in the 2019 Cricket World Cup? (+1, -0.25)

- a. Henry Nicholls
 - b. Angelo Mathews
 - c. Yuvraj Singh
 - d. Kane Williamson
-

35. Babur introduced a technique of warfare called '_____' which divided the army into different divisions to flank the enemy from all sides. (+1, -0.25)

- a. Charah

- b. Khums
 - c. Tulughma
 - d. Araba
-

36. In which of the following years was Bharatiya Janta Party founded? (+1, -0.25)

- a. 1967
 - b. 1980
 - c. 1934
 - d. 1957
-

37. Which of the following statements about a bank account opened under the 'Pradhan Mantri Jan Dhan Yojana' (PMJDY) is INCORRECT? (+1, -0.25)

- a. No interest is earned on the deposit in PMJDY accounts.
 - b. An overdraft (OD) facility of up to ₹10,000 is available to eligible account holders.
 - c. One basic savings bank account is opened for an unbanked person.
 - d. The account holder is provided with a RuPay debit card.
-

38. Which of the following vitamin's deficiency causes rickets in children? (+1, -0.25)

- a. Vitamin E
- b. Vitamin A

- c. Vitamin D
 - d. Vitamin C
-

39. King Ambhi was the ruler of _____. (+1, -0.25)

- a. Ayodhya
 - b. Taxila
 - c. Ujjain
 - d. Kannauj
-

40. Which state's governor won the first prize in a letter writing competition organised by the Department of Posts in June 2020? (+1, -0.25)

- a. Madhya Pradesh
 - b. Maharashtra
 - c. Kerala
 - d. Arunachal Pradesh
-

41. Brihadeeshwara Temple, also called Periya Koyil or Big Temple, is located in Thanjavur in the Indian state of: (+1, -0.25)

- a. Karnatak
- b. Tamil Nadu
- c. Maharashtra

d. Kerala

42. Who among the following was a recipient of Tenzing Norgay National Advanture Award 2019? (+1, -0.25)

- a. Manish Narwal
 - b. Gajanand Yadava
 - c. Rahul Aware
 - d. Netarpal Hooda
-

43. Which of the following forces does a charged body exert on another charged body or uncharged body? (+1, -0.25)

- a. Muscular force
 - b. Centrifugal force
 - c. Electrostatic force
 - d. Centripetal force
-

44. Who among the following assumed charge as Secretary General of the Lok Sabha in December 2020? (+1, -0.25)

- a. Utpal Kumar Singh
- b. Snehalata Shrivastava
- c. Hardeep Singh Puri
- d. Om Birla

45. The lowermost layer of soil is called the _____. (+1, -0.25)

- a. foundation rock
 - b. bedrock
 - c. base rock
 - d. parent rock
-

46. Who among the following players created a record by winning the Hopman Cup the greatest number of times as of December 2020? (+1, -0.25)

- a. Novak Djokovic
 - b. Roger Federer
 - c. Rafael Nadal
 - d. Dominic Thiem
-

47. Which of the following national movements witnessed participation of women on a large scale for the first time? (+1, -0.25)

- a. Non-cooperation Movement
 - b. Civil Disobedience Movemet
 - c. Khilafat Movement
 - d. Swadeshi Movement
-

48. Protozoans are causative agents of _____. (+1, -0.25)

- a. malaria
- b. polio
- c. typhoid
- d. tuberculosis

49. As per guidelines issued by the Ministry of Heavy Industries and Public Enterprises, which of the following conditions must a Central Public Sector Enterprise fulfil to be eligible for grant of Maharatna status? (+1, -0.25)

- a. Have an average annual turnover of more than ₹25,000 crores during the last 5 years
- b. Have an average annual net worth of more than ₹15,000 crores during the last 5 years
- c. Have a Navratna status
- d. Have an average annual net profit after tax of more than ₹5,000 crores during the last 5 years

50. The 'PRANA' portal was launched by the Central Government in September 2021. (+1, -0.25)

'PRANA' is the acronym for _____.

- a. Portal for Regulation of Air-pollution in Non-Attainment Cities
- b. Programme for Regulation of Air-polluted and Non-Polluted Cities
- c. Portal for Registration of Air-polluted and Non-Polluted Areas
- d. Programme for Rating of Air-polluted and Non-polluted Areas

Elementary Mathematics

51. In what time will ₹8,000 become ₹9,261 at 5% per annum, compounded annually? (+1, -0.25)
- a. 3 years
 - b. 5 years
 - c. 2 years
 - d. 4 years
-
52. A shopkeeper gained 7% more by selling an article for ₹580 as compared to selling it for ₹545. Find the cost price of the article. (+1, -0.25)
- a. ₹510
 - b. ₹500
 - c. ₹480
 - d. ₹525
-
53. A sum of ₹12,500 amounts to ₹15,125 at 10% p.a. in a certain time, interest compounded annually, What will be the amount of the same sum at 15% p.a. for the same time, interest compounded 8-monthly? (Nearest to a ₹) (+1, -0.25)
- a. ₹16,638
 - b. ₹16,658
 - c. ₹16,548

d. ₹16,531

54. The total surface area of a solid right circular cone is 6930 cm^2 . Its curved surface area is $\frac{4}{5}$ its total surface area. What is the diameter (in cm) of the base of the cone? (Take $\pi = \frac{22}{7}$) (+1, -0.25)

a. 14

b. 42

c. 21

d. 56

55. The expenditure of Manav is 200% more than his savings. If his income increases by 18% and saving increase by 64%, then what is the percentage increase/decrease in his expenditure? (+1, -0.25)

a. Increases by $2\frac{2}{3}\%$

b. Increase by $3\frac{1}{3}\%$

c. Decreases by $3\frac{1}{3}\%$

d. Decreases by $6\frac{1}{2}\%$

56. The average of five consecutive odd natural numbers is 27. The product of the first and fifth number is: (+1, -0.25)

a. 713

b. 715

c. 717

d. 621

57. A sum amounts of ₹37044 in 3 years at 5% p.a., interest being compounded yearly. If the same sum amounts of ₹x in 16 months at 12% p.a., when the interest is compounded 8-monthly, then the value of x is: (+1, -0.25)

a. 38724.30

b. 32374.80

c. 37324.80

d. 33247.80

58. Find the greatest number of four digits which is divisible by 18, 21 and 24. (+1, -0.25)

a. 9864

b. 9618

c. 9842

d. 9576

59. Two washing machines are brought for a total of ₹10,750. One of them is sold at 25% profit and the other at 10% loss. If the selling price of both the washing machines is the same, then what is the difference (in ₹) between their cost prices? (+1, -0.25)

a. 1,500

b. 1,750

c. 1,600

d. 1,550

60. The HCF of 319, 435 and 667 is x. The value of x lies between: (+1, -0.25)

a. 25 and 30

b. 35 and 40

c. 30 and 35

d. 20 and 25

61. The ratio of boys and girls in a club was 8 : 5. When 6 boys left and at the same time 9 more girls joined the club, the ratio of boys and girls became 14 : 13. The number of girls, initially, in the club was: (+1, -0.25)

a. 45

b. 30

c. 40

d. 35

62. Simplify the expression (+1, -0.25)

$$4 + 12 \div 4 - 2 \times 3 + 1$$

a. 23

b. 2

c. -1

d. 31

63. A reduction of 25% in the price of an item enables a purchaser to obtain 5 items more for ₹240. The original price of the item is: (+1, -0.25)

a. ₹16

b. ₹15

c. ₹14

d. ₹18

64. A man travelled a distance of 44 km in 4 hours. He travelled partly on foot at the speed of 7 km/h and partly on bicycle at the speed of 15 km/h. The distance travelled on bicycle is: (+1, -0.25)

a. 28 km

b. 25 km

c. 32 km

d. 30 km

65. An article was sold by trader at 5.85% profit. Had it been sold at 2.1% loss, it would have given him ₹1,431 less. The cost price (in ₹) of the article is: (+1, -0.25)

a. 15,000

b. 20,000

c. 12,000

d. 18,000

66. If 50% of a number is equal to two-thirds of another number, what will be the ratio of the first number to the second number? (+1, -0.25)

a. 5 : 3

b. 1 : 3

c. 4 : 3

d. 4 : 5

67. A can complete a work 2 days earlier than B. Together they will complete the work in $4\frac{4}{9}$ days. Find the number of days taken by B to complete the same work. (+1, -0.25)

a. 10 days

b. 14 days

c. 8 days

d. 12 days

68. A shopkeeper offers 28% discount on the marked price of an article and still gains 20%. If the marked price is ₹900, then the cost price (in ₹) of the article will be: (+1, -0.25)

a. 500

b. 620

c. 640

d. 540

69. The marked price of an item is ₹2,850. If a person earns a profit of 20% after allowing a discount of 20%, then the cost price of the item is: (+1, -0.25)

a. ₹1,800

b. ₹1,850

c. ₹1,500

d. ₹1,900

70. The average age of 10 men is increased by 3 years, when three of them whose ages are 15 years, 16 years and 17 years are replaced by three new men. Find the average age of the three new men. (+1, -0.25)

a. 21 years

b. 26 years

c. 24 years

d. 19 years

71. If a person had walked at a speed of 15 km/h instead of walking at a speed of 10 km/h, he would have walked 30 km more in the same time. The actual distance travelled by him was: (+1, -0.25)

a. 60 km

b. 65 km

c. 50 km

d. 45 km

72. A can do a piece of work in 18 days and B can do the same work in 24 days, How many days will they take if both work together? (+1, -0.25)

a. $11\frac{1}{7}$

b. $10\frac{1}{2}$

c. $9\frac{4}{5}$

d. $10\frac{2}{7}$

73. Copper and zinc are melted together in the ratio 11 : 9. What is the weight of melted mixture, if 27 kg of zinc has been consumed in it? (+1, -0.25)

a. 60 kg

b. 45 kg

c. 54 kg

d. 63 kg

74. The approximate value of $\frac{5+8^2 \times (30 \div 5)}{48} - \frac{14}{7}$ is: (+1, -0.25)

a. 6

b. 10

c. 12

d. 21

75. Find the total surface of a solid cylindrical tin of radius 14 cm and height 7 cm. (Take $\pi = \frac{22}{7}$) (+1, -0.25)
- a. 1808 cm²
 - b. 1748 cm²
 - c. 1848 cm²
 - d. 1448 cm²

prepp

Your Personal Exams Guide

English

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

In the long run

- a. Repeatedly
- b. Eventually
- c. In case
- d. On condition

77. Select the option that can be used as a one-word substitute for the given group of words. (+1, -0.25)

Something that cannot be avoided

- a. Impossible
- b. Intolerable
- c. Inevitable
- d. Irreparable

78. Select the most appropriate SYNONYM of the given word. (+1, -0.25)

Erect

- a. Topple
- b. Raze
- c. Raise

d. Lower

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

There are five _____ members of the United Nations.

- a. forever
 - b. immortal
 - c. permanent
 - d. durable
-

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

Aggregate

- a. Divide
 - b. Total
 - c. Separate
 - d. Disperse
-

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

Two young men _____ the chain from the woman's neck and ran away.

- a. turned
- b. squeezed
- c. pulled

d. pushed

82. Select the option that can be used as a one-word substitute for the given group of words. (+1, -0.25)

A steep descent of water of a stream or river

- a. waterfall
 - b. glacier
 - c. fountain
 - d. whirlpool
-

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

Delhi is a most affected city by the virus nowadays.

- a. Delhi is the most affected
 - b. No substitution required
 - c. Delhi has a most affected
 - d. Delhi was a most affected
-

84. The following sentence has been split into four segments. Identify the segment that contains a grammatical error. (+1, -0.25)

Ajit asked me / how could I solve / the complex puzzle / so easily.

- a. the complex puzzle
 - b. how could I solve
 - c. Ajit asked me
 - d. so easily
-

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

- a. Contein
 - b. Certain
 - c. Vein
 - d. Quick
-

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

On cloud nine

- a. Very worried
 - b. Very angry
 - c. Very far
 - d. Very happy
-

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

Violent

- a. Mighty

- b. Gentle
 - c. Urgent
 - d. Delicious
-

88. Select the option that can be used as a one-word substitute for the given group of words. (+1, -0.25)

Woman who is the head of the family

- a. Matriarch
 - b. Patriarch
 - c. Monogamy
 - d. Polygamy
-

89. The following sentence has been split into four segments. Identify the segment that contains a grammatical error. (+1, -0.25)

I think / he has / settled / in United States.

- a. settled
 - b. in United States
 - c. he has
 - d. I think
-

90. The following sentence has been split into four segments. Identify the segment that contains a grammatical error. (+1, -0.25)

There is / hardly some / petrol left / in the car.

- a. in the car
- b. petrol left
- c. There is
- d. hardly some

91. Select the option that will improve the underlined part of the given sentence. In case no improvement is needed, select 'No improvement required'. (+1, -0.25)

You are going abroad for studies, are you?

- a. aren't you
- b. No improvement required
- c. isn't it
- d. wasn't you

92. Select the option that will improve the underlined part of the given sentence. In case no improvement is needed, select 'No improvement required'. (+1, -0.25)

Father asked me that if I will accompany him to the park.

- a. if I would
- b. No improvement required
- c. whether I will

d. that if I would

93. Select the most appropriate ANTONYM of the given word.

(+1, -0.25)

Mettle

- a. Stamina
 - b. Cowardice
 - c. Caution
 - d. Attention
-

94. Select the most appropriate option to fill in the blank.

(+1, -0.25)

The ___ was given a stipend during his period of training

- a. entrant
 - b. intern
 - c. owner
 - d. employer
-

95. Select the INCORRECTLY spelt word.

(+1, -0.25)

- a. Worried
 - b. Warrior
 - c. Complaint
 - d. Passenger
-

96. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+1, -0.25)

You (1)_____ that tomatoes and processed tomato products protect (2)_____ some types of cancer. The cancer-preventing properties of tomato products have been (3)_____ to lycopene. It is a bright red pigment found in tomatoes and (4)_____ red fruits. Processing of tomatoes increases the (5)_____ of lycopene.

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

- a. are going to hear
- b. may have heard
- c. will hear
- d. may hear

97. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+1, -0.25)

You (1)_____ that tomatoes and processed tomato products protect (2)_____ some types of cancer. The cancer-preventing properties of tomato products have been (3)_____ to lycopene. It is a bright red pigment found in tomatoes and (4)_____ red fruits. Processing of tomatoes increases the (5)_____ of lycopene.

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

- a. as
- b. for

- c. by
- d. against

98. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+1, -0.25)

You (1)_____ that tomatoes and processed tomato products protect (2)_____ some types of cancer. The cancer-preventing properties of tomato products have been (3)_____ to lycopene. It is a bright red pigment found in tomatoes and (4)_____ red fruits. Processing of tomatoes increases the (5)_____ of lycopene.

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

- a. allotted
- b. offered
- c. attributed
- d. formed

99. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+1, -0.25)

You (1)_____ that tomatoes and processed tomato products protect (2)_____ some types of cancer. The cancer-preventing properties of tomato products have been (3)_____ to lycopene. It is a bright red pigment found in tomatoes and (4)_____ red fruits. Processing of tomatoes increases the (5)_____ of lycopene.

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

- a. new
- b. another
- c. same
- d. other

100. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+1, -0.25)

You (1)_____ that tomatoes and processed tomato products protect (2)_____ some types of cancer. The cancer-preventing properties of tomato products have been (3)_____ to lycopene. It is a bright red pigment found in tomatoes and (4)_____ red fruits. Processing of tomatoes increases the (5)_____ of lycopene.

