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Your Personal Exams Guide



NDA



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UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

SSC MTS Previous Year Paper (Held on: 26 Oct 2021 Shift 3)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

Instructions

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

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

General English

1. Select the most appropriate one-word substitution for the given group of words. (+1, -0.25)

Move suddenly and powerfully forward or upward

- a. Surge
- b. Thrive
- c. Abound
- d. Flourish

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

I'm sure that I found the place without any difficulty when I go next time.

- a. without any difficulty
- b. I'm sure that
- c. when I go next time
- d. I found the place

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

- a. Guidance
- b. Quiet
- c. Quandary
- d. Graphic

4. Select the most appropriate one-word substitution for the given group of words. (+1, -0.25)

A grant or payment to support a student's education

- a. Advance
- b. Fund
- c. Sponsor
- d. Scholarship

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

HIGHLIGHT

- a. Recognise
- b. Describe
- c. Downplay
- d. Consider

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

Girish was able to drive down from Bengaluru in ten hours as there was very little traffic on the highway.

- a. as there was very less
- b. as there were very little

- c. No substitution required
 - d. as there was a very little
-

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

DISASTER

- a. Safety
 - b. Downfall
 - c. Success
 - d. Collapse
-

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

A recent survey on the subject of fear asked people to _____ to a list of common phobias.

- a. answer
 - b. respond
 - c. reflect
 - d. review
-

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

Investigations have been going on for a long time to produce an environment-friendly plastic that decay and become a part of the soil.

- a. Investigations have been going on

- b. that decay and become a part of the soil
- c. for a long time
- d. to produce an environment-friendly plastic

10. Select the INCORRECTLY spelt word.

(+1, -0.25)

- a. Weather
- b. Indicashun
- c. Advertisement
- d. Excuse

11. Select the most appropriate synonym of the given word.

(+1, -0.25)

ACHIEVE

- a. Prevent
- b. Confuse
- c. Succeed
- d. Avoid

12. Select the most appropriate option to substitute the underlined segment.

(+1, -0.25)

If no substitution is required, select 'No substitution required'.

Rohit had hardly stepped into the office than he was summon by his boss.

- a. than he is summoned

- b. when he was summoned
 - c. then he were summoned
 - d. No substitution required
-

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

To get the _____ idea you need to read through the paragraph first.

- a. altogether
 - b. overall
 - c. internal
 - d. inside
-

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

DETERMINED

- a. Disillusioned
 - b. Intense
 - c. Resolute
 - d. Inspired
-

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

You are fond of instrumental music, isn't it?

- a. fond of

- b. instrumental music
 - c. You are
 - d. isn't it
-

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

Out of the question

- a. Very badly written
 - b. Very difficult
 - c. Not in the syllabus
 - d. Not possible at all
-

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

Change hands

- a. Give away something you do not need
 - b. Pass from one person to another
 - c. Move from one hand to another
 - d. Carry something in both hands
-

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

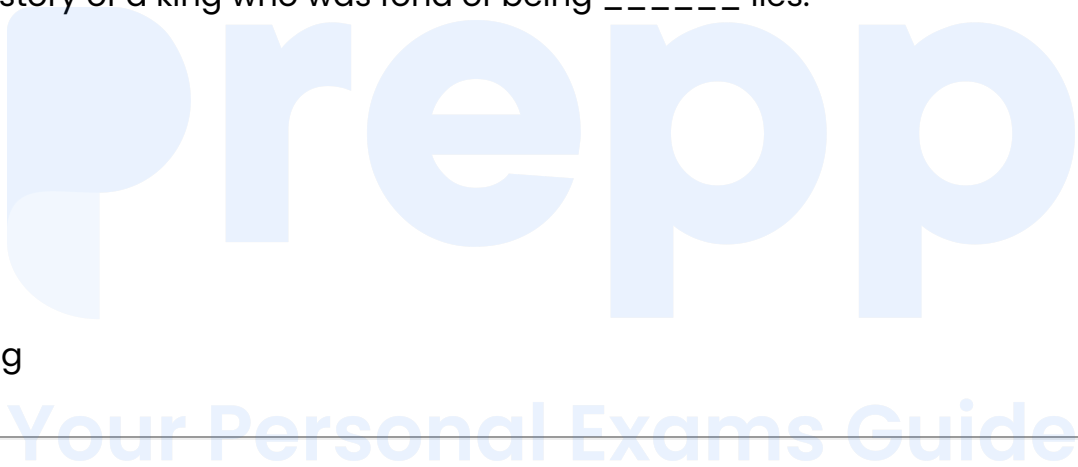
You can find several kind of birds in the Mysore Zoo, pelicans, flamingos, hornbills and egrets.

- a. several kinds of birds
 - b. kind of several birds
 - c. No substitution required
 - d. several kind of bird
-

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

It is the story of a king who was fond of being _____ lies.

- a. told
 - b. said
 - c. tell
 - d. telling
-



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

It is mandatory for information about the _____ of the product to be given on the label.

- a. requirements
 - b. essentials
 - c. materials
 - d. ingredients
-

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

You must pace your work. What (1) _____ I mean? I'm glad you (2) _____ that question. We pace our work according (3) _____ the eight-hour workday. If you (4) _____ twelve hours of work in your in-box, for example, you must (5) _____ that work into the eight-hour day.

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

- a. am
- b. will
- c. have
- d. do

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

You must pace your work. What (1) _____ I mean? I'm glad you (2) _____ that question. We pace our work according (3) _____ the eight-hour workday. If you (4) _____ twelve hours of work in your in-box, for example, you must (5) _____ that work into the eight-hour day.

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

- a. asked
- b. say
- c. spoke

d. find

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

You must pace your work. What (1) _____ I mean? I'm glad you (2) _____ that question. We pace our work according (3) _____ the eight-hour workday. If you (4) _____ twelve hours of work in your in-box, for example, you must (5) _____ that work into the eight-hour day.

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

- a. to
- b. from
- c. by
- d. with

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

You must pace your work. What (1) _____ I mean? I'm glad you (2) _____ that question. We pace our work according (3) _____ the eight-hour workday. If you (4) _____ twelve hours of work in your in-box, for example, you must (5) _____ that work into the eight-hour day.

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

- a. will have
- b. are having

c. have

d. had

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

You must pace your work. What (1) _____ I mean? I'm glad you (2) _____ that question. We pace our work according (3) _____ the eight-hour workday. If you (4) _____ twelve hours of work in your in-box, for example, you must (5) _____ that work into the eight-hour day.

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

a. compress

b. stretch

c. increase

d. expand



General Intelligence & Reasoning

26. Which of the following numbers will replace the question mark (?) in the given series? (+1, -0.25)

57, 71, 88, 109, 135, ?

- a. 167
- b. 188
- c. 175
- d. 201

27. Select the correct mirror image of the given combination when the mirror is placed at MN as shown below. (+1, -0.25)



- a. 5 P A 3 F
- b. F 3 A P 5
- c. 5 P A 3 F
- d. F 3 A P 5

28. In a certain code language, 'MARKS' is written as 'NASLT', and 'PORT' is written as 'QOSU'. How will 'FINGER' be written in that language? (+1, -0.25)

- a. GIOFDS
- b. GIOHES
- c. GJOHFS
- d. EIOKFT

29. Select the option figure in which the given figure (X) is embedded as its part (rotation is NOT allowed). (+1, -0.25)



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

$$81 + 45 \div 3 - 18 \times 9 = 32$$

- a. 3 and 9
- b. 45 and 18
- c. 81 and 18
- d. 45 and 9

31. In a certain code language, 'MINT' is written as 'TNIM'. How will 'CORTEX' be written in that language? (+1, -0.25)

- a. XERTOC
- b. XETROC
- c. XTEROC
- d. XETRCO

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

$$7 : 53 :: 9 : ?$$

- a. 101
- b. 99
- c. 85
- d. 112

33. Select the option figure that will replace the question mark (?) in the figure given below to complete the pattern.

(+1, -0.25)



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34. Which two signs should be interchanged to make the given equation correct?

(+1, -0.25)

$$4 + 5 - 16 \times 4 \div 2 = 1$$

- a. + and ×
- b. ÷ and -
- c. + and -
- d. ÷ and ×

35. Eight friends P, Q, R, S, T, U, V and W in are sitting clockwise at equal distances in the same sequence around a circular table. All are facing the centre of the table. If U is sitting in the South, then who is sitting in the North-east direction? (+1, -0.25)
- a. T
 - b. R
 - c. Q
 - d. P

36. In a certain code language, 'FLOOD' is written as '25', and 'HINT' is written as '15'. How will 'FAST' be written in that language? (+1, -0.25)
- a. 78
 - b. 18
 - c. 64
 - d. 60

37. Select the option that is related to the third word in the same way as the second word is related to the first word. (+1, -0.25)
- Books : School Bag :: Gas stove : ?
- a. Chef
 - b. Gas cylinder
 - c. Food

d. Kitchen

38. Which of the following numbers will replace the question mark (?) in the given series? (+1, -0.25)

17, 17, 34, 102, 408, ?

a. 1620

b. 2040

c. 2440

d. 1550

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

Statements:

All crows are sparrows.

All ducks are sparrows.

Conclusions:

I. No sparrow is a crow.

II. No crow is a duck.

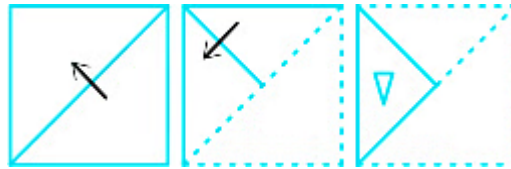
III. Some crows are ducks.

a. Only conclusions I and II follow

b. Either conclusion II or III follows

- c. Only conclusions II and III follow
- d. Only conclusions I and III follow

40. A paper is folded and cut as shown in the given figures. How will it appear when unfolded? (+1, -0.25)



- a.
- b.
- c.
- d.

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

Statements:

No shop is a restaurant.

All restaurants are parks.

Conclusions:

I. Some parks are restaurants.

II. No restaurant is a shop.

a. Both conclusion I and II follow

b. Only conclusion II follows

c. Neither conclusion I nor II follows

d. Only conclusion I follows

42. Which of the following letter-clusters will replace the question mark (?) in the given series? (+1, -0.25)

KTY, NXD, QBI, TFN, ?

a. WJS

b. VJS

c. WKR

d. WLT

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

Kathmandu : Nepal :: Thimphu : ?

- a. Bhutan
 - b. Sri Lanka
 - c. China
 - d. Maldives
-

44. 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.

NORWAY : YWRONA :: PORTUGAL : ?

