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NDA



CDS



SSC CGL



CBSE UGC NET



IAS



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CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



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SSC MTS



SBI PO



BPS



UPTET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

SSC MTS Previous Year Paper (Held on: 22 July 2022 Shift 2)

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 & Reasoning	25	25	0.25	1
2	Numerical Aptitude	25	25	0.25	1
3	General English	25	25	0.25	1
4	General Awareness	25	25	0.25	1

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

General Intelligence & Reasoning

1. Select the option that will replace the question mark (?) in the given series. (+1, -0.25)

45, 46, 42, 51, 35, ?

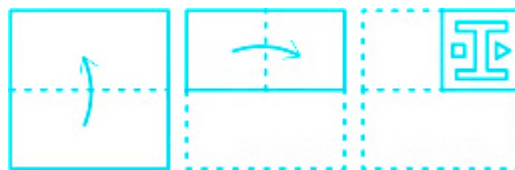
- a. 60
- b. 55
- c. 50
- d. 62

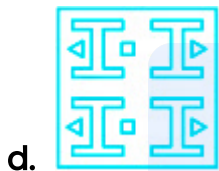
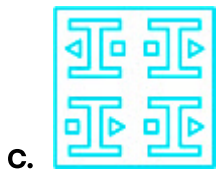
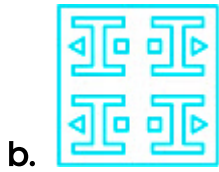
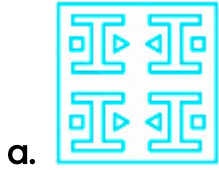
2. Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number. (+1, -0.25)

7 : 42 :: 9 : 72 :: 12 : ?

- a. 128
- b. 98
- c. 132
- d. 144

3. 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)





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

KRA, IQZ, ?, EOX, CNW

- a. GQY
- b. GPY
- c. HQX
- d. HPY

5. Which of the numbers (not digits) should be interchanged in the given equation to make it mathematically correct? (+1, -0.25)

$$104 \div 4 - 6 + 13 \times 5 = 22$$

- a. 13 and 4
- b. 6 and 4
- c. 6 and 5
- d. 13 and 6

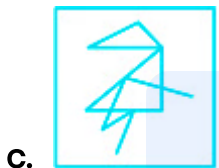
6. In a certain code language, 'Milk are exhausting' is coded as '# tg 5', and 'Are water super milk' is coded as 'pa 5 6 #'. What is the code for 'super' in that language? (+1, -0.25)

- a. tg
- b. 5 or 6
- c. pa or 6
- d. # or 5

7. In a certain code language, 'shoes are shining' is coded as '235', 'shining stars rotate' is coded as '458', and 'stars are round' is coded as '829'. How will 'are' be coded in that language? (+1, -0.25)

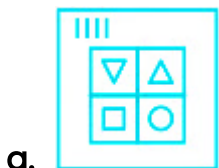
- a. 3
- b. 8
- c. 9
- d. 2

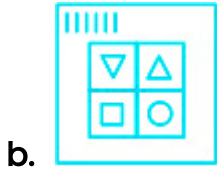
8. Select the option in which the given figure is embedded (rotation is NOT allowed). (+1, -0.25)



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





10. By interchanging the given two numbers (not digits), which of the following equations will NOT be correct? (+1, -0.25)

11 and 17

I. $400 + 17 - 71 \times 85 \div 11 = 58$

II. $1331 \div 17 - 50 + 6 \times 11 = 173$

- a. Only I
- b. Both I and II
- c. Only II
- d. Neither I nor II

11. 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)

Statement I: All criminals are thieves.

Statement II: Rakesh is a thief.

Conclusion I: Rakesh is a criminal.

Conclusion II: Some thieves may not be criminals.

- a. Only conclusion II follows
- b. Both conclusions I and II follow.
- c. Neither conclusion I nor II follows.
- d. Only conclusion I follows.

12. In a certain code language, 'POEM' is written as 'ODQO', 'HARD' is written as 'FQCG'. (+1, -0.25)

How will 'RNGC' be written in that language?

- a. FEPQ
- b. EEPQ
- c. FFPQ
- d. EFPQ

13. A, B, R, D, I, S, and T are sitting around a circular table facing away from the circle. A does not sit adjacent to I and T. B does not sit adjacent to A. R sits fourth to the left of A. D and B sit adjacent to each other. S sits third to the left of I. Who is the immediate neighbour of both T and A? (+1, -0.25)

- a. S

- b. T
- c. B
- d. R

14. In a certain code language, 'LUNCH' is written as 'NWPEJ', and 'FAITH' is written as 'HCKVJ'. How will 'SPACE' be written in that language? (+1, -0.25)

- a. USCEG
- b. URBEG
- c. URCFG
- d. URCEG

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

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g 13-Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is NOT allowed)

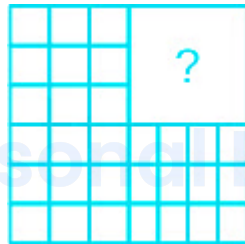
- (4, 5, 20)
- (7, 8, 56)
- a. (9, 12, 98)
- b. (8, 11, 89)
- c. (7, 12, 84)

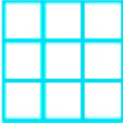

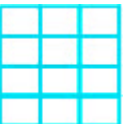
d. (9, 11, 89)

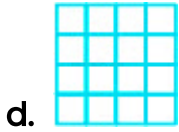
16. Among seven persons A, B, C, D, E, F and G, who are of different ages, D is younger than only A and E. E is younger to A and older than B. C is third youngest. F and G are second youngest and youngest respectively. Who is the fourth eldest? (+1, -0.25)

- a. D
 - b. C
 - c. B
 - d. E
-

17. Select the figure from the options that can replace the question mark (?) and complete the pattern. (+1, -0.25)



- a. 
- b. 
- c. 



18. 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:

Some Parrots are Birds.

All Birds are Mammals.

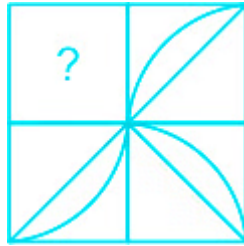
Conclusions:

I. All Mammals are Birds.

II. Some Mammals are Parrots.

- a. Neither conclusion I nor II follow.
- b. Only conclusion II follows.
- c. Both conclusions I and II follow.
- d. Only conclusion I follows.

19. Select the figure from the options that can replace the question mark (?) and complete the given pattern (rotation is not allowed). (+1, -0.25)



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

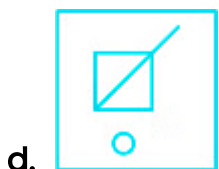
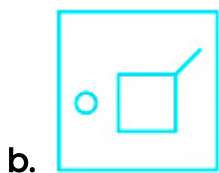
RL : OQ :: GO : ?

- a. DT
- b. CT
- c. DS
- d. ES

21. CI is related to F 4 in a certain way. In the same way, J 6 is related to M 9. (+1, -0.25)
To which of the following is P 4 related, following the same logic?

- a. S 6
- b. T 7
- c. S 7
- d. R 7

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



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

94, 95, 100, 109, 122, ?

- a. 133
- b. 137
- c. 139
- d. 141

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

SIPL : AQXT :: ADGJ : ILOR :: UMEB : ?

- a. CUMJ
- b. MCUF
- c. CUFM
- d. JCUM

25. Five men Z, X, H, I and J are sitting around a circular table, facing towards the centre (but not necessarily in the same order). Z is sitting second to the left of I. H is sitting second to the right of X. J is not the immediate neighbour of Z. Who is sitting third to the right of X? (+1, -0.25)

- a. I

b. Z

c. H

d. J

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Numerical Aptitude

26. The LCM of two numbers is 450. If the product of the two numbers is 20250, then find their HCF. (+1, -0.25)
- a. 90
 - b. 15
 - c. 150
 - d. 45
-

27. If the ratio of an external angle and an internal angle of a regular polygon is 1 : 5, then what is the number of sides in the polygon? (+1, -0.25)
- a. 24
 - b. 30
 - c. 12
 - d. 22
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28. The average marks of a group of 16 students in a test are reduced by 4 when the topper, who scored 92 marks, is replaced by a new student. What are the marks scored by the new student? (+1, -0.25)
- a. 18
 - b. 28
 - c. 32
 - d. 22

29. The selling price of an item is 20% less than its marked price. The marked price of the item is 30% more than the cost price. What is the profit percentage? (+1, -0.25)

- a. 10%
- b. 4%
- c. 6%
- d. 8%

30. If 45% of $(x - y) = 30\%$ of $(x + y)$, then what percent of x is y ? (+1, -0.25)

- a. 23%
- b. 15%
- c. 18%
- d. 20%

31. The average of 12 consecutive odd numbers is 32. What is the difference between the largest number and the smallest number that are part of the set of 12 consecutive odd numbers mentioned above? (+1, -0.25)

- a. 22
- b. 25
- c. 21
- d. 18

32. The ratio of P and Q in an alloy is 3: 7. If the alloy is made of only P and Q, (+1, -0.25)
how much amount of Q will be there in 1800 kg of that alloy?
- a. 1150 kg
 - b. 1320 kg
 - c. 1210 kg
 - d. 1260 kg
-

33. Sneha bought a fridge for Rs. 10,000. She spent Rs. 5,000 on its repairs, (+1, -0.25)
and then sold it for Rs. 16,000. Find the gain percentage.
- a. 20%
 - b. 6.67%
 - c. 55.48%
 - d. 30%
-

34. The average of seven numbers is 9. If each number is multiplied by a (+1, -0.25)
number P, then the average becomes 36. What is the value of P?
- a. 4
 - b. 18
 - c. 27
 - d. 5
-

35. What will come in place of the question mark (?) in the following equation? (+1, -0.25)

$$62\% \text{ of } 2200 - 24\% \text{ of } (?) = 932$$

- a. 4320
- b. 2200
- c. 1364
- d. 1800

36. What is the value of $56 - [36 - \{2 + 10 \times (6 - 3)\}]$? (+1, -0.25)

- a. 26
- b. 44
- c. 50
- d. 52

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37. What is the value of $\frac{\frac{5}{6} - \frac{5}{11} \text{ of } \left[\frac{3}{7} + \frac{8}{12} \div \frac{6}{24} + \frac{5}{7} \right]}{\frac{3}{12} \times \frac{6}{5}}$? (+1, -0.25)

- a. $\frac{-1891}{691}$
- b. $\frac{2075}{693}$
- c. $\frac{-1894}{891}$
- d. $\frac{-2075}{693}$

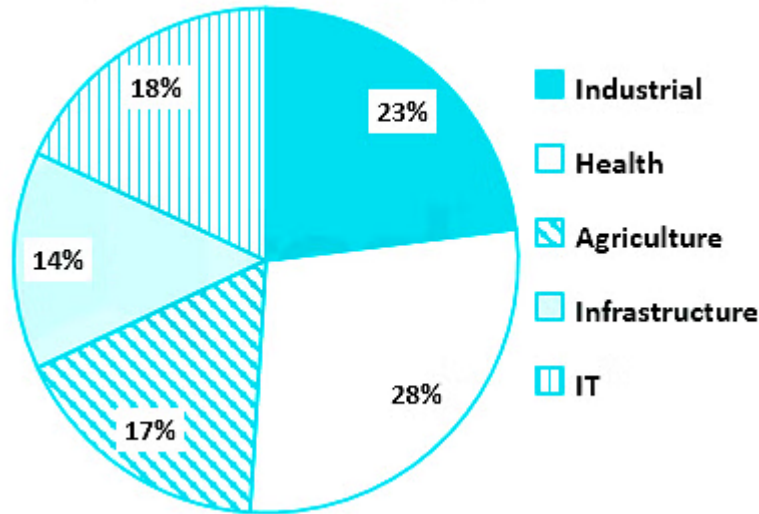
38. The following table shows the number of trains that originate in the five different zones of the railway network of a country. (+1, -0.25)

Zone	Trains
Z1	690
Z2	710
Z3	830
Z4	670
Z5	900

The total number of trains that originate in Z_3 and Z_4 taken together is what percentage of the total number of trains that originate in all the 5 zones taken together? [Give your answer correct to 2 decimal places.]

- a. 43.49%
 - b. 31.23%
 - c. 39.47%
 - d. 45.61%
-
39. The following pie chart shows the expenditure of a village in a given year in the different sectors of its economy. (+1, -0.25)

Expenditure (in percentage)



If the amount spent on agriculture was Rs. 8.5 crore, then find the amount spent in the IT sector.

- a. Rs. 8 crore
- b. Rs. 10.5 crore
- c. Rs. 9 crore
- d. Rs. 7.5 crore

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40. A sum of Rs. 3,400 is divided among P and Q in such a way that $\frac{3}{4}$ of P's share is equal to $\frac{2}{3}$ of Q's share. What is the positive difference between the shares of P and Q? (+1, -0.25)

- a. Rs. 500
- b. Rs. 400
- c. Rs. 200
- d. Rs. 300

41. Profit earned on selling a book for Rs. 450 is the same as the loss incurred on selling it for Rs. 390. Find the cost price of the book. **(+1, -0.25)**

- a. Rs. 380
- b. Rs. 460
- c. Rs. 360
- d. Rs. 420

42. The length, the breadth, and the height of a closed cardboard box are in the ratio of 5 : 3 : 7, respectively. Find the length of this box, if its total surface area is 1278 cm^2 . **(+1, -0.25)**

- a. 20 cm
- b. 15 cm
- c. 25 cm
- d. 10 cm

43. If a sum of money amounts to 6 times of itself in 25 years at simple interest, then what is the rate of interest per annum? **(+1, -0.25)**

- a. 20%
- b. 22.5%
- c. 15%
- d. 25%

44. Train A crosses train B completely in 90 seconds, with the trains running in opposite directions. The lengths of the trains A and B are 900 metres and 1800 metres, respectively. If the speed of train A is 45 km/h, then in how much time can train B cross a stationary pole? (+1, -0.25)

- a. $\frac{830}{7}$ seconds
- b. $\frac{810}{7}$ seconds
- c. $\frac{720}{7}$ seconds
- d. $\frac{650}{7}$ seconds

45. Find the ratio of the simple interest and the compound interest on Rs. 100 at 10% per annum for 2 years, if, when compounded, interest is compounded annually. (+1, -0.25)

- a. 13 : 32
- b. 20 : 21
- c. 21 : 20
- d. 32 : 13

46. If A and B together can do a piece of work in 5 days, and A alone can do the same work in 10 days, then in how many days can B alone do the piece of work? (+1, -0.25)

- a. 10 days
- b. 11 days
- c. 12 days

d. 13 days

47. 12 women can make 15 toys in 6 days if they work for 8 hours a day. If 20 toys are to be made by 10 women, working 12 hours a day, then how many days will be required? (+1, -0.25)

a. 6.8 days

b. 7.8 days

c. 6.4 days

d. 5.4 days

48. The volume of a cube is 3375 cm^3 . What is the length of the longest rod that can be placed in this cube? (+1, -0.25)

a. 15 cm

b. $15\sqrt{3}$ cm

c. 45 cm

d. $12\sqrt{3}$ cm

49. A 600-metre-long train is running at a speed of 48 km/h. It crosses a platform completely in 4 minutes and 30 seconds. What is the length of the platform? (+1, -0.25)

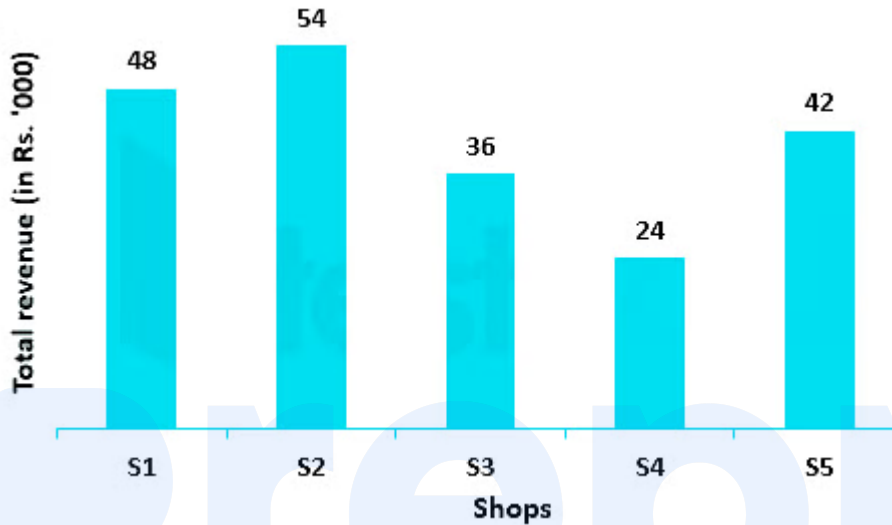
a. 1800 m

b. 3600 m

c. 2400 m

d. 3000 m

50. The bar chart given below shows the total revenue (in Rs. '000) earned by 5 shops by selling steel bottles. (+1, -0.25)



The price of each bottle is Rs. 600 in all the shops. How many bottles have been sold by S2 and S3 taken together?