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

- a. concentration
- b. attention
- c. persistence
- d. application

Answers

1. Answer: a

Explanation:

Given :

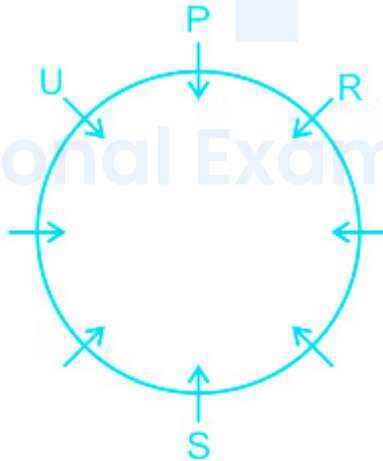
- Eight boys – P, Q, R, S, T, U, V and W
- They are seated around a round table but with equal spacing between them
- All are facing the center of the table.

Explanation :

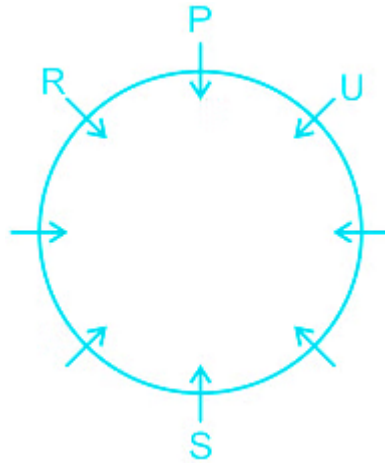
1) S is seated exactly opposite to P, who has U and R as his immediate neighbours.

As position of U and R with respect to P is not known yet, therefore there are two possible cases.

- Case - (1)

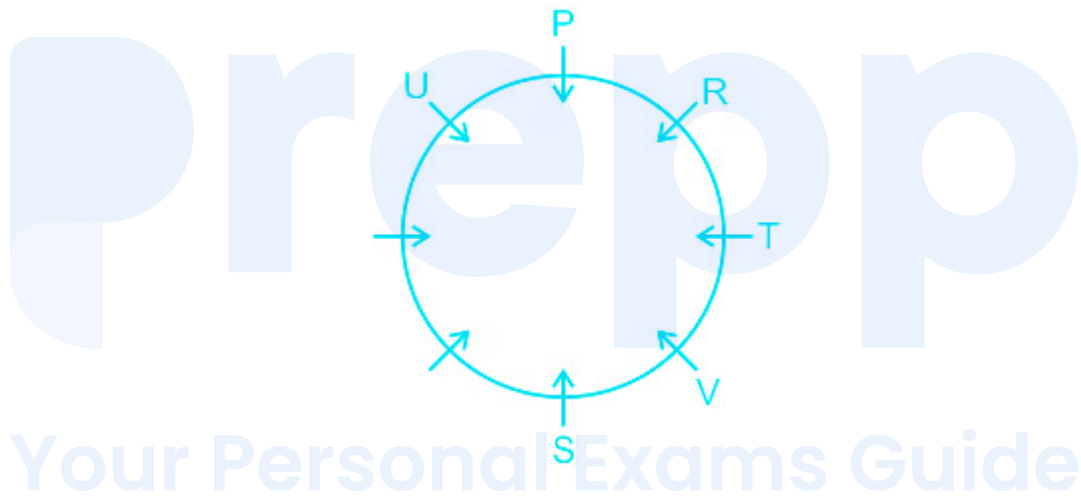


- Case - (2)

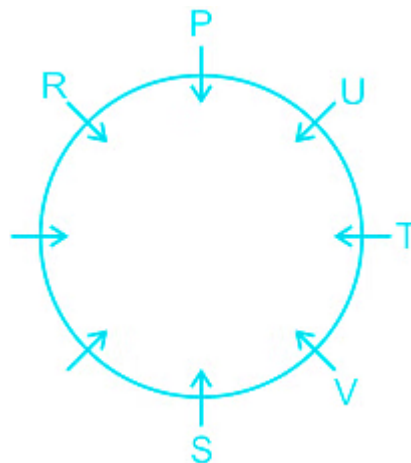


2) T is seated immediately next to V, who is to the immediate right of S.

- Case - (1)



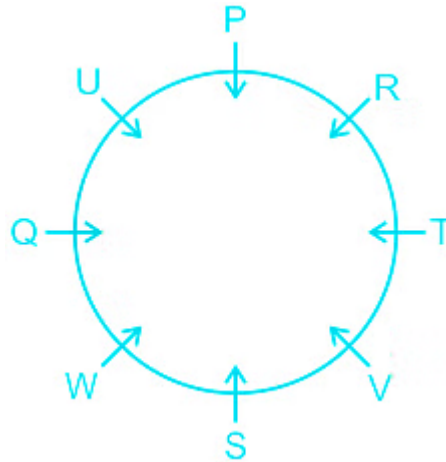
- Case - (2)



3) Q is exactly opposite to T and does not have R as his immediate neighbor.

As in case - (2) there is no possible position for Q, therefore this case is eliminated.

- Case - (1)



Thus, according to the final arrangement:

1. R is seated exactly opposite to W - **Correct**
2. S and U are the immediate neighbors of W - Incorrect (As S and Q are immediate neighbors of W)
3. Q and U are not the neighbors of each other - Incorrect (AS Q and U are neighbors of each other)
4. T is seated immediately next to V but not next to R - Incorrect (As T is seated immediate next to both V and R)

Hence, "R is seated exactly opposite to W" is the correct answer.

2. Answer: a

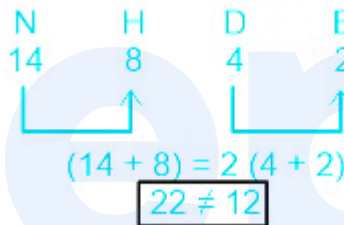
Explanation:

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

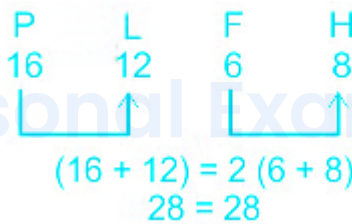
Logic : (Position value of first letter + Position value of second letter) = 2 (Position value of third letter + Position value of fourth letter)

So,

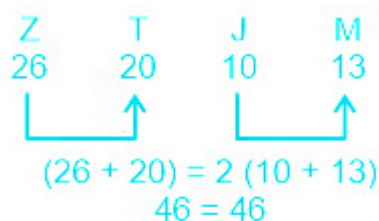
- NHDB



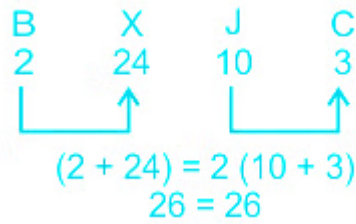
- PLFH



- ZTJM



- BXJC



Thus, the sum of first two letters is not equal to double of the sum of last two letters in NHDB,

Hence, "NHDB" is the correct answer.

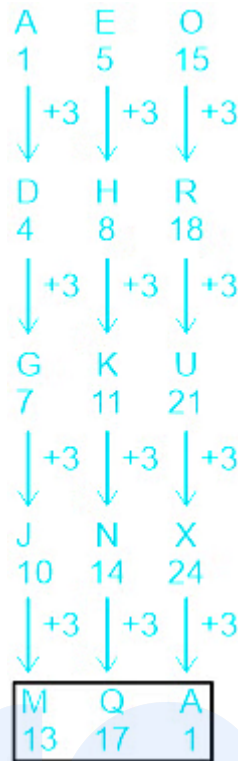
3. Answer: c

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

Logic : (3) is added to each letter's position value.

So, **Your Personal Exams Guide**



Hence, "MQA" is the correct answer.

4. Answer: c

Explanation:

Logic : (First number + Third number) 4 = Second number

Given : 15, 104, 11

$$(15 + 11) \times 4 = 104$$

$$26 \times 4 = 104$$

$$104 = 104 \text{ (LHS = RHS)}$$

So, Following the same pattern in the given options

- 18, 160, 16

$$(18 + 16) \times 4 = 160$$

$$34 \times 4 = 160$$

$$136 \neq 160 \text{ (LHS} \neq \text{RHS)}$$

- 13, 48, 10

$$(13 + 10) \times 4 = 48$$

$$23 \times 4 = 48$$

$$92 \neq 48 \text{ (LHS} \neq \text{RHS)}$$

- 17, 112, 11

$$(17 + 11) \times 4 = 112$$

$$28 \times 4 = 112$$

$$112 = 112 \text{ (LHS} = \text{RHS)}$$

- 14, 154, 8

$$(14 + 8) \times 4 = 154$$

$$22 \times 4 = 154$$

$$88 \neq 48 \text{ (LHS} \neq \text{RHS)}$$

Hence, "17, 112, 11" is the correct answer.

5. Answer: c

Explanation:

Given : L, M, N, O, P and Q families are living in houses in a row of a colony.

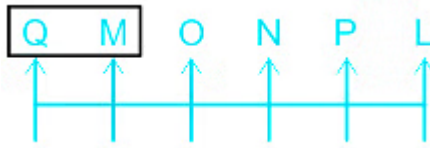
Explanation :

- Q and O are neighbours of M. L and N are neighbours of P. If O is not the nearest neighbour of L

Two groups i.e QMO or OMQ and LPN or NPL are formed.

As O is not adjacent to L, therefore there are six possible cases for the position of these two groups.

- Case - (1)



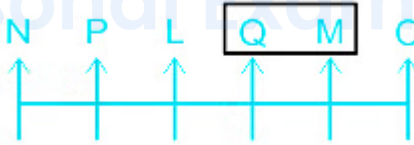
- Case - (2)



- Case - (3)



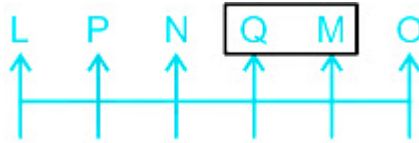
- Case - (4)



- Case - (5)



- Case - (6)



Thus, the possible neighbor of Q are M, N, L but M is Q's neighbor in each case.

Hence, "M" is the correct answer.

6. Answer: c

Explanation:

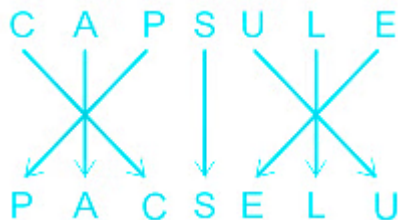
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Logic :

- First and third letters are interchanged with each other.
- Fifth and seventh letters are interchanged with each other.
- Rest letters are written as it at same position .

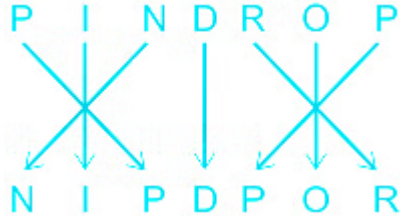
So,

- CAPSULE : PACSELU



Similarly,

- PINDROP : ?

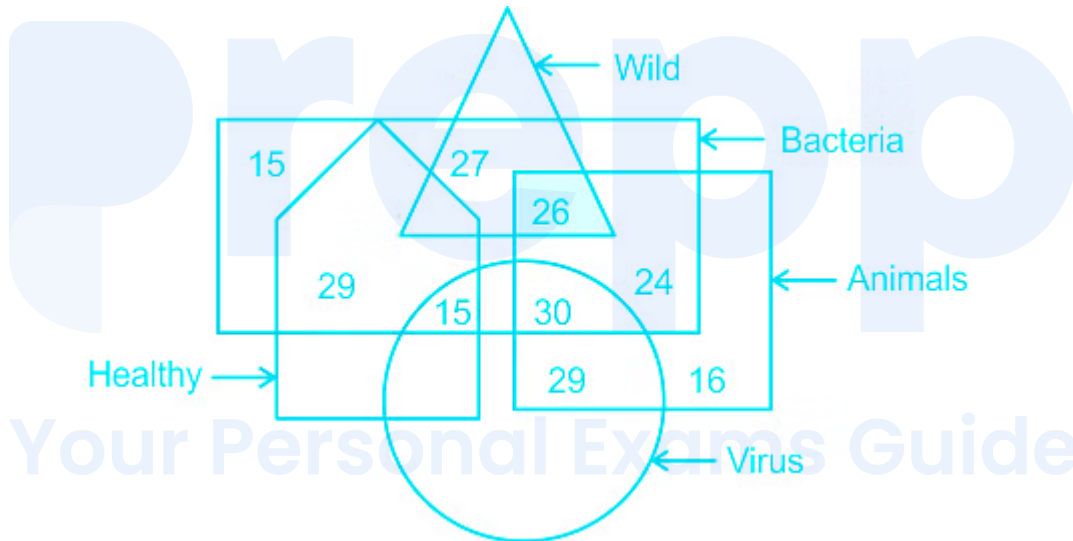


Hence, "NIPDPOR" is the correct answer.

7. Answer: a

Explanation:

Refer to the diagram as shown below:



Here, the shaded area represents wild animals which are infected by bacteria .

Hence, 'option(1) - 26' is the correct answer.

8. Answer: c

Explanation:

A is			
Symbol	\$	@	+
Meaning	Mother	Brother	Husband
to B			

According to given conditions,

Symbol in Diagram	Meaning
○	Female
□	Male
=	Married couple
—	Siblings
	Difference of a generation

Given : E G Y @ K + W

So,

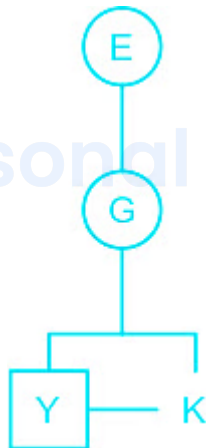
- E \$ G → E is the mother of G.



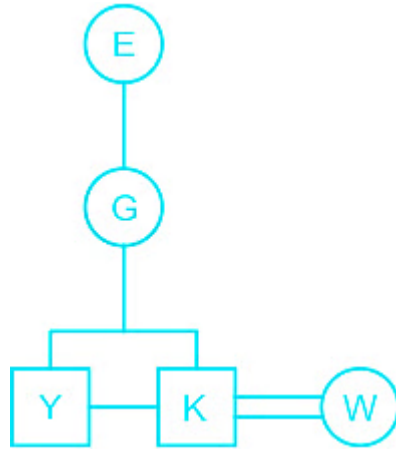
- $G \$ Y \rightarrow G$ is the mother of Y .



- $Y @ K \rightarrow Y$ is the brother of K .



- $K + W \rightarrow K$ is the husband of W .



Thus, according to the final family tree E is the maternal grandmother of K.

Hence, "Maternal grandmother" is the correct answer.

9. Answer: c

Explanation:

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

According to the question,

Letter	A	B	C	D
Meaning	+	×	-	÷

Given that: 625 D 5 A 93 C 22 B 8

After replacing the letters with their meanings, we get :-

$$= \underline{625} \div \underline{5} + 93 - 22 \times 8$$

$$= 125 + 93 - \underline{22} \times \underline{8}$$

$$= \underline{125} + \underline{93} - 176$$

$$= \underline{218} - 176$$

$$= 42$$

Hence, "42" is the correct answer.