- a. URTOPLGA
 - b. UTRPOLGA
 - c. UTPRLOGA
 - d. ATRPOGLU
-

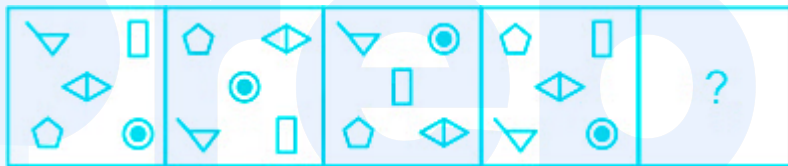
45. Five persons are waiting to buy a ticket in a queue. Dipti is standing just behind Harsha. Vinita is just before Mrunal. Sindhu is just after Dipti. If Vinita is the first person standing in the queue, who is the last person in the queue? (+1, -0.25)

- a. Mrunal
 - b. Sindhu
 - c. Dipti
 - d. Harsha
-

46. If $G > T$, $H = B$, $T > H$, $M = T$ and $B > K$, then which of the following expressions is correct? (+1, -0.25)

- a. $K < H$
- b. $G < M$
- c. $G = T$
- d. $B > T$

47. Select the figure that will replace the question mark (?) in the following figure series. (+1, -0.25)



- a.
- b.
- c.
- d.

48. In a certain code language, 'LOAN' is written as '15122613'. How will 'DEUCE' be written in that language? (+1, -0.25)

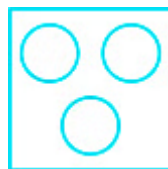
- a. 232262422
- b. 232292322
- c. 232162421
- d. 202272422

49. Study the given pattern carefully and select the number that can replace the question mark (?) in it. (+1, -0.25)

15	4	161
12	3	117
16	5	?

- a. 120
- b. 131
- c. 143
- d. 111

50. Select the set of classes the relationship among which is best illustrated by the following Venn diagram. (+1, -0.25)



- a. Food, Cereal, Maize
- b. Vehicles, Animals, Buses
- c. Books, Kitchens, Cars
- d. Animals, Polar Bears, Ice

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Numerical Aptitude

51. A can do a work in $7\frac{1}{2}$ days, whereas B can do the same work in $10\frac{1}{2}$ days. (+1, -0.25)
If they worked together, then the same work would be completed in:
- a. $4\frac{3}{8}$ days
 - b. $4\frac{1}{8}$ days
 - c. 4 days
 - d. $4\frac{1}{2}$ days
-
52. Vineeth is younger than Vinoth by 8 years. If 4 years ago, their ages were (+1, -0.25)
in the ratio of 1 : 2, then the present age of Vinoth is:
- a. 22 years
 - b. 20 years
 - c. 28 years
 - d. 25 years
-
53. A reduction of $12\frac{1}{2}$ % in the price of an item enables a person to buy 2.5 kg (+1, -0.25)
more for Rs. 280. The reduced price of the item per kg is:
- a. Rs. 15
 - b. Rs. 13
 - c. Rs. 14
 - d. Rs. 12

54. A and B can do a work in 12 days and 18 days, respectively. They worked together for 4 days, after which B was replaced by C and the remaining work was completed by A and C in the next 4 days. In how many days will C alone complete the same work? (+1, -0.25)

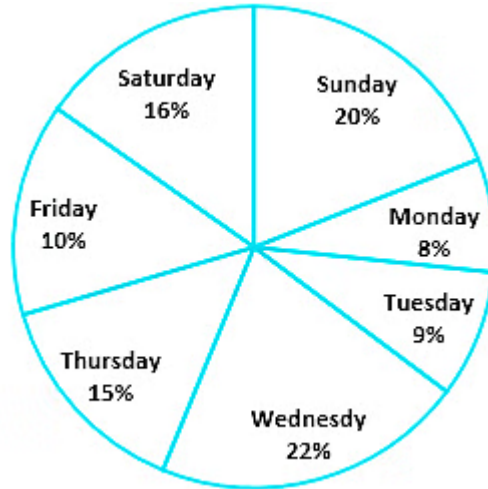
- a. 30
- b. 42
- c. 32
- d. 36

55. The curved surface area of a cone is $\frac{3432}{7}$ cm² and its radius is 12 cm. What is the radius of a sphere whose volume is 1.2 times the volume of the cone? (Take $\pi = \frac{22}{7}$) (+1, -0.25)

- a. 6 cm
- b. 4 cm
- c. 8 cm
- d. 5 cm

56. Study the given pie chart and answer the question that follows. (+1, -0.25)

The given chart represents the percentage-wise distribution of the total number of vanilla cakes and chocolate cakes sold on each day of the week. The total number of cakes sold in a week = 10500.



If the ratio of vanilla cakes sold to chocolate cakes sold on Wednesday is $13 : 8$, then how many vanilla cakes are sold on that day?

- a. 1340
- b. 1450
- c. 1430
- d. 1420

57. The average of four consecutive even numbers is 27. The smallest number is: (+1, -0.25)

- a. 26
- b. 24
- c. 20
- d. 22

58. A circular wire of diameter 56 cm is folded in the shape of a rectangle (+1, -0.25) whose sides are in the ratio of $7 : 4$. The area enclosed by the rectangle is:

(Take $\pi = \frac{22}{7}$)

- a. 1792 cm²
- b. 1842 cm²
- c. 1782 cm²
- d. 1684 cm²

59. The average monthly expenditure of a family is Rs. 12,000 for the first 4 months, Rs. 15,000 for the next 3 months, and Rs. 17,000 for the last 5 months. If the family saves Rs. 1,52,000 throughout the year, then the average monthly income of the family is: (+1, -0.25)

- a. Rs. 25,700
- b. Rs. 26,500
- c. Rs. 27,000
- d. Rs. 27,500

60. A sum of Rs. x amounts to Rs. 27,900 in 3 years and to Rs. 41,850 in 6 years at a certain rate percent per annum when the interest is compounded yearly. The value of x is: (+1, -0.25)

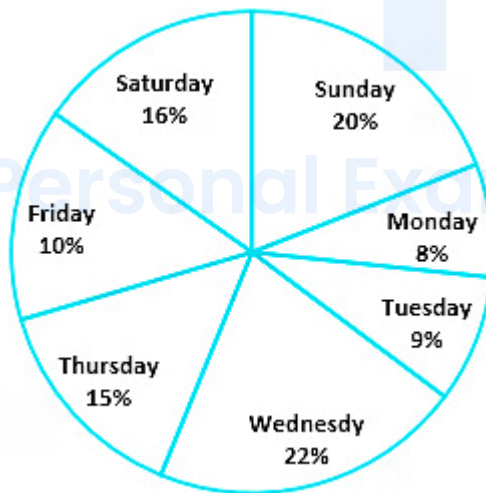
- a. 17,600
- b. 18,600
- c. 17,800
- d. 18,400

61. The average speed of train is 160% of the average speed of a car. The car covers a distance of 880 km in 16 hours. The time taken by the train to cover a distance of 484 km is: (+1, -0.25)

- a. 5 hours
- b. $7\frac{1}{2}$ hours
- c. $4\frac{1}{2}$ hours
- d. $5\frac{1}{2}$ hours

62. Study the given pie chart and answer the question that follows. (+1, -0.25)

The given chart represents the percentage-wise distribution of the total number of vanilla cakes and chocolate cakes sold on each day of the week. The total number of cakes sold in a week = 10500.



The ratio of vanilla cakes sold to chocolate cakes sold on Friday is 4 : 3. If the price of one vanilla cake is Rs.8 and that of one chocolate cake is Rs. 7, then the total amount earned by selling all vanilla cakes and chocolate cakes on Friday is:

- a. Rs. 7,950

- b. Rs. 7,500
- c. Rs. 8,000
- d. Rs. 6,950

63. $\frac{11}{5}$ of a number A is 22% of a number B. The number B is equal to 2.5% of a third number, C. If the value of number C is 5500, then the sum of 40% of A and 20% of B is: (+1, -0.25)

- a. 32
- b. 33
- c. 30
- d. 36

64. At what percent per annum will Rs. 12,500 amount to Rs. 14,045 in 2 years if the interest is compounded annually? (+1, -0.25)

- a. 7%
- b. 9%
- c. 6%
- d. 8%

65. The ratio of A's and B's salary is 6 : 7. If A's salary is increased by $5\frac{1}{2}$ %, then his total salary becomes Rs. 1,26,600. Find the salary of B. (+1, -0.25)

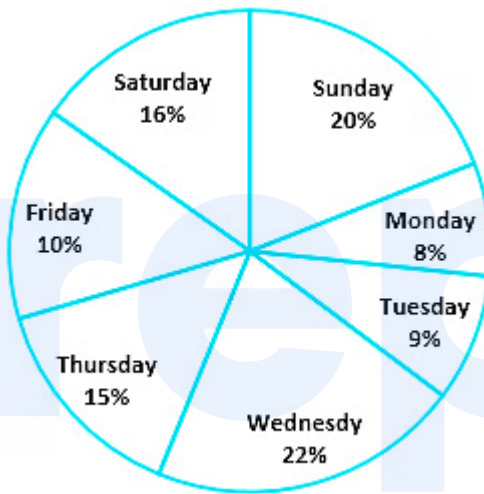
- a. Rs. 1,45,000
- b. Rs. 1,40,000

c. Rs. 1,20,000

d. Rs. 1,30,000

66. Study the given pie chart and answer the question that follows. (+1, -0.25)

The given chart represents the percentage-wise distribution of the total number of vanilla cakes and chocolate cakes sold on each day of the week. The total number of cakes sold in a week = 10500.



If the average number of vanilla cakes sold on Thursday and Sunday is 1020, and the number of chocolate cakes sold on Thursday is 245 more than the number of chocolate cakes sold on Sunday, then the number of chocolate cakes sold on Thursday is:

a. 950

b. 850

c. 840

d. 940

67. The value of $5 - 5 \div 5 \times 5 + (7 \div 7 \text{ of } 6) \times 6 - (3\frac{2}{3} \div \frac{11}{30} \text{ of } \frac{2}{3}) \div 5$ is: (+1, -0.25)

- a. -2
 - b. 0
 - c. -1
 - d. 1
-

68. The ratio of the curved surface area and total surface area of a cylinder is 4 : 7. If its volume is 4851 cm^3 , then its radius is: (+1, -0.25)

(Take $\pi = \frac{22}{7}$)

- a. 10.5 cm
 - b. 9.5 cm
 - c. 7 cm
 - d. 10 cm
-

69. A car covers a distance of 300 km with uniform speed. The time taken for the journey is one-third of the speed in km/h. The time taken to cover the distance of 300 km is: (+1, -0.25)

- a. 10 hours
 - b. 12 hours
 - c. 8 hours
 - d. 9 hours
-

70. If the side of a square is increased by 40%, then its area will be increased by: (+1, -0.25)
- a. 90%
 - b. 96%
 - c. 86%
 - d. 92%
-

71. If a certain sum amounts to Rs. 27,450 in 5 years at simple interest at the rate of $10\frac{1}{2}$ % p.a., then the sum is: (+1, -0.25)
- a. Rs. 18,000
 - b. Rs. 16,500
 - c. Rs. 16,000
 - d. Rs. 17,000
-

72. The LCM and HCF of two positive numbers are 96 and 8, respectively. If the sum of the numbers is 56, then the difference between the numbers is: (+1, -0.25)
- a. 8
 - b. 9
 - c. 12
 - d. 10
-

73. An article was bought for Rs. 14,000 and sold at $\frac{4}{7}$ of its cost price. The loss percentage is: (+1, -0.25)

- a. $42\frac{3}{7}\%$
- b. $41\frac{6}{7}\%$
- c. $42\frac{6}{7}\%$
- d. $42\frac{5}{7}\%$

74. If the ratio of the mean and median of a certain data is 4 : 5, then the ratio of its mode and mean is: (+1, -0.25)

- a. 7 : 4
- b. 7 : 5
- c. 8 : 5
- d. 6 : 5

75. A loss of $12\frac{1}{2}\%$ gets converted into a profit of $11\frac{1}{5}\%$ when the selling price is increased by Rs. 118.5. The cost price of the article is: (+1, -0.25)

- a. Rs. 500
- b. Rs. 800
- c. Rs. 600
- d. Rs. 550

General Awareness

76. Which of the following is a performing art from the state of Maharashtra? (+1, -0.25)

- a. Lavani
- b. Kalbelia
- c. Dandi Gair
- d. Kheliran

77. Which of the following household items contains sulphuric acid? (+1, -0.25)

- a. Battery
- b. Vinegar
- c. Toothpaste
- d. Butter

78. Which city was the capital of the French Colony in India? (+1, -0.25)

- a. Tuticorin
- b. Cochin
- c. Pondicherry
- d. Panjim

79. Launched in 1951, India's first five-year plan was based on which of the following economic models to focus on agriculture and irrigation to boost (+1, -0.25)

farm output?