- a. 120
- b. 135
- c. 150
- d. 165

Your Personal Exams Guide

General English

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

Scholars have / studied the lives of / present-day farmer's / who practice agriculture.

- a. Scholars have
- b. studied the lives of
- c. who practice agriculture
- d. present-day farmer's

-
52. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer. (+1, -0.25)

Her comfort was in her children; / her second son, Rupert, / was especially dear to her.

- a. No error
- b. was especially dear to her
- c. her second son, Rupert
- d. Her comfort was in her children

-
53. 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)

I didn't wanted her to go out with her friends.

- a. doesn't wanted
 - b. No improvement required
 - c. didn't want
 - d. didn't wants
-

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

All Greek to me

- a. incomprehensible
 - b. obvious
 - c. familiar
 - d. Invisible
-

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

An arm and a leg

- a. At the service
 - b. n a backward and forward motion
 - c. A large amount of money
 - d. Willing to do something immediately
-

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

You don't seem to be _____ happy with this proposal.

- a. few
 - b. many
 - c. very
 - d. some
-

57. Select the correctly spelt word.

(+1, -0.25)

- a. Harnes
 - b. Harness
 - c. Harnass
 - d. Harnnes
-

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

(+1, -0.25)

Malleable

- a. Resilient
 - b. Flexible
 - c. Variable
 - d. Stiff
-

59. Select the option that will improve the underlined part of the given sentence. In case no improvement is needed, select 'No improvement'

(+1, -0.25)

required'.

He indicated that a vigorous recovery programme was being carried out; 90,000 reminders had been issued and thousands of summons sent.

- a. has been issued and thousands of summons sent
 - b. No improvement required
 - c. has been issued and thousands of summonses sent
 - d. had been issued and thousands of summonses were sent
-

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

Occurring after the death of the said person

- a. Effusive
 - b. Gregarious
 - c. Fugitive
 - d. Posthumous
-

61. Select the most appropriate ANTONYM of the underlined word. (+1, -0.25)

My husband has committed a very heinous crime.

- a. Gruesome
- b. Appalling
- c. Cynical

d. Delightful

62. Select the most appropriate synonym of the underlined word in the given sentence. (+1, -0.25)

I am not going to scold you anymore.

a. Placate

b. Chide

c. Laud

d. Startle

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

a. Bequille

b. Blandishment

c. Bereft

d. Assiduous

64. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer. (+1, -0.25)

I liked talking to / you when you was / a small boy.

a. No error

b. you when you was

- c. a small boy
 - d. I liked talking to
-

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

Voracious

- a. Moderate
 - b. Restrained
 - c. Greedy
 - d. Truthful
-

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

Preserve

- a. Descend
 - b. Neglect
 - c. Safeguard
 - d. Treasure
-

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

I prefer to have lunch with my family _____ Sundays.

- a. Over
- b. on

c. at

d. in

68. 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)

Shirley have had all her children with the help of a fertility drug.

- a. Shirley had all her children through
 - b. No improvement required
 - c. Shirley have had all her children by
 - d. Shirley has had all her children with
-

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

A place where dead bodies are kept for identification

- a. Hutch
 - b. Morgue
 - c. Crematorium
 - d. Tannery
-

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

Feelings of great happiness and excitement

- a. Contentment
- b. Decadence
- c. Euphoria
- d. Desolation

71. 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)

The role of the school and teachers (1) _____ always been vital in the all-round personality (2) _____ of students. In fact, a teacher is a role (3) _____ influencing every facet of the student's growth and developing (4) _____ innate potential, in addition to (5) _____ a motivator, guide and friend.

Select the most appropriate option to fill in blank number 1.

- a. were
- b. has
- c. having
- d. have

72. 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)

The role of the school and teachers (1) _____ always been vital in the all-round personality (2) _____ of students. In fact, a teacher is a role (3) _____ influencing every facet of the student's growth and developing (4) _____ innate potential, in addition to (5) _____ a motivator, guide and friend.

Select the most appropriate option to fill in blank number 2.

- a. development
- b. turbulence
- c. occupation
- d. validation

73. 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)

The role of the school and teachers (1) _____ always been vital in the all-round personality (2) _____ of students. In fact, a teacher is a role (3) _____ influencing every facet of the student's growth and developing (4) _____ innate potential, in addition to (5) _____ a motivator, guide and friend.

Select the most appropriate option to fill in blank number 3.

- a. replica
- b. template
- c. model
- d. double

74. 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)

The role of the school and teachers (1) _____ always been vital in the all-round personality (2) _____ of students. In fact, a teacher is a role (3) _____ influencing every facet of the student's growth and developing (4) _____ innate potential, in addition to (5) _____ a motivator, guide and friend.

Select the most appropriate option to fill in blank number 4.

- a. its
- b. there
- c. their
- d. our

75. 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)

The role of the school and teachers (1) _____ always been vital in the all-round personality (2) _____ of students. In fact, a teacher is a role (3) _____ influencing every facet of the student's growth and developing (4) _____ innate potential, in addition to (5) _____ a motivator, guide and friend.

Select the most appropriate option to fill in blank number 5.

- a. been
- b. having

- c. being
- d. seeing

prepp

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General Awareness

76. Which of the following is the fifth state of matter? (+1, -0.25)
- a. Gas
 - b. Liquid
 - c. Plasma
 - d. Bose-Einstein condensates
-
77. Who has been appointed the first deputy managing director of the International Monetary Fund? (+1, -0.25)
- a. Urjit Patel
 - b. Gita Gopinath
 - c. V Anantha Nageswaran
 - d. Raghuram Rajan
-
78. Which famous Kathak dancer was called to perform for Queen Elizabeth II coronation festivities, in 1953 and was awarded with Padma Bhushan in 1970? (+1, -0.25)
- a. Sridevi
 - b. Kumari Kamala
 - c. Kanaka Raju
 - d. Mallika Sarabhai

79. Who is the author of the book 'Slumdog Millionaire'? (+1, -0.25)

- a. APJ Abdul Kalam
 - b. Vikas Swarup
 - c. Kiran Desai
 - d. R K Narayan
-

80. Who was India's first Olympian who went on to star in Hollywood and Broadway? (+1, -0.25)

- a. Milkha Singh
 - b. Norman Pritchard
 - c. Virat Kohli
 - d. PT Usha
-

81. The tax imposed on goods imported into and exported out of India is called _____. (+1, -0.25)

- a. corporation tax
 - b. custom duty
 - c. excise tax
 - d. capital gain tax
-

82. Which of the following is the largest moon of Saturn? (+1, -0.25)

- a. Europa
 - b. Atlas
 - c. Titan
 - d. Carme
-

83. Chennai Super Kings defeated which team to win IPL 2021? (+1, -0.25)

- a. Mumbai Indians
 - b. Sunrisers Hyderabad
 - c. Kolkata Night Riders
 - d. Delhi Capitals
-

84. As of April 2022, who is the Chairman of Rajya Sabha? (+1, -0.25)

- a. Shri Om Birla
 - b. Shri M Venkaiah Naidu
 - c. Shri Narendra Modi
 - d. Shri Amit Shah
-

85. The Rajya Sabha passed the National Institute of Pharmaceutical Education and Research (NIPER) Amendment Bill, 2021. The institutes mentioned in the bill are of national importance and fall under the aegis of the Department of Pharmaceutical, Ministry of _____.

- a. Chemicals and Fertilisers

- b. Health and Family Welfare
 - c. Consumer Affairs, Food and Public Distribution
 - d. AYUSH
-

86. Which state has the highest reserves of manganese in India, as of April 2022? (+1, -0.25)

- a. Maharashtra
 - b. Chhattisgarh
 - c. Bihar
 - d. Odisha
-

87. Which of the following architectural styles had an entrance gateway called 'Gopuram'? (+1, -0.25)

- a. Indo-Islamic architecture
 - b. Nagara architecture
 - c. Buddhist architecture
 - d. Dravidian architecture
-

88. Citric acid is commonly found in _____. (+1, -0.25)

- a. onions
- b. apples

- c. oranges
 - d. bananas
-

89. Which of the following statements is correct? (+1, -0.25)

- I. Tipu Sultan is also known as the Tiger of Mysore.
- II. Tipu Sultan ruled over Mysore from 1782 to 1799.

- a. Neither I nor II
 - b. Only I
 - c. Only II
 - d. Both I and II
-

90. Which Indian musician was conferred with the Lifetime achievement Grammy Award? (+1, -0.25)

- a. Sonu Nigam
 - b. Pandit Ravi Shankar
 - c. Zubin Mehta
 - d. AR Rahman
-

91. What is a type of unemployment called in rural areas, in which people appear to be employed but actually do not have employment? (+1, -0.25)

- a. Disguised Unemployment

- b. Voluntary Unemployment
 - c. Educated Unemployment
 - d. Seasonal Unemployment
-

92. Which freedom fighter of India composed the song, 'Saare Jahan Se Achha'?

(+1, -0.25)

- a. Jawaharlal Nehru
 - b. Jyotiba Phule
 - c. Mahatma Gandhi
 - d. Muhammad Iqbal
-

93. Which of the following is an employment generation programme in India?

(+1, -0.25)

- a. Swarna Jayanti Shahari Rozgar Yojana (SJSRY)
 - b. Pradhan Mantri Jan Dhan Yojana
 - c. Stand Up India Scheme
 - d. Pradhan Mantri Suraksha Bima Yojana
-

94. The green plants in a terrestrial ecosystem capture about _____ of the energy of sunlight that falls on their leaves and convert it into food energy.

(+1, -0.25)

- a. 5%

- b. 14%
 - c. 8%
 - d. 1%
-

95. Pulakeshin II was a ruler of which dynasty? (+1, -0.25)

- a. Chera
 - b. Chola
 - c. Chalukya
 - d. Pallava
-

96. Who among the following rulers of Mewar was defeated by Babur in the Battle of Khanwa (1527 AD)? (+1, -0.25)

- a. Rana Sanga
 - b. Ahmed Shah I
 - c. Rana Kumbha Karan
 - d. Alauddin Khalji
-

97. Ugadi is an important festival of which state? (+1, -0.25)

- a. Karnataka
- b. Haryana
- c. Bihar

d. Goa

98. Which of the following was formed to maintain and develop road networks in Indian border areas for easy accessibility and connectivity? (+1, -0.25)

- a. Border Roadways Authority
 - b. Border Roads Organisation
 - c. Indian Border Roadways
 - d. Border Authority of India
-

99. Kalbelia is a tribal dance form of which Indian state? (+1, -0.25)

- a. Kerala
 - b. Rajasthan
 - c. Goa
 - d. Meghalaya
-

100. Which Article of the Constitution of India states the 'Right to freedom of speech and expression'? (+1, -0.25)

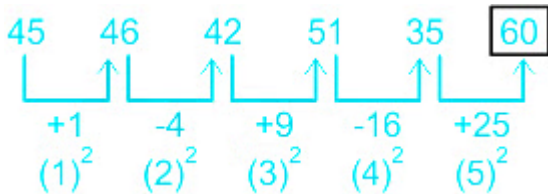
- a. Article 370
- b. Article 200
- c. Article 19
- d. Article 377

Answers

1. Answer: a

Explanation:

The logic followed here is:



So, '60' will complete the series.

Hence, the correct answer is "60".

2. Answer: c

Explanation:

The logic followed here is:

Logic: 1st number \times (1st number - 1) = 2nd number.

Now,

7 : 42

$$\rightarrow 7 \times (7 - 1)$$

$$\Rightarrow 7 \times 6 = 42.$$

For, 9 : 72

$$\rightarrow 9 \times (9 - 1)$$

$\Rightarrow 9 \times 8 = 72.$

Similarly, for 12 : ?

$\rightarrow 12 \times (12 - 1)$

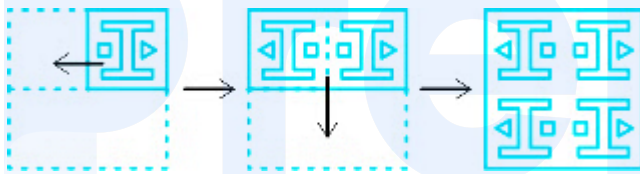
$\Rightarrow 12 \times 11 = 132.$

Hence, the correct answer is "132".

3. Answer: b

Explanation:

The paper when unfolded will appear as shown below:



Hence, "Option 2" is the correct answer.

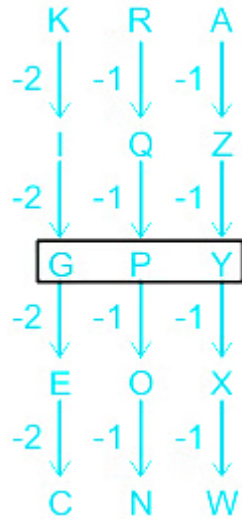
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4. Answer: b

Explanation:

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

The logic followed here is:



So, 'GPY' will replace the question mark in the given series.

Hence, the correct answer is "Option 2".

5. Answer: a

Explanation:

Given equation: $104 \div 4 - 6 + 13 \times 5 = 22$.

BODMAS Table:

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

Let's check each option one by one.

Option 1) 13 and 4

Given: $104 \div 4 - 6 + 13 \times 5 = 22$

After interchanging the numbers we get;

$$\Rightarrow \underline{104 \div 13} - 6 + 4 \times 5 = 22$$

$$\Rightarrow 8 - 6 + \underline{4 \times 5} = 22$$

$$\Rightarrow \underline{8} - 6 + \underline{20} = 22$$

$$\Rightarrow \underline{28} - 6 = 22$$

$$\Rightarrow \underline{22} = 22$$

$$\Rightarrow \text{LHS} = \text{RHS}$$

Option 2) 6 and 4

$$\text{Given: } 104 \div 4 - 6 + 13 \times 5 = 22$$

After interchanging the numbers we get;

$$\Rightarrow \underline{104 \div 6} - 4 + 13 \times 5 = 22$$

$$\Rightarrow 17.33 - 4 + \underline{13 \times 5} = 22$$

$$\Rightarrow \underline{17.33} - 4 + \underline{65} = 22$$

$$\Rightarrow 82.33 - 4 = 22$$

$$\Rightarrow 78.33 \neq 22$$

$$\Rightarrow \text{LHS} \neq \text{RHS}$$

Option 3) 6 and 5

$$\text{Given: } 104 \div 4 - 6 + 13 \times 5 = 22$$

After interchanging the numbers we get;

$$\Rightarrow \underline{104 \div 4} - 5 + 13 \times 6 = 22$$

$$\Rightarrow 26 - 5 + \underline{13 \times 6} = 22$$

$$\Rightarrow \underline{26} - 5 + \underline{78} = 22$$

$$\Rightarrow 104 - 5 = 22$$

$$\Rightarrow 99 \neq 22$$

$$\Rightarrow \text{LHS} \neq \text{RHS}$$

Option 4) 13 and 6

$$\text{Given: } 104 \div 4 - 6 + 13 \times 5 = 22$$

After interchanging the numbers we get;

$$\Rightarrow 104 \div 4 - 13 + 6 \times 5 = 22$$

$$\Rightarrow 26 - 13 + 6 \times 5 = 22$$

$$\Rightarrow 26 - 13 + 30 = 22$$

$$\Rightarrow 56 - 13 = 22$$

$$\Rightarrow 43 \neq 22$$

$$\Rightarrow \text{LHS} \neq \text{RHS}$$

Hence, the correct answer is "Option 1".