10. Answer: b

Explanation:

Logic : [Cube of (First number - 5)] + 1 = Second number

So,

- 7 : 9

$$(7 - 5)^3 + 1 = 9$$

$$(2)^3 + 1 = 9$$

$$8 + 1 = 9$$

$$9 = 9 \text{ (LHS = RHS)}$$

- 6 : 2

$$(6 - 5)^3 + 1 = 2$$

$$(1)^3 + 1 = 2$$

$$1 + 1 = 2$$

$$2 = 2 \text{ (LHS = RHS)}$$

Similarly,

- $8 : ?$

$$(8 - 5)^3 + 1 = ?$$

$$(3)^3 + 1 = ?$$

$$27 + 1 = ?$$

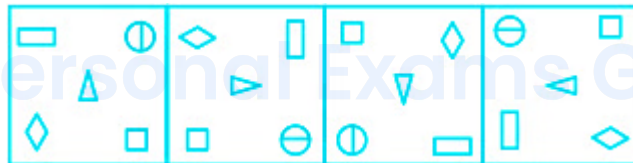
$$? = 28$$

Hence, "28" is the correct answer.

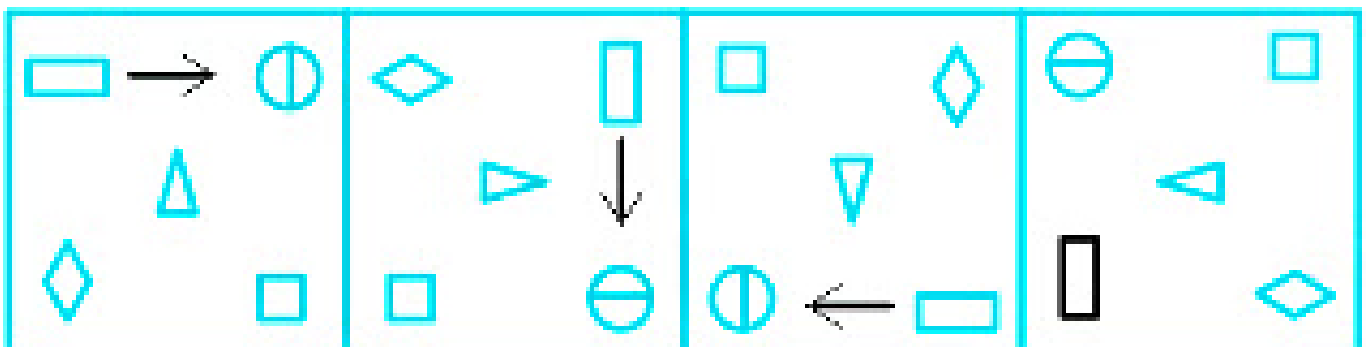
11. Answer: d

Explanation:

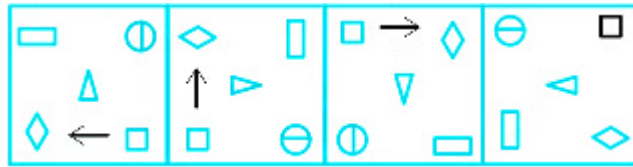
The figure that will replace the question mark (?) in the following figure series is shown below:



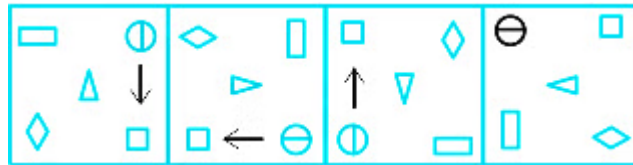
1) Rectangle - It is shifting in clockwise direction at corners only and with every shift it also rotating vertically and horizontally alternately.



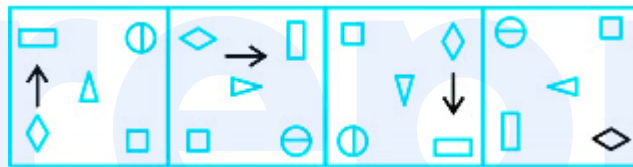
2) Square - It is shifting in clockwise direction at the corners only.



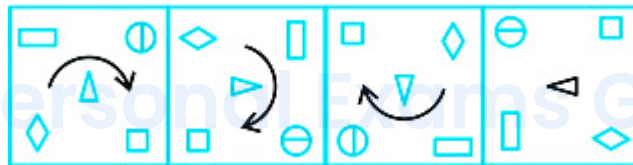
3) Circle - It is shifting in clockwise direction at the corners only.



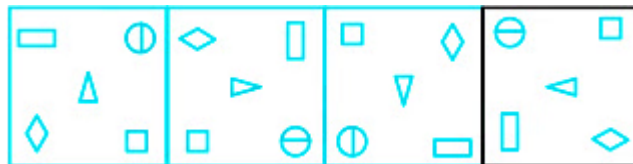
4) Rhombus - It is shifting in clockwise direction at the corners only and with every shift it also rotating vertically and horizontally alternately.



5) Triangle - It is not shifting from its position but rotating at same position in the clockwise direction.



Thus, the final series is :

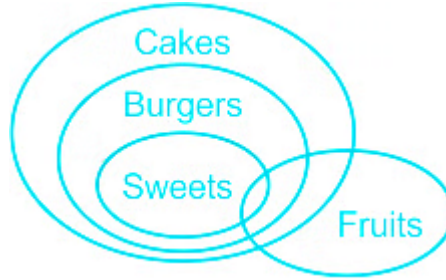


Hence, 'option - (4)' is the correct answer.

12. Answer: b

Explanation:

The least possible Venn diagram for the given statements is as shown below :



Conclusions:

I. Some fruits are burgers → Follow (As some sweets are fruits, and all sweets are burgers. So, it is definitely true)

II. Some cakes are sweets → Follow (As all burgers are cakes, and all sweets are burgers. So, it is definitely true)

∴ Here, Both the conclusions follow.

Hence, the correct answer is "Both the conclusions follow".

13. Answer: c

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Explanation:

	Ordinary year	Leap year
No. of odd days	$365 \div 7 = 52 \text{ weeks} + 1 \text{ odd day}$	$366 \div 7 = 52 \text{ weeks} + 2 \text{ odd day}$

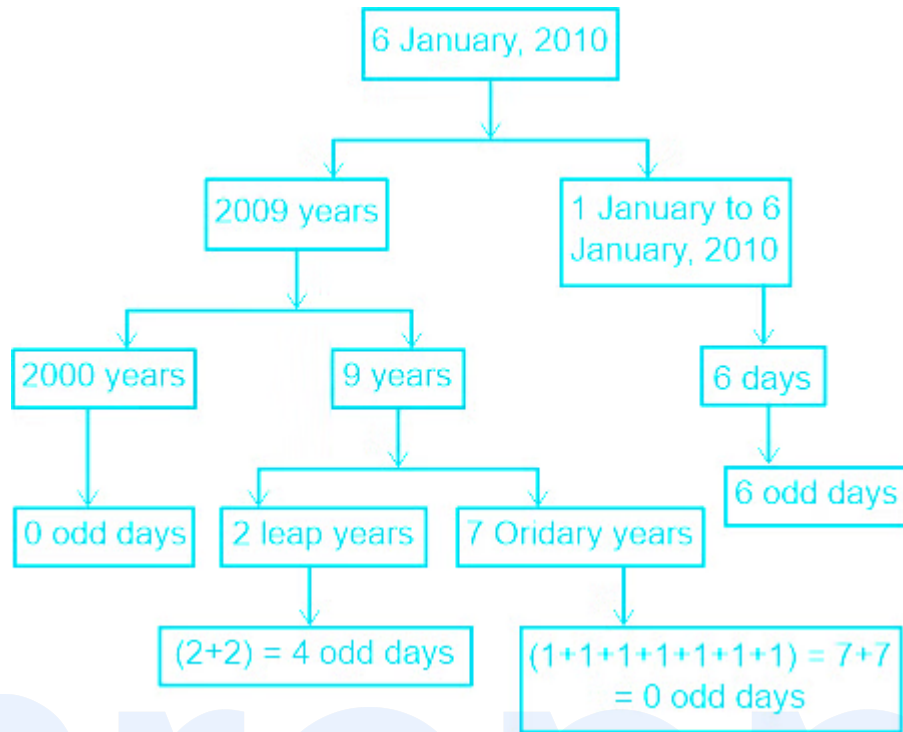
And,

Years	No. of odd days
100	5
200	3
300	1
400	0

Note : Multiple of 400 years i.e 800, 1200, 1600, 2000 will also have **0 odds days**.

Days	No. of odd days
Sunday	0
Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6

Now, calculating total number of odd days:



Total odd days till 6 January 2010 = 4 + 0 + 6 ⇒ 10 ÷ 7 = 3

Thus, "3" is the code for 'Wednesday'.

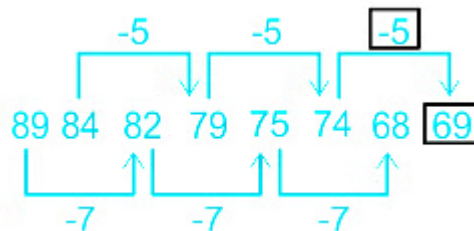
Hence, "Wednesday" is the correct answer.

14. Answer: d Four Personal Exams Guide

Explanation:

The pattern followed here is :

- Starting with the first number in the series (7) is subtracted alternately.
- Starting with the second number in the series (5) is subtracted alternately.

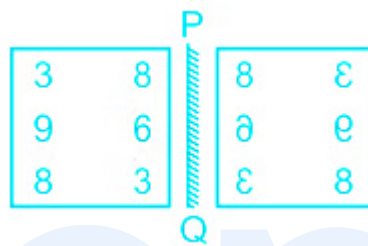


Hence, "69" is the correct answer.

15. Answer: d

Explanation:

The correct mirror image of the given combination when mirror is placed at PQ is as shown below:



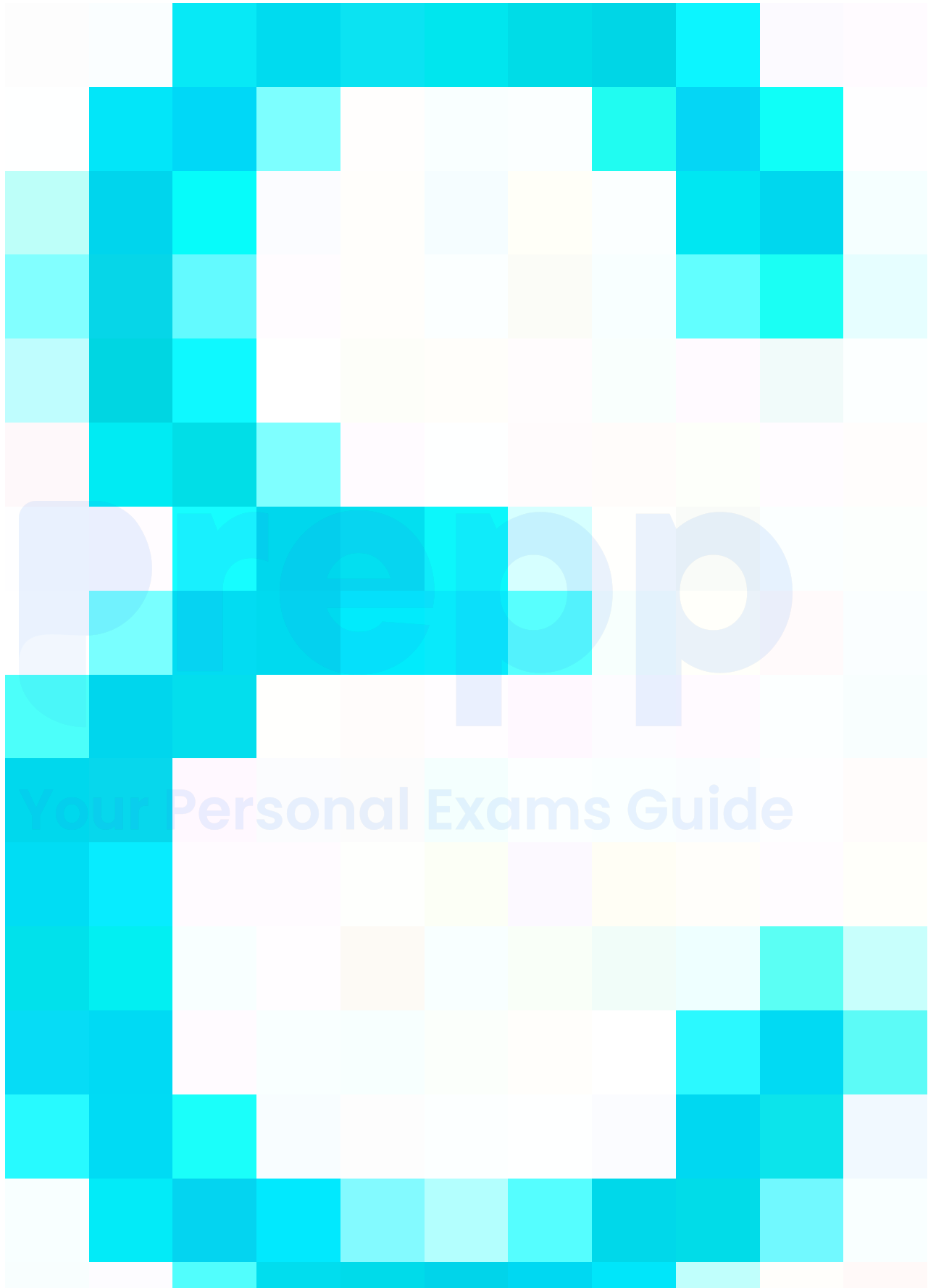
Detailed Explanation:

- The line PQ is the mirror
- The figure '

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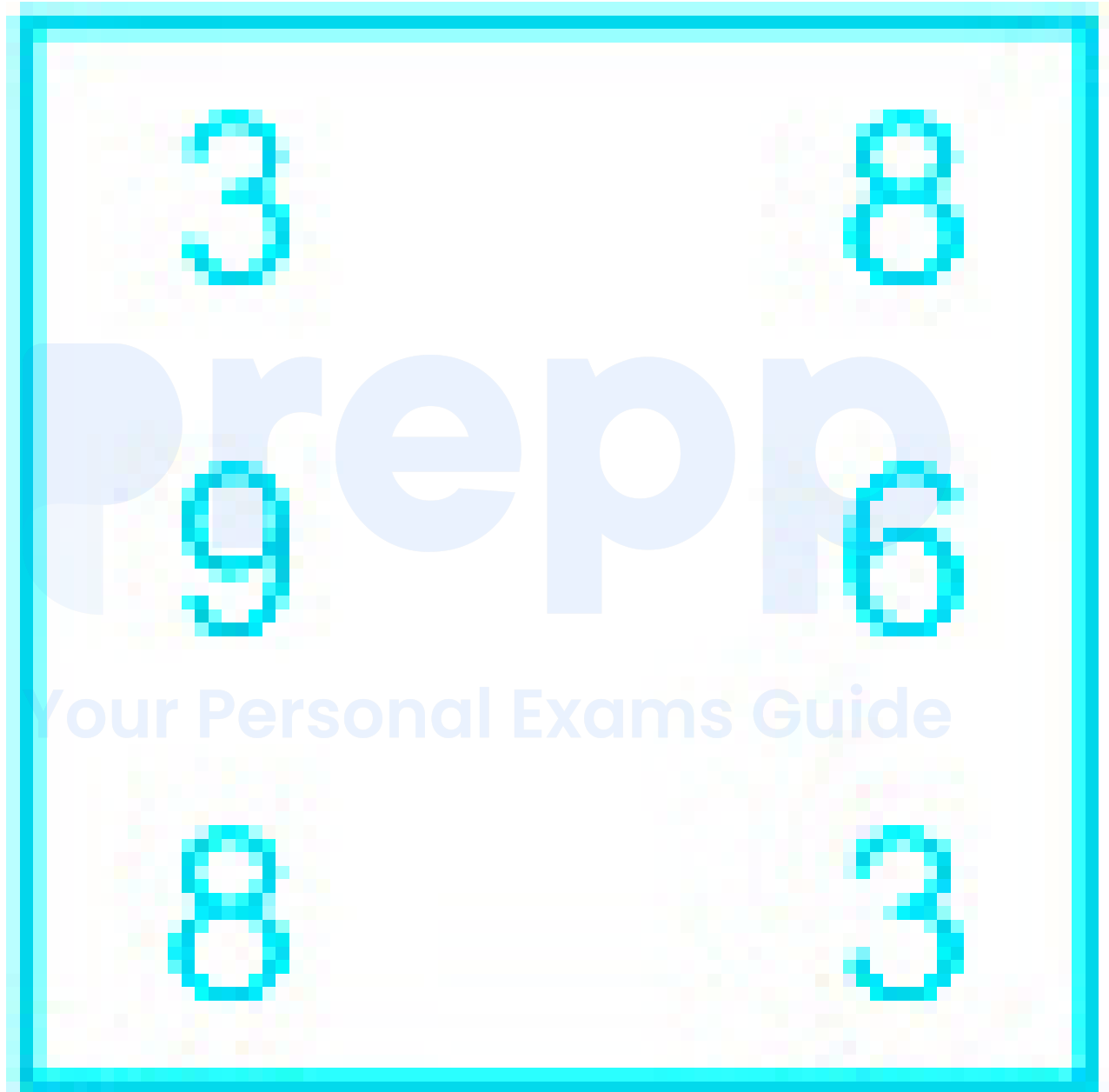
' the first digit of first row and first column is "3". So, the mirror image should be "