- a. Heckscher–Ohlin Model
 - b. Cobb–Douglas Model
 - c. Harrod–Domar Model
 - d. Mundell–Fleming Model
-

80. In 2019 which Indian cueist became the first to hold the World, Asian and Indian titles simultaneously in five different years? (+1, -0.25)

- a. Sourav Kothari
 - b. Aditya Mehta
 - c. Pankaj Advani
 - d. Rupesh Shah
-

81. Which Indian actor is the author of the book 'Mrs Funnybones: She's just Like You and a Lot Like Me'? (+1, -0.25)

- a. Sonali Bendre
 - b. Madhuri Dixit
 - c. Aishwarya Rai
 - d. Twinkle Khanna
-

82. Which of the following is a mountain peak that rises above the surrounding peaks at the mountainous border of the Indian state of (+1, -0.25)

Nagaland and the Sagaing region of Myanmar?

- a. Mount Kalsubai
 - b. Mount Doddabetta
 - c. Mount Saramati
 - d. Mount Dhupgarh
-

83. Which state of India had the lowest number of districts as of September 2020? (+1, -0.25)

- a. Arunachal Pradesh
 - b. Nagaland
 - c. Goa
 - d. Sikkim
-

84. The Lucknow Pact was signed in _____. (+1, -0.25)

- a. 1930
 - b. 1916
 - c. 1920
 - d. 1922
-

85. 'Tolu Bommalata' (leather shadow puppet show) is a traditional art form from the state of: (+1, -0.25)

- a. Karnataka
 - b. Kerala
 - c. Andhra Pradesh
 - d. Tamil Nadu
-

86. Who among the following was the youngest ever Governor of an Indian state as of July 2020? (+1, -0.25)

- a. Jagdish Mukhi
 - b. Sharda Mukherjee
 - c. Margaret Alva
 - d. Swaraj Kaushal
-

87. In which year was the National Bank for Agriculture and Rural Development Bank (NABARD) established? (+1, -0.25)

- a. 1972
 - b. 1952
 - c. 1962
 - d. 1982
-

88. Which Indian diplomat was conferred the First Class Order of Zayed II award by UAE in 2019? (+1, -0.25)

- a. Navdeep Singh Suri

- b. Jawed Ashraf
 - c. Raveesh Kumar
 - d. Taranjit Singh Sandhu
-

89. Five to eight per cent solution of acetic acid in water is known as: (+1, -0.25)

- a. lime
 - b. quicklime
 - c. vinegar
 - d. alcohol
-

90. Which gland produces Cortisol often known as a 'stress hormone' in humans? (+1, -0.25)

- a. Pituitary gland
 - b. Thyroid gland
 - c. Adrenal gland
 - d. Pineal gland
-

91. Which Indian state is the source of the rivers Brahmani, Kharkai and Subarnarekha? (+1, -0.25)

- a. Uttar Pradesh
- b. Jharkhand

- c. Madhya Pradesh
 - d. Bihar
-

92. Which of the following rocks floats in water? (+1, -0.25)

- a. Slate
 - b. Obsidian
 - c. Pumice
 - d. Granite
-

93. In which Indian state is the 'Bhushi Lake' located? (+1, -0.25)

- a. Gujarat
 - b. Punjab
 - c. Rajasthan
 - d. Maharashtra
-

94. Who among the following got the 2018 Nobel Prize in Physiology or (+1, -0.25)
Medicine for launching an effective new way to attack cancer by treating
the immune system rather than the tumour?

- a. Michael W Young
- b. James P Allison
- c. Jeffrey Hall

d. Michael Rosbash

95. Who among the following was a freedom fighter, based on whose design the present Indian National Flag is designed? (+1, -0.25)

a. Pingali Venkaiah

b. Badal Gupta

c. Tanguturi Prakasam

d. Tirot Sing

96. 'Mopin', a festival to drive away evil spirits, is celebrated in the state of: (+1, -0.25)

a. Arunachal Pradesh

b. Kerala

c. Chhattisgarh

d. Rajasthan

97. 'Police and Public Order' are State subjects under the _____ Schedule of the Constitution of India. (+1, -0.25)

a. 12th

b. 7th

c. 5th

d. 9th

98. Who among the following was the first Indian swimmer to swim across the English Channel in 1958? (+1, -0.25)

- a. Brojen Das
- b. Virdhawal Khade
- c. Shamsheer Khan
- d. Mihir Sen

99. Which aspect of the financial system do the Basel Norms focus on? (+1, -0.25)

- a. Insurance
- b. Banking
- c. Share market
- d. Commodity market

100. Which Indian scientist was conferred the distinction of Chevalier de l'Ordre national de la Légion d'Honneur by the Government of France in May 2019? (+1, -0.25)

- a. Tapan Mishra
- b. AS Kiran Kumar
- c. Mylswamy Annadurai
- d. G Madhavan Nair

Answers

1. Answer: a

Explanation:

The correct answer is " Surge ".

★ Key Points

- Let's look at the meaning of the given words:
- **Surge**: a sudden powerful forward or upward movement, especially by a crowd or by a natural force such as the tide.
- **Thrive**: to prosper; be fortunate or successful.
- **Abound**: to occur or exist in great quantities or numbers.
- **Flourish**: to be in its or in one's prime; be at the height of fame, excellence, influence, etc.
- The meaning of the word ' surge ' is closest to that of the given group of words.
 - **Example** : *The crowd surged towards the stadium when their team started winning.*

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

★ Hinglish

- Let's look at the meaning of the given words:
- **Surge**: एक अचानक शक्तिशाली आगे या ऊपर की ओर गति, विशेष रूप से भीड़ द्वारा या ज्वार जैसी प्राकृतिक शक्ति द्वारा।
- **Thrive**: समृद्ध करना; भाग्यशाली हो या सफल।
- **Abound**: बड़ी मात्रा में या संख्या में होना या होना।
- **Flourish**: इसके या किसी के प्रमुख में होना; प्रसिद्धि, उत्कृष्टता, प्रभाव आदि की ऊंचाई पर हो।
- The meaning of the word ' surge ' is closest to that of the given group of words.

2. Answer: d

Explanation:

The erroneous segment is " I found the place "

★ Key Points

- In the given sentence, the speaker is talking about an action they are going to complete in the **future** .
- But the phrase **found** is in the **past tense** form of the verb and is the incorrect tense for the sentence.
- We need to use ' **will find** ' in the sentence for the future tense.

The correct sentence is: *I'm sure that I will find the place without any difficulty when I go next time .*

Hence, the correct answer is **option 4** .

3. Answer: a

Explanation:

The erroneous spelling is " **Guidence** "

★ Key Points

- Let's look at the correct spelling and meaning of the word.
- **Guidance** :advice or information aimed at resolving a problem or difficulty, especially as given by someone in authority.
 - **Example:** *The teacher's guidance was crucial to the students appearing for the board exam.*

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

★ Hinglish

- Let's look at the correct spelling and meaning of the word.

- **Guidance** : किसी समस्या या कठिनाई को हल करने के उद्देश्य से सलाह या जानकारी, विशेष रूप से अधिकार में किसी के द्वारा दी गई।

4. Answer: d

Explanation:

The correct answer is " **Scholarship** "

★ Key Points

- Let's look at the meaning of the given words.
- **Advance**:move forwards in a purposeful way.
- **Fund**:a sum of money saved or made available for a particular purpose.
- **Sponsor**:a person or organization that pays for or contributes to the costs involved in staging a sporting or artistic event in return for advertising.
- **Scholarship** :a grant or payment made to support a student's education, awarded on the basis of academic or other achievements.
- As per the meaning of the words, **scholarship** is the synonym of the given group of words.
 - **Example** :*The scholarship offered by the foreign university allowed me to pursue a doctoral degree abroad.*

Hence, the correct answer is **option 4**.

★ Hinglish

- Let's look at the meaning of the given words.
- **Advance**:उद्देश्यपूर्ण तरीके से आगे बढ़ें।
- **Fund**: किसी विशेष उद्देश्य के लिए बचाया या उपलब्ध कराया गया धन।
- **Sponsor** :एक व्यक्ति या संगठन जो विज्ञापन के बदले में एक खेल या कलात्मक आयोजन में शामिल लागतों के लिए भुगतान करता है या योगदान देता है।
- **Scholarship** :एक छात्र की शिक्षा का समर्थन करने के लिए किया गया अनुदान या भुगतान, शैक्षणिक या अन्य उपलब्धियों के आधार पर प्रदान किया जाता है।
- As per the meaning of the words, **scholarship** is the synonym of the given group of words.

5. Answer: c

Explanation:

The correct answer is " **Downplay** "

★ Key Points

- Let's look at the meaning of the given word.
- **Highlight** :an outstanding part of an event or period of time.
- Let's look at the meaning of the given options.
- **Recognise** :identify (someone or something) from having encountered them before; know again.
- **Describe** :give a detailed account in words.
- **Downplay** :make (something) appear less important than it really is.
- **Consider**:think carefully about (something), typically before making a decision.
- As per the meaning of the words, **downplay** is the antonym of **highlight** .
 - **Example** :*The captain of the cricket team downplayed the importance of the loss in the friendly match.*

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

★ Hinglish

- Let's look at the meaning of the given word.
- **Highlight**:किसी घटना या समय की अवधि का एक उत्कृष्ट हिस्सा।
- Let's look at the meaning of the given options.
- **Recognise**:(किसी या कुछ) को पहले उनका सामना करने से पहचानें; फिर से जानो।
- **Describe**:शब्दों में विस्तृत विवरण दें।
- **Downplay**:बनाओ (कुछ) वास्तव में उससे कम महत्वपूर्ण दिखाई देता है।
- **Consider**:(कुछ) ध्यान से सोचें, आमतौर पर निर्णय लेने से पहले।
- As per the meaning of the words, **downplay** is the antonym (विलोम)of **highlight** .