Your Personal Exams Guide

6. Answer: c

Explanation:

Given:

'Milk are exhausting' is coded as '# tg 5'

'Are water super milk' is coded as 'pa 5 6 #'.

Milk are exhausting \rightarrow # tg 5

Are water super milk \rightarrow pa 5 6 #

Here,

The code for 'Milk' is either '#' or '5'.

The code for 'Are' is either '#' or '5'.

The code for 'Water' is either 'pa' or '6'.

The code for 'super' is either 'pa' or '6'.

Hence, the correct answer is "Option 3".

7. Answer: d

Explanation:

Given:

'shoes are shining' is coded as '235',

'shining stars rotate' is coded as '458',

'stars are round' is coded as '829'.

shoes are shining → 2 3 5
shining stars rotate → 4 5 8
stars are round → 8 2 9

Here,

The code for 'Shining' is '5'.

The code for 'Shoes' is '3'.

The code for 'are' is '2'.

The code for 'Stars' is '8'.

The code for 'Rotate' is '4'.









The code for 'Round' is '9'

Hence, the correct answer is "Option 4".

8. Answer: d

Explanation:

The image embedded in given figure is as shown below:

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

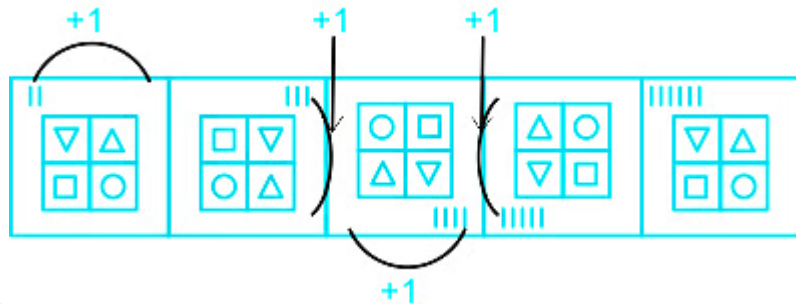
Hence, "Option 4" is the correct answer.

9. Answer: b

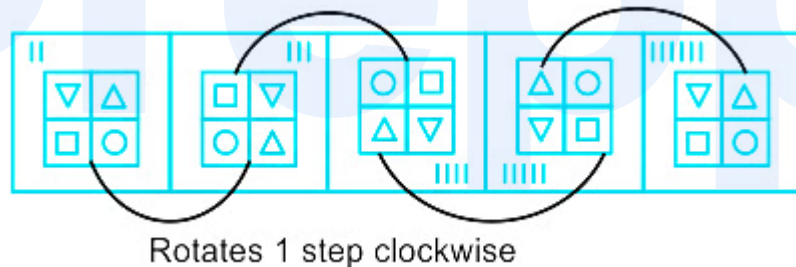
Explanation:

The logic followed here is:

Step I: The lines is increased by + 1 and shifted to next place in clockwise direction.



Step II: The inner shape is shifted one place to next boxes in clockwise direction.



Hence, the correct answer is "Option 2".

10. Answer: a

Explanation:

BODMAS Table:

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

Given equation I: $400 + 17 - 71 \times 85 \div 11 = 58$

Now, if '11 and 17' are interchanged, then:

$$\Rightarrow 400 + 11 - 71 \times \underline{85 \div 17} = 58$$

$$\Rightarrow 400 + 11 - \underline{71 \times 5} = 58$$

$$\Rightarrow \underline{400 + 11} - 355 = 58$$

$$\Rightarrow \underline{411} - \underline{355} = 58$$

$$= 56 \neq 58.$$

LHS \neq RHS.

Given equation II: $1331 \div 17 - 50 + 6 \times 11 = 173$

Now, if '11 and 17' are interchanged, then:

$$\Rightarrow \underline{1331 \div 11} - 50 + 6 \times 17 = 173$$

$$\Rightarrow 121 - 50 + \underline{6 \times 17} = 173$$

$$\Rightarrow \underline{121} - 50 + \underline{102} = 173$$

$$\Rightarrow \underline{223} - \underline{50} = 173$$

$$= 173 = 173$$

LHS = RHS.

Here, **Only I** are the **incorrect** equation after interchanging the given symbol and number.

Hence, the correct answer is "Option 1".

11. Answer: a

Explanation:

Statement:

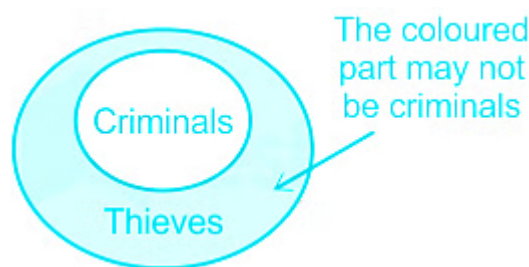
All criminals are thieves.

Rakesh is a thief.

Conclusions:

(i) Rakesh is a criminal - False (Because All criminals are thieves doesn't implies that all thieves is criminal, and the statement says Rakesh is thief, nothing mention that Rakesh is a criminal or All thieves are criminal).

(ii) Some thieves may not be criminals - **True** (Because All criminals are thieves doesn't implies that all thieves is criminal, it also possible that some thieves may not be criminals, they may be only thieves).



So, Only conclusion II follows.

Hence, the correct answer is "Option 1"

12. 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

The logic followed here is:

'POEM' is written as 'ODQO'



'HARD' is written as 'FQCG'



Similarly, for 'RNGC'



So, 'RNGC' will be written as 'EFPQ'.

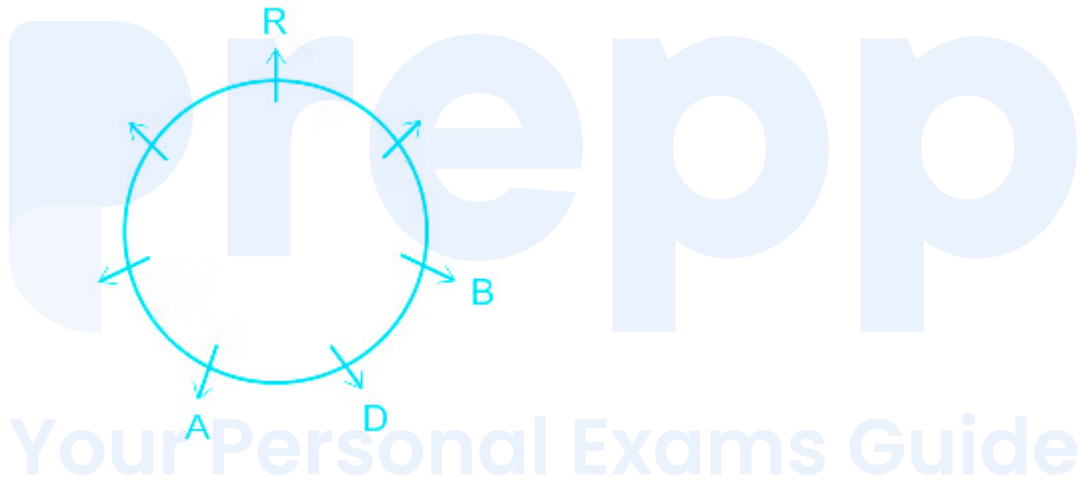
Hence, the correct answer is " Option 4 ".

13. Answer: a

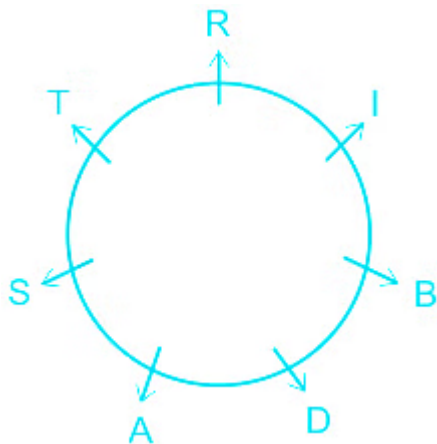
Explanation:

Given: A, B, R, D, I, S, and T.

- 1) R sits fourth to the left of A.
- 2) B does not sit adjacent to A.
- 3) D and B sit adjacent to each other.



- 4) S sits third to the left of I.
- 5) A does not sit adjacent to I and T.



So, 'S' is the immediate neighbor of both T and A.

Hence, the correct answer is "Option 1".

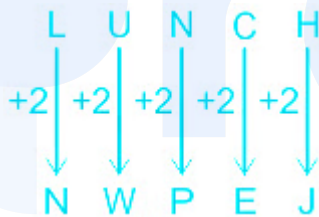
14. Answer: d

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

The logic followed here is: Letter + 2.

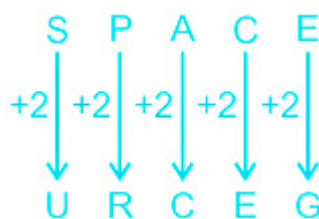
'LUNCH' is written as 'NWPEJ'



'FAITH' is written as 'HCKVJ'



Similarly, for 'SPACE'



So, 'SPACE' will be written as 'URCEG'.

Hence, the correct answer is " Option 4 ".

15. Answer: c

Explanation:

The logic followed here is:

Logic: **1st number × 2nd number = 3rd number.**

Now,

(4, 5, 20)

→ $4 \times 5 = 20.$

(7, 8, 56)

→ $7 \times 8 = 56.$

Now, checking the options:

Option 1) (9, 12, 98)

→ $9 \times 12 = 108 \neq 98.$

Option 2) (8, 11, 89)

→ $8 \times 11 = 88 \neq 89.$

Option 3) (7, 12, 84)

→ **$7 \times 12 = 84.$**

Option 4) (9, 11, 89)

→ $9 \times 11 = 99 \neq 89.$

Hence, the correct answer is "Option 3".

16. Answer: c

Explanation:

Given: Seven persons A, B, C, D, E, F and G.

1) C is third youngest.

2) F and G are second youngest and youngest respectively.

___ > ___ > ___ > ___ > C > F > G

3) E is younger to A and older than B.

4) D is younger than only A and E.

A > E > D > B

So, the final arrangement will be:

A > E > D > B > C > F > G

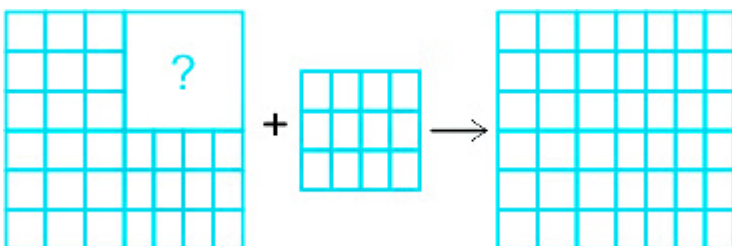
Here, B is the fourth eldest.

Hence, the correct answer is "B".

17. Answer: b

Explanation:

The image that completes the pattern is:



Hence, the correct answer is "Option 2".

18. Answer: b

Explanation:

Statement:

Some Parrots are Birds.

All Birds are Mammals.

The least possible diagram for the given statements is as follows:



Conclusions:

(i) All Mammals are Birds - False (Because All Birds are Mammals, so All Mammals are Birds can be possible not definite).

(ii) Some Mammals are Parrots - True (Some Parrots are Birds and All Birds are Mammals, so those parrots who is birds is definitely mammals).

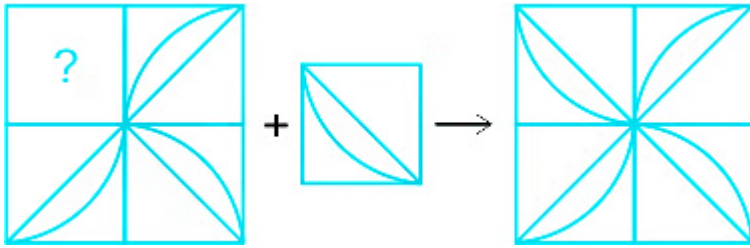
Here, Only conclusion II follows.

Hence, the correct answer is "Option 2".

19. Answer: a

Explanation:

The image that completes the pattern is:



Hence, the correct answer is "Option 1".

20. 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

The logic followed here is:

RL : OQ



Similarly, for GO : ?



Hence, the correct answer is " Option 1 ".

21. Answer: c

Explanation:

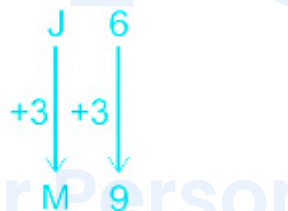
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:

'C 1' is related to 'F 4'



'J 6' is related to 'M 9'



Similarly, for 'P 4'



So, 'P 4' is related by 'S 7'.

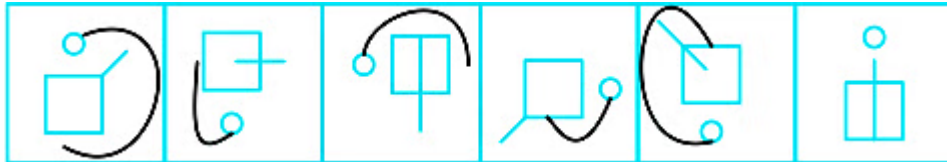
Hence, the correct answer is " Option 3 ".

22. Answer: a

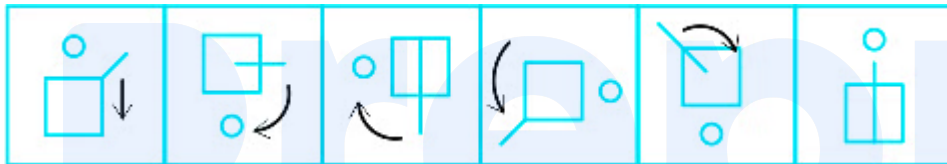
Explanation:

The logic followed here is:

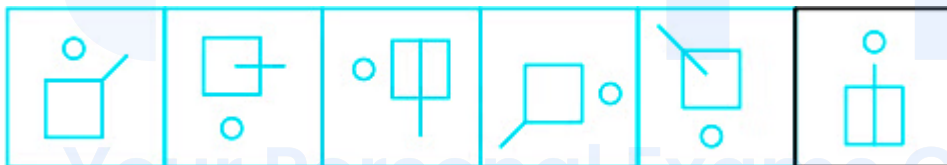
Step I: Circle is shifting 1 place and 2 place in alternative boxes.



Step II: Lines are shifting 1 place and 2 place in alternative boxes.



So, the final series is:

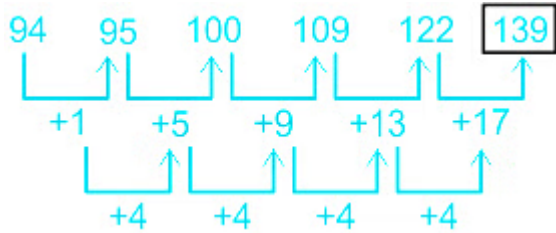


Hence, the correct answer is "Option 1".

23. Answer: c

Explanation:

The logic followed here is:



So, '139' will complete the series.

Hence, the correct answer is "Option 3".

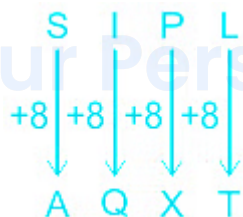
24. Answer: a

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

The logic followed here is: **Letter + 8**.

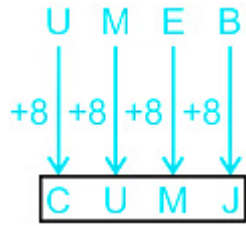
SIPL : AQXT



ADGJ : ILOR



Similarly, for 'UMEB'



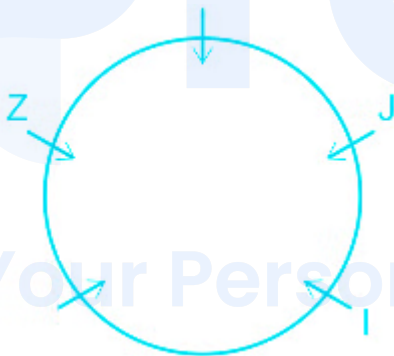
Hence, the correct answer is " Option 1 ".