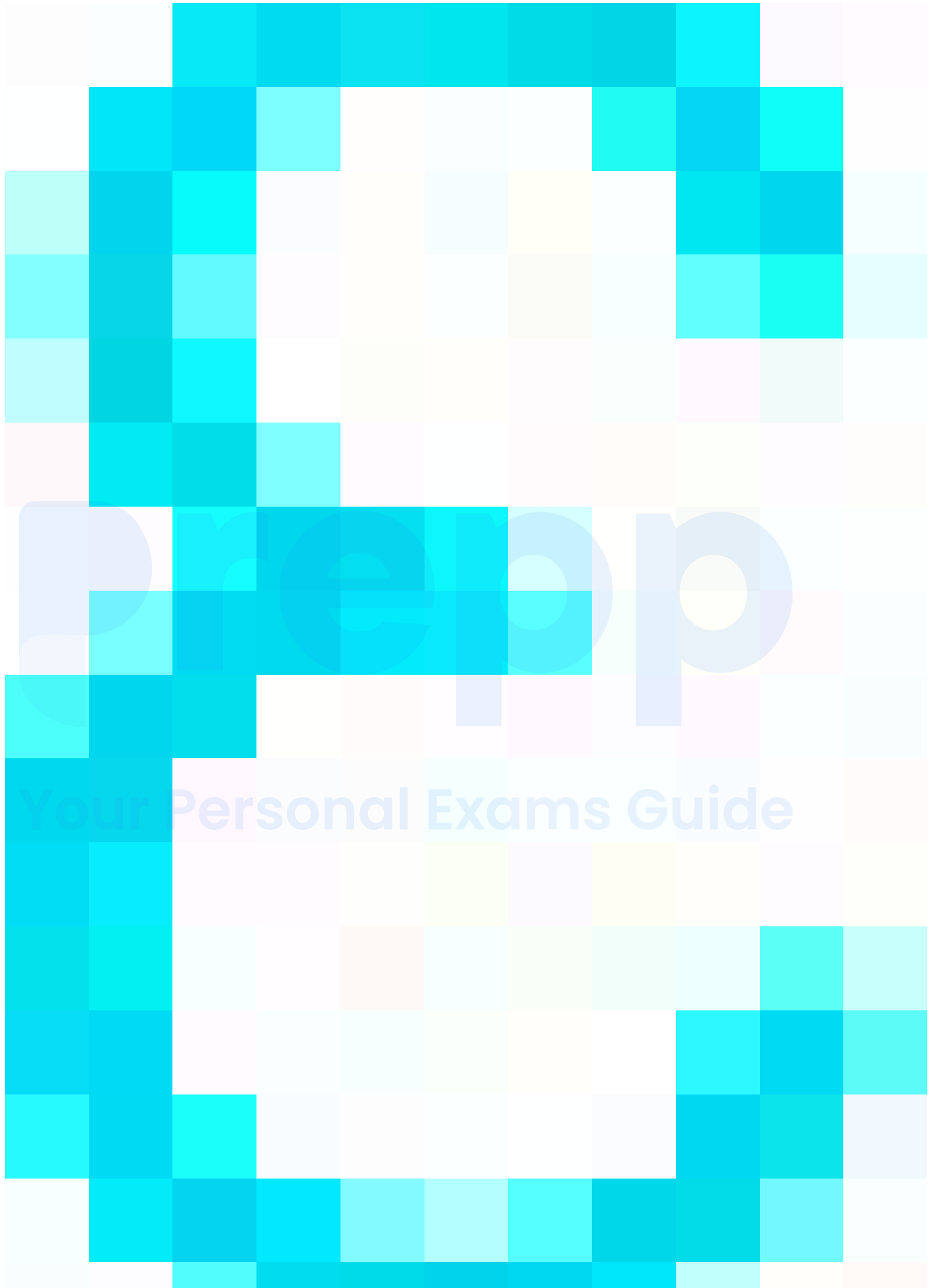


" ⇒ Option 1 is eliminated.

- The figure '



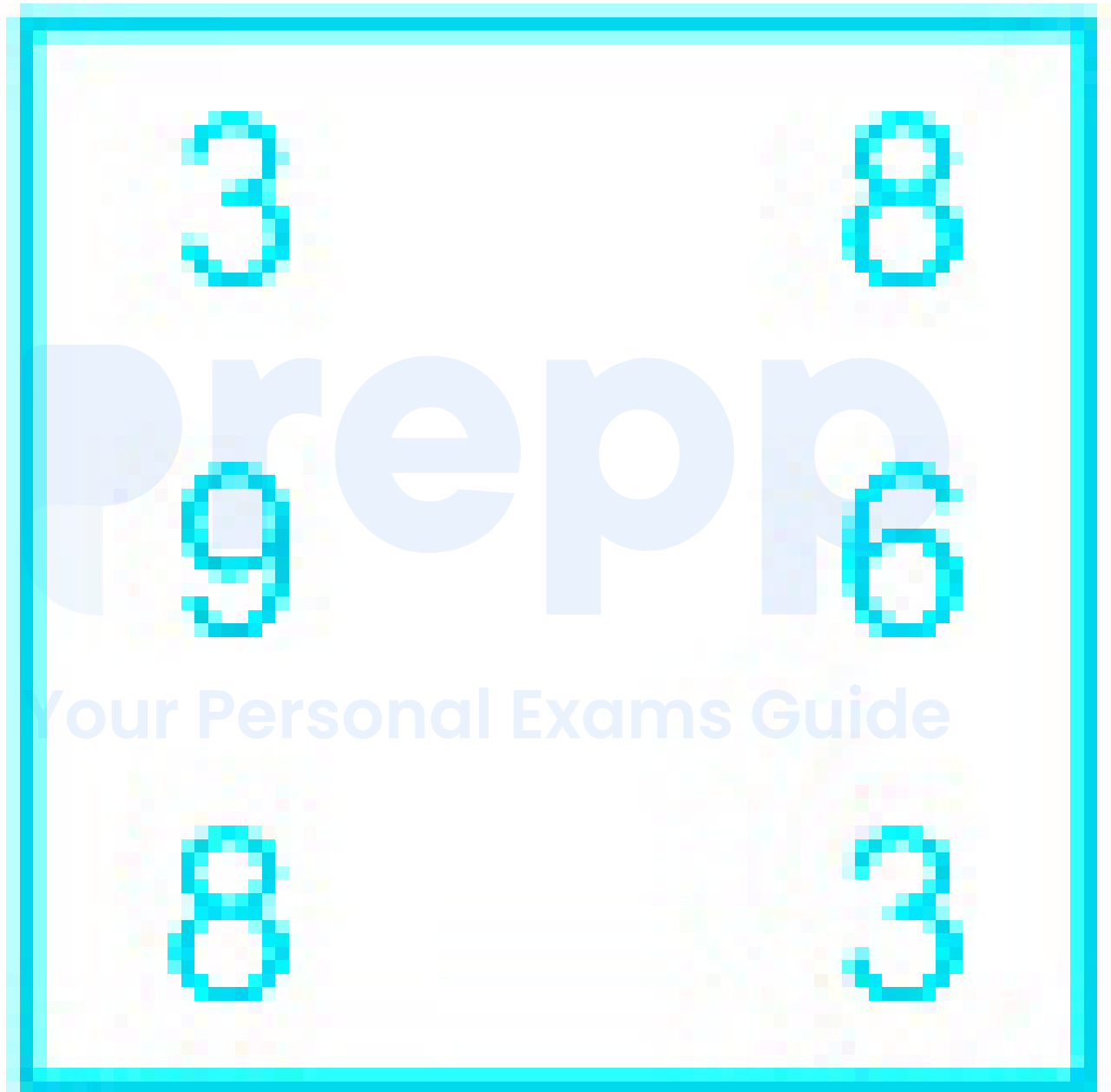
' the first digit of first row and first column is "3 ". So, the mirror image should be "



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- " ⇒ Option 2 is eliminated..
- The figure '



' the second digit of second row and second column is "8". So, the mirror image should be "



" ⇒ Option 3 is eliminated.

Hence, the correct answer is "Option - (4)".

16. Answer: c

Explanation:

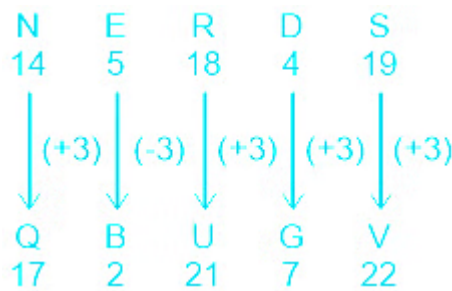
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Logic :

- Vowels - (3) is subtracted from each position value.
- Consonants - (3) is added to each position value.

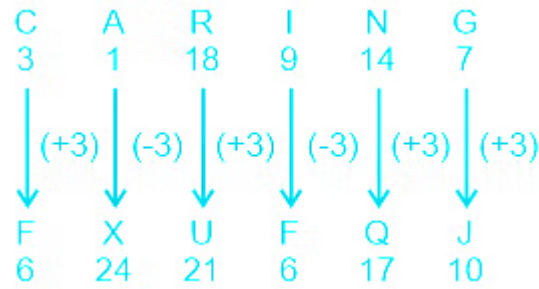
So,

- NERDS is written as :



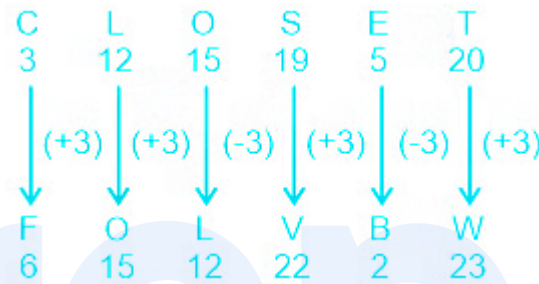
- CARING is written as :

Simila



rly,

- CLOSET is written as :



Hence, "FOLVBW" is the correct answer.

17. Answer: a

Explanation:

The pattern followed here is :

Logic: (Prime number series + Number series)

- Prime number series ⇒ Starting with 3 → 3, 5, 7, 11, 13, 17
- Number series ⇒ Starting with 2 → 2, 3, 4, 5, 6, 7

So,

- 3 → initial number
- 3 + 2 = 5
- 5 + 3 = 8
- 7 + 4 = 11
- 11 + 5 = 16

- $13 + 6 = 19$
- $17 + 7 = 24$

Hence, "16" is the correct answer.

18. Answer: b

Explanation:

According to the sequence in the dictionary.

2. Abstract

4. Abstruse

5. Absurd

1. Abundant

3. Abuse

Hence, the correct answer is "2, 4, 5, 1, 3"

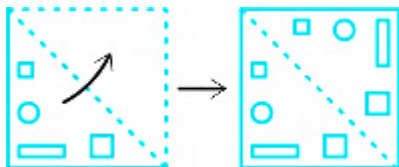
Your Personal Exams Guide

19. Answer: b

Explanation:

According to given figure:

The figure will appear when it is opened as follows:



Hence, "Option - (2)" is the correct answer.

20. Answer: d

Explanation:

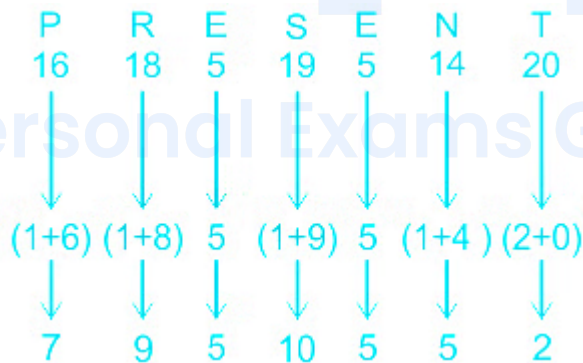
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Logic :

- Each letter's position value is written.
- Two digit position value are added within.

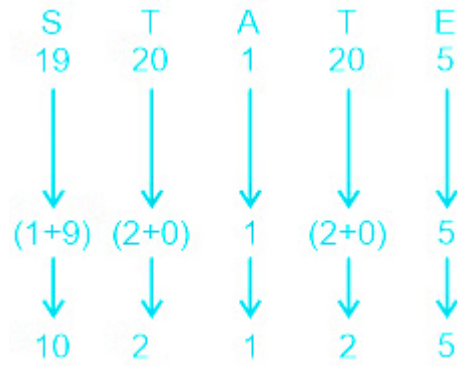
So,

- PRESENT is coded as :



Similarly,

- STATE is coded as :



Hence, "102125" is the correct answer.

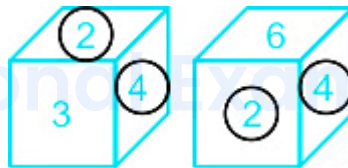
21. Answer: a

Explanation:

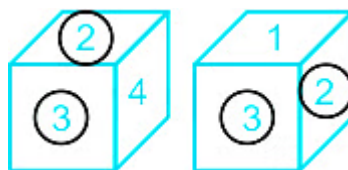
The logic followed here is :-

From the given two different cubes the adjacent sides are as shown below :

- As 2 and 4 are common on first and the second dice, it is clear that 3 is opposite to 6.



- As 2 and 3 are common on first and the third dice, it is clear that 4 is opposite to 1.



Opposite pairs:

3 → 6

4 → 1

2 → 5 (Left out numbers)

So, the opposite side of "3" will be side "6".

Hence, the correct answer is "6".

22. Answer: c

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

Logic : The letter's position is interchanged in pairs i.e

- First two letter's position is interchanged with each other.
- Next two letters i.e third and fourth letter's position is interchanged with each other.
- Next two letters i.e fifth and sixth letter's position is interchanged with each other.

So,

- FUTILE is written as :



- SELDOM is written as :



Similarly,

- CORTEX is written as :



Hence, "OCTRXE" is the correct answer.