6. Answer: c

Explanation:

The correct sentence is " **No substitution required** "

★ Key Points

- Let's look at why the other options are incorrect.
- In option 1, the word choice 'very less' is an incorrect usage. It implies less than something or does not make sense in certain contexts. The correct usage is **very little** which implies there is a limited quantity of something.
- In option 2, the plural verb 'were' does not agree with the singular subject 'very little traffic' in the sentence. So there is no **subject-verb agreement** .
- In option 4, the usage of the **indefinite** article 'a' is incorrect in the sentence. We use an **indefinite article** such as 'an' or 'a' with a **countable noun**.

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

7. Answer: c

Explanation:

The correct answer is " **Success** "

★ Key Points

- Let's look at the meaning of the word.
- **Disaster** :An event or fact that has unfortunate consequences.
 - **Example** :*The meeting with angel investors regarding funding was a disaster.*
- Let's look at the meaning of the given options.
- **Safety** :The condition of being protected from or unlikely to cause danger, risk, or injury.
- **Downfall** :a loss of power, prosperity, or status.
- **Success** :the accomplishment of an aim or purpose.
- **Collapse** :cause (something) to fall down or give way.

- As per the meaning of the given words, **success** is the antonym of **disaster** .
 - **Example** :*The boss has thrown a party to celebrate the success of the recent project.*

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

★ Hinglish

- Let's look at the meaning of the word.
- **Disaster** : एक घटना या तथ्य जिसके दुर्भाग्यपूर्ण परिणाम होते हैं।
- Let's look at the meaning of the given options.
- **Safety** : खतरे, जोखिम या चोट से सुरक्षित होने या होने की संभावना नहीं है।
- **Downfall** : शक्ति, समृद्धि, या स्थिति का नुकसान।
- **Success** : किसी उद्देश्य या उद्देश्य की सिद्धि।
- **Collapse** : कारण (कुछ) नीचे गिरना या रास्ता देना।
- As per the meaning of the given words, **success** is the antonym of **disaster** .

8. Answer: b

Explanation:

The correct answer is " **respond** "

★ Key Points

- Let's look at the meaning of the given words.
- **Answer**: a thing that is said, written, or done as a reaction to a question, statement, or situation.
- **Respond**: (of a person) do something as a reaction to someone or something.
- **Reflect**: think deeply or carefully about something.
- **Review**: a formal assessment of something with the intention of instituting change if necessary.
- As per the meaning of the given words, **respond** is the appropriate word choice for the blank.
 - **Example** :*The selected candidates for the job were asked to respond to the mail within 48 hours after receiving it.*

The correct sentence is: *A recent survey on the subject of fear asked people to respond to a list of common phobias.*

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

★ Hinglish

- Let's look at the meaning of the given words.
- **Answer:** वह बात जो किसी प्रश्न, कथन या स्थिति की प्रतिक्रिया के रूप में कही, लिखी या की गई हो।
- **Respond:** (किसी व्यक्ति का) किसी व्यक्ति या किसी चीज की प्रतिक्रिया के रूप में कुछ करना।
- **Reflect:** किसी चीज के बारे में गहराई से या ध्यान से सोचना।
- **Review:** यदि आवश्यक हो तो परिवर्तन स्थापित करने के इरादे से किसी चीज का औपचारिक मूल्यांकन।
- As per the meaning of the given words, **respond** is the appropriate word choice for the blank.

9. Answer: b

Explanation:

The erroneous segment is " **t hat decay and become a part of the soil** "

★ Key Points

- In the given sentence, the **subject-verb agreement** is incorrect.
- The plural verb decay does not agree with the singular subject 'an environment-friendly plastic'.
- The correct verb form should be ' **decays** '.
- The verb 'become' does not agree with the subject as well. It should be ' **becomes** '.

The correct sentence is: *Investigations have been going on for a long time to produce an environment-friendly plastic that decays and becomes a part of the soil.*

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

10. Answer: b

Explanation:

The erroneous spelling is " **Indicashun** "

★ Key Points

- Let's look at the correct spelling and meaning of the word.
- **Indication** :a sign or piece of information that indicates something.
 - **Example** :*Her silence was an indication of the guilt she was feeling .*

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

★ Hinglish

- Let's look at the correct spelling and meaning of the word.
- **Indication** :एक संकेत या जानकारी का टुकड़ा जो कुछ इंगित करता है।

11. Answer: c

Explanation:

The correct answer is " **Succeed** "

★ Key Points

- Let's look at the meaning of the word.
- **Achieve** :successfully bring about or reach (a desired objective or result) by effort, skill, or courage.
- Let's look at the meaning of the given words.
- **Prevent**:keep (something) from happening.
- **Confuse**:make (someone) bewildered or perplexed.
- **Succeed**:achieve the desired aim or result.
- **Avoid**:keep away from or stop oneself from doing (something).

- As per the meaning of the words, **succeed** is the synonym for **achieve** .
 - **Example** :*He succeeded in breaking all the records for the high jump in the sports meet .*

Hence. the correct answer is **option 3** .

★ Hinglish

- Let's look at the meaning of the word.
- **Achieve** :प्रयास, कौशल या साहस द्वारा सफलतापूर्वक (एक वांछित उद्देश्य या परिणाम) प्राप्त करना या प्राप्त करना।
- Let's look at the meaning of the given words.
- **Prevent**:कुछ होने से रोकना।
- **Confuse**:किसी को हतप्रभ या भ्रमित करना।
- **Succeed**:इच्छित उद्देश्य या परिणाम प्राप्त करना।
- **Avoid**:कुछ करने से खुद को दूर रखना या रोकना।
- As per the meaning of the words, **succeed** is the synonym for **achieve** .

12. Answer: b

Explanation:

The correct answer is " **when he was summoned** "

★ Key Points

- In the given sentence, the **conjunction** 'than' is incorrect here.
- Also, the verb was will not work with **summon** .
- We use than for drawing comparisons about people or things.
- We need to use the conjunction **when** which implies ' **at that time** ' .
- It also completes the meaning of the first clause of the sentence by indicating the time when Rohit's boss summoned him.
- The verb 'was' should be used with the past participle form **summoned** in the given sentence.

The correct sentence is: *Rohit had hardly stepped into the office when he was summoned by his boss.*

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

13. Answer: b

Explanation:

The correct answer is " **overall** "

★ Key Points

- Let's look at the meaning of the given words.
- **altogether** :including everything or everyone; in total.
- **overall** :taking everything into account.
- **internal**:of or situated on the inside.
- **inside**: the inner side or surface of something.
- As per the meaning of the given words, **overall** is the appropriate word choice for the blank.
 - **Example** : *The client was impressed with the team's overall performance on the project.*

The correct sentence is : *To get the overall idea you need to read through the paragraph first.*

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

★ Hinglish

- Let's look at the meaning of the given words.
- **altogether** :सब कुछ या सभी सहित; कुल मिलाकर।
- **overall** :सब कुछ ध्यान में रखते हुए।
- **internal**:के अंदर या अंदर स्थित।
- **inside**:किसी चीज का भीतरी भाग या सतह।
- As per the meaning of the given words, **overall** is the appropriate word choice for the blank.

14. Answer: c

Explanation:

The correct answer is " **Resolute** "

★ Key Points

- Let's look at the meaning of the word.
- **Determined** :having made a firm decision and being resolved not to change it.
- Let's look at the meaning of the given words.
- **Disillusioned** :disappointed in someone or something that one discovers to be less good than one had believed.
- **Intense** :of extreme force, degree, or strength.
- **Resolute** :admirably purposeful, determined, and unwavering.
- **Inspired**:of extraordinary quality, as if arising from some external creative impulse.
- As per the meaning of the words, **resolute** is the synonym for **determined** .
 - **Example** :*The pilot was **resolute** in his decision to do an emergency landing due to a technical issue in the plane.*

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

★ Hinglish

- Let's look at the meaning of the word.
- **Determined** :एक दृढ़ निर्णय लिया है और इसे न बदलने का संकल्प लिया है।
- Let's look at the meaning of the given words.
- **Disillusioned** :किसी व्यक्ति या किसी चीज में निराश होना, जिस पर किसी ने विश्वास किया था, उससे कम अच्छा होने का पता चलता है।
- **Intense** :अत्यधिक बल, डिग्री या शक्ति का।
- **Resolute** :सराहनीय उद्देश्यपूर्ण, दृढ़ निश्चयी और अटूट।
- **Inspired**:असाधारण गुणवत्ता का, मानो किसी बाहरी रचनात्मक आवेग से उत्पन्न हो।
- As per the meaning of the words, **resolute** is the synonym for **determined** .

15. Answer: d

Explanation:

The erroneous segment is " **isn't it** "

★ Key Points

- The given sentence is an example of a tag question.
- In a tag question, a **positive affirmation** is followed by a **negative question** and vice versa.
- We use the same auxiliary verb in question that we have used in the main sentence.
- In the given sentence, we started with 'You are' in the main sentence so the tag question will be ' **aren't you?** '
 - **Example** : *You are good at singing, aren't you?*

The correct sentence is: *You are fond of instrumental music, aren't you?*

Hence, the correct answer is **option 4** .

16. Answer: d

Explanation:

The correct answer is " **Not possible at all** "

★ Key Points

- The idiom 'Out of the question' means **something too impracticable or unlikely to merit discussion**.
- We use the idiom when referring to a situation where a certain action or suggestion is not possible or too impractical to be carried out.
 - **Example** : *The warden declared that the permission for the freshers' party in the hostel was out of the question.*

Hence, the correct answer is **option 4** .

17. Answer: b

Explanation:

The correct answer is " **Pass from one person to another** "

★ Key Points

- The meaning of the idiom 'change hands' is **passed to another person in the course of a business transaction** .
- We use this idiom when referring to an object or property that has passed from one owner to another in a deal.
 - **Example** : *The quality of customer service deteriorated as the company changed hands.*

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

18. Answer: a

Explanation:

The correct answer is " **several kinds of birds** "

★ Key Points

- In the given sentence, the usage of **singular countable noun** 'kind' which follows the quantifier 'several' is incorrect.
- This sentence requires a **plural noun** with the quantifier 'several'.
- We should use the plural noun ' **kinds** ' in this sentence.

The correct sentence is : *You can find several kinds of birds in the Mysore Zoo, pelicans, flamingos, hornbills and egrets.*

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

19. Answer: a

Explanation:

The correct answer is " **told** "

★ Key Points

- In the given sentence, we can see the word being before the blank which means the action is continuing into the present.
- 'Being' is the present participle of 'be'.
- We need to use the appropriate verb form which is ' **told** ' as the sentence is in the **past continuous tense**.
- In the given sentence, being **told** implies that the story is being told in the present but about a past time.