25. Answer: a

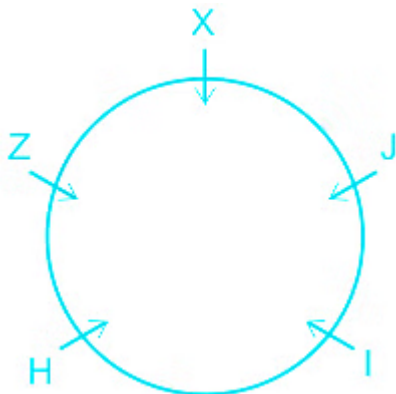
Explanation:

Given: Five men Z, X, H, I and J.

- 1) Z is sitting second to the left of I.
- 2) J is not the immediate neighbour of Z.



- 3) H is sitting second to the right of X.



So, 'l' is sitting third to the right of X.

Hence, the correct answer is "Option 1".

26. Answer: d

Explanation:

Given:

LCM of two numbers = 450

Product of the two numbers = 20250

Concept Used:

LCM \times HCF = number first \times number second

or LCM \times HCF = Product of two numbers

Calculation:

According to the concept,

LCM \times HCF = Product of two numbers

$450 \times \text{HCF} = 20250$

$\Rightarrow \text{HCF} = 20250/450$

$\Rightarrow \text{HCF} = 45$

\therefore The HCF of the two no is 45.

27. Answer: c

Explanation:

Given:

external angle : internal angle = 1 : 5

Formula used for regular Polygon:

External angle = $360/n$

Internal angle = $\{(n - 2)/n\}180$

Where n is the number of sides in a polygon.

Calculation:

According to the question,

$$360/n : \{(n - 2)/n\}180 = 1 : 5$$

$$\Rightarrow 2/(n - 2) = 1 : 5$$

$$\Rightarrow (n - 2) = 10$$

$$\Rightarrow n = 12$$

\therefore The number of sides in the polygon is 12.

★ Shortcut Trick

The sum of an external angle and an internal angle of a regular polygon is 180

$$\text{so } 5x + 1x = 180, x = 30$$

$$\text{External angle} = 360/n = 30, n = 12$$

28. Answer: b

Explanation:

Given:

Total no of students = 16

Calculation:

Let's assume the initial average marks of 16 students is y

Total marks of 16 students initially = $16y$ (1)

The average marks of a group of 16 students in a test are reduced by 4 when the topper, who scored 92 marks, is replaced by new students.

Now the average marks of a group of 16 students

$$= (y - 4)$$

Total marks of 16 students now = $16(y - 4)$ (2)

let's assume the marks of new students is z

$$\text{Eq (1)} - 92 = \text{Eq (2)} - z$$

$$\Rightarrow 16y - 92 = 16(y - 4) - z$$

$$\Rightarrow 16y - 92 = 16y - 64 - z$$

$$\Rightarrow z = 92 - 64$$

$$\Rightarrow z = 28$$

∴ The mark scored by the new student is 28.

★ **Shortcut Trick**

If the average is reduced by 4 marks so total sum will be reduced by $16 \times 4 = 64$ marks.

Topper score = 92 marks

Since the topper is replaced by new student so,

New student marks = $92 - 64 = 28$ marks.

29. Answer: b

Explanation:

Formula used:

$$\text{Gain\%} = (\text{Gain}/\text{CP}) \times 100$$

Calculation:

Let cost price of the items is 100 Rs

According to the question,

$$\text{Marked price} = 100 + 30\% \times 100$$

$$\text{MP} = 100 + 30 = 130 \text{ Rs}$$

A selling price 20% less than the marked price means 80% of the marked price is the selling price

$$\text{SP} = 80\% \times 130$$

$$\text{SP} = 104 \text{ Rs}$$

$$\text{Gain} = \text{Selling price} - \text{Cost price}$$

$$\text{Gain} = 104 - 100 = 4$$

$$\text{Gain\%} = (4/100) \times 100$$

$$\text{Gain\%} = 4\%$$

\therefore Profit Percentage is 4%.

30. Answer: d

Explanation:

Given:

$$45\% \text{ of } (x - y) = 30\% \text{ of } (x + y)$$

Calculation:

$$45\% \text{ of } (x - y) = 30\% \text{ of } (x + y)$$

$$\Rightarrow (45/100) \times (x - y) = (30/100) \times (x + y)$$

Divide the above equation by 15 and 100 will be cut from both sides,

$$3(x - y) = 2(x + y)$$

$$\Rightarrow 3x - 3y = 2x + 2y$$

$$\Rightarrow 3x - 2x = 2y + 3y$$

$$\Rightarrow x = 5y$$

$$\Rightarrow x/y = 5/1$$

$$\Rightarrow \text{Percentage of } x \text{ is } y = (1/5) \times 100$$

$$\Rightarrow 20\%$$

\therefore The percentage of x is y is 20%.

31. Answer: a

Explanation:

Calculation:

The average of 12 consecutive odd numbers is 32.

Let's assume the smallest odd number of the given sequence is Y

So the numbers are $Y, (Y + 2), (Y + 4), (Y + 6),$

$(Y + 8), (Y + 10), (Y + 12), (Y + 14), (Y + 16),$

$(Y + 18), (Y + 20)$ and $(Y + 22),$

Difference between the largest and smallest number that are part of set 12 consecutive odd numbers mentioned above = $(Y + 22) - Y$

= 22

★ **Shortcut Trick**

Difference between the largest number and the smallest number of odd or even numbers = $(n - 1) \times 2$

Where n is the total odd or even number

Difference between the largest number and the smallest of 12 odd numbers = $(12 - 1) \times 2 = 22$

32. Answer: d

Explanation:

Given:

Total weight of alloy = 1800 kg

The ratio of P and Q in an alloy is 3: 7

Concept used:

Amount of P = $\{P/(P + Q)\} \times \text{Total alloy}$

or Amount of Q = $\{Q/(P + Q)\} \times \text{Total alloy}$

Calculation:

Amount of Q = $\{Q/(P + Q)\} \times \text{Total alloy}$

$P + Q = 3 + 7 = 10$

$$\text{Amount of Q} = (7/10) \times 1800 \text{ kg}$$

$$\Rightarrow 7 \times 180 \text{ kg}$$

$$\Rightarrow 1260 \text{ kg}$$

\therefore The amount of Q in the alloy is 1260 kg.

33. Answer: b

Explanation:

Given:

$$\text{SP} = 16000 \text{ Rs}$$

Formula used:

$$\text{Gain percentage} = (\text{Gain} / \text{CP}) \times 100$$

Calculation:

$$\text{CP} = \text{Purchase Price} + \text{Repair Price}$$

$$\text{CP} = 10000 + 5000 = 15000 \text{ Rs}$$

$$\text{Gain} = \text{SP} - \text{CP}$$

$$\text{Gain} = 16000 - 15000 = 1000 \text{ Rs}$$

$$\text{Gain Percentage} = (1000/15000) \times 100$$

$$\Rightarrow (1/15) \times 100$$

$$\Rightarrow 6.67\%$$

\therefore Sneha's gain percentage of the bridge is 6.67%.

34. Answer: a

Explanation:

Given:

The Average of seven numbers is 9

Calculation:

The Average of seven numbers is 9

The sum of seven numbers initially = $9 \times 7 = 63$ (1)

If each number is multiplied by P, then the average becomes 36

The sum of seven numbers when each number is multiplied by a number P = $36 \times 7 = 252$ (2)

by making both equations equal

Equation 1 \times P = Equation 2

$$63 \times P = 252$$

$$\Rightarrow P = 4$$

\therefore The value of P is 4.

★ Shortcut Trick

If we multiply or divide or add each number by a particular

number then the average will be directly multiplied or divide or add

by that number.

$$\text{so } 9 \times P = 36, P = 4$$

35. Answer: d

Explanation:

Given:

$$62\% \text{ of } 2200 - 24\% \text{ of } (?) = 932$$

Calculation:

$$62\% \text{ of } 2200 - 24\% \text{ of } (?) = 932$$

$$\Rightarrow \{(62/100) \times 2200\} - 24\% \text{ of } (?) = 932$$

$$\Rightarrow 1364 - 24\% \text{ of } (?) = 932$$

$$\Rightarrow 24\% \text{ of } (?) = 1364 - 932$$

$$\Rightarrow 24\% \text{ of } (?) = 432$$

$$\Rightarrow 6\% \text{ of } (?) = 108$$

$$\Rightarrow 1\% \text{ of } (?) = 18$$

$$\Rightarrow (1/100) \times (?) = 18$$

$$\Rightarrow (?) = 1800$$

\therefore The required answer is 1800.

36. Answer: d

Explanation:

Given:

$$56 - [36 - \{2 + 10 \times (6 - 3)\}]$$

Concept Used:

BODMAS Rule:

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

Calculation:

$$\begin{aligned} & 56 - [36 - \{2 + 10 \times (6 - 3)\}] \\ \Rightarrow & 56 - [36 - \{2 + 10 \times (6 - 3)\}] \\ \Rightarrow & 56 - [36 - \{2 + 10 \times 3\}] \\ \Rightarrow & 56 - [36 - \{2 + 30\}] \\ \Rightarrow & 56 - [36 - 32] \\ \Rightarrow & 56 - 4 \\ \Rightarrow & 52 \end{aligned}$$

37. Answer: d

Explanation:

Concept Used:

BODMAS Rule:

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

Calculation:

$$\frac{5}{6} - \frac{5}{11} \text{ of } \left[\frac{3}{7} + \frac{8}{12} \div \frac{6}{24} + \frac{5}{7} \right]$$

$$\Rightarrow \frac{5}{6} - \frac{5}{11} \text{ of } \left[\frac{3}{7} + \frac{8}{12} \times \frac{24}{6} + \frac{5}{7} \right]$$

$$\Rightarrow \frac{5}{6} - \frac{5}{11} \text{ of } \left[\frac{3}{7} + \frac{8}{3} + \frac{5}{7} \right]$$

$$\Rightarrow \frac{5}{6} - \frac{5}{11} \text{ of } \left[\frac{3}{7} + \frac{8}{3} + \frac{5}{7} \right]$$

$$\Rightarrow \left[\frac{5}{6} - \left\{ \frac{5}{11} \times \left(\frac{8}{7} + \frac{8}{3} \right) \right\} \right] \times \frac{10}{3}$$

$$\Rightarrow \left[\frac{5}{6} - \left\{ \frac{5}{11} \times \frac{80}{21} \right\} \right] \times \frac{10}{3}$$

$$\Rightarrow \left[\frac{5}{6} - \frac{400}{231} \right] \times \frac{10}{3}$$

$$\Rightarrow \left[\frac{(385 - 800)}{462} \right] \times \frac{10}{3}$$

$$\Rightarrow \left[- \frac{415}{462} \right] \times \frac{10}{3}$$

$$\Rightarrow - \frac{2075}{693}$$

∴ The required answer is $-\frac{2075}{693}$.

38. Answer: c

Explanation:

Given:

$$Z_1 = 690, Z_2 = 710,$$

$$Z_3 = 830, Z_4 = 670$$

$$\text{and } Z_5 = 900$$

Calculation:

From the table no of trains origination of different 5 Zone

The total number of trains in Z_3 and Z_4

$$Z_3 + Z_4 = 830 + 670 = 1500$$

The total number of trains in all 5 zone,

$$Z_1 + Z_2 + Z_3 + Z_4 + Z_5 = 690 + 710 + 830 + 670 + 900$$

$$\Rightarrow Z_1 + Z_2 + Z_3 + Z_4 + Z_5 = 3800$$

According to the question,

$$\text{Required Percentage} = (1500/3800) \times 100$$

$$= 39.47 \%$$

\therefore The total number of trains that originate in Z_3 and Z_4 taken together is 39.47 % of the total number of trains that originate in all 5 zones taken together.

39. Answer: c

Explanation:

Given:

Amount spent on agriculture = 8.5 crore

Calculation:

From the pie chart agriculture cover 17% and the IT sector covers 18%.

According to the question,

17% → 8.5 crore

⇒ 1% → .5 crore

⇒ 18% → $18 \times .5 = 9$ crore

∴ The amount spent in the IT sector is 9 crore.

40. **Answer: c**

Explanation:

Given:

Total sum = 3400

Calculation:

According to question,

$\frac{3}{4}$ of P's share = $\frac{2}{3}$ of Q's share

⇒ $\frac{3}{4} P = \frac{2}{3} Q$

⇒ $P/Q = \frac{2}{3} \times \frac{4}{3}$

⇒ $P/Q = 8/9$

Sum of P + Q = 8 + 9 = 17

17 → 3400

$$1 \rightarrow 200$$

$$P's \text{ share} = 8 \times 200 = 1600$$

$$Q's \text{ share} = 9 \times 200 = 1800$$

Difference between the shares of P and Q

$$= 1800 - 1600$$

$$= 200$$

\therefore Difference between the shares of P and Q is 200.

41. Answer: d

Explanation:

Calculation:

The profit earned on selling a book for 450 is the same as the loss incurred on selling it for 390.

$$SP_1 - CP = CP - SP_2$$

$$\Rightarrow 450 - CP = CP - 390$$

$$\Rightarrow 450 + 390 = 2CP$$

$$\Rightarrow 2CP = 840$$

$$\Rightarrow CP = 420$$

\therefore The cost price of the book is Rs 420.

42. Answer: b

Explanation:

Given:

Total Surface area = 1278 cm^2

length, width and height ratio = $5 : 3 : 7$

Formula Used:

Total Surface area of cardboard box = $2(lb + bh + hl)$

Calculation:

length, width and height ratio = $5 : 3 : 7$

let common multiple factors is a ,

length = $5a$, width = $3a$ and height = $7a$

Total Surface area of cardboard box = $2(lb + bh + hl)$

$2(5a \times 3a + 3a \times 7a + 7a \times 5a) = 1278 \text{ cm}^2$

$\Rightarrow 2(15a^2 + 21a^2 + 35a^2) = 1278 \text{ cm}^2$

$\Rightarrow (71a^2) = 639$

$\Rightarrow a^2 = 9$

$\Rightarrow a = 3$

Length of the box = $5 \times 3 = 15 \text{ cm}$

\therefore The length of the box is 15 cm .

43. Answer: a

Explanation:

Given:

Time = 25 years

Formula used:

Simple Interest = $PRT/100$

Amount = Simple Interest + sum

Calculation:

Let us assume the sum is P

So the Amount will be 6P

then Simple interest = $6P - P$

Simple interest = 5P

Simple Interest = $PRT/100$

$5P = (P \times R \times 25)/100$

$\Rightarrow 5 = R/4$

$\Rightarrow R = 20\%$

\therefore The rate of interest per annum will be 20%.

44. Answer: c

Explanation:

Given:

lengths of the trains A = 900 meters

lengths of the trains B = 1800 meters

Concept Used:

If the train will go in the opposite direction then the relative speed will be additive.

If the train will go in the same direction then relative speed will subtract.

Calculation:

lets the speed of train B is X m/s

Total length of the train = $900 + 1800 = 2700$ meters

Speed of train A = 45 km/h

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

$$= \frac{25}{2} \text{ m/s}$$

According to the question,

$$\frac{2700}{(X + \frac{25}{2})} = 90$$

$$\Rightarrow 2700/90 = X + 25/2$$

$$\Rightarrow 30 = X + 25/2$$

$$\Rightarrow X = 30 - 25/2 = 35/2$$

The speed of train B is $35/2$ m/s

Time to cross a stationary pole by train B

$$= 1800 / (35/2)$$

$$= 720/7 \text{ sec}$$

\therefore Train B crosses a stationary pole in $720/7$ sec.

45. Answer: b

Explanation:

Given:

$$\text{Sum} = 100$$

$$\text{Time} = 2 \text{ years}$$

$$\text{Rate} = 10\%$$

Formula used:

$$\text{Simple interest} = \frac{PRT}{100}$$

$$\text{Compound interest} = A - P$$

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

Calculation:

$$\text{Simple interest} = \frac{PRT}{100}$$

$$= \frac{(100 \times 10 \times 2)}{100} = 20$$

$$\text{Compound interest} = P\left(1 + \frac{R}{100}\right)^T - P$$

$$= 100\left(1 + \frac{10}{100}\right)^2 - 100$$

$$= 100\left\{\frac{121}{100} - 1\right\}$$

$$= 100\{121 - 100\} \times \frac{1}{100} = 21$$

∴ Simple interest : Compound interest 20 : 21

★ Shortcut Trick

Since there is asked for ratio so no need to involve the given sum value.

$$SI = 2 \times 10 = 20$$

for CI from the ratio method $10\% = \frac{1}{10}$

for first year $10 \rightarrow 11$

for second year $100 \rightarrow 121$

CI = 21

SI : CI = 20 : 21

46. Answer: a

Explanation:

Given:

A + B can complete the work in 5 days

A alone do the work in 10 days.