23. Answer: b

Explanation:

The logic followed here is:

- **Shirt** is made up of **cloth** .

Similarly,

- **Earring** is made up **Gold** .

Hence, the correct answer is "Gold" .









★ Additional Information

1. Women - Women are the one who wear earrings.
2. Goldsmith - A person who makes gold articles like gold earrings.
3. **Gold** - a soft, yellow metal that is highly valued and used especially in jewelry and as a form of wealth
4. Ear - Part of the human body, it is where earring is wore

24. Answer: b

Explanation:

The image embedded in given figure is as shown below :

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

∴ Here, Option figure -(2) is embedded in given figure.

Hence, the correct answer is "Option-(2)".

25. Answer: c

Explanation:

Given : K _ H A _ A K O _ A R _ _ O H _ R A

By checking options :

1. OHRAKA → KO H AH A K OR A RAK O H A R A → (It doesn't Follows the pattern)
2. AOHRAK → KA H AO A K OH A RRA O H K R A → (It doesn't Follows the pattern)
3. ORHAKA → KO H AR A K OH A R AK O H A R A → (It follows the pattern of : KOHARA - KOHARA - KOHARA)
4. OAHRKA → K O H AA A K OH A RRK O H A R A → (It doesn't Follows the pattern)

⇒Option - (3) gives the pattern of " K O H A R A - K O H A R A - K O H A R A "

Hence, "ORHAKA" is the correct answer.

26. Answer: b

Explanation:

The correct answer is A person who buys any goods or services for consideration.

★ Key Points

- A **consumer** is a person who buys any goods or services for consideration and uses the goods for non-commercial purposes.
- Consumer Protection Act 2019
 - The Consumer Protection Act (CPA), 2019 has replaced Consumer Protection Act of 1986.
 - This Act also proposes the establishment of a Central Consumer Protection Authority in order to promote, protect and enforce the rights of consumers.
 - Rules for the prevention of unfair trade practices by e-commerce platforms would be covered under this new Act.
 - This act will apply to all goods and services.

- The consumers are provided with a three-tier consumer dispute redressal machinery at the National, State and District levels.
- Every Year 24th December is observed as National Consumer Day with a specific theme in India. On this day the Consumer Protection Act, of 1986 had received the assent of the president.

★ Additional Information

Rights of consumers

- Right to Safety – A consumer has the right to insist on the quality and guarantee of the goods. They should purchase a certified product like ISI or AGMARK.
- Right to be heard – Consumers will get due attention to express their grievances at a suitable forum.
- Right to be informed – Consumers should be informed of all the necessary details of the product.
- Right to Choose- Consumers should have the right to choose from a variety of goods at a competitive price.
- Right to Consumer Education- Consumers should be aware of their rights and avoid exploitation.
- Right to seek compensation – The consumer has the right to seek redress against unfair and cruel practices or exploitation of the consumer.

27. Answer: d

Explanation:

The correct answer is Agra.

★ Key Points

- The tomb of Itimad- ud -Daulah is located along the banks of the Yamuna at Agra, Uttar Pradesh.
 - It was built by the Mughal queen Noor Jahan , wife of Emperor Jehangir .

- The tomb of Itimad- ud -Daulah is often regarded as a draft of the Taj Mahal .
- It is known for the first use of the pietra dura.

★ Additional Information

- Agra is known for Taj Mahal (Tomb of Mumtaz Mahal , built by the Mughal emperor Shah Jahan for the memory of his favourite wife).
- The Taj Mahal is in the list of UNESCO World Heritage Site since 1983.
- Ustad Ahmad Lahaur i was the chief architect of Taj mahal.
- Agra Fort is a historical fort in the city of Agra in India. It was the main residence of the emperors of the Mughal Dynasty until 1638.
- Moti Masjid inside Agra Fort was built by Mughal emperor Shah jahan .

28. Answer: c

Explanation:

The correct answer is Biplab Kumar Deb.

★ Key Points

- Biplab Kumar Deb is the Chief Minister of Tripura.
- He took oath as the 10th Chief Minister of the state in March 2018 .

★ Additional Information

- About Tripura: As of Sept 2022:
 - Capital: Agartala
 - Chief minister: Manik Saha
 - Governor: Satyadev Narayan Arya
 - Union territory: 1 November 1956
 - Upgraded as State: 21 January 1972
 - State Animal: Phayre's leaf monkey
 - State Bird: Green imperial pigeon

29. Answer: b

Explanation:

The correct answer is Atlantic Ocean.

★ Key Points

- The Labrador sea is a part of the North Atlantic Ocean.
 - The Atlantic Ocean is the second-largest ocean of the world.
 - The Labrador sea is between the Labrador Peninsula and Greenland.
 - It is connected with Baffin Bay in the north through the Davis Strait and with Hudson Bay in the west through Hudson Strait.
 - It contains one of the world's largest turbidity current channel systems, the Northwest Atlantic Mid-Ocean Channel .
- The Mediterranean Sea is an intercontinental sea that stretches from the Atlantic Ocean on the west to Asia on the east and separates Europe from Africa .
 - Calypso Deep , located in the Hellenic Trench , Ionian Sea southwest of Pylos, Greece , is the deepest part of the Mediterranean Sea, with a maximum depth of 5,267 m .
 - The Mediterranean Sea extends for about 4,000 km (west to east) from the Strait of Gibraltar to the Gulf of Iskenderun on Turkey's southwestern coast.

30. Answer: b

Explanation:

The correct answer is Atlantic Ocean.

★ Key Points

- Puerto Rico Trench, a submarine depression in the North Atlantic Ocean, roughly parallel to the northern coast of the island of Puerto Rico and lying about 75 miles to the north.
- The Puerto Rico Trench is about **1,090 miles long and 60 miles wide**.
- The Puerto Rico Trench is located on the boundary between the Caribbean Sea and the Atlantic Ocean.
- The oceanic trench, the deepest in the Atlantic, is associated with a complex transition between the Lesser Antilles subduction zone to the south and the major transform fault zone or plate boundary, which extends west between Cuba and Hispaniola through the Cayman Trough to the coast of Central America.

★ Additional Information

- The shape of Atlantic Ocean is of an 'S-shaped' basin.
- It extends between **Europe and Africa** to the east and the Americas to the west.
- The Atlantic Ocean is the second-largest ocean in the **World after the Pacific Ocean**.

31. **Answer: a**

Explanation:

The correct answer is
Pilibhit Tiger Reserve



Key Points

- The Pilibhit Tiger Reserve (PTR) and the Uttar Pradesh Forest department have bagged the first-ever international award, TX2 , for doubling the number of tigers in four years against a target of 10 years.
- Pilibhit Tiger Reserve was the first to receive the award among 13 tiger range countries.

- It achieved this goal in just four years from 2014 when it had 25 tigers which went up to 65 in 2018.
- The award was virtually presented to the principal chief conservator of forest of the state, by United Nations Development Program .
- The growth of 40 tigers in a short span of four years was recognized for the TX2 award.

★ Additional Information

- In 2014, All India Tiger Estimation had estimated 25 tigers in Pilibhit and 2018 estimation showed an increase by projecting 65 tigers.
- Pilibhit Tiger Reserve had 57 resident and eight transit tigers in 2018. However, this figure did not include the tiger cubs below the age of one year.
- The global target of doubling the tiger population was set in 2010 by the partners in TX2 award.
- TX2 is the global award which was set up in 2010 in St. Petersburg, Russia.
- Partners- UNDP, Global Tiger Forum, International Union for Conservation of Nature, World Wide Fund for Nature, Conservation Assured/Tiger Standards and Lion's Share.
- No other tiger reserve among all the 13 tiger range countries could succeed in doubling the big cat population in a span of 10 years.

32. Answer: b

Explanation:

The correct answer is Assam.

★ Key Points

- **Kanaklata Barua** was a teenage freedom fighter who was shot dead in **Assam** during the Quit India Movement.
- She was one of the youngest martyrs of the Quit India Movement.
- She led the Mukti Bahini to unfurl the Tricolour at the Gohpur police station on September 20, 1942.

★ Additional Information

- ICGS Kanaklata Barua is the fifth and last in a series of FPVs built by **Garden Reach Shipbuilders and Engineers (GRSE) Ltd.**
- The other four are:
 - ICGS Priyadarshini
 - ICGS Annie Besant.
 - ICGS Kamala Devi.
 - ICGS Amrit Kaur.

33. Answer: b

Explanation:

The correct answer is **RBI formulates the annual budget for the central government.**

★ Key Points

- RBI acts as a sole currency authority of the country, known as **Banker's Bank**
 - Controller of Credit
 - Exchange Management and Control
 - RBI makes the **monetary policy of the country.**

★ Additional Information

- Reserve Bank of India (RBI) is India's apex central banking institution.
- Established: April 1 1935, under RBI act 1934.
- It was formed on the recommendation of the Hilton Young Commission.
- Initial Paid-up capital was 5 crores .
- RBI was nationalized on 1 January 1949.
- The Central Office of the Reserve Bank was initially established in Calcutta but was permanently moved to Mumbai in 1937.

34. Answer: d

Explanation:

The correct answer is Kane Williamson.

★ Key Points

- **Kane Williamson** has been adjudged the 'Player of the Tournament in the 2019 Cricket World Cup.
- He is the captain of the New Zealand cricket team in all three game formats. (2020).
- Kane Williamson was awarded the Man of the tournament award in the ICC Cricket World Cup 2019.
- He scored 578 runs in the tournament and helps New Zealand to fix a spot in the finals.
- Ben Stokes is Man of the match in the final, he helps England to win its first-ever world cup title.
- Rohit Sharma hits five centuries in the tournament.

★ Additional Information

- ICC Men's Cricket World Cup 2019 final match was held at Lord's in London.
 - Lord's had hosted the Cricket World Cup Final five times, the most of any venue.
- The final match was played between New Zealand and England.
 - The final match was conducted on 14 July 2019.
 - England defeated New Zealand and lifted the ICC Men's Cricket World Cup 2019.
 - It was England's first ICC Men's Cricket World Cup victory in four final appearances.
 - It was also the first world cup final since 1992 to have a definite new winner.
 - The two teams were tied on the same score at the end of the match, resulting in a Super Over.
 - It was the first time a Super Over was necessary for a One Day International final match.
 - England won on the boundary count.

- England's all-rounder Ben Stokes was awarded the player of the match.
-

35. Answer: c

Explanation:

The correct answer is Tulughma.

★ Key Points

- The new war tactics introduced by Babur were the **tulughma and the araba**.
- Tulughma meant dividing the whole army into various units, viz. the **Left, the Right and the Centre**.
- The Left and Right divisions were further subdivided into Forward and Rear divisions.
- Through this a small army could be used to surround the **enemy from all the sides**.
- The Centre Forward division was then provided with carts (araba) which were placed in rows facing the enemy and tied to each other with animal hide ropes.
- Behind them were placed cannons protected and supported by **mantelets** which could be used to **easily manoeuvre the canons**.
- These two tactics made **Babur's artillery lethal**.

★ Additional Information

- The First Battle of Panipat (21 April 1526) fought near a small village of Panipat Haryana.
 - The battle was fought between the invading forces of Zahir-ud-din Babur and Lodi Empire during the rule of Ibrahim Lodi.
 - The Mughal forces of Babur, the ruler of Kabulistan, defeated ruling army of Ibrahim Lodi, Sultan of Delhi.
 - Babur's tactics of Tulughma and Araba that led him to victory.
-

36. Answer: b

Explanation:

The correct answer is 1980.

★ Key Points

- Bharatiya Janta Party was founded by Atal Bihari Vajpayee and Lal Krishna Advani in 1980 .
- It succeeded the Bhartiya Jan Sangh which was formed by Shyama Prasad Mukherjee in 1951 .
- Its aim is to build a strong and modern India by drawing inspiration from ancient culture and values .
- They believe in the ideas of Deen Dayal Upadhyay of integral humanism and Antyodaya .
- It promotes cultural nationalism (or 'Hindutva') .
- Party's goal is to full territorial and political integration of Jammu and Kashmir with India, a uniform civil code and a ban on religious conversions .
- It has a symbol of the Lotus .
- As of August 2022, it is the ruling party in India with Narendra Modi as its Prime Minister.

★ Additional Information

Political Party	Founding Year
Indian National Congress (INC)	1885
Communist Party of India (CPI)	1925
Bahujan Samaj Party (BSP)	1984
Nationalist Congress Party (NCP)	1999
Communist Party of India - Marxist (CPI-M)	1964

37. Answer: a

Explanation:



The correct answer is No interest is earned on the deposit in PMJDY accounts.**Key Points**

- Pradhan Mantri Jan-Dhan Yojana (PMJDY), launched in 2014, is National Mission for Financial Inclusion to ensure access to financial services, namely, Banking/ Savings & Deposit Accounts, Remittance, Credit, Insurance, Pension in an affordable manner.
- Accounts opened under PMJDY are being opened with Zero balance.
- Accidental insurance cover under the scheme is of Rs. 2 lakhs.
- After satisfactory operation of the account for 6 months, an overdraft facility will be permitted.
- Overdraft facility upto Rs. 10,000/- is available in only one account per household, preferably lady of the household.
- The account holder is provided with a **RuPay debit card**.
- The scheme provide life cover of Rs. 30,000/- payable on death of the beneficiary, subject to fulfillment of the eligibility condition.
- Other benefits under PMJDY Scheme are - Interest on deposit, No minimum balance required, Easy Transfer of money across India Access to Pension, insurance products etc.

38. Answer: c

Explanation:

The correct answer is Vitamin D.

★ Key Points

- Vitamin D deficiency causes rickets .
- The chemical name of Vitamin D is Cholecalciferol .
- It was discovered by Edward Mellanby.
- It is fat-soluble.
- It is found in Fish, eggs, liver, mushrooms.

★ Additional Information

- They convert food into energy and repair cellular damage.

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Vitamin	Vitamins	Diseases	Sources
Vitamin A	Retinol, retinal, and four carotenoids	Night-blindness, Hyperkeratosis, and Keratomalacia	Orange, ripe yellow fruits, leafy vegetables, carrots, pumpkin, squash, spinach, liver
Vitamin B1	Thiamine	Beriberi, Wernicke-Korsakoff syndrome	Pork, oatmeal, brown rice, vegetables, potatoes, liver, eggs
Vitamin B2	Riboflavin	Ariboflavinosis	Dairy products, bananas, popcorn, green beans, asparagus
Vitamin B3	Niacin, niacinamide	Pellagra	Meat, fish, eggs, many vegetables, mushrooms, tree nuts
Vitamin B5	Pantothenic acid	Paresthesia	Meat, broccoli, avocados

Vitamin	Vitamins	Diseases	Sources
Vitamin B6	Pyridoxine, pyridoxamine, pyridoxal	Anaemia peripheral neuropathy.	Meat, vegetables, tree nuts, bananas
Vitamin B7	Biotin	Dermatitis, enteritis	Raw egg yolk, liver, peanuts, certain vegetables
Vitamin B9	Folic acid, folinic acid	Megaloblast and deficiency during pregnancy are associated with birth defects, such as neural defects.	Leafy vegetables, pasta, bread, cereal, liver
Vitamin B12	Cyanocobalamin, hydroxycobalamin, methylcobalamin	Megaloblastic anaemia	Meat and other animal products
Vitamin C	Ascorbic acid	Scurvy	Many fruits and vegetables, liver
Vitamin D	Cholecalciferol	Rickets and Osteomalacia	Fish, eggs, liver, mushrooms

Vitamin	Vitamins	Diseases	Sources
Vitamin E	Tocopherols, tocotrienols	Deficiency is very rare; mild hemolytic anemia in newborn infants.	Many fruits and vegetables, nuts and seeds
Vitamin K	phylloquinone, menaquinones	Bleeding diathesis	Leafy green vegetables such as spinach, egg yolks, liver

39. Answer: b

Explanation:

The correct answer is

Taxila.