The correct sentence is :*It is the story of a king who was fond of being toldlies .*

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

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20. Answer: d

Explanation:

The correct answer is " **ingredients** "

★ Key Points

- Let's look at the meaning of the given words.
- **requirements:**a thing that is compulsory; a necessary condition.
- **essentials:**the fundamental elements or characteristics of something.
- **materials:**the matter from which a thing is or can be made.
- **ingredients:**a component part or element of something.

- As per the meaning of the given words, **ingredients** are the appropriate word choice for the blank.
 - **Example** : *The ingredients of this soft drink include artificial sweeteners and coloring agents.*

The correct sentence is: *It is mandatory for information about the ingredients of the product to be given on the label.*

Hence, the correct answer is **option 4** .

★ Hinglish

- Let's look at the meaning of the given words.
- **requirements**: एक चीज जो अनिवार्य है; एक आवश्यक शर्त।
- **essentials**: किसी चीज के मूल तत्व या गुण।
- **materials**: वह वस्तु जिससे कोई वस्तु बनाई या बनाई जा सके।
- **ingredients**: किसी चीज का घटक भाग या तत्व।
- As per the meaning of the given words, **ingredients** are the appropriate word choice for the blank.

21. **Answer: d**

Explanation:

The correct answer is " **do** "

★ Key Points

- We will use **do** in the blank.
- We use "do" when the subject is "I, you, we or they."
- In the given sentence, we notice the subject **I** after the blank.

Hence, the correct answer is **option 4** .

The complete passage is: You must pace your work. What **(1) do** I mean? I'm glad you **(2) asked** that question. We pace our work according **(3) to** the eight-hour

workday. If you (4) **have** twelve hours of work in your in-box, for example, you must (5) **compress** that work into the eight-hour day.

22. Answer: a

Explanation:

The correct answer is " **asked** "

★ Key Points

- In the given sentence, **asked** is the correct verb form.
- We don't generally use spoke, say, find to refer to questions.
- Questions are always **asked** by people or a person.
 - **Example** :*He asked , "Why did you not attend my wedding ceremony?"*

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

The complete passage is: You must pace your work. What (1) **do** I mean? I'm glad you (2) **asked** that question. We pace our work according (3) **to** the eight-hour workday. If you (4) **have** twelve hours of work in your in-box, for example, you must (5) **compress** that work into the eight-hour day.

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23. Answer: a

Explanation:

The correct answer is " **to** "

★ Key Points

- In the given sentence, we need to use the preposition ' **to** '.
- In the given sentence, we notice the word ' **according** ' before the blank.
- This is an example of a **compound preposition** (present participle + preposition) .

- "According" is the present participle followed by the preposition to.
- The grammatically correct phrase is 'according to' in the sentence.

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

The complete passage is: You must pace your work. What **(1) do** I mean? I'm glad you **(2) asked** that question. We pace our work according **(3) to** the eight-hour workday. If you **(4) have** twelve hours of work in your in-box, for example, you must **(5) compress** that work into the eight-hour day.

24. Answer: c

Explanation:

The correct answer is " **have** "

★ Key Points

- In the given sentence, we need to use ' **have** ' in the sentence.
- Have is used with the **pronouns** I, you, we, and they.
- Have is always used to indicate the **present tense** in a sentence.
- In the given sentence, we notice the pronoun **you** is mentioned before the blank so we will use ' **have** ' to fill the blank.

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

The complete passage is: You must pace your work. What **(1) do** I mean? I'm glad you **(2) asked** that question. We pace our work according **(3) to** the eight-hour workday. If you **(4) have** twelve hours of work in your in-box, for example, you must **(5) compress** that work into the eight-hour day.

25. Answer: a

Explanation:

The correct answer is " **compress** "

★ Key Points

- Let's look at the meaning of the given words.
- **Compress**: express in a shorter form; abridge.
- **Stretch**: extend or spread over an area or period of time.
- **Increase**: a rise in the size, amount, or degree of something.
- **Expand**: become or make larger or more extensive.
- As per the meaning of the given words, **compress** is the appropriate word choice for the blank.

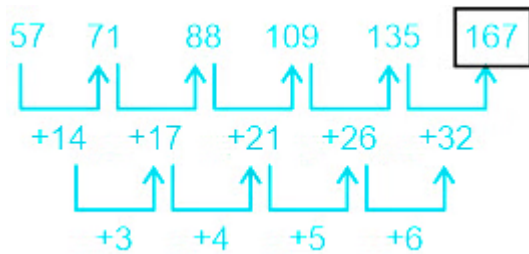
Hence, the correct answer is **option 1** .

The complete passage is: You must pace your work. What **(1) do** I mean? I'm glad you **(2) asked** that question. We pace our work according **(3) to** the eight-hour workday. If you **(4) have** twelve hours of work in your in-box, for example, you must **(5) compress** that work into the eight-hour day.

26. **Answer: a**

Explanation:

The logic followed here is :



Hence, the correct answer is "167".

27. **Answer: d**

Explanation:

The mirror image of the given figure is given below:



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

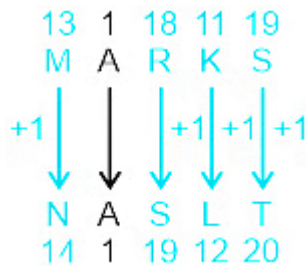
28. Answer: b

Explanation:

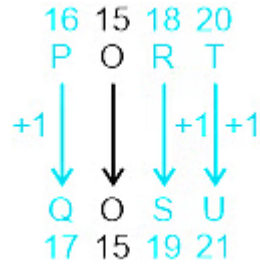
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:

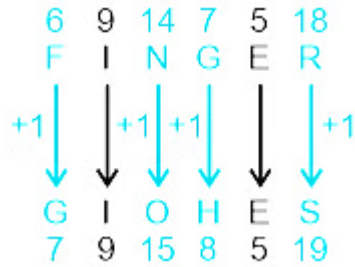
Consonants coded as the next letter and vowels remain the same vowels.



Similarly,



Therefore,











Hence, the correct answer is "GIOHES".

29. Answer: b

Explanation:

The question figure is embedded in option 2 as shown:



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

Hence, the correct answer is " option (2) ".

30. Answer: a

Explanation:

BODMAS RULE:

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

Given equation is $81 + 45 \div 3 - 18 \times 9 = 32$

Option (1):

By interchanging **3 and 9** in the given equation

Interchanged equation is : $81 + \underline{45 \div 9} - 18 \times 3 = 32$

$$\Rightarrow 81 + 5 - \underline{18 \times 3} = 32$$

$$\Rightarrow \underline{81 + 5} - 54 = 32$$

$$\Rightarrow 86 - 54 = 32$$

$$\Rightarrow \underline{32 = 32}$$

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

Option (2):

By interchanging **45 and 18** in the given equation

Interchanged equation is : $81 + \underline{18 \div 3} - 45 \times 9 = 32$

$$\Rightarrow 81 + 6 - \underline{45 \times 9} = 32$$

$$\Rightarrow \underline{81 + 6} - 405 = 32$$

$$\Rightarrow 87 - 405 = 32$$

$$\Rightarrow \underline{-318 \neq 32}$$

⇒ LHS ≠ RHS

Option (3):

By interchanging **81 and 18** in the given equation

Interchanged equation is : $18 + \underline{45 \div 3} - 81 \times 9 = 32$

⇒ $18 + 15 - \underline{81 \times 9} = 32$

⇒ $\underline{18 + 15} - 729 = 32$

⇒ $33 - 729 = 32$

⇒ $\underline{-696} \neq 32$

⇒ LHS ≠ RHS

Option (4):

By interchanging **45 and 9** in the given equation

Interchanged equation is : $81 + \underline{9 \div 3} - 18 \times 45 = 32$

⇒ $81 + 3 - \underline{18 \times 45} = 32$

⇒ $\underline{81 + 3} - 810 = 32$

⇒ $84 - 810 = 32$

⇒ $\underline{-726} \neq 32$

⇒ LHS ≠ RHS

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

31. Answer: b

Explanation:

The pattern for the code is as follows:



Similarly,



Hence, the correct answer is "XETROC".

32. Answer: c

Explanation:

Logic: (First number)² + 4 = Second Number

In 7 : 53 →

$$\rightarrow (7^2) = 49 = 49 + 4 = 53 = 7 : 53$$

Similarly,

In 9 : ?

$$\rightarrow (9^2) = 81 = 81 + 4 = 85 = 9 : 85$$

Hence, the correct answer is "85".

33. Answer: c

Explanation:

Pattern are followed in the given figure below:

Hence, the correct answer is "Option (3)".

34. Answer: d

Explanation:

BODMAS RULE :

On checking each option one by one.

1) **Given:** + and ×

After interchanging sign we get: $4 \times 5 - 16 + 4 \div 2 = 1$

$$\rightarrow 4 \times 5 - 16 + 2 = 1$$

$$\rightarrow 20 - 16 + 2 = 1$$

$$\rightarrow 22 - 16 = 1$$

$$\rightarrow 6 \neq 1$$

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

2) **Given:** ÷ and -

After interchanging sign we get: $4 + 5 \div 16 \times 4 - 2 = 1$

$$\rightarrow 4 + 0.3125 \times 4 - 2 = 1$$

$$\rightarrow 4 + 1.25 - 2 = 1$$

$$\rightarrow 5.25 - 2 = 1$$

$$\rightarrow 3.25 \neq 1$$

→ LHS ≠ RHS

3) Given: + and -

After interchanging sign we get: $4 - 5 + 16 \times 4 \div 2 = 1$

→ $4 - 5 + 16 \times 2 = 1$

→ $4 - 5 + 32 = 1$

→ $36 - 5 = 1$

→ $31 \neq 1$

→ LHS ≠ RHS

4) Given: ÷ and ×

After interchanging sign we get: $4 + 5 - 16 \div 4 \times 2 = 1$

→ $4 + 5 - 4 \times 2 = 1$

→ $4 + 5 - 8 = 1$

→ $9 - 8 = 1$

→ $1 = 1$

→ LHS = RHS

Hence, the correct answer is "÷ and ×".

35. Answer: b

Explanation:

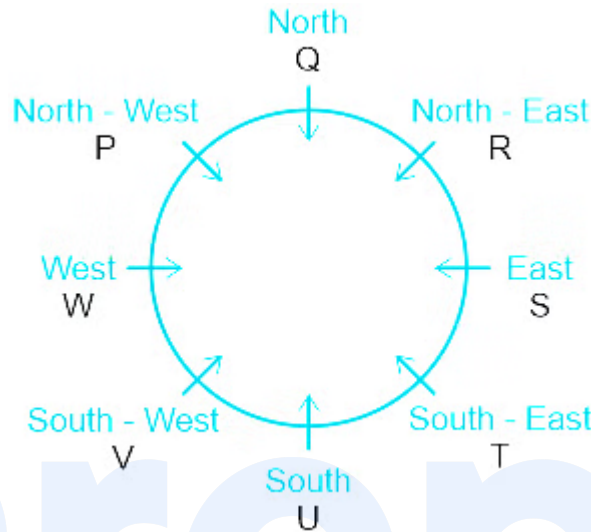
Eight Friends: P, Q, R, S, T, U, V and W

1) Sitting Clockwise in the same sequence.