Calculation:

LCM method used:

Person	Days	Total Work	Efficiency
A + B	5	10	2
A	10		1
B	?		

from the above table efficiency of B = 2 - 1

Efficiency of B = 1

So no of the days to complete the task alone by B

B alone do the work in. = $10/1 = 10$ days

\therefore B alone does the work in 10 days.

47. Answer: c

Explanation:

Given:

$M_1 = 12$ women, $M_2 = 10$ women

$D_1 = 6$ Days,

$H_1 = 8$ hours, $H_2 = 12$ hours

$W_1 = 15$ toys, $W_2 = 20$ toys

Formula Used:

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

Where M = men, D = days,

H = Hours, W = works

Calculation:

According to question,

$$(12 \times 6 \times 8) / 15 = (10 \times d \times 12) / 20$$

$$\Rightarrow (24 \times 8) / 5 = d \times 6$$

$$\Rightarrow d = 6.4 \text{ days}$$

\therefore 6.4 days will be required to complete the task.

48. Answer: b

Explanation:

Given:

The volume of cube = 3375 cm^3

Formula Used:

The volume of cube = a^3

Diagonal of cubes = $a\sqrt{3}$

Calculation:

According to the question,

The volume of cube = 3375 cm^3

$$\Rightarrow a^3 = 3375 \text{ cm}^3$$

$$\Rightarrow a = 15 \text{ cm}$$

Diagonal of cubes = length of the longest rod that can be placed in the cube = $a\sqrt{3}$

length of the longest rod = $a\sqrt{3}$

$$= 15\sqrt{3} \text{ cm}$$

\therefore length of the longest rod is $15\sqrt{3} \text{ cm}$.

49. Answer: d

Explanation:

Given:

Length of train = 600 meter

Speed of the train = 48 km/h

Time is taken by train to cross plate form = 270 sec

Formula Used:

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

Calculation:

$$\text{Speed of the train} = 48 \text{ km/h}$$

$$\text{or Speed of the train} = 48 \text{ km/h} \times 5/18$$

$$= 40/3 \text{ m/s}$$

$$\text{The train crosses its length in time} = \frac{600}{40/3}$$

$$= 15 \times 3$$

$$= 45 \text{ sec}$$

Let the platform length is X meter

According to the question,

So the train crosses the platform in 270 sec with its length of 600 meters and speed of $40/3$ m/s

$$\frac{(600+X)}{40/3} = 270$$

$$\Rightarrow 600 + X = 270 \times 40/3$$

$$\Rightarrow 600 + X = 3600$$

$$\Rightarrow X = 3000 \text{ meters}$$

\therefore The Platform length is 3000 meters.

★ Shortcut Trick

Since train crosses the platform in 270 sec and its length in 45 sec so $(270 - 45 = 225)$ will take only to cross platform

$$45 \rightarrow 600$$

$$3 \rightarrow 40$$

$$3 \times 75 \rightarrow 40 \times 75$$

$$225 \rightarrow 3000$$

50. Answer: c

Explanation:

Calculation:

Total Revenue of shop S_2 and S_3 by selling steel bottles = $54000 + 36000$

$$= 90000$$

The price of each bottle is Rs 600 in all the shops.

Number of bottles sold by S_2 and S_3 taken together

$$= 90000/600$$

$$= 150$$

\therefore The total number of bottles sold by S_2 and S_3 is 150.

51. Answer: d

Explanation:

The correct answer is **present-day farmer's**.

★ Key Points

- The segment that contains a grammatical error is **present-day farmer's**.
- In this sentence, **the farmer** word should be in plural form.

- Thus the correct part of the sentence would be present-day farmers.

★ Additional Information

- When to add an "s" or "es" to a plural word. In English, we typically add an "s" to a word to make it plural. But occasionally, we add an "es."
- When the noun is singular and we want to show that that noun owns something we add the apostrophe 's'.
 - Example- The cat's toy is that.
- When a noun ends in s and is already plural, the apostrophe is placed after the s.
 - Example- The cats' toy is that.

52. Answer: a

Explanation:

The correct answer is **No error**.

★ Key Points

- There is no error in the given sentence.
- Thus the correct option would be no error.

★ Additional Information

- In the given sentence object and passive forms have been used.
 - **Her** comfort was in **her** children; / **her** second son, Rupert, / was especially dear to **her** .

Subject	Object	Passive
He	Him	His
She	her	her
It	It	Its
I	Me	My
You	You	Your
We	us	our
They	them	Their

53. Answer: c

Explanation:

The correct answer is **didn't want**.

★ Key Points

- The option that will improve the underlined part of the given sentence is didn't want.
- The above sentence is in Simple past tense.
- Thus the correct option that will improve the underlined part of the given sentence didn't **want**.

★ Additional Information

- **Simple Past Negative sentence rule** – There is a formula that works for both regular and irregular verbs to make simple past tense negative (except for the verb to be). The equation is **[did not + verb's root form]**.
- Instead of **did not**, you can also use the contraction **didn't**.
 - Example- Wolfgang didn't exaggerate his hula hoop prowess much.

54. Answer: a

Explanation:

The correct answer is **Incomprehensible**.

★ Key Points

- The Most appropriate meaning of the given idiom is **incomprehensible**.
- **All Greek to me** means not understandable or comprehensible.
 - **Example** - Ram tried to explain the rules of the game to me, but it was all Greek to me.

★ Additional Information

- Synonyms of Incomprehensible are unintelligible, indecipherable, incoherent, inarticulate etc.
- Antonyms of Incomprehensible are intelligible, comprehensible, understandable etc.

55. Answer: c

Explanation:

The correct answer is **A large amount of money**.

★ Key Points

- The most appropriate meaning of the given idiom is **A large amount of money**.
- **An arm and a leg** means A large amount of money-
 - For example- Clothes don't always have to cost an arm and a leg.

★ Additional Information

- **Idioms-** Every language has its unique assortment of wise proverbs. These proverbs are referred to as "idioms." Idioms and idiomatic expressions are vital components of the English language. English is an expressive language that is intriguing and well-written.
- **Phrases-** A phrase consists of several words. Phrases may be brief or lengthy, but they do not contain the subject-verb agreement required to form a sentence. A phrase is a collection of words that function as a single entity, frequently as a clause or sentence.

56. Answer: c

Explanation:

The correct option is **Very**.

★ Key Points

- The most appropriate option is **Very**.
- When we want to emphasise a point, we use **very** before adverbs and adjectives. It signifies "in a significant way."
 - **Example** - *He runs **very** fast.*
 - *He looks **very** Happy .*
- Thus the correct appropriate option is **Very**.

★ Additional Information

- **Few-** When describing the quantity of anything, we use the word few. Typically, we employ it whenever we like to discuss a modest amount.
 - Example- ***Few** players of the team leave their hometown each year.*
- **Many-** Many is a word we use to describe a lot of something that can be counted. Most frequently, we employ it in negative statements and queries.
 - Example- *I don't have **many** relatives. We're a small family.*
- **Some-** Indefinite numbers are denoted by the preposition some before nouns. Despite the fact that the quantity is unimportant or undefined, using some implies a finite amount:
 - **Example-** *I've got **some** questions for you.*

57. Answer: b

Explanation:

The correct answer is **Harness**.

★ Key Points

- The correct spelt word is **Harness**.
- **Harness** means a system of fittings and straps used to secure and steer a horse or other draught animal to a cart, plough, etc.
- Thus the correct answer is **Harness**. The other words do not make sense.

★ Additional Information

- There are some examples of the given words –
 - *The care and harnessing of a horse.*
 - *There is a 5-point harness with cushioning in each seat.*

58. Answer: d

Explanation:

The correct answer is **Stiff**.

★ Key Points

- The most appropriate antonym of the given word is **Stiff**.
- **Malleable** means the **ability to be hammered or forced into shape without breaking or shattering** (a metal or other material).
- The most appropriate antonyms of the given words would be **behind, intractable, Stiff** etc.
- Thus the correct answer is **Stiff**.

★ Additional Information

- Flexible, Variable and Resilient all are not antonyms of the given word Malleable.
- **Flexible** meaning **able to bend without breaking easily**.
- **Variable** means are **a variable or changeable aspect, trait, or factor** .
- **Resilient** means (of a human or animal) is able to endure or swiftly recover from trying circumstances.

59. Answer: d

Explanation:

The correct answer had been issued and thousands of summonses were sent.

★ Key Points

- The option that will improve the underlined part of the given sentence is **had been issued and thousands of summonses were sent**.
- This is **past perfect tense**.
- Thus the correct option had been issued and thousands of summonses were sent.

★ Additional Information

- **Past perfect tense**– The past perfect tense differs slightly from the simple past tense and the past continuous tense in terms of both form and how it is used in sentences.
- The past perfect tense makes it very evident that one action occurred before another in the past.
- The past perfect tense can also be used to describe an action that happened in the past.

60. Answer: d

Explanation:

The correct answer is **Posthumous**.

★ Key Points

- The option that can be used as a one-word substitute for the given group of words is **Posthumous**.
- **Posthumous** means **occurring, being given, or existing after the creator's passing**.
- Thus the correct answer is **Posthumous**.

★ Additional Information

- **Effusive** - **Effusive** means **displaying or expressing uninhibited or sincere appreciation, joy, or approbation**.
- **Gregarious** - **Gregarious** means **(of a person) gregarious and likes company**.
- **Fugitive** - **Fugitive** means **a person who is in hiding or has fled from captivity**.

61. Answer: d

Explanation:

The correct answer is **Delightful**.

★ Key Points

- The most appropriate Antonym of the underlined word is **Delightful**.
- **Heinous** is the given the word. Its meaning is of **a person or improper action, particularly a criminal**.
- Thus the correct answer is **Delightful**.

★ Additional Information

- **Gruesome** means **provoking disgust or dread**.
- **Appalling** means **producing awe or surprise**.
- **Cynical** means **assuming that people are only driven by their own interests**.
- A word that has the opposite meaning from another word is called an **antonym**.

- **Example** - *Hot - Cold*
 - *Winter - Summer*
 - *Black - White*
-

62. Answer: b

Explanation:

The correct answer is **Chide**.

★ Key Points

- **Chide** is the most appropriate synonym of the underlined word in the given sentence .
- Scold meaning is **argued with or reprimanded**.
- Thus, the correct synonym of the given word is **Chide**.

★ Additional Information

- **Laud** means **praise**.
- **Placate** means **to make (someone) less angry or hostile**.
- **Startle** means **reducing a person's rage or hostility**.

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63. Answer: a

Explanation:

The correct answer is Bequille.

★ Key Points

- The incorrectly spelt word is **Bequille** .
- The **Bequille** is an incorrectly spelt word because it does not make any sense in the English language.
- Thus the correct option is **Bequille** .

★ Additional Information

- **Blandishment** means a charming or appealing remark or action used to subtly persuade someone to take a certain action.
- Bereft means deficient or lacking in
- **Bereft** means **deficient or lacking**.

64. Answer: b

Explanation:

The correct answer is **you when you was**.

★ Key Points

- The part that contains the error is **'you when you was'**.
- It is a **conditional sentence**.
- Also, in past tense, we use 'were' with 'you'. The use of 'was' is grammatically incorrect.
- Thus the correct part of the sentence should be **'you when you were'**.

Correct sentence: *I liked talking to you when you **were** a small boy.*

★ Additional Information

- **'When'** is a word that indicates a conditional sentence.
- Wherever we find conditional words like **if, when, and where** between the sentences, we do not use the helping verbs.
 - **Example** - *My daughter smiles when I give her a compliment.*

65. Answer: c

Explanation:

The correct answer is **Greedy**.

★ Key Points

- The most appropriate synonym of the given word is Greedy.
- The given word is **Voracious** . Its meaning is **a strong desire for or appetite for food.**
- Thus the correct word is **Greedy.**

★ Additional Information

- **Restrained** -It means **exhibiting restraint or moderation**
 - **Moderate** - It means **average in size.**
 - **Truthful** -It means **communicating or speaking the truth.**
-

66. Answer: b

Explanation:

The correct answer is **Neglect.**

★ Key Points

- The correct antonym of the given word is Neglect.
- Preserve means **keep (anything) in its initial or current state .**
- Thus the correct answer would be Neglect.

★ Additional Information

- **Neglect** means **neglecting to properly maintain.**
 - **Safeguard** means **Using the right precautions to protect against harm or damage .**
 - **Treasure** means **a large number of precious metals , gems, or other priceless items.**
 - **Descend** means **to move or descend.**
-

67. Answer: b

Explanation:

The correct answer is **On**.

★ Key Points

- The most appropriate option to fill in the blank is **On**.
- The preposition **On** is always used before day names, and months names like Sundays, Mondays, January etc.
- Thus the correct preposition is **On**.

★ Additional Information

- **Over** is used when moving from one side to the other, **typically when going up and then down, the preposition "over" is employed** .
- **At** is used for When you are at the top, bottom, or end of anything, you use the verb "at."
- The preposition **"in"** might refer to a neighbourhood, **city, country, tiny vehicle, or body of water** .

68. Answer: d

Explanation:

The correct answer is **Shirley has had all her children with** .

★ Key Points

- The option that will improve the underlined part of the given sentence is **Shirley has had all her children with**.
- In English grammar, **"had had"** is used in the past perfect tense. When describing events or actions that happened before another event or action in the past, the past perfect tense is employed.
- Thus the correct sentence would be Shirley has had all her children with.

★ Additional Information

- Have had is the verb's present perfect tense equivalent.
 - 'Have you had your breakfast?'
 - Had had (had + past participle form of having) is the past perfect form of the verb to have.
 - She felt marvellous after she had had a good night's sleep.
-

69. Answer: b

Explanation:

The correct answer is **Morgue**.

★ Key Points

- The option that can be used as a one-word substitute for the given group of words is **Morgue**.
- **The Morgue Means a mortuary.**
- Thus the correct answer is The Morgue.

★ Additional Information

- The antonyms of the given word are **modesty, antenatal clinic etc.**
 - The synonyms of the given word are **mortuary, charnel house, charnel etc.**
 - *Examples- A full-time obituaries editor in charge of the morgue.*
 - *The bodies were wrapped and taken to the city morgue.*
-

70. Answer: c

Explanation:

The correct answer is **Euphoria**.

★ Key Points

- The option that can be used as a one-word substitute for the given group of words is **Euphoria**.
- **Euphoria** means a **feeling or state of intense excitement and happiness**.
- Thus the correct answer is Euphoria.

★ Additional Information

- The antonyms of the given word are **euphorias, euphorants, autoantonyms, euphoriant etc.**
- The Synonyms of the given word are **ecstasy, exhilaration, intoxication etc.**
- **Examples-** *This one would not feel euphoria, only pain and terror.*
 - *The euphoria lasted for three heavenly weeks, and then she woke one morning with that old feeling of impending doom.*

71. Answer: b

Explanation:

The correct answer is **Has**.

★ Key Points

- The most appropriate option to fill in the blank number 1 is **Has**.
- The given fill-in-the-blank is the part of the **present perfect continuous sentence**.
- Thus the correct answer is **Has**.

★ Additional Information

- **Has been** and '**have been**' describe an action that **began in the past but is still ongoing in the present**.
- We use '**have been**' when the subject of a sentence is **I - You - We - They** or a **plural noun** (cars, birds, children).
 - **Examples** - *A total of five cars have been stolen from the city centre.*
 - *Birds have been following me all day long.*

- If the sentence's subject is **He-She-It** or a **singular noun** (car, bird, child), we use 'has been.'
 - **Example**- *My car has been stolen from the city centre.*
 - *This bird has been following me all day long .*
-

72. Answer: a

Explanation:

The correct answer is **Development**.