Vitamin K

Key Points

- Ambhi, the ruler of Taxila, readily submitted to the invader, augmenting Alexander's army and replenishing his treasure.
- When he reached the Jhelum, Alexander encountered the first and the strongest resistance from Porus.
- Although Alexander defeated Porus, he was impressed by the bravery and courage of the Indian prince.
 - He, therefore, restored his kingdom to him and made him his ally.

★ Additional Information

- Porus was an Indian prince who governed the area between the Hydaspes (Jhelum) and Acesines (Chenab) rivers during the conquest of Punjab by Alexander the Great (327–326 bce).
- Porus resisted Alexander, in contrast to his neighbour, Ambhi, king of Taxila (Takshashila).
- In his capacity as King of Macedonia and Persia and one of history's greatest military strategists, Alexander the Great built the biggest empire the ancient world had ever known.
- Alexander the Great and King Porus engaged in combat in the Hydaspes in 326 BC.

40. Answer: b

Explanation:

The correct answer is Maharashtra.

★ Key Points

- **Maharashtra Governor Bhagat Singh Koshyari** has won the first prize in the State Level Letter Writing Competition (Inland Letter Card Category) organised by the Department of Posts for his essay on the theme '**Dear Bapu, you are immortal**'.
- Senior Officers of the Postal Department presented the **first prize cheque of Rs.25000**.

★ Additional Information

- Maharashtra :
 - Mumbai is the capital city of Maharashtra.
 - The Gateway of India is the most famous monument and Iconic landmark located in Mumbai.
 - Eknath Shind is the current CM of Maharashtra.
 - Bhagat Singh Koshyari is the Governor of Maharashtra.

41. Answer: b

Explanation:

The correct answer is Tamil Nadu.

★ Key Points

- Brihadeeswarar Temple also called Periya Koyil or Big Temple is the greatest architectural monument of the Chola period in **Thanjavur, Tamil Nadu**.

- Rajaraja Chola, who commissioned the temple, called it Rajarajeshwaram (Rajarajeswaram), literally "the temple of the almighty of Rajaraja".
- A later inscription in the Brihannayaki shrine calls the temple's deity Periya Udaiya Nayanar, which appears to be the source of the modern names Brihadisvara and Peruvudaiyar Kovil.

★ **Additional Information**

- Brihadeeswarar Temple is a Hindu temple dedicated to Shiva on the south bank of the Cauvery river in Thanjavur, Tamil Nadu, India.
- It is one of the largest Hindu temples and an exemplary example of fully realized Tamil architecture .
- It is called Dakshina Meru.
- Built by Tamil king Raja Raja Chola I between 1003 and 1010 AD, the temple is a part of the UNESCO World Heritage Site known as the "Great Living Chola Temples", along with the Chola dynasty era Gangaikonda Cholapuram temple and Airavatesvara temple that is about 70 kilometres and 40 kilometres to its northeast respectively.

42. Answer: b

Explanation:

The correct answer is Satyendra Singh.

★ **Key Points**

- **Gajanand Yadava** was a recipient of Tenzing Norgay National Adventure Award 2019.
- WgCdr Gajanand Yadava, a Parachute Jump Instructor & member of IAF Skydiving Team '**AkashGanga**'
- He was awarded the '**Tenzing Norgay National Adventure Award 2019**' in '**Air Adventure category**'.

★ **Additional Information**

- Tenzing Norgay National Adventure Award
 - It is the prestigious national award for adventure sports in India, equivalent to the Arjuna Award.
 - The award is given every year on National Sports Day - August 29 .
 - It was named after Tenzing Norgay, a Nepali- Indian Sherpa Mountaineer, who was the first to reach the summit of Mount Everest along with Edmund Hillary on 29th May 1953.
 - The award is given in 4 categories
 - Land Adventure
 - Air Adventure
 - Water Adventure
 - Life Time Achievement
 - The awardees are given prize money of Rs. 5 lakh along with statuettes, and certificates.

43. Answer: c

Explanation:

The correct answer is Electrostatic force.

★ Key Points

- Electrostatic force is the force between two charges it is also a central force because it acts along the line joining the centers of the two charges .
- It is also known as coulombian or electric force sometimes .
- Lightning is an example of electrostatic forces in everyday life.

★ Additional Information

- When any force applied by using our muscles like arms or legs, then this force is known as **muscular force**.
 - Muscular force is a type of contact force.
- **Centrifugal force** is the apparent outward force on a mass when it is rotated.
 - Think of a ball on the end of a string that is being twirled around, or the outward motion you feel when turning a curve in a car.

- A **centripetal force** is a force that makes a body follow a curved path.
 - Its direction is always orthogonal to the motion of the body and towards the fixed point of the instantaneous center of curvature of the path.
-

44. Answer: a

Explanation:

The correct answer is Utpal Kumar Singh.

★ Key Points

- On November 30, Lok Sabha Speaker Om Birla appointed senior IAS officer Utpal Kumar Singh as Secretary-General of the Lok Sabha.
- Singh has also been appointed to the Lok Sabha Secretariat in the rank and status of Cabinet Secretary with effect from December 1.
- Retired IAS officer from the 1986 batch, Utpal Kumar Singh will replace Snehlata Shrivastava, the first woman Secretary-General of the Lok Sabha.
- A former IAS officer from the Madhya Pradesh Cadre, Shrivastava was appointed to the top post on December 1, 2017.

★ Additional Information

- The **Speaker** appoints the **Secretary-General of the Lok Sabha**.
 - The Lok Sabha speaker is the presiding officer of the Lok Sabha.
 - The Speaker ranks sixth in the hierarchy of State government of India, equivalent with the Chief Justice.
 - He/she represents the full authority of the House and decides whether a bill is a money bill or not.
-

45. Answer: b

Explanation:

The correct answer is **bedrock**.

★ **Key Points**

- **Bedrock** is the bottommost layer of a **soil profile**.
 - This layer mainly consists of **huge rocks**.

★ **Additional Information**

- It is the vertical section of soil from all its horizons.
- There are different types of soil, each with its own set of characteristics.
- It is made of layers, or horizons (O, A, E, B, C, R).
- Put the horizons together, and they form a soil profile.
- Most soil profiles cover the earth as 2 main layers Topsoil and Subsoil.
- Most soils have three major horizons (A, B, C) and some have an organic horizon (O).

★ **Additional Information**

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Soil Horizon	Characteristics
O Horizon	<ul style="list-style-type: none"> • Layers dominated by organic material. • Some O layers consist of undecomposed or partially decomposed litter (such as leaves, needles, twigs, moss, and lichens). • They may be on top of either mineral or organic soils.
Horizon A or Surface soil	<ul style="list-style-type: none"> • It is the part of the topsoil. • In this layer, organic matter is mixed with mineral matter. • It is the layer of mineral soil with the most organic matter accumulation and soil life. • Nutrients like iron, aluminium, clay and organic matter are sometimes dissolved and carried out in this layer. • This layer is depleted of (eluviated of) iron, clay, aluminium, organic compounds, and other soluble constituents. • When depletion is pronounced, a lighter-coloured "E" subsurface soil horizon is apparent at the base of the "A" horizon. • The A horizon is a surface horizon that largely consists of minerals like sand, silt, and clay.
E Horizon	<ul style="list-style-type: none"> • "E" stands for eluviated layer. • It is a light-coloured eluviated layer, that is eroded by its nutrients. • It is the horizon that has been significantly leached of clay, iron, and aluminium oxides, which leaves a concentration of resistant minerals, such as quartz, in the sand and silt sizes. • These are present only in older, well-developed soils, and generally occur between the A and B horizons.

<p>B Horizon or Subsoil</p>	<ul style="list-style-type: none"> • It is a subsurface layer reflecting chemical or physical alteration of the parent material. • This layer accumulates all the leached minerals from the A and E horizons. • Thus iron, clay, aluminium, and organic compounds accumulate in this horizon (illuviation).
<p>C Horizon or Parent rock</p>	<ul style="list-style-type: none"> • Weathered parent material accumulates in this layer, i.e. the parent material in sedimentary deposits. • It is a layer of large unbroken rocks . • This layer may accumulate more soluble compounds (inorganic material).
<p>R Horizon or Bedrock</p>	<ul style="list-style-type: none"> • This layer denotes the layer of partially weathered bedrock at the base of the soil profile. • Unlike the above layers, R horizons largely comprise continuous masses of hard rock. • Soils formed in situ will exhibit strong similarities to this bedrock layer. • These areas of bedrock are under 50 feet of the other profiles. • It is also known as 'D horizon' in some cases.

46. Answer: b

Explanation:

The correct answer is Roger Federer.

★ Key Points

- **Roger Federer** created a record by winning the Hopman Cup the greatest number of times as of December 2020.
- Switzerland won their third Hopman Cup as Roger Federer and Belinda Bencic beat Germany's Alexander Zverev and Angelique Kerber.

- Belinda Bencic and Roger Federer are swiss tennis champions.
- It was Federer's second Hopman Cup triumph after a victory in 2001 alongside then-world number one Martina Hingis.
- The final was held at the Perth Arena.

★ Additional Information

- The Hopman Cup is an international eight-team indoor hardcourt tennis tournament that plays mixed-gender teams on a country-by-country basis.
- It was held in Perth, Western Australia each year from 1989 to 2019.
- It was replaced on the calendar in 2020 by the ATP Cup, a newly created ATP event.
- It is set to return on the calendar in 2023 in a French venue.

47. Answer: b

Explanation:

The correct answer is Civil Disobedience Movement.

★ Key Points

- **The civil Disobedience Movement** witnessed the participation of women on a large scale for the first time.
- It was a landmark event in the Indian Nationalist movement.
- In many ways, the civil disobedience movement is credited for paving the way for freedom in India.
- It was significant in many ways as it was a movement that spread to the urban areas and witnessed the participation of women and people belonging to the lower castes.
- It was initiated under the stewardship of Mahatma Gandhi.
- It was launched after the observance of Independence Day in 1930.
- The civil disobedience movement commenced with the Dandi march when Gandhi left the Sabarmati Ashram at Ahmedabad on foot with 78 other

members of the Ashram for Dandi on 12 March 1930. After reaching Dandi, Gandhi broke the salt law.

- It was considered illegal to make salt as it was solely a government monopoly.

★ Additional Information

- The salt satyagraha led to a widespread acceptance of the civil Disobedience movement across the country.
- This event became symbolic of people's defiance of the government policies.
- Following Gandhi's footsteps, C. Rajgopalchari in Tamil Nadu led a similar march from Trichinopoly to Vedaranyam. At the same time Sarojini Naidu, a prominent leader in the congress led the movement in Darasana in Gujarat.
- The police opened a lathi charge which led to over 300 satyagrahis being severely injured.
- Consequently, there were demonstrations, hartals, a boycott of foreign goods, and later a refusal to pay taxes.
- A lakh of participants including women participated in this movement.
- Large scale participation of women was an important feature of the Civil Disobedience Movement.
- During the Salt March, thousands of women came out of their homes to listen to the speeches of Gandhi.
- Women participated in protest marches, manufactured salt, and picketed foreign cloth and liquor shops. Many went to jail.

48. Answer: a

Explanation:

The correct answer is malaria.

★ Key Points

- Malaria disease is caused by protozoa Plasmodium.
- Malaria is caused by protozoa of the genus Plasmodium.
- Four species cause disease in humans: P falciparum, P vivax, P ovale, and P malaria.

- Malaria is spread to humans by the bite of female mosquitoes of the genus Anopheles.
- Signs and symptoms of malaria are similar to flu symptoms.
- They include:
 - Fever and sweating.
 - Chills that shake your whole body.
 - Headache and muscle aches.
 - Fatigue.
 - Chest pain, breathing problems, and cough.
 - Diarrhoea, nausea, and vomiting.

★ Additional Information

- Based on the causative organisms, communicable diseases can be classified as -
 - Bacterial : Tuberculosis, Typhoid , Cholera, Anthrax .
 - Viral : Common cold, Dengue, Measles , Influenza, HIV infection.
 - Protozoal : Malaria , Kala azar.
 - Fungal : Fungal infections of groins, skin, hair, nails.
 - Parasitic : Infestations of intestinal worms like roundworm or lice.

49. Answer: c

Explanation:

The correct answer is Have a Navratna status.

★ Key Points

- Eligibility Criteria to be considered for grant of Maharatna status:
 - Having Navratna status .
 - Listed on the Indian stock exchange with minimum prescribed public shareholding under SEBI regulations.
 - Average annual turnover of more than Rs. 25,000 crore , during the last 3 years.

- The average annual net worth of more than Rs. 15,000 crore, during the last 3 years.
 - Average annual net profit after tax of more than Rs. 5,000 crore, during the last 3 years.
 - Should have a significant global presence/international operations.
 - There are ten 'Maharatna' CPSEs : Bharat Heavy Electricals Limited, Coal India Limited, GAIL (India) Limited, Indian Oil Corporation Limited, NTPC Limited, Oil & Natural Gas Corporation Limited, Hindustan Petroleum Corporation Limited (HPCL), Bharat Petroleum Corporation Limited (BPCL), Power Grid Corporation of India (POWERGRID), and Steel Authority of India Limited.
- Hence Statement 3 is correct.

★ Additional Information

- Eligibility Criteria to be considered for grant of Navratna status:
 - The Miniratna Category – I and Schedule 'A' CPSEs, which have obtained 'excellent' or 'very good' rating under the Memorandum of Understanding system in three of the last five years, and have a composite score of 60 or above in the six selected performance parameters, namely,
 - net profit to net worth,
 - manpower cost to total cost of production/services,
 - profit before depreciation, interest, and taxes to capital employed,
 - profit before interest and taxes to turnover,
 - earning per share,
 - inter-sectoral performance.
- Eligibility Criteria to be considered for grant of Miniratna status:
 - Category –I CPSEs should have made a profit in the last three years continuously, the pre-tax profit should have been Rs. 30 crores or more in at least one of the three years and should have a positive net worth.
 - Category-II CPSEs should have made a profit for the last three years continuously and should have a positive net worth.
 - These CPSEs shall be eligible for the enhanced delegated powers provided they have not defaulted in the repayment of loans/interest payment on any loans due to the Government.

50. Answer: a

Explanation:

The correct answer is Portal for Regulation of Air-pollution in Non-Attainment Cities.

★ Key Points

- 'PRANA' is the acronym for Portal for Regulation of Air-pollution in Non-Attainment Cities.
- Union Environment Minister launched the Portal for Regulation of Air-pollution in Non-Attainment cities (PRANA).
- Non-Attainment cities (NACs) are the cities which failed to meet national air quality standards over a five-year period under National Clean Air Program (NCAP) .
- The portal would disseminate information on air quality to the public while also providing comprehensive information related to NCAP program details, progress, city action plans, implementation updates by various agencies, etc.

51. Answer: a

Explanation:

Formula:

$$A = P \times \left(1 + \frac{R}{100}\right)^T$$

where-

P = Principal

R = Rate

T = Time

A = Amount

Your Personal Exams Guide

Calculated:

Substituting the values given, we get-

$$\Rightarrow ₹9,261 = ₹8,000 \times \left(1 + \frac{5}{100}\right)^T$$

$$\Rightarrow \frac{9261}{8000} = \left(\frac{21}{20}\right)^T$$

$$\Rightarrow \left(\frac{21}{20}\right)^3 = \left(\frac{21}{20}\right)^T$$

$\therefore T = 3$ years

\therefore The time period is 3 years.