2) All are facing the towards center of table.

3) U is sitting in the South.

(According to this information, we have to put P in North-west direction)



From above sitting arrangement, R is sitting in North-east direction.

Hence, the correct answer is "R".

36. Answer: c

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Explanation:

Table shows the positional value of alphabets.

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

Logic: Sum of positional value of letters will be written in reverse order

F	6
L	12
O	15
O	15
D	4
Total	52 This may be written as '25'

H	8
I	9
N	14
T	20
Total	51 This may be written as '15'

Similarly,

F	6
A	1
S	19
T	20
Total	46 This may be written as '64'

Hence, the correct answer is "64".

37. Answer: d

Explanation:

The logic followed here is:

- **Books** is carried in **School Bag** .

Similarly,

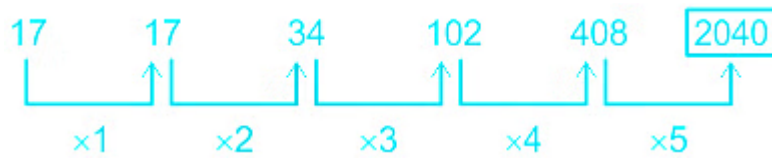
- **Gas stove** is used in **Kitchen**.

Hence, the correct answer is "Kitchen".

38. Answer: b

Explanation:

The logic followed here is:

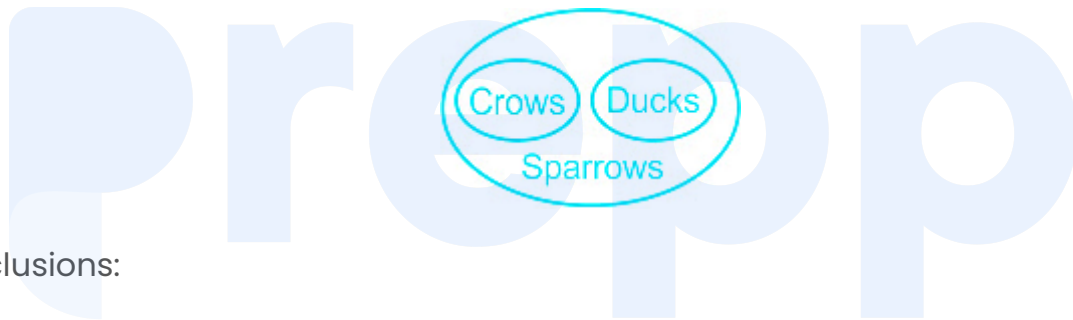


Hence, the correct answer is "2040".

39. Answer: b

Explanation:

Least Possible Venn Diagram:



Conclusions:

I. No sparrow is a crow → Doesn't **Follows** (Because all crows are sparrows than no sparrow is a crow can not be possible)

II. No crow is a duck → Doesn't **Follows** (It is possible but not definite because there is no relation between crows and ducks)

III. Some crows are ducks → Doesn't **Follows**(It is possible but not definite)

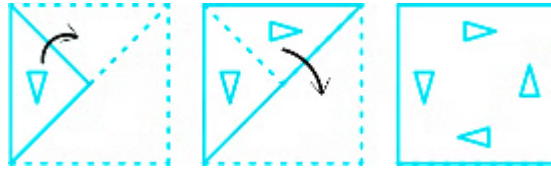
Both (II) and (III) are complimentary pair.

Hence, "either (II) or (III) follows".

40. Answer: c

Explanation:

The image obtained when the paper is unfolded is as shown below :

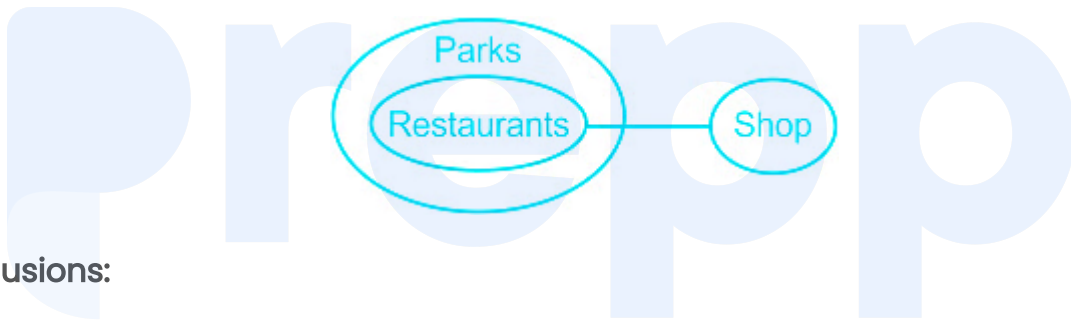


Hence, the correct answer is "option (3)."

41. Answer: a

Explanation:

The least possible Venn diagram will be as follows:



Conclusions:

- I. Some parks are restaurants → **follows** (As All restaurants are parks . So, some parks are restaurants is definitely true)
- II. No restaurant is a shop → **follows** (As no shop is a restaurant, then we can say no restaurant is a shop)

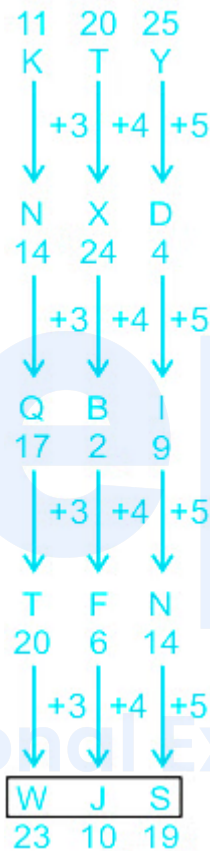
Hence, **both conclusions I and II follow.**

42. 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:



Hence the correct answer is "WJS".

43. Answer: a

Explanation:

The logic followed here is:

- Kathmandu is the capital of Nepal

Similarly,

- Thimphu is the capital of Bhutan.

Hence, the correct answer is "Bhutan".

★ Additional Information

COUNTRY	CAPITAL
Sri Lanka	Colombo
China	Beijing
Maldives	Male

44. Answer: b

Explanation: Your Personal Exams Guide

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:

The word is arranged according to the reverse alphabetical order.

NORWAY → YWRONA (Decreasing order)

Similarly,

PORTUGAL → UTRPOLGA (Decreasing order)

Hence, the correct answer is "UTRPO LGA".

45. Answer: b

Explanation:

Five persons are Dipti, Harsha, Vinita, Mrunal and Sindhu.

1) Vinita is the first person standing in the queue

Vinita



2) Vinita is just before Mrunal.

Vinita Mrunal



3) Dipti is standing just behind Harsha. So, there have two possibilities.

Case 1:

Vinita Mrunal Harsha Dipti



Case 2:

Vinita Mrunal Harsha Dipti



4) Sindhu is just after Dipti.

So, Case 2 gets eliminated.



Hence, **Sindhu** is the last person in the queue.

46. Answer: a

Explanation:

Given: $G > T, H = B, T > H, M = T$ and $B > K$

After combine a equation: $G > T = M > H = B > K$

Checking each option one by one.

1) $K < H \rightarrow \text{True} \rightarrow [G > T = M > H = B > K]$

In this equation, **H** is equal to **B**, and **B** is greater than **K**. It means **H** is also greater than **K**.

2) $G < M \rightarrow \text{False} \rightarrow [G > T = M > H = B > K]$

In this equation, **G** is greater than **T**, and **T** is equal to **M**. It means **M** is not greater than **G**.

3) $G = T \rightarrow \text{False} \rightarrow [G > T = M > H = B > K]$

In this equation, Clearly mentioned **G** is greater than **T**. It means **G** never be equal to **T**.

4) $B > T \rightarrow \text{False} \rightarrow [G > T = M > H = B > K]$

In this equation, **B** is equal to **H**, and **H** is smaller than **M** from this **B** never be greater than **T**.

Hence, the correct answer is "**K < H**".

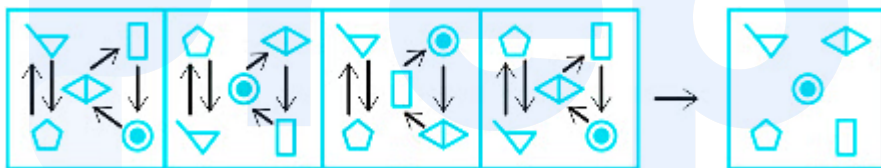
47. Answer: b

Explanation:

The logic followed here is:

- 1) Bottom left corner shape is moved up and down in each step.
- 2) Upper left corner shape is moved down and up in each step.
- 3) Middle shape is moved in right top corner in each step.
- 4) Right bottom shape is moved center in each step.
- 5) Upper right corner shape is moved right bottom in each step.

Solution figure after follow these steps:



Hence, the correct answer is "Option 2".

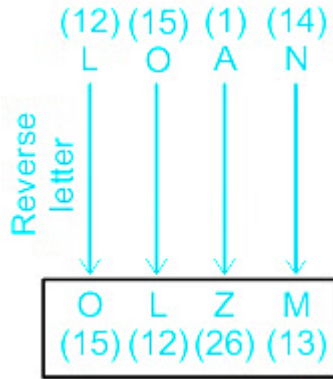
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48. Answer: a

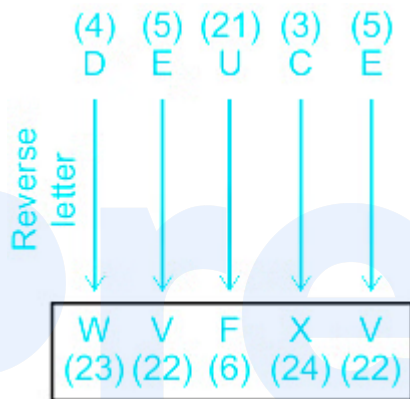
Explanation:

Logic: We have written a reverse value of given word.

Given:



Similarly,



Hence, the correct answer is "232262422".

49. Answer: b

Explanation:

Logic: (First Number)² - (Second Number)³ = Third Number

In first row:

$$\rightarrow (15^2) - (4^3) = 225 - 64 = 161$$

In second row:

$$\rightarrow (12^2) - (3^3) = 144 - 27 = 117$$

Similarly,

In third row:

$$\rightarrow (16^2) - (5^3) = 256 - 125 = 131$$

Hence, the correct answer is "131".