★ Key Points

- The most appropriate option to fill in the blank number 2 is **Development**.
- **Development** Means are **the process of developing or being developed**.
- Thus the correct answer is **Development**.

★ Additional Information

- **Turbulence** means **violent or unsteady movement of air or water, or of some other fluid**.
 - **Occupation** means **a job or profession** .
 - **Validation** means **the action of checking or proving the validity or accuracy of something**.
-

73. Answer: c

Explanation:

The correct answer is **Model**.

★ Key Points

- The most appropriate option to fill in the blank number 3 is **Model**.

- The **model** means a three-dimensional representation of a person, thing, or planned construction on a lower scale than the original.
- Thus the correct answer is **model**.

★ Additional Information

- **Replica** means an exact copy or model of something, especially one on a smaller scale.
- **Template** means a rigidly formed piece of material used as a template for processes such as cutting out, shaping.
- **Double** means more than one, one + one.

74. Answer: c

Explanation:

The correct answer is **Their**.

★ Key Points

- The most appropriate option to fill in the blank number 4 is "**Their**".
- **The word is "Their"** used for what belongs to, relates to, or is made or done by certain people, animals, or things.
- Thus the correct answer is "**Their**".

★ Additional Information

- **"Their"** Application Their is the possessive form of they, therefore it refers to what belongs to, pertains to, or is made or done by specific people, animals, or things.
- **It's** always used as a contraction for it is.
- Use there to allude to a specific location or **to suggest a generic location**. It could be a noun, a pronoun, an adverb, or an adjective.

75. Answer: c

Explanation:

The correct answer is **Being**.

★ Key Points

- The most appropriate option to fill in blank number 5 is **Being**.
- Being can be followed by a **past participle**.
- Thus the correct answer is **Being**.

★ Additional Information

- A past participle can be used after **being**. In the passive forms of the present and **past continuous tenses**, this structure is used.
- The **being + adjective** structure is used to discuss activities and conduct.
 - *Why are you being so silly?*
- A past participle can be used after **being**. In the passive forms of the **present and past continuous tenses**, this structure is used.
 - *Dinner is being cooked by mother.*

76. Answer: d

Explanation:

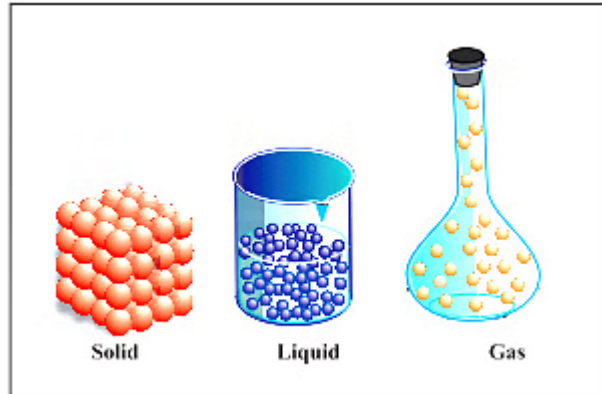
The correct answer is **Bose-Einstein condensate**.

★ Key Points:

- Matters are generally categorized into 3 states:
 - Solid: Particles are held very close to each other and can't move.
 - Liquid: Particles are close to each other but they can move around.
 - Gas: Particles are far from each other as compared to those present in solid or liquid states and their movement is easy and fast.
- Two more states are discovered under extreme circumstances:
 - Plasma: A superheated matter, so hot that the electrons are ripped away from the atoms forming an ionized gas.

- Bose-Einstein Condensate: A group of atoms cooled to absolute zero temperature(-273.15 oC).

★ Additional Information:



77. Answer: b

Explanation:

The correct answer is Gita Gopinath.

★ Key Points:

- Gita Gopinath is an Indian American Economist.
- She is the first Indian to take up the top role in the organization.
- She is also a professor of economics at Harvard University.
- She has written research articles on emerging markets, trade and investment, and international financial crises.
- The International Monetary Fund (IMF) is an agency of the United Nations, and an international financial institution, headquartered in Washington, D.C., consisting of 190 countries.
- Its stated mission is "working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world."
- Formed in 1944, started on 27 December 1945.

- Christine Lagarde was the Managing Director of the International Monetary Fund (2017).
- At present (Dec 2021), Kristalina Georgieva, from Bulgaria, is the Managing Director and Chairman of the Executive Board since October 1, 2019.

★ Additional Information:

Raghuram Rajan:

- Raghuram Rajan is the author of 'The Third Pillar'.
- Raghuram Rajan was the Chief Economist of the International Monetary Fund Between 2003 and 2006.
- Raghuram Rajan, an Indian economist and 23rd Governor of the RBI and also is the author of the book 'I Do What I Do'.
- I am Malala is written by **Malala Yousafzai**.
- An Era of Darkness is written by **Shashi Tharoor**.

78. Answer: b

Explanation:

Correct Answer **Kumari Kamala**

★ Key Points:

- **Kumari Kamala**, also known as **Kamala Lakshman**, is a renowned **Indian dancer and actress**.
- She began her career as a **child dancer** and went on to appear in almost **100 Tamil, Hindi, Telugu, and Kannada films**.
- In addition to her film career, **Kamala also excelled as a classical dancer** and specialized in the **Vazhuvoor style of dance**.
- She also performed in other **classical dance** forms such as **Kathakali and Manipuri**.
- **Kamala's contributions to the world of Indian classical dance and cinema** have been significant, and she is widely respected for **her talent and dedication**.

- Her invitation to perform for **Queen Elizabeth II** during her coronation festivities in **1953** was a great honor and recognition of her talent.
- In **1970**, Kamala was awarded the **Padma Bhushan**, which is one of India's **highest civilian awards**.
- This recognition was a testament to **her dedication and contributions** to the field of **Bharatanatyam**.

79. Answer: b

Explanation:

Correct Answer **Vikas Swarup**

★ Key Points

- **Vikas Swarup** is an **Indian author and diplomat**.
- He was born on **August 10, 1963**, in **Allahabad, India**.
- **Swarup** is best known for his debut novel "**Q&A**," which was later adapted into the **Academy Award-winning film "Slumdog Millionaire"**.
- He has also written other novels, including "**Six Suspects**," "**The Accidental Apprentice**," and "**The Boy with a Broken Heart**."

★ Additional Information

Dr APJ. Abdul Kalam was the **11th President of India**.

- He served as the president of India from 2002 to 2007.
- He was the **first scientist to become the president** of India.
- He is well known as the "**missile man of India**".
- He was honored with the **Bharat Ratna** award in 1997.
- He died on 27th July 2015
- "**Wings of Fire**" is the autobiography of Dr. APJ. Abdul Kalam
- Notable works are:
 - **The luminous spark.**
 - **India 2020.**
 - **Mission India**

- Ignited Minds.
- Indomitable Spirit.
- Inspiring Thoughts.

K. R. Narayanan :

- Kocheril Raman Narayanan was **an Indian diplomat, academic, and politician.**
 - who served as **the 10th President of India and the 9th Vice President of India.**
- **Books:**
 - Images and insights, Nehru and his vision, President Speaks: Three Speeches of President K R Narayanan in the 21st Century India, In the Name of the People: Reflections on Democracy, Freedom, and Development

80. Answer: b

Explanation:

Correct Answer **Norman Pritchard**

★ Key Points

- **Norman Gilbert Pritchard** was a **British-Indian athlete** who competed in the **1900 Summer Olympics** held in Paris, France.
- He is considered India's **first Olympic medalist**, having won **two silver medals** in **athletics events**.
- Pritchard was born in Calcutta, India, in 1875 to a British father and Indian mother.
- He studied in England and was a member of the London Athletic Club.
- At the **1900 Olympics**, he competed in **five events** and **won silver medals in the 200-meter sprint and the 200-meter hurdles**.
- After the **Olympics**, Pritchard returned to India and worked as **an actor and filmmaker** in the early Indian film industry.
- He acted in and directed several silent films, including **"The Dancer's Revenge"** and **"The Sign of the Cross"**.

- He died in 1929 in the United States, where he had been living for several years.

★ Additional Information

Milkha Singh

- **He is known as The Flying Sikh, was an Indian track and field sprinter.**
- He was introduced to the sport while serving the Indian Army.
- **He is the only athlete who won gold in 400 meters race at Asian Games & Commonwealth Games.**
- **In 1957, Milkha Singh won the first National title in the 400 m race. Hence, Option 3 is correct.**
- He won gold medals in the 1958 and 1962 Asian Games.
- He also represented India in the 1956 Summer Olympics in Melbourne, the 1960 Summer Olympics in Rome, and the 1964 Summer Olympics in Tokyo.
- **He was conferred India's fourth-highest civilian honor, Padma Shri for his sporting achievements.**
- During the 1960 Olympic Games, he finished in fourth place in 400 meters final.
- Several records were broken in the race. He finished in fourth place in 45.73 seconds which was an Indian national record for almost 40 years.
- **His autobiography, The Race of My Life (co-written with his daughter Sonia Sanwalka), was published in 2013.**
- His life story was portrayed in a biographical film, "Bhaag Milkha Bhaag". It was directed by Rakeysh Omprakash Mehra and starred Farhan Akhtar and Sonam Kapoor.
- His wax statue that was created by sculptors of Madame Tussauds in London was unveiled at Chandigarh in September 2017.

PT Usha:

- P.T. Usha is known for her stellar performance at the 1984 Los Angeles Olympics.
- PT Usha won 200m, 400m, 400m hurdles at the 1986 Asian Games in Seoul. She is known as 'Payyoli Express'.
- She also won five gold medals in the 1985 Asian Games in Jakarta.
- She received the Arjuna Award in 1983 and Padma Shri in 1985.

- She has been appointed as a member of the Athletes Commission of the Asian Athletics Association (AAA).
 - She has been awarded the prestigious International International Association of Athletics Federation (IAAF) Veteran Pin Award.
-

81. Answer: b

Explanation:

The correct answer is Custom duty.

★ **Key Points:**

- The tax imposed on the import and export of commodities is called custom duty.
 - This is a form of foreign trade control and a policy that taxes foreign goods to encourage or protect domestic industry.
 - Tariffs may be set (a constant sum per unit of imported goods or a percentage of the price) or variable (the amount varies by price). Import taxation means that consumers are less likely to purchase them because they are more costly.
 - An excise tax is an indirect tax on the sale of a particular good or service charged by the Government.
 - A VAT (Value-added tax) is a consumption tax that is imposed on a product whenever a value is added at each stage of the supply chain, from production to point of sale.
 - Goods and Services Tax(GST) is an Indirect tax on the purchase of goods and services used in India.
-

82. Answer: c

Explanation:

The correct answer is Titan.

★ Key Points:

- The **largest moon in the solar system is Ganymede (5,268.2 km).**
- The **largest moon of Saturn is Titan (5,149.5 km).**
- Titan is an icy world whose surface is completely obscured by a hazy golden atmosphere.
- Titan is bigger than Earth's moon and larger than even the planet Mercury.

★ Important Points:

Saturn:

- Adorned with thousands of beautiful ringlets, **Saturn is unique among the planets.**
- It is not the only planet to have rings made of chunks of ice and rock – but none are as spectacular or as complicated as Saturn's.
- Like fellow gas giant Jupiter, Saturn is a massive ball made mostly of hydrogen and helium.

★ Additional Information:

Phobos:

- It is the **larger of Mars's two moons.**
- It orbits Mars three times a day and is so close to the planet's surface that in some locations on Mars it cannot always be seen.

Deimos:

- It is the **outer and smaller of Mars's two moons.**
- It was discovered telescopically with its companion moon, **Phobos, by the American astronomer Asaph Hall in 1877.**

Triton:

- It is the **largest of Neptune's 13 moons.**
- It is unusual because it is the **only large moon in our solar system** that orbits in the opposite direction of its planet's rotation—a retrograde orbit.
- **Carme** is a retrograde **irregular satellite of Jupiter.**

- It was discovered by **Seth Barnes Nicholson** at **Mount Wilson Observatory** in **California** in **July 1938**.

83. Answer: c

Explanation:

The correct answer is **Kolkata Night Riders**

★ Key Points:

- Chennai Super Kings(CSK) is the **second most successful** Indian Premier League(IPL) franchise.
- CSK is owned by **India Cements Limited**.
- India Cements Limited is headed by former International Cricket Council chairman N. Srinivasan.
- CSK won the IPL title four times:

Year	Defeated
2010	Mumbai Indians
2011	Royal Challengers Bangalore
2018	Sunrisers Hyderabad
2021	Kolkata Knight Riders

CSK has retained four players before the auction for IPL 2022:

- Ravindra Jadeja (₹ 16 crores)
- Mahendra Singh Dhoni (₹ 12 crores)
- Ruturaj Gaikwad (₹ 8 crore)
- Moeen Ali (₹ 6 crores)

★ Important Points:

- IPL is governed by the **Board of Control for Cricket in India(BCCI)**.

- IPL started in the year **2008**.
- CSK was banned for two years by **Justice Lodha Committee**:
 1. **2016**
 2. **2017**
- The Lodha Committee was appointed by the **Supreme Court of India** on **22 January 2015** to analyze and recommend implementable actions in the **IPL betting scandal**.
- The **headquarters** of **India Cements Limited** is in **Chennai**.

84. Answer: b

Explanation:

Correct Answer **Shri M Venkaiah Naidu**

★ **Key Points:**

- **Shri M.Venkaiah Naidu** is the Chairman of Rajya Sabha (**April 2022**).
- **Shri Jagdeep Dhankhar** is the **current Chairman of the Rajya Sabha**.
- The Vice President of India is the ex-officio Chairman of the Rajya Sabha.
- The Rajya Sabha is the upper house of the Parliament of India.
- The membership of Rajya Sabha is limited by the Constitution to a maximum of 250 members.
- The **Vice President** of India is the **Chairman of the Rajya Sabha**.
- The Vice President of India is the **ex-officio Chairman of the Rajya Sabha**.
- The term of the Chairman of the **Rajya Sabha** is **only 5 years**.
- The Rajya Sabha selects a **Deputy Chairman** from among its members.
- The Chairman of the Rajya Sabha gives his **resignation to the President**.
- In the **absence of the Chairman** of the Rajya Sabha the **deputy chairman** performs the duties of the Chairman.
- The **Deputy Chairman** is elected **internally by the Rajya Sabha**.

★ **Additional Information:**

- The vice-President of India is the **second-highest constitutional post** in India after the President.
- **Article 63** of the Indian Constitution states that "**There shall be a vice president of India.**"
- The vice president acts **as President** in the **absence of the president** thanks to death, resignation, impeachment, or other situations.
- When a **bill** is introduced in Rajya Sabha, the **vice president decides** whether it's a **financial bill or not**.
- If he's of the opinion, a bill introduced within the Rajya Sabha may be a money bill, he would **refer the case to the Speaker of the Lok Sabha for deciding it**.
- **Part V** of the **Constitution of India under Chapter I (Executive)** also discusses the **office of the Vice-President of India**.
- **Articles (63-73)** describe the election, removal, post, requirement, etc of the **Vice President of India**.
- Currently, **Jagdeep Dhankhar is the Vice-President** of India.
- **Dr. Sarvepalli Radhakrishnan** was the **first Vice President** of independent India, takes charge of the office in 1952.

85. Answer: a

Explanation:

Correct answer **Chemicals and Fertilisers**

★ **Key Points:**

- **Parliament** on 9 December 2021 passed the **National Institute of Pharmaceutical Education and Research (Amendment) Bill, 2021**.
- It seeks to accord the status of institute of national importance to **six more institutes** of pharmaceutical education and research and also set up an advisory council for them.
- These institutes are in **Ahmedabad, Guwahati, Hajipur, Hyderabad, Kolkata and Raebareli**.
- The **Ministry of Chemicals and Fertilizers** has issued a notification bringing the provisions of the **National Institute of Pharmaceutical Education and Research**

(Amendment) Act, 2021, into force on May 25, 2022

★ Important Points:

- The Bill has come with **four amendments** which include **qualifying six NIPERs (National Institutes of Pharmaceutical Education and Research)** as institutes of national importance and **introducing undergraduate and diploma courses**.
- The Bill was introduced in Lok Sabha in March 2021 and referred, thereafter, to the Standing Committee on Chemicals and Fertilizers.
- It seeks to amend the **National Institute of Pharmaceutical Education and Research Act, 1998**.
- It also proposes to bring down the membership of the board of governors mandated to manage the affairs at each NIPER from the current **23 to 12**.