52. Answer: b

Explanation:

Concept:

The gain percentage of the seller is due to the difference in the selling price of the article.

Calculation:

Difference in the selling price of the article = ₹580 - ₹545 = ₹35

According to the question-

$$\Rightarrow \frac{7}{100} \times CP = ₹35$$

$$\Rightarrow CP = ₹500$$

The cost price of the article is Rs 500.

53. Answer: a

Explanation:

Formula:

$$A = P \times \left(1 + \frac{R}{100}\right)^T$$

where-

P = Principal

A = Amount

R = Rate

T = Time

Calculation:

Let the time be "t"

$$\Rightarrow ₹ 15,125 = ₹ 12,500 \times \left(1 + \frac{10}{100}\right)^t$$

$$\Rightarrow \frac{15,125}{12,500} = \left(\frac{11}{10}\right)^t$$

$$\Rightarrow \left(\frac{11}{10}\right)^2 = \left(\frac{11}{10}\right)^t$$

$$\Rightarrow t = 2 \text{ years}$$

According to the question-

If the interest is compounded annually, then the interest rate for 8 month period

$$= 15 \times \frac{8}{12} = 10\%$$

$$\Rightarrow \text{Total installments of compound interest} = \frac{2 \times 12}{8} = 3$$

$$\Rightarrow \text{Amount} = ₹ 12,500 \times \left(1 + \frac{10}{100}\right)^3$$

$$\Rightarrow x = ₹ 12,500 \times \left(\frac{11}{10}\right)^3 = ₹ 16,638$$

The amount is ₹ 16,638.

54. Answer: b

Explanation:

Formula:

$$\text{Total surface area of solid cone} = \pi r(l + r)$$

$$\text{Curved surface area} = \pi r l$$

Where "l" and "r" are the slant height of the cylinder and the radius of the cylinder respectively.

Calculation:

According to the question,

Curved surface area is $\frac{4}{5}$ its Total surface,

$$\Rightarrow \pi r l = \frac{4}{5} \pi r(l + r)$$

$$\Rightarrow l = \frac{4}{5}(l + r)$$

$$\Rightarrow 5l = 4l + 4r$$

$$\Rightarrow l = 4r$$

Now,

Total surface area of a solid right circular cone is 6930 cm²

$$\Rightarrow \pi r(l + r) = 6930$$

$$\Rightarrow \frac{22}{7} \times r \times (4r + r) = 6930$$

$$\Rightarrow \frac{22}{7} \times r \times 5r = 6930$$

$$\Rightarrow r^2 = 63 \times 7$$

$$\Rightarrow r = 7 \times 3 = 21 \text{ cm}$$

$$\text{Diameter} = 2r = 2 \times 21 = 42 \text{ cm.}$$

∴ The diameter of a cone is 42 cm.

55. Answer: a

Explanation:

Calculation:

Let the savings of Manav be 100.

$$\Rightarrow \text{Expenditure of Manav} = 100 + 2 \times 100 = 300$$

$$\therefore \text{Income of Manav} = 100 + 300 = 400$$

According to the question-

$$\Rightarrow \text{Increase in income} = 0.18 \times 400 = 72$$

$$\text{New income} = 400 + 72 = 472$$

$$\Rightarrow \text{Increase in savings} = 0.64 \times 100 = 64$$

$$\text{New Savings} = 100 + 64 = 164$$

$$\therefore \text{New Expenditure of Manav} = 472 - 164 = 308$$

$$\text{Increase in expenditure of Manav} = 308 - 300 = 8$$

$$\text{Increase \% of expenditure} = \frac{8}{300} \times 100 = 2\frac{2}{3} \%$$

∴ The increase in expenditure is $2\frac{2}{3} \%$

56. Answer: a

Explanation:

Given:

Average of 5 consecutive odd integer = 27

Formula:

Sum of n terms in AP (Arithmetic Progression) = $\frac{n(a+l)}{2}$

Where-

n = number of terms

a = starting term

l = last term

Calculations:

Let the first integer be "n"

⇒ Consecutive odd integers = (n + 2), (n + 4), (n + 6), and (n + 8)

These terms would be in Arithmetic progression with the common difference being 2.

Sum of 5 terms = $\frac{5 \times (n+n+8)}{2}$

Average of 5 terms = $\frac{5 \times (n+n+8)}{2 \times 5} = \frac{2n+8}{2} = n + 4$

According to the question, average = 27

⇒ n + 4 = 27

⇒ n = 27 - 4 = 23

∴ Fifth number = n + 8 = 23 + 8 = 31

⇒ Product of first and fifth number = 23 × 31 = 713

∴ The product is 713.

57. Answer: c

Explanation:

Formula:

$$A = P \times \left(1 + \frac{R}{100}\right)T$$

where-

P = Principal

A = Amount

R = Rate

T = Time

Calculation:

Let the principal be "P"

$$\Rightarrow ₹ 37044 = P \times \left(1 + \frac{5}{100}\right) 3$$

$$\Rightarrow ₹ 37044 = P \times \left(\frac{21}{20}\right) 3$$

$$\Rightarrow P = 37044 \times \left(\frac{20}{21}\right) 3 = ₹ 32,000$$

According to the question-

If the interest is compounded annually, than the interest rate for 8 month period

$$= 12 \times \frac{8}{12} = 8\%$$

$$\Rightarrow x = ₹ 32,000 \times \left(1 + \frac{8}{100}\right) 2$$

$$\Rightarrow x = ₹ 32,000 \times \left(\frac{27}{25}\right) 2 = ₹ 37,324.80$$

The amount is ₹ 37,324 .80.

58. Answer: d

Explanation:

Concept:

We need to find a common multiple for a set of numbers i.e., LCM of the numbers. This is followed by division with the greatest number of four digits by the LCM of the number.

Calculations:

LCM of 18, 21, and 24 = 504

Greatest number of four digits = 9999

Greatest number of four digits which is perfectly divisible by 504 = $9999 \div 504 = 9576$

\therefore The greatest four-digit number divisible by 18, 21, and 24 is 9576.

59. Answer: b

Explanation:

Calculation:

Let the cost price of one machine machine be "a".

\Rightarrow cost price of other washing machine = (₹ 10,750 - a)

Difference in the cost of two washing machines = $a - (\text{₹ } 10,750 - a) = 2a - \text{₹ } 10,750$

According to the question-

$\Rightarrow 1.25 \times a = 0.9 \times (\text{₹ } 10,750 - a)$

$$\Rightarrow 1.25a = 9,675 - 0.9a$$

$$\Rightarrow 1.25a + 0.9a = 9,675$$

$$\Rightarrow 2.15a = 9,675$$

$$\therefore a = \frac{9675}{2.15} = ₹ 4500$$

Substituting the value of "a" in the different of the cost, we get-

$$\Rightarrow \text{Difference of the cost} = 2 \times ₹ 4500 - ₹ 10,750 = ₹ 9,000 - ₹ 10,750 = -₹ 1,750$$

\therefore The difference of the cost of the washing machines is ₹ 1,750.

★ Additional Information

The negative sign in the difference of the cost indicates that the cost of the second washing machine is more than the cost of the first washing machine.

60. Answer: a

Explanation:

Calculations:

Finding the HCF of 319, 435 and 667 through the prime factorization method, we get-

$$319 = 11 \times 29$$

$$435 = 3 \times 5 \times 29$$

$$667 = 23 \times 29$$

Thus, HCF of the numbers is 29

Hence, the HCF of the numbers lies between 25 and 30.

The HCF of the numbers lies between 25 and 30.

61. Answer: b

Explanation:

Calculation:

Let the common ratio be "a".

⇒ Total number of boys = $8a$

⇒ Total number of girls = $5a$

According to the question-

$$\Rightarrow \frac{8a-6}{5a+9} = \frac{14}{13}$$

$$\Rightarrow 13 \times (8a - 6) = 14 \times (5a + 9)$$

$$\Rightarrow 104a - 78 = 70a + 126$$

$$\Rightarrow 34a = 204$$

$$\Rightarrow a = 6$$

Number of girls initially = $5 \times 6 = 30$

∴ The number of girls initially was 30.

62. Answer: b

Explanation:

Concept:

We would use the concept of BODMAS-

B – Bracket

O – Off

D – Divide

M – Multiplication

A – Addition

S – Subtraction

Calculation:

$$4 + 12 \div 4 - 2 \times 3 + 1$$

$$\Rightarrow 4 + 3 - 2 \times 3 + 1$$

$$\Rightarrow 4 + 3 - 6 + 1$$

$$\Rightarrow 7 - 5$$

$$\Rightarrow 2$$

\therefore The answer is 2.

63. Answer: a

Explanation:

Calculation:

Let the cost of the item initially be "a".

$$\therefore \text{New cost per item} = (1 - 0.25) \times a = 0.75a$$

$$\text{Total items bought initially} = \frac{240}{a}$$

$$\text{Total items bought under reduced price} = \frac{240}{0.75a}$$

According to the question-

$$\Rightarrow \frac{240}{0.75a} - \frac{240}{a} = 5$$

$$\Rightarrow \frac{240}{a} \times \left(\frac{1}{0.75} - 1 \right) = 5$$

$$\Rightarrow a = 240 \times \frac{1}{5} \times \frac{0.25}{0.75} = \text{Rs } 16$$

The original price of the item was Rs 16.

64. Answer: d

Explanation:

Formula:

$D = S \times T$, where

D = Distance

S = Speed

T = Time

Calculation:

Let the time for which man travel partly on bicycle be "t" hours.

$$\Rightarrow \text{Distance covered by the man on bicycle} = 15 \times t = 15t$$

Time for which man travels on foot = $(4 - t)$ hours

$$\text{Distance travelled on foot} = (4 - t) \times 7$$

According to the question,

$$\Rightarrow (4 - t) \times 7 + 15t = 44 \text{ km}$$

$$\Rightarrow 28 - 7t + 15t = 44 \text{ km}$$

$$\Rightarrow 8t = 16 \text{ km}$$

$\Rightarrow t = 2$ hours

Distance travelled on bicycle = $15 \times 2 = 30$ km.

\therefore The distance travelled by the man on bicycle was 30 km.

65. Answer: d

Explanation:

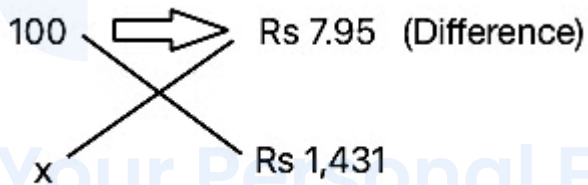
Calculations:

Let the cost price be Rs 100.

SP for 5.85% profit = Rs 100 + 5.85 = Rs 105.85

SP for 2.1% loss = Rs 100 - 2.1 = Rs 97.9

Difference in profit = Rs 105.85 - Rs 97.9 = Rs 7.95



$$\Rightarrow x = \frac{1431 \times 100}{7.95} = \text{Rs } 18,000$$

\therefore The cost price is Rs 18,000.

66. Answer: c

Explanation:

Calculation:

Let the number be 100.

50% of the number = 50

Let the second number be "a"

Two-thirds of another number = $\frac{2}{3} \times a$

According to the question-

$$\Rightarrow 50 = \frac{2}{3} \times a$$

$$\Rightarrow a = 50 \times \frac{3}{2} = 75$$

Ratio of first number to the second number = $100 : 75 = 4 : 3$

The required ratio is 4 : 3.

67. Answer: a

Explanation:

Calculations:

Let the time taken by B to complete the work be "b" days.

\Rightarrow Time taken by A to complete the work = $(b - 2)$ days

Work done by A in 1 day = $\frac{1}{b-2}$

Work done by B in 1 day = $\frac{1}{b}$

Total work done by A and B in 1 day = $\frac{1}{b} + \frac{1}{b-2} = \frac{1}{40}$

Solving the equation, we get-

$$\Rightarrow \frac{1}{b} + \frac{1}{b-2} = \frac{9}{40}$$

$$\Rightarrow \frac{2b-2}{(b)(b-2)} = \frac{9}{40}$$

$$\Rightarrow 40 \times (2b - 2) = 9 \times (b^2 - 2b)$$

$$\Rightarrow 80b - 80 = 9b^2 - 18b$$

$$\Rightarrow 9b^2 - 98b + 80 = 0$$

$$\Rightarrow 9b^2 - 90b - 8b + 80 = 0$$

$$\Rightarrow 9b(b - 10) - 8(b - 10) = 0$$

$$\Rightarrow (9b - 8)(b - 10) = 0$$

$$\therefore \text{Either } 9b - 8 = 0; b = \frac{8}{9} \text{ or}$$

$$\Rightarrow b - 10 = 0; b = 10$$

$\Rightarrow b$ cannot be $\frac{8}{9}$ since time taken by A would be negative.

\therefore Time taken to complete work by B = 10 days.

\therefore The work would be completed by B in 10 days.

68. Answer: d

Explanation:

Given:

Profit % = 20%

Discount at Marked Price = 28%

Marked Price = Rs 900

Formula:

$$MP \times (100 - D\%) = CP \times (100 + G\%) = SP$$

Where-

MP = Marked Price

CP = Cost Price

SP = Selling Price

D% = Discount offered at Marked Price

G% = Profit %

Calculations:

Substituting the values of D%, G%, and MP in the equation-

$$MP \times (100 - D\%) = CP \times (100 + G\%)$$

$$CP = MP \times (100 - D\%) / (100 + G\%)$$

$$MP = 900 \times (100 - 28) / (100 + 20)$$

$$MP = 900 \times (72 / 120) = \text{Rs } 540$$

The Cost Price is Rs 540.

69. Answer: d

Your Personal Exams Guide

Explanation:

Formula:

$$CP = \frac{100}{100 + \%G} \times SP, \text{ where}$$

SP = Selling Price

CP = Cost Price

G% = Gain percentage

Calculation:

$$SP = 0.8 \times ₹ 2,850 = ₹ 2,280$$

Substituting the value of SP in the CP equation, we get-

$$CP = \frac{100}{100+20} \times ₹ 2,280 = ₹ 1900$$

∴ The cost price of the item is ₹ 1900.

70. Answer: b

Explanation:

Formula:

Average age = Total age of men ÷ Total number of men

Calculation:

Let the average age be "a".

Total age of men = 10 × a = 10a

Total age of men to be replaced = 15 + 16 + 17 = 48 years

Let the total age of new three men = "M"

According to the question-

$$\Rightarrow \frac{10a - 48 + M}{10} = a + 3$$

$$\Rightarrow 10a - 48 + M = 10a + 30$$

$$\Rightarrow M = 78 \text{ years}$$

$$\therefore \text{Average age of three new men} = \frac{78}{3} = 26 \text{ years}$$

The average of three new men is 26 years.

71. Answer: a

Explanation:

Formula:

$$D = S \times T, \text{ where}$$

D = Distance

S = Speed

T = Time

Calculation:

Let the time for which the person walked is "t" hours.

$$\text{Distance travelled when walking at } 10 \text{ km/h} = 10 \times t = 10t$$

$$\text{Distance travelled when walking at } 15 \text{ km/h} = 15 \times t = 15t$$

According to the question,

$$\Rightarrow 15t - 10t = 30 \text{ km}$$

$$\Rightarrow 5t = 30 \text{ km}$$

$$\therefore t = 6 \text{ hours}$$

$$\text{Original distance} = 10 \times 6 = 60 \text{ km.}$$

\therefore The actual distance travelled by the man was 60 km.