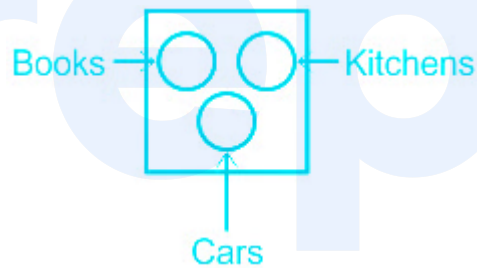
50. Answer: c

Explanation:

Venn diagram according to the given information:

Books, Kitchens and Cars. These three have no relationship between each other.

So, they are represented by three disjoint circles.



Hence, the correct answer is "Books, Kitchens and Cars".

51. Answer: a

Explanation:

Given

Work done by A in 7.5 days

Work done by B in 10.5 days

Concept

First find the work done by A and B in one day, then add their one day work.

Calculation

Work done by A in 7.5 days

Work done by A in 1 day = $1/7.5$

Work done by B in 10.5 days

Work done by B in 1 day = $1/10.5$

Work done by A and B together in 1 day = $(1/7.5) + (1/10.5)$

$\Rightarrow (10/75) + (10/105)$

$\Rightarrow (70 + 50)/525$

$\Rightarrow 120/525$

$\Rightarrow 8/35$

Work done by A and B in $35/8$ days

$\Rightarrow 4\frac{3}{8}$ days

\therefore Work done by A and B in $4\frac{3}{8}$ days.

52. Answer: b

Explanation:

Given

Vineeth is 8 years younger than Vinoth

Ratio of ages of 4 years ago vineeth and vinoth = 1 : 2

Calculation

Let the Vinoth present age is x years

Vineeth present age is $(x - 8)$ years

Vinoth age, four years ago = $(x - 4)$ years

Vineeth age, four years ago = $(x - 8 - 4)$ years

$\Rightarrow (x - 12)$ years

$\Rightarrow (x - 4)/(x - 12) = (2/1)$

$\Rightarrow x - 4 = 2(x - 12)$

$\Rightarrow x - 4 = 2x - 24$

$\Rightarrow x - 2x = -24 + 4$

$\Rightarrow -x = -20$

$\Rightarrow x = 20$

\therefore The present age of Vinoth age is 20 years .

53. Answer: c

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Explanation:

Given

Percentage of price reduced = 12.5%

Quantity of buying increased = 2.5 kg

Concept

Price per Kg = Total amount/Quantity(in Kg)

Calculation

Let the quantity purchased for Rs 280 is x kg

$$\text{Price} = 280/x$$

$$\text{New price} = [(280/x) - 12.5\% \text{ of } (280/x)]$$

$$\text{New quantity purchased at reduced price} = (x + 2.5)\text{kg}$$

According to question

$$[(280/x) - 12.5\% \text{ of } (280/x)] \times (x + 2.5) = 280$$

$$\Rightarrow [(280/x) - (35/x)] \times (x + 2.5) = 280$$

$$\Rightarrow [(280 - 35)/x] \times (x + 2.5) = 280$$

$$\Rightarrow (245/x) \times (x + 2.5) = 280$$

$$\Rightarrow (245x + 612.5)/x = 280$$

$$\Rightarrow 245x + 612.5 = 280x$$

$$\Rightarrow 612.5 = 280x - 245x$$

$$\Rightarrow 612.5 = 35x$$

$$\Rightarrow 612.5/35 = x$$

$$\Rightarrow 17.5 = x$$

$$\text{New price} = [(280/x) - 12.5\% \text{ of } (280/x)]$$

$$\Rightarrow [(280/17.5) - 12.5\% \text{ of } (280/17.5)]$$

$$\Rightarrow 16 - 12.5\% \text{ of } 16$$

$$\Rightarrow 16 - 2$$

$$\Rightarrow 14$$

\therefore Reduced price is Rs.14 per kg.

54. Answer: d

Explanation:

Given

Work done by A alone = 12 days

Work done by B alone = 18 days

Concept

Find the total work by taking the LCM of the days taken by A and B to complete the work.

Formula used

Work done = Efficiency \times Time

Calculation

Total work(LCM of 12 and 18) = 36 units

Work done by A in one day = $36/12$

\Rightarrow 3 units

Work done by B in one day = $36/18$

\Rightarrow 2 units

Work done by A and B in one day = $3 + 2$

\Rightarrow 5 units

Work done by A and B in 4 days = 4×5

\Rightarrow 20 units

Work left after 4 days = $36 - 20$

⇒ 16 units

let work done by C in one day is x units

Remaining work done by A and C in 4 days = 16 units

$$4 \times 3 + 4 \times x = 16$$

$$\Rightarrow 12 + 4x = 16$$

$$\Rightarrow 4x = 16 - 12$$

$$\Rightarrow 4x = 4$$

$$\Rightarrow x = 1 \text{ unit}$$

work = efficiency × time

$$36 = 1 \times \text{time}$$

$$36 \text{ days} = \text{Time}$$

∴ Work is complete by C alone in 36 days.

55. Answer: a

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Explanation:

Given

Curved surface area of a cone = $\frac{3432}{7}$ cm² and its radius is 12 cm

Formula used

Curved surface area of cone = $\pi r l$

where r and l are radius and slant height of the cone respectively

Volume of cone = $(1/3)\pi r^2 h$

$$\text{Volume of sphere} = (4/3)\pi r^2 h$$

Calculation

$$\pi r l = (3432/7)$$

$$\Rightarrow (22/7) \times 12 \times l = (3432/7)$$

$$\Rightarrow l = (3432)/(22 \times 12)$$

$$\Rightarrow l = 13$$

$$h = \sqrt{l^2 - r^2}$$

$$\Rightarrow h = \sqrt{(13)^2 - (12)^2}$$

$$\Rightarrow h = \sqrt{169 - 144}$$

$$\Rightarrow h = \sqrt{25}$$

$$\Rightarrow h = 5$$

$$\text{Volume of sphere} = 1.2 \times \text{volume of cone}$$

$$\Rightarrow (4/3) \times \pi \times r^3 = 1.2 \times (1/3) \times \pi \times 12^2 \times h$$

$$\Rightarrow 4r^3 = 1.2 \times 12 \times 12 \times 5$$

$$\Rightarrow r^3 = (1.2 \times 12 \times 12 \times 5)/4$$

$$\Rightarrow r^3 = 216$$

$$\Rightarrow r = 6 \text{ cm}$$

\therefore Radius of sphere is 6 cm

56. Answer: c

Explanation:

DAYS	Percentage of cakes sold	Number of cakes sold
Sunday	20% of 10,500	2100
Monday	8% of 10,500	840
Tuesday	9% of 10,500	945
Wednesday	22% of 10,500	2310
Thursday	15% of 10,500	1575
Friday	10% of 10,500	1050
Saturday	16% of 10,500	1680

Ratio of vanilla cakes to chocolates cakes sold on Wednesday = 13 : 8

let the number of vanilla cakes and chocolates cakes sold on wednesday is $13x$ and $8x$

$$13x + 8x = 2310$$

$$\Rightarrow 21x = 2310$$

$$\Rightarrow x = 2310/21$$

$$\Rightarrow x = 110$$

Vanilla cakes sold on Wednesday = 13×110

$$\Rightarrow 1430$$

\therefore Vanilla cakes sold on Wednesday is 1430

57. Answer: b

Explanation:

Given

Average of four consecutive even numbers = 27

Formula used

Average = sum of all observation/Number of observation

Calculation

let the even consecutive numbers are $(x + 1)$, $(x + 3)$, $(x + 5)$ and $(x + 7)$

$$[(x+1) + (x + 3) + (x + 5) + (x + 7)]/4 = 27$$

$$\Rightarrow (4x + 16)/4 = 27$$

$$\Rightarrow 4x + 16 = 27 \times 4$$

$$\Rightarrow 4x + 16 = 108$$

$$\Rightarrow 4x = 108 - 16$$

$$\Rightarrow 4x = 92$$

$$\Rightarrow x = 23$$

Smallest number = $23 + 1$

$$\Rightarrow 24$$

\therefore The smallest number is 24.

58. Answer: a

Explanation:

Given

Diameter of wire = 56 cm

Ratio of rectangle sides = 7 : 4

Formula used

Perimeter of rectangle = $2(\text{length} + \text{breadth})$

Circumference of circle = $2\pi r$

Area of rectangle = $\text{length} \times \text{breadth}$

Calculation

let the sides of rectangle are $7x$ and $4x$

Circumference of circle = Perimeter of rectangle

$$2\pi r = 2(7x + 4x)$$

$$\Rightarrow 2 \times \left(\frac{22}{7}\right) \times 28 = 2(11x)$$

$$\Rightarrow 2 \times 22 \times 4 = 22x$$

$$\Rightarrow x = 8$$

$$\text{Area of rectangle} = 7(8) \times 4(8)$$

$$\Rightarrow 56 \times 32$$

$$\Rightarrow 1792 \text{ cm}^2$$

\therefore Area of rectangle is 1792 cm^2

59. Answer: d

Explanation:

Given

Average monthly expenditure of a family for 4 months = Rs. 12,000

Average monthly expenditure of a family for 3 months = Rs. 15,000

Average monthly expenditure of a family for 5 months = Rs. 17,000

family saves Rs. 1,52,000

Formula

Average = Sum of observation/Number of observation

Calculation

Sum of First 4 month expenditure = 12000×4

⇒ 48,000

sum of next three months expenditure = $15,000 \times 3$

⇒ 45,000

sum of next 5 months expenditure = $17,000 \times 5$

⇒ 85,000

Total income = saving + expenditure

Let total income is Rs.x

$x = 152000 + 48000 + 45000 + 85000$

⇒ $x = 3,30,000$

Average monthly income = $3,30,000/12$

⇒ 27,500

∴ Average monthly income is Rs.27,500

60. Answer: b

Explanation:

Given

Principles = x

Amount = 27,900

Formula used

Amount = Principal(1 + Rate%)^t

where t represents time respectively

Calculation

$$27,900 = x(1 + r\%)^3$$

$$\Rightarrow 27,900/x = (1 + r\%)^3 \quad \text{----- (1)}$$

$$41,850 = x(1 + r\%)^6$$

$$\Rightarrow 41,850/x = [(1 + r\%)^3]^2 \quad \text{(from 1)}$$

$$41,850/x = (27900/x)^2$$

$$\Rightarrow (41,850/x) = (27900 \times 27900)/(x \times x)$$

$$\Rightarrow 41850 = (27900 \times 27900)/x$$

$$\Rightarrow x = (27,900 \times 27,900)/(41850)$$

$$\Rightarrow x = 18,600$$

∴ The value of x is Rs.18,600

61. Answer: d

Explanation:

Given

Average speed of train = 160% of the average speed of a car

Formula used

Speed = Distance/Time

Calculation

Let the average speed of car is x km/h

Average speed of train = 160% of x

$\Rightarrow 160x/100$

Speed of car = $880/16$

$x = 55$ km/h

Average speed of train = $(160 \times 55)/100$

$\Rightarrow 88$ km/h

Time taken by train = $484/88$

$\Rightarrow 121/22$

$\Rightarrow 5\frac{1}{2}$ hours

\therefore The time taken by the train to cover a distance of 484 km is $5\frac{1}{2}$ hours.