★ Additional Information:

- The Central Government grants the status of '**Institute of National Importance**' to premier higher educational institutions in India through an act of the Parliament.
- It is an institute that "serves as a pivotal player in developing highly skilled personnel within the specified region of the country/state".
- Such institutes get **special funding and recognition** from the Government of India.

Your Personal Exams Guide

86. Answer: d

Explanation:

Correct Answer **Odisha**

Manganese is one of the important raw materials used for smelting iron ore.

★ Key Points:

- Manganese is used for **making alloys**.
- It is used in the **manufacturing of enamel, dry cell batteries, plastics, chemicals, and glasses**.

- It requires almost 10 kg of manganese to manufacture one tonne of steel.
- **Odisha is the largest producer of manganese** in India with multiple mines located over the iron ore belt of India.
- Some of the major mines are **Bonai, Kendujhar, Sundergarh, Gangpur, Koraput, Kalahandi, and Bolanger**.
- After Odisha, **Karnataka, Maharashtra, Telangana, Goa, and Jharkhand** lies in the list of manganese producer in India.
- In **2000–2001, Odisha produced one-third of the country's total production**.

Thus, we can conclude that **Odisha** is the **largest producer of manganese**.

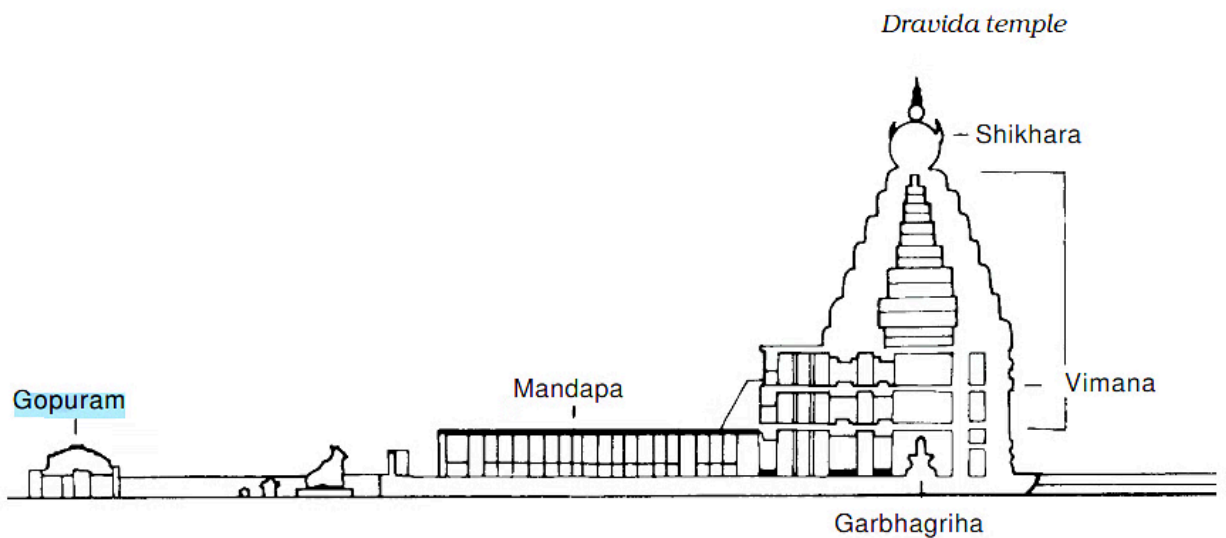
87. Answer: d

Explanation:

The correct answer is **Dravidian architecture**

★ Key Points:

- Most of the important temples present in the South Indian states have a **gopuram**.
 - Gopuram acts as a characteristic feature to represent the temples built in the **Dravidian Style**.
- The entrance gateway in the **Dravidian style of temples** is known as **Gopuram**.
- The finest examples of their architecture are the **Chennakesava Temple in Belur**, the **Hoysaleswara Temple in Halebid**, and the **Kesava Temple in Somanathapura**.



★ Additional Information:

Buddhist architecture:

- Buddhist Architecture is primarily represented by three prominent building types:
 - The Chaitya Hall (Place Of Worship or Prayer hall)
 - The Vihara (Monastery)
 - The Stupa (Hemispherical Mound For Worship/Memory)
- Chaitya is a place of worship, while Vihara is the dwelling place of the monks.
- Both early Chaityas and Viharas were made from woods and later stone-cut Chaityas and Viharas were made.
- Chaitya was a rectangular prayer hall with a stupa placed in the centre, the purpose was prayer.
- The Chaitya was divided into three parts and had an apsidal ending, that is, a semicircular rear end.
- The central part of the hall (also called the nave) was separated from the two aisles by two rows of pillars.
- The chaityas also had polished interior walls, semicircular roofs and horse-shoe-shaped windows called the Chaitya windows.
- Viharas were the residences of the monks.
- Distinctive Buddhist architectural structures and sculptures like Stupas, Pagodas, caves, and monasteries

- Being the spiritual symbols of Buddhism, these structures are monastic or holy places
- They also serve as a sacred land that has the power to purify one's soul.

Nagara architecture

- It is the style of temple architecture that became popular in northern India.
- In North India, it is common for an entire temple to be built on a stone platform with steps leading up to it.
- In South India, it usually has elaborate boundary walls or gateways.
- Latina was the most common name for the simple shikhara which is square at the base and whose walls curve or slope inward to a point on top.
- The second major type of architectural form in the Nagara order is the phamsana.
 - Phamsana buildings tend to be broader and shorter than Latina ones.
 - Their roofs are composed of several slabs that gently rise to a single point over the centre of the building, unlike the Latina ones which look like sharply rising tall towers.
 - Phamsana roofs do not curve inward, instead, they slope upwards on a straight incline.
 - Phamsana design is used for the mandapas while the main garbhagriha is housed in a Latina building.

Your Personal Exams Guide

88. Answer: c

Explanation:

The correct answer is Oranges

★ Key Points

- The fruits containing citric acid are termed citrus fruits. eg: lemon, orange, grapefruit, etc.
- These are sour in taste and are a good source of Vitamin C, thus help in preventing the disease caused by the deficiency of Vitamin C, i.e., Scurvy.
- Grapes contain a lesser amount of citric acid than lime.

- Banana is a rich source of fiber, potassium, and Vitamin B6.
- Mango is a food source of fiber and Vitamin A and C.

★ Additional Information

Few naturally occurring acids are -

Sl no.	Name of the Acid	Generally Found in
1	Tartaric acid	Grapes, tamarind
2	Lactic acid	Curd
3	Formic acid	The sting of bees and red ants
4	Gastric Juice/ HCL	Human stomach
5	Oxalic acid	Tomatoes
6	Citric acid or Ascorbic Acid	Orange or lemon, gooseberries (amla)
7	Acetic Acid	Vinegar

89. Answer: d

Explanation:

The correct answer is **Both I and II**

★ Key Points:

- Tipu Sultan was the ruler of the Mysore Kingdom and he is known as the Tiger of Mysore.
- He reigned from 1782 to 1799.
- Tipu Sultan expanded the iron-cased Mysorean rockets and commissioned the military manual Fathul Mujahidin.
- The French commander-in-chief, Napoleon Bonaparte, sought an alliance with Tipu Sultan.

★ Additional Information:

- Hyder Ali fought the first Anglo-Mysore War in 1767–69 at the age of 17 and then Second Anglo-Mysore in 1780–84.
- Hyder Ali died during the Second Anglo-Mysore War and then **Tipu Sultan led Mysore.**
- He reformed the tax system and imposed tax directly on the peasant and collected through salaried agents in cash.
- Tipu Sultan deployed rockets against the advances of British forces and their allies during the Anglo-Mysore Wars, including the Siege of Seringapatam and the Battle of Pollilur.

90. Answer: b

Explanation:

The correct answer is **Pandit Ravi Shankar**

★ Key Points:

- **Ravi Shankar KBE** was an **Indian sitarist** and **composer**. A **sitar virtuoso**, he **became the world's best-known** exponent of **North Indian classical music** in the **second half of the 20th century** and **influenced many musicians in India and throughout the world.**
- He was **born on 7 April 1920** in **Varanasi** and **died on 11 December 2012** in **La Jolla, California, United States.**
- Ravi Shankar received the **Lifetime Achievement Award** at the **55th Annual Grammy Award** ceremony.
- Ravi Shankar was awarded the **Bharat Ratna**, in 1999
- He is **an Indian musician, player of the sitar, composer, and founder** of the **National Orchestra of India.**
- **Sitar**, a **stringed instrument** of the **lute family** that is **popular in northern India, Pakistan, and Bangladesh.**

★ Additional Information

Zubin Mehta

- Zubin Mehta is an **Indian conductor** of some greatest **Western and Eastern classical music**.
- He is music director **emeritus of the Israel Philharmonic Orchestra (IPO)** and **conductor emeritus of the Los Angeles Philharmonic**.
- Mehta's father was the creator of the **Bombay Symphony Orchestra**.
- When he was 18, he registered in the **Vienna state music academy**, from which he graduated after **three years with a diploma as a conductor**.
- He began conquering international competitions and conducted the **Royal Liverpool Philharmonic** at age of just **21**.
- Beginning in the **1960s**, Mehta availed experience by **substituting for celebrated maestros** throughout the world.
- Mehta was music director of the **Montreal Symphony Orchestra** from 1961 to 1967 and of the **Los Angeles Philharmonic** from 1962 to 1978.
- **Zubin was** the youngest music director ever for any major **North American orchestra**.
- In 1969, he was assigned as **Music Adviser to the Israel Philharmonic Orchestra** and in **1981** he became its Music Director for Life.

AR Rahman:

- **AR Rahman** made history when he became the **first Indian to win two Academy Awards in 2009**.
- The popular music director dubbed the "Madras Mozart," won two Academy Awards, one for the original score for "**Slumdog Millionaire**" and the other for the film's massively popular global song "**Jai Ho**."
- AR Rahman is an Indian film composer, record producer, vocalist, and songwriter who primarily works in Indian cinema (especially Tamil and Hindi films) and occasionally international movies.
- The Padma Bhushan, India's third-highest civilian award, was bestowed upon him by the Indian government in 2010.
- **Six National Film Awards, two Academy Awards, two Grammy Awards, a BAFTA Award, a Golden Globe Award, fifteen Filmfare Awards, and seventeen Filmfare Awards South** are among Rahman's achievements.

Sonu Nigam:

- **Sonu Nigam** is the most recent recipient of a Grammy as he took home the award in the category of 'Mubarakan Album' for 'Mubarakan'.
- **Grammy Award**, any of a series of awards presented annually in the **United States** by the National Academy of Recording **Arts & Sciences**.
- Winners are selected from more than **25 fields**, which cover such genres as **pop, rock, rap, R&B, country, reggae, classical, gospel**, and **jazz**, as well as production and postproduction work, including packaging and album notes

91. Answer: a

Explanation:

The correct answer is **Disguised Unemployment**.

★ Key Points:

UNEMPLOYMENT

- A condition where a person eligible to work and looking for it is not able to find work.
- An individual on the basis of his activity status can be categorized into the following: **Employed, Unemployed, and Neither working nor looking for work**.
- The first two categories constitute the **total labor force**.
- The unemployment rate can be calculated using the below formula: **Unemployment rate = (Unemployed workers/Total labour force) x 100**
- **Following are the types of unemployment**
 - **Disguised Unemployment** - More labor is engaged in an occupation than optimally required and is usually seen in the agriculture sector.
 - **Seasonal Unemployment** - It occurs when a worker is unable to find work during a particular season and this also is seen in the agriculture sector.
 - **Structural Unemployment** - It occurs when workers do not have skills according to the jobs available in the market. -
 - **Cyclical Unemployment** - It occurs during the recessions in the business cycle.

- **Technological Unemployment** – It occurs due to changes/advancements in technology.
- **Frictional/Search Unemployment** – It occurs when there a time lag between the jobs when an individual is searching for a new job or is switching between the jobs.
- **Vulnerable Unemployment** – It occurs when workers do not have proper job contracts and legal protection. Since their work record is not maintained, they are considered unemployed.

★ Additional Information:

- The **National Sample Survey Office (NSSO)** uses the following approaches to measure unemployment in India:
 - **Usual Status Approach**
 - **Weekly Status Approach**
 - **Daily Status Approach**

92. Answer: d

Explanation:

The correct answer is Muhammad Iqbal.

★ Key Points:

- The **philosopher, poet, and politician Allama Muhammad Iqbal** created one of the most enduring **patriotic poems** of the Urdu language, '**Saare Jahan Se Accha**'.
- Known alternatively as '**Tarana-e-Hind**', this song was originally a poem written by **Muhammad Iqbal**.
- It quickly became an **anthem of opposition against the British Raj**.
- The poem was published in the weekly journal Ittehad on August 16, 1904.
- As Tarana-e-Hindi, the song, '**Saare Jahan Se Accha**' was later published in 1924 in the Urdu book **Bang-i-Dara**.

★ Additional Information

National Anthem:-

- The song *Jana-Gana-Mana*, composed originally in Bengali by **Rabindranath Tagore**, was adopted in its Hindi version by the Constituent Assembly as the **National Anthem of India on 24 January 1950**.
- It was first sung on **27 December 1911** at the **Kolkata Session** of the Indian National Congress.
- Rabindranath Tagore had published it in '*Tatvabodhini*' in **1912** with the title '*Bharat Bhagya Vidhata*' and translated it into **English in 1919** with the title '**Morning song of India**'.
- The credit of composing the present tune (music) of our national anthem goes to **Captain Ram Singh Thakur** (an I.N.A. sepoy).

National Song:-

- The song '*Vande Mataram*' was composed in **Sanskrit** by **Bankim Chandra Chatterji**.
- It has an **equal status with Jana-Gana-Mana**.
- The first political occasion when it was sung was at the **1896 session of the Indian National Congress**.
- The song was published in the novel '*Anandmath*', authored by **Bankim Chandra Chatterji**, and was adopted as the **National Song on 24 January 1950**.

Jyotiba Phule:

- **Mahatma Jyotirao Govindrao Phule** born on 11 April 1827, also known as **Jyotiba Phule**, was an **Indian social activist, thinker, anti-caste social reformer, and writer** from Maharashtra.
- He led the movement against the **prevailing caste restrictions in India** and thus was **associated with the anti-caste movement**.
- He **revolted against the domination of the Brahmins** and struggled for the **rights of peasants** and other low-caste people.
- Phule along with his followers formed **Satyashodhak Samaj** in 1873 which meant 'Seekers of Truth' in order to **attain equal social and economic benefits for the lower castes** in Maharashtra.
- He along with his wife Savitribai Phule opened **a girls' school in Poona**
- Jyotiba Phule was awarded the **title of 'Mahatma'** for his social work.

93. Answer: a

Explanation:

Correct answer **Swarna Jayanti Shahari Rozgar Yojana (SJSRY)**

★ Key Points

Rural Employment Generation Programme (REGP)

- Rural Employment Generation Program mainly aims at self-employment opportunities in small towns and villages.
- It is a scheme initiated by the Central Government of India.
- **The rural Employment Generation Programme (REGP) aims at creating self-employment opportunities in rural areas and small towns.**
- The Khadi & Village Industries Commission (KVIC) launched and initiated the Rural Employment Generation Programme (REGP) scheme on 1st April 1995. They generated job opportunities for around two million job seekers under the KVI sector in the rural areas of the country.

Objectives

- Generation and expansion of sustainable and continuous employment opportunities in rural and urban areas across the country.
- Giving a provision to establish and generate micro-enterprises for employment generation.
- Smooth and easy flow of credit to the micro sector by facilitating the participation of financial institutions.
- To increase the need for raw materials generated by small-scale industries to high-scale industries.

Swarna Jayanti Shahari Rozgar Yojana

- The Swarnajayanti Gram Swarojgar Yojana was launched on the 01 Dec 1997 with its primary **aim towards the creation of self-employment opportunities for the urban poor.**

- This scheme envisioned the upliftment of low-income families (referred to as the swarojgaris) into self-help groups through mobilization, capacity building, and provision of income-generating assets.