72. Answer: d

Explanation:

Given:

Time taken by A to complete the work = 18 days

Time taken by B to complete the work = 24 days

Calculations:

Work done by A in 1 day = $\frac{1}{18}$

Work done by B in 1 day = $\frac{1}{24}$

Total work done by A and B in 1 day = $\frac{1}{18} + \frac{1}{24} = \frac{4+3}{72}$

Time taken to complete total work = $\frac{72}{7} = 10 \frac{2}{7}$ days.

∴ The total work would be completed in $10 \frac{2}{7}$ days.

73. Answer: a

Explanation:

Calculation:

Ratio of zinc in the copper and zinc mixture = $\frac{9}{20}$

Let the total weight of the melted mixture be "a" kg.

According to the question-

$$\Rightarrow \frac{9}{20} \times a = 27 \text{ kg}$$

$$\Rightarrow a = 27 \times \frac{20}{9} = 60 \text{ kg}$$

∴ The weight of the melted mixture is 60 kg.

★ Alternate Method

The ratio of copper and zinc could be expressed as-

$$\begin{array}{ccc}
 11 & : & 9 \\
 & & \downarrow \times 3 \\
 & & 27 \\
 & & \\
 & & 20 \\
 & & \downarrow \times 3 \\
 & & 60
 \end{array}$$

Hence, the total weight is 60 kg.

74. Answer: a

Explanation:

Concept:

B	Brackets in order {}, [], ()	ब्रेकेट {}, [], () क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़े (+)
S	Subtraction (-)	घटाव (-)

Calculation:

$$\frac{5+8^2 \times (30 \div 5)}{48} - \frac{14}{7}$$

$$\Rightarrow \frac{5+8^2 \times 6}{48} - 2$$

$$\Rightarrow \frac{5+64 \times 6}{48} - 2$$

$$\Rightarrow \frac{5+384}{48} - 2$$

$$\Rightarrow \frac{389-96}{48}$$

$$\Rightarrow \frac{389-96}{48} = 6.11 \approx 6$$

∴ The answer is 6.

75. Answer: c

Explanation:

Formula:

Total surface area of solid cylinder = $2\pi r(h + r)$,

Where "h" and "r" are the height of the cylinder and the radius of the cylinder respectively.

Calculation:

Substituting the values, we get-

$$\Rightarrow \text{Total surface} = 2 \times \frac{22}{7} \times 14 \times (14 + 7)$$

$$\Rightarrow \text{Total surface} = 2 \times 22 \times 2 \times 21 = 1848 \text{ cm}^2$$

∴ The total surface area of the cylinder is 1848 cm^2

Your Personal Exams Guide

76. Answer: b

Explanation:

The correct answer is 'Eventually'.

★ Key Points

- The given Idiom 'In the long run' means after a long time or in the end.
 - **Example:** It may be our best option in *the long run*.
- From the given options, The marked option 'eventually' means in the end; finally.
- Therefore, The correct meaning is 'eventually' and hence the correct answer is option 2.

77. Answer: c

Explanation:

The correct answer is 'inevitable'.

★ Key Points

- We need to substitute the given group of words with one word from the following options:
- Let's explore the **meanings** :
 - **Impossible** means Complicated and difficult to do.(असंभव)
 - **Intolerable** means too bad, unpleasant, or difficult to bear or accept.(न सहने योग्य)
 - **Inevitable** means unable to be avoided, evaded, or escaped(अपरिहार्य)
 - **Irreparable** means that cannot be repaired.(जो सुधार के योग्य न हो)
- Therefore, from the given meanings, the one word is '**inevitable**'.
 - *Example: We have to accept that death is an inevitable fact of life.*
- Hence, the correct answer is **option 3**.

78. Answer: c

Explanation:

The correct answer is 'Raise'.

★ Key Points

- The given word '**Erect**' means to raise and set in an upright or vertical position.
(सीधी या सीधी स्थिति में उठाना)
 - *Example : He erected a marker over the grave.*
- Therefore, from the given options, the marked option 'raise' is the synonym of the given word '**erect**'.
- Hence, the correct answer is **option 3**.

79. Answer: c

Explanation:

The correct answer is '**permanent**'.

★ Key Points

- We have to choose the **appropriate word** from the given options to fill the given blank as our marked option.
- The marked option '**permanent**' means lasting for a long time or forever; that will not change.
- From the given options, '**permanent**' is the only word that fits well in the given blank and establishes the context.
- Hence, the correct answer is **option 3**.

80. Answer: b

Explanation:

The correct answer is '**Total**'.

★ Key Points

- The given word '**Aggregate**' means formed by adding together several amounts or things; total.(कुल)
 - *Example:* Man Utd won the first leg 1-0 and Liverpool won the second 3-1, so the **aggregate** score was 3-2 to Liverpool.
- Therefore, from the given options, The marked option '**total**' is the synonym of the given word '**aggregate**'.
- Hence, the correct answer is **option 2**.

81. Answer: c

Explanation:

The correct answer is 'pulled'.

★ Key Points

- We have to choose the appropriate **word** from the given options to fill the given blank as our marked option.
- The marked option '**pulled**' means to exert force or influence so as to cause it to move toward you.
 - *Example: The farmer pulled a plow behind him as he moved through his field.*
- The given sentence **implies** that two young men take out the chain from the woman's neck and ran away.

Therefore, the correct answer is **option 3**.

82. Answer: a

Explanation:

The correct answer is '**Waterfall**'.

★ Key Points

- We need to substitute the given group of words '*A steep descent of the water of a stream or river*' with **one word** from the following options:
- The marked option '**waterfall**' means a point in a river or stream where water flows over a **vertical drop** or a series of steep drops.
- From the meanings of the given option, it is clear that '**waterfall**' is the one word for the given group of words.
- Thus, the correct answer is **option 1**.

83. Answer: a

Explanation:

The correct answer is 'Delhi is the most affected' .

★ Key Points

- The given sentence is not grammatically correct.
- The underlined segment is erroneous here.
- We need to **substitute** the underlined segment with the **sentence** from the following options:
- Here, the word is associated with the word '**affected**' and this word is an adjective that reflects the superlative degree of comparison (most).
- With the **superlative degree** we prefer to use the definite article '**the**' and thus the usage of the indefinite article '**a**' is **erroneous here**.
- We need to **substitute 'a' with 'the'** for making the underlined segment error-free.
- Therefore, the correct answer is **option 1**.

84. Answer: b

Explanation:

The correct answer is "how could I solve".

★ Key Points

- The error lies in option 2 of the sentence.
- Here, we can use "how I could solved" in place of "how could I solve" to make the sentence grammatically correct.
- The given question is written in the **past tense**, so we have to maintain the complete sentence in the **past tense** .

- Also, when you're **not asking** a question, "**how I could**" is appropriate, thus there won't be a question mark at the end. When you **pose a question**, you use the phrase "**how could I**" which usually has a **question mark** at the end.
- **Past Tense:** We use past tense when something has **happened in past**.
- The **formula** for **past tense** :
 - *Subject + V₂ + Object.*
 - **Example:** *Dipa **played** cricket.*
- So, we replace "how could I solve" with "how I could solved" to make the sentence grammatically correct.
- All the other options are correct.

Hence, option 2 is the correct answer.

Correct sentence: *Ajit asked me / **how I could solved** / the complex puzzle / so easily.*

85. Answer: a

Explanation:

The correct answer is '**Contein**'.

★ Key Points

- In this question, we need to choose the incorrectly spelled word from the given four options.
- The marked option '**Contein**' is erroneous here, as its correct spelling is **Contain**.
- **Contain** means to keep something within limits (नियंत्रित करना).
 - **Example:** *He could hardly **contain** his enthusiasm.*
- Therefore, the correct answer is option 1.

86. Answer: d

Explanation:

The correct answer is 'very happy'.

★ Key Points

- The given Idiom '**cloud nine**' means very happy.
 - **Example** : He was on **cloud nine** when he had completed all his tasks on time.
- Therefore, the correct meaning is 'very happy' and hence the correct answer is option 4.

87. Answer: b

Explanation:

The correct answer is 'Gentle'.

★ Key Points

- **Violent** means acting with or characterized by uncontrolled, strong, rough force.
 - **Example** Trapped emotions in our body create aggression which is expressed as **violent** behaviour. (हिंसक)
- The marked option '**gentle**' means kind and calm; treating people or things in a careful way so that they are not hurt.
- From the given meaning and the example sentence, it is clear that '**violent**' and '**gentle**' are antonyms of each other.(सज्जन)
- Therefore, the correct answer is **option 2**.

88. Answer: a

Explanation:

The correct answer is 'Matriarch'.

★ Key Points

- We need to substitute the **given group of words** 'Woman who is the head of the **family**' with one word from the following options:
- The marked option '**matriarch**' means a woman who is the head of a family or social group. (कुलमाता)
- From the meaning of the given marked option, it is clear that '**matriarch**' is the one word for the given group of words.

Therefore, the correct answer is **option 1**.

89. Answer: b

Explanation:

The erroneous segment is 'In USA'.

★ Key Points

- The given sentence is not **grammatically correct**.
- The last segment is **erroneous here**.
- As per the rules related to the articles, when the name of a country happens to be plural in form, we need the **definite article (the)** before it.
- "In the US", which is the shortened version of "in the United **States**" we have a plural term "**states**" and it is due to this term, the use of "**the**" is a must.

Therefore, the correct answer is **option 2**.

Correct Sentence: *I think he has settled in the United States.*

90. Answer: d

Explanation:

The erroneous part is 'hardly some'.

★ Key Points

- The given sentence is not grammatically correct.
- The **part 2** segment is **erroneous here**.
- Hardly is also often used with 'ANY' to give **Hardly any**.
- **Hardly any** means almost none.
 - **Example:** *There is hardly any milk left in the container.*
- Instead of 'hardly some' we will use '**hardly any**' for making this construction error-free.
- Therefore, the correct answer is **option 4**.

Correct Sentence: *There is **hardly any** petrol left in the car.*

91. **Answer: a**

Explanation:

The erroneous part is '**are you**'.

★ Key Points

- Here, 'aren't you' should be used instead of 'are you'.
- A positive statement is followed by a negative question tag.
 - **Example:** *Ajit can teach English, can't he?*
- In the given question, the sentence is positive and hence it is to be followed by a negative question tag.
- Therefore, the correct answer is **option 1**.

Correct Sentence: *You are going abroad for studies, aren't you?*

92. **Answer: a**

Explanation:

The correct answer is '**if i would**'.

★ Key Points

- The given sentence is not **grammatically** correct.
- Here, the error lies in the underlined segment of the sentence.
- With the word '**asked**' it is clear that the tense of the given sentence is in **simple past**.
- Therefore, instead of will, we will use 'would' for making the construction error-free.
- Hence , '**if I would**' is used instead of 'if I will'.
- Thus, the correct answer is **option 1**.

93. **Answer: b**

Explanation:

The correct answer is '**Cowardice**' .

★ Key Points

- The given word 'mettle' means ability and determination when competing or doing something difficult.(दिलेरी)
 - *Example: He proved his mettle by winning the game.*
- The marked option '**cowardice**' means a lack of courage or firmness of purpose.(कायरता)
- From the given meaning and the example sentence, it is clear that '**mettle**' and '**cowardice**' are antonyms of each other.
- Therefore, the correct answer is **option 2**.

94. **Answer: b**

Explanation:

The correct answer is '**intern**' .

★ Key Points

- We have to choose the appropriate word from the given options to fill the given blank as our marked option.
- The marked option '**intern**' means someone who is an advanced student undergoing training for a skilled job especially by getting practical experience in the work involved.
 - *Example* : He got the opportunity of a student **intern** f or a law firm while completing his coursework.
- The given sentence implies that the intern was given a stipend during his period of training.

Therefore, the correct answer is **option 3**.

95. Answer: b

Explanation:

The erroneously spelled word is '**Warior**' .

★ Key Points

- In this question, we need to choose the incorrectly spelled word from the given four options.
- The marked option '**Warior**' is erroneous here, as its correct spelling is **Warrior**.
- **Warrior** is a person who fights in a battle; a soldier.
 - *Example*: The young man is a bold **warrior**.
- Therefore, the correct answer is **option 2**.

96. Answer: b

Explanation:

The correct answer is '**may have heard**' .

★ Key Points

- The given sentence 'You (1)_____ that tomatoes and processed tomato products protect' requires an appropriate sentence construction to be filled in the **blank number 1** from the given options.
- There is no past tense, but ' **may have**' is followed by a past participle that can be used for talking about **past possibilities** .
 - *Example : He may have changed his mind and decided not to come to this retreat.*
- From the usage of 'may have+past participle' and the example sentence given above, we are clear that :
- For the given context of the given sentence, **may have heard** is the only sentence construction from the given options that fit well in the **blank 1**.

Hence, the correct answer is **option 2**.

97. Answer: d

Explanation:

The correct answer is '**against**' .

★ Key Points

- The given sentence 'tomato products protect (2)_____ some types of cancer.' requires an appropriate word to be filled in the **blank number 2** from the given options.
- From the given context, we need protection against disease, and we use the preposition '**against**' in resistance to or defense from any disease.
 - *Example: Active wearing of masks helps to **protect against** Covid-19 disease.*
- Therefore, from the context, protect '**against**' is the correct construction here.
- Hence, the correct answer is **option 4**.

98. Answer: c

Explanation:

The correct answer is '**attributed**'.

★ Key Points

- The given sentence '*The cancer-preventing properties of tomato products have been (3)_____ to lycopene*' requires an **appropriate word to be filled in the blank number 3** from the given options.
- Let's explore the **meanings** :
 - **Allotted** means assigned as a share of something.
 - **Offered** means to present for acceptance or rejection;
 - **Attributed** means to believe that something was caused or done by somebody/something.
 - **Formed** means to begin to exist or to make something exist.
- Therefore, from the given context of the given sentence , **Attributed** is the only word from the given options that fit well in the **blank 3**.
 - **Example sentence:** *He attributed his success to the guidance he got from his mentor.*
- Thus, from the given meaning of the options and the **example sentence**, it is clear that the correct answer to this question is **option 3**.

99. Answer: d

Explanation:

The correct answer is '**other**' .

★ Key Points

- The given sentence '*It is a bright red pigment found in tomatoes and (4)_____ red fruits.*' requires an **appropriate word** to be filled in the **blank number 4**

from the given options.

- **Other** is a determiner/pronoun which is **used for referring to additional people or things of the type already mentioned or known about.**
- In the given sentence, it fits well as per the given context as the sentence conveys that the bright red pigment is found in tomatoes and **additional red fruits.**
- Therefore, the correct answer is **option 4.**

100. **Answer: a**

Explanation:

The correct answer is '**concentration**' .

★ Key Points

- The given sentence '*Processing of tomatoes increases the (5)_____ of lycopene.*' requires an **appropriate word** to be filled in the **blank number 5** from the given options.
- Let's explore the **meanings** :
 - **Concentration** is the ability to think carefully about something you are doing and nothing else.
 - **Attention** is the act or power of fixing one's mind upon something
 - **Persistence** is the attitude or behavior of someone who continues to do, or tries to do, something in a determined way.
 - **Application** is the practical use (of something).
- Therefore, from the given context of the given sentence, **Concentration** is the only word from the given options that fit well in the **blank 5.**

Hence, the correct answer is **option 1.**