Mahatma Gandhi National Urban Employment Guarantee Act.

- It is called **Mahatma Gandhi National Rural Employment Guarantee Act 2005** (MGNREGA 2005).
- Under MGNREGA 2005, all those who are able to, and are in need of, work in rural areas are guaranteed 100 days of employment in a year by the government.

★ Additional Information

Pradhan Mantri Jan Dhan Yojana:

- The Government initiated the National Mission for Financial Inclusion (NMFI), namely, **Pradhan Mantri Jan Dhan Yojana (PMJDY)** in August 2014.
- It provides universal banking services for every unbaked **household, based on the guiding principles of banking the unbanked, securing the unsecured, funding the unfunded, and serving unserved and underserved areas.**
- Under the PMJDY scheme, some of the financial services that are offered to individuals are pensions, insurance, and banking.
 - **For cardholders below the poverty line and Industrial workers.**
- Under **PMJDY** zero balance accounts can be opened by individuals.
 - However, in case individuals would like to have access to the cheque facility, maintenance of a minimum balance is mandatory.

Pradhan Mantri Suraksha Bima Yojana:

- **Pradhan Mantri Suraksha Bima Yojana** is a government scheme launched on **9th May 2015** by PM Narendra Modi.
- It intends to provide an **affordable insurance scheme** for the **poor and underprivileged people** in the age group of **18 to 70 years** with a bank account at a premium of Rs.20 per annum; risk coverage of Rs.2 lakh for accidental death and full disability and Rs.1 lakh for partial disability.

- As per the latest PIB release, about **41.50 percent of enrolment** under this scheme belongs to women, and 61.29 percent of claim beneficiaries are women.
- **Some of the benefits provided by the scheme** are mentioned below:
 - The Pradhan Mantri Suraksha Bima Yojana offers a life cover of **Rs. 2 lakhs for one year** to all its account holders. This life cover is provided in case of accidental death or permanent disability.
 - A life cover of **Rs. 1 lakh** is provided to the beneficiary in case of partial disability.
 - This scheme can be availed by any individual aged between **18 years to 70 years**.
 - In case of the death of the account holder, the benefits of the scheme can be availed by his/her nominee.
 - The scheme provides an annual premium of **Rs. 20 per annum** per member. This premium is auto-debited in one instalment on or before 1st June of every year.

94. Answer: d

Explanation:

The correct answer is 1%.

- The green plants in a terrestrial ecosystem capture about **1%** of the energy of sunlight that falls on their leaves and converts it into food energy.

★ **Key Points:**

- **Photosynthesis** is the process by which green plants produce carbohydrates by absorbing carbon dioxide, water, and sunlight in the presence of chloroplast and liberating chemical energy.
- **Sunlight** is the main source of energy for Photosynthesis.
- Only **1%** of total sunlight falls on earth trapped by green plants.
- The gas which is taken in by the plants during photosynthesis - **Carbon dioxide**.

- The gas which is given out by plants during photosynthesis - **Oxygen**.
- The gas which is taken in by the plants during respiration- **Oxygen**.
- The gas which is given out by the plants during respiration - **Carbon dioxide**.
- The rate of photosynthesis is maximum - **Red light**.
- The rate of photosynthesis is minimum - **Yellow light**.
- The pigment in chloroplasts gives green color to plants - **Chlorophyll**.
- The only metal present in chlorophyll - **Magnesium**.

95. Answer: c

Explanation:

Correct Answer Chalukya dynasty.

★ Key Points:

- Pulakesi II reigned over the **Chalukyas of Badami**, an Indian royal dynasty that ruled large parts of southern and central India between the sixth and the twelfth centuries.
- Pulakeshin II reigned from **610 to 642 CE**.
- His court poet, **Ravikirti**, left accounts of his campaigns, his wins and wrote a eulogy at Aihole called the **Aihole Inscription**.
- The **Aihole inscription** is the most famous account written by **Ravikirti**.
- The inscription describes how the mighty Harsha was defeated by Pulakeshin and lost his Harsha (joy) when he suffered the ignominy of defeat.
- There is also a mention of the **victory of Chalukyas** over the Pallavas and of the shifting the capital from Aihole to Badami by Pulikeshi-II in the Aihole inscriptions.

★ Additional Information

- Muvendars (Three Great Kings) controlled the territories of Tamizhagam during the Sangam Age.
- The Tamil word 'Vendar' was used to refer to three dynasties, namely the Cheras, Cholas, and Pandyas.

Cheras:

- The Cheras ruled over the central and north Travancore, Cochin, south Malabar, and Kongu regions of Tamil Nadu.

Cholas:

- The Chola kingdom of the Sangam period extended upto Venkatam (Tirupathi) hills.
- The Kaveri Delta region remained the central part of the kingdom.
- This area was later known as Cholamandalam.

Pandyas:

- The Pandyas ruled present-day southern Tamil Nadu.
- The Pandya kings patronized Tamil poets and scholars.
- Several names of Pandya kings are mentioned in the Sangam literature.

Pallava Dynasty:

- Their capital was **Kanchipuram**.
- Their Kingdom extended from the **northern part of Andhra Pradesh to the Kaveri river in the South**.
- Sivaskanda Varman was the first ruler of the dynasty.
- Mahendravarman was a Pallava ruler who ruled from 600 AD to 630 AD.
 - He **succeeded Simhavishnu**.
 - He introduced **Pallava rock-cut temple architecture**.
- **Aparajita Varman** was the **last ruler of the Pallava dynasty**.

96. **Answer: a**

Explanation:

Correct Answer **Rana Sanga**

★ Key Points:

- In the **Battle of Khanwa**, Babur defeated the Rana Sanga in 1527.
- The **battle** was fought on 16 March 1527.
- The **Battle of Khanwa** was a **decisive battle** that helps the establishment of **Mughal rule in India**.
- **Babur assumes** the **title of Ghazi** after the victory of this battle.
- **Khanwa** is located **60km west of Agra**.

★ Additional Information:

Some Important Battle Fought by Babur

Battle	Year	Outcome
First Battle of Panipat	1526	Babur defeated Ibrahim Lodi.
Battle of Khanwa	1527	Babur defeated Rana Sanga.
Battle of Chanderi	1528	Babur defeated Medini Rai
Battle of Ghaghra	1529	Babur defeated joint forces of Afghans and the sultan of Bengal

Mahmud Shah I:

- The **Gujarat Sultanate's** most notable Ruler was **Mahmud Shah I**.
- He was in charge of bringing down the **Dwarkadhish Temple in Gujarat's Dwarka**.

Alauddin Khalji was an emperor of the **Khalji dynasty**.

- **Alauddin** was a **nephew and son-in-law** of **Jalaluddin Khalji**, founder of the **Khalji dynasty**.
- He ruled the Delhi Sultanate from **1296–1316**.
- He adopted the title "**Sikander-i-Sani**".
- He adopted the **Blood and Iron policy of Balban** in tackling the Mongols.
- Introduced **Chehra and Dagh** systems.
- **Alauddin** built the **Siri Fort, The Hauz-i-Khas, and Alai Darwaza**.

97. Answer: a

Explanation:

Correct Answer **Karnataka**

★ Key Points:

- According to the Hindu calendar, Ugadi or Yugadi is the Hindu New Year's Day, which is observed in the Indian states of **Andhra Pradesh, Telangana, and Karnataka**.
- On the first day of the Hindu lunisolar calendar month of Chaitra, it is celebrated festively in these areas.
- The Pachadi is a popular festive dish that incorporates a wide range of flavors, including **sweet, sour, salty, bitter, astringent, and spicy**.
- It is a symbolic reminder in **Telugu and Kannada Hindu** traditions that one should expect a wide range of experiences in the approaching new year and make the most of them.

★ Additional Information

List of religious festivals in a different state in India:

Your Personal Exams Guide

STATE	FESTIVALS
Arunachal Pradesh	Solang, Mopin, Monpa, Pongtu
Nagaland	Hornbill, Moatsu
Meghalaya	Nongkrem, Khasis
Jharkhand	Karam Utsav, Holi
Jammu and Kashmir	Bahu Mela, Chhari, Har Navami
Odisha	Rath Yatra, Raja Parba
Chhattisgarh	Maghi Purnima, Bastar
Andhra Pradesh	Flamingo Festival, Srivari Brahmotsavam Festival, Visakha Utsav
Karnataka	Kambala Festival, Karaga Festival, Mahamastakabhisheka Festival, Vairamudi Brahmotsava Festival
Tamil Nadu	Pongal, Puthandu Festival, Chapparam Festival, Mahamaham Festival
Kerala	Onam, Makaravilakku Festival, Vishu Festival, Theyyam Festival

98. Answer: b

Explanation:

Correct Answer **Border Roads Organisation**

★ Key Points:

- The **Border Roads Organisation (BRO)** is a road construction executive force in India.
- BRO was formed in **7 May 1960**.
- It provides **support** to and is now a part of the **Indian Armed Forces**.
- **BRO** develops and **maintains road networks** in India's border areas and friendly neighboring countries.
- **Earlier Border Roads Organization** was functioning under the **Ministry of Road Transport & Highways**.
- Now it is **completely controlled** by the **Ministry of Defence**.
- **Border roads** are important because they have **improved accessibility** in areas of difficult terrain.

★ Additional Information:

- **Ministry of Communications** is a union ministerial agency under the **Government of India** responsible for **telecommunications and postal service**.
- The **Ministry of Commerce and Industry** administers two departments, the **Department of Commerce** and the **Department for Promotion of Industry & Internal Trade**. The head of the Ministry is a **Minister of Cabinet rank**.
- The **Ministry of Consumer Affairs, Food, and Public Distribution** is a government ministry of India. The Ministry is **headed by a Cabinet rank minister**.

99. **Answer: b**

Explanation:

Correct Answer **Rajasthan**

★ Key Points:

- **Kalbelia or kalbeliya** dance form is associated with a **Rajsthani** tribe of the same name.
- **Kalbeliya** dance was included in **UNESCO's list of the Cultural Heritage of Humanity** in **2010**.
- It is performed by the **women of the Kalbeliya community**.
- **Kalbeliya** dancer's clothes are flowing **black skirts mixed in red and black hues** and embroidered in unique patterns.
- **Kalbeliya** dance has traditional musical instruments known as **Poongi**.

★ Additional Information

The Indian States and Folk Dances

- Andhra Pradesh- Kuchipudi, Bhamakalpam, Lambadi, Dhimsa, Kolattam, Butta Bommalu.
- Assam- Bihu, Bichhua, Natpuja, Maharas, Kaligopal, Bagurumba, Naga dance, Khel Gopal, Tabal Chongli, Canoe, Jhumura Hobjanai
- Bihar- Jata-Jatin, Bakho-Bakhain, Panwariya, Sama Chakwa, Bidesia.
- Gujarat- Garba, Dandiya Ras, Tippani Juriun, Bhavai.
- Haryana- Jhumar, Phag, Daph, Dhamal, Loor, Gugga, Khor, Gagor.
- Himachal Pradesh- Jhora, Jhali, Chharhi, Dhaman, Chhapeli, Mahasu, Nati, Dangi.
- Jammu and Kashmir- Rauf, Hikar, Mandjas, Kud Dandi Nach, Damali.
- Karnataka- Yakshagan, Huttari, Suggi, Kunitha, Karga, Lambi.
- Kerala- Kathakali (Classical), Ottamthullal, Mohiniattam, Kaikottikali.
- Maharashtra- Lavani, Nakata, Koli, Lezim, Gafa, Dahikala Dasavtar or Bohada.
- Odisha- Odissi (Classical), Savari, Ghumara, Painka, Munari, Chhau.
- West Bengal- Kathi, Gambhira, Dhali, Jatra, Baul, Marasia, Mahal, Keertan.
- Punjab- Bhangra, Giddha, Daff, Dhaman, Bhand, Naqual.
- Rajasthan- Ghumar, Chakri, Ganagor, Jhulan Leela, Jhuma, Suisini, Ghapal, Kalbeliya.
- Tamil Nadu- Bharatanatyam, Kumi, Kolattam, Kavadi.
- Uttar Pradesh- Nautanki, Raslila, Kajri, Jhora, Chappeli, Jaita.
- Uttarakhand- Garhwali, Kumayuni, Kajari, Jhora, Raslila, Chappeli.
- Goa- Tarangamel, Koli, Dekhni, Fugdi, Shigmo, Ghode, Modni, Samayi nrutya, Jagar, Ranmale, Gonph, Tonnya mell.

- Madhya Pradesh Jawara, Matki, Aada, Khada Nach, Phulpati, Grida Dance, Selalarki, Selabhadoni, Maanch.
- Chhattisgarh Gaur Maria, Panthi, Raut Nacha, Pandwani, Vedamati, Kapalik, Bharthari Charit, Chandaini.
- Jharkhand Alkap, Karma Munda, Agni, Jhumar, Janani Jhumar, Mardana Jhumar, Paika, Phagua, Hunta Dance, Mundari Dance, Sarhul, Barao, Jhitka, Danga, Domkach, Ghora Naach.
- Arunachal Pradesh Buiya, Chalo, Wancho, Pasi Kongki, Ponung, Popir, Bardo Chham.
- Manipur Dol Cholam, Thang Ta, Lai Haraoba, Pung Cholom, Khamba Thaibi, Nupa Dance, Raslila, Khubak Ishei, Lhou Sha.
- Meghalaya Ka Shad Suk Mynsiem, Nongkrem, Laho.
- Mizoram Cheraw Dance, Khuallam, Chailam, Sawlakin, Chawnglaizawn, Zangtalam, Par Lam, Sarlamkai/Solakia, Tlanglam.
- Nagaland Rangma, Bamboo Dance, Zeliang, Nsuirolians, Gethinglim, Temangnetin, Hetaleulee.
- Tripura Hojagiri.
- Sikkim Chu Faat Dance, Sikmari, Singhi Chaam or the Snow Lion Dance, Yak Chaam, Denzong Gnenha, Tashi Yangku Dance, Khukuri Naach, Chutkey Naach, Maruni Dance.

100. Answer: c

Explanation:

Correct Answer **Article 19**

★ Key Points

- **Article 19**, particularly article **19(1)(a)** of our constitution grants the right to freedom of speech and expression to its citizens.
- Freedom to speech and expression is one of the **six freedoms** provided under article 19, **Right to Freedom**:
- Following are the other five freedoms provided under this right:
 - Right to assemble peacefully.

- Right to form associations or unions or cooperative societies.
- Right to move freely throughout the territory of India.
- Right to reside and settle in any part of the Indian territory.
- Right to practice any profession or carry out any expression.
- Freedom to speech and expression includes the following freedoms and freedoms:
 - Right to propagate ones views, telecast, know about government activities, demonstrate.
 - Freedom of the press, commercial advertisements, silence.
 - Right against tapping of phone calls, bundhs called by political properties, pre-censorship against a newspaper.

Article Number	Provisions
Article 16	Equality of opportunity in matters of public employment.
Article 17	Abolition of untouchability
Article 18	Abolition of titles.

★ Additional Information

- **Article 370** of the Indian Constitution **granted special autonomous status to the erstwhile state of Jammu and Kashmir.**
- **Article 370** was added to the Indian constitution on October 17, 1949, as a **‘temporary provision’**, which exempted Jammu & Kashmir, permitting it to draft its own Constitution and restricting the Indian Parliament’s legislative powers in the state.
- Under the article, **the Constituent Assembly of Jammu & Kashmir was empowered to recommend** which articles of the Indian Constitution should apply to the state.
Article 35A stems from Article 370 and was introduced through a Presidential Order in 1954, on the recommendation of the J&K Constituent Assembly.
- Article 35A empowers the Jammu & Kashmir legislature to define the permanent residents of the state, and their special rights and privileges. It appears in Appendix I of the Constitution.

Article 200 in The Constitution Of India 1949.

- Assent to Bills When a Bill has been passed by the Legislative Assembly of a State or, in the case of a State having a Legislative Council, has been passed by both Houses of the Legislature of the State, it shall be presented to the Governor and the Governor shall declare either that he assents to the Bill or that he withholds assent therefrom or that he reserves the Bill for the consideration of the President:

Article 377:

- States about the Provision as to comptroller and auditor general of India.

Prepp

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