62. Answer: a

Explanation:

DAYS	Percentage of cakes sold	Number of cakes sold
Sunday	20% of 10,500	2100
Monday	8% of 10,500	840
Tuesday	9% of 10,500	945
Wednesday	22% of 10,500	2310
Thursday	15% of 10,500	1575
Friday	10% of 10,500	1050
Saturday	16% of 10,500	1680

Ratio of vanilla cake and chocolate cake sold on Friday = 4 : 3

$$4x + 3x = 1050$$

$$\Rightarrow 7x = 1050$$

$$\Rightarrow x = 150$$

Number of vanilla cake sold = 4×150

$$\Rightarrow 600$$

Number of chocolate cake sold = 3×150

$$\Rightarrow 450$$

Amount earned on cake sold = $600 \times 8 + 450 \times 7$

$$\Rightarrow 4800 + 3150$$

$$\Rightarrow 7950$$

\therefore The total amount earned by selling all vanilla cakes and chocolate cakes on Friday is Rs.7950

63. Answer: b

Explanation:

Given

$$C = 5500$$

$$B = 2.5\% \text{ of } C$$

$$\frac{11}{5} \text{ of a number } A = 22\% \text{ of a number } B$$

Calculation

$$B = 2.5\% \text{ of } 5500$$

$$\Rightarrow 137.5$$

$$\left(\frac{11}{5}\right) \times A = (22\% \text{ of } 137.5)$$

$$\Rightarrow 11A/5 = 302.5$$

$$\Rightarrow A = (302.5 \times 5)/11$$

$$\Rightarrow A = 13.75$$

$$40\% \text{ of } A = (40/100) \times 13.75$$

$$\Rightarrow 5.5$$

$$20\% \text{ of } B = (20/100) \times 137.5$$

$$\Rightarrow 27.5$$

$$(40\% \text{ of } A + 20\% \text{ of } B) = 5.5 + 27.5$$

$$\Rightarrow 33$$

\therefore The sum of 40% of A and 20% of B is 33

64. Answer: c

Explanation:

Given

Principal = Rs.12,500

Amount = RS.14,045

Time = 2 years

Formula used

$$\text{Amount} = \text{Principal}(1 + r\%)^t$$

Calculation

$$14,045 = 12,500(1 + r\%)^2$$

$$\Rightarrow (14045/12500) = (1 + r\%)^2$$

$$\Rightarrow 2809/2500 = (1 + r\%)^2$$

$$\Rightarrow \sqrt{2809/2500} = (1 + r\%)$$

$$\Rightarrow (53/50) - 1 = r\%$$

$$\Rightarrow (53 - 50)/50 = r\%$$

$$\Rightarrow 3/50 = r/100$$

$$\Rightarrow (3 \times 100)/50 = r$$

$$\Rightarrow 6\% = r$$

∴ Rate of interest is 6%.

65. Answer: b

Explanation:

Given

Ratio of A's and B's salary = 6 : 7

A's salary increased by $5\frac{1}{2}\%$

Calculation

Let A's salary = $6x$ and B's salary = $7x$

A's salary increased by 11.5% = $6x \times (11/2)\%$

$$\Rightarrow 3x \times (11/100)$$

$$\Rightarrow 3x \times 0.11$$

$$\Rightarrow 0.33x$$

According to question

$$6x + 0.33x = 126600$$

$$\Rightarrow 6.33x = 126600$$

$$\Rightarrow x = 20,000$$

$$\text{B's salary} = 7 \times 20,000$$

$$\Rightarrow \text{Rs. } 1,40,000$$

\therefore B's salary is RS.1,40,000

66. Answer: d

Explanation:

DAYS	Percentage of cakes sold	Number of cakes sold
Sunday	20% of 10,500	2100
Monday	8% of 10,500	840
Tuesday	9% of 10,500	945
Wednesday	22% of 10,500	2310
Thursday	15% of 10,500	1575
Friday	10% of 10,500	1050
Saturday	16% of 10,500	1680

Number of vanilla cakes sold on Thursday and Sunday = 1020×2

⇒ 2040

Let the number of chocolates cakes sold on Sunday = x

Number of chocolates cakes sold on Thursday = $x + 245$

According to question

$$2040 + x + x + 245 = 1575 + 2100$$

$$\Rightarrow 2285 + 2x = 3675$$

$$\Rightarrow 2x = 3675 - 2285$$

$$\Rightarrow 2x = 1390$$

$$\Rightarrow x = 695$$

Number of chocolates cakes sold on Thursday = $x + 245$

$$\Rightarrow 695 + 245$$

⇒ 940

∴ The number of chocolate cakes sold on Thursday is 940

67. Answer: a

Explanation:

Given

$$5 - 5 \div 5 \times 5 + (7 \div 7 \text{ of } 6) \times 6 - (3\frac{2}{3} \div \frac{11}{30} \text{ of } \frac{2}{3}) \div 5$$

Concept

BODMAS

B	Bracket, [,{,(
O	'OF'
D	Division, ÷
M	Multiply, ×
A	Addition, +
S	Subtraction, -

Calculation

$$5 - 5 \times \frac{1}{5} \times 5 + (7 \div 7 \times 6) \times 6 - \left(\frac{11}{3} \div \frac{11}{30} \times \frac{2}{3} \right) \div 5$$

$$\Rightarrow 5 - 5 + (7 \div 42) \times 6 - \left(\frac{11}{3} \div \frac{11}{45} \right) \times \left(\frac{1}{5} \right)$$

$$\Rightarrow 0 + \left(\frac{1}{6} \right) \times 6 - \left(\frac{11}{3} \times \frac{45}{11} \right) \times \left(\frac{1}{5} \right)$$

$$\Rightarrow 0 + 1 - 15 \times \frac{1}{5}$$

$$\Rightarrow 1 - 3$$

$$\Rightarrow -2$$

$$\therefore 5 - 5 \div 5 \times 5 + (7 \div 7 \text{ of } 6) \times 6 - (3\frac{2}{3} \div \frac{11}{30} \text{ of } \frac{2}{3}) \div 5 \text{ is } -2$$

68. Answer: a

Explanation:

Given

ratio of the curved surface area and total surface area of a cylinder is 4 : 7.

$$\text{Volume of cylinder} = 4851 \text{ c m}^3$$

Formula used

$$\text{Curved surface area of cylinder} = 2\pi rh$$

$$\text{Total surface area of cylinder} = 2\pi rh + 2\pi r^2$$

Calculation

$$2\pi rh / (2\pi rh + 2\pi r^2) = 4/7$$

$$\Rightarrow 2\pi rh / [2\pi r(h + r)] = 4/7$$

$$\Rightarrow h / (h + r) = 4/7$$

$$\Rightarrow 7h = 4h + 4r$$

$$\Rightarrow 7h - 4h = 4r$$

$$\Rightarrow 3h = 4r$$

$$\Rightarrow 3h/4 = r$$

$$\pi r^2 h = 4851$$

$$(22/7) \times (3h/4)^2 \times h = 4851$$

$$\Rightarrow (22/7) \times [(9h^2)/16] \times h = 4851$$

$$\Rightarrow (22 \times 9 \times h^3)/(7 \times 16) = 4851$$

$$\Rightarrow h^3 = (4851 \times 7 \times 16)/(22 \times 9)$$

$$\Rightarrow h^3 = (1617 \times 16 \times 7)/(22 \times 3)$$

$$\Rightarrow h^3 = 2744$$

$$\Rightarrow h = 14 \text{ cm}$$

$$\text{radius} = (3 \times 14)/4$$

$$\Rightarrow \text{radius} = 3 \times 3.5$$

$$\Rightarrow \text{radius} = 10.5 \text{ cm}$$

\therefore The radius of cylinder is 10.5 cm

69. Answer: a

Explanation:

Given

Distance = 300 km

Time = speed/3

Formula used

Time = Distance/Speed

Calculation

let the uniform speed is x km/h

Time = (300/x)

$$\text{Time} = x/3 \text{ hours}$$

According to question

$$(300/x) = x/3$$

$$\Rightarrow 300 \times 3 = x^2$$

$$\Rightarrow 900 = x^2$$

$$\Rightarrow 30 = x$$

Time taken to cover the distance of 300 km = $30/3$

$$\Rightarrow 10 \text{ hours}$$

\therefore Time taken to cover distance of 300 km is 10 hours.

70. **Answer: b**

Explanation:

Given

Side of square increased by 40%

Formula used

Percentage increased = $(\text{change in area}/\text{original area}) \times 100$

Calculation

let the side of square is 100 units

side increased by 40%

Original area of square = 100×100

$$\Rightarrow 10000 \text{ sq units}$$

New area of square = 140×140

$\Rightarrow 19600$

Change in area = $19600 - 10,000$

$\Rightarrow 9600$

Area increased by = $(9600/10000) \times 100$

$\Rightarrow 96\%$

\therefore Area of square increased by 96%.

71. Answer: a

Explanation:

Given

Amount = Rs.27,450

Time = 5 years

Rate = 10.5%

Formula used

Amount = Principal + (Principal \times rate \times time)/100

Calculation

$27,450 = P + (P \times 10.5 \times 5)/100$

$\Rightarrow 27,450 = (100P + 52.5P)/100$

$\Rightarrow 27,450 \times 100 = 152.5P$

$\Rightarrow (27,450 \times 100)/152.5 = P$

$$\Rightarrow 18,000 = P$$

\therefore The principal is Rs. 18,000

72. Answer: a

Explanation:

Given

Sum of two numbers = 56

LCM = 96

HCF = 8

Concept

Product of two numbers = Product of LCM and HCM

Calculation

Let the one number is x and second number is $(56 - x)$

$$x \times (56 - x) = 96 \times 8$$

$$\Rightarrow 56x - x^2 = 768$$

$$\Rightarrow -x^2 + 56x = 768$$

$$\Rightarrow -x^2 + 56x - 768 = 0$$

$$\Rightarrow x^2 - 56x + 768 = 0$$

$$\Rightarrow x^2 - 24x - 32x + 768 = 0$$

$$\Rightarrow x(x - 24) - 32(x - 24) = 0$$

$$\Rightarrow (x - 32)(x - 24) = 0$$

$$\Rightarrow x = 32 \text{ and } 24$$

$$\text{Required difference} = 32 - 24$$

$$\Rightarrow 8$$

\therefore The difference between the number is 8.

73. Answer: c

Explanation:

Given

$$\text{Cost price} = \text{Rs } 14,000$$

$$\text{Selling Price} = \left(\frac{4}{7}\right) \times \text{cost price}$$

Formula used

Loss = Cost price - selling price, when Selling price is less than cost price

Calculation

$$\text{selling price} = \left(\frac{4}{7}\right) \times 14,000$$

$$\Rightarrow 4 \times 2000$$

$$\Rightarrow \text{Rs. } 8000$$

$$\text{Loss} = 14000 - 8000$$

$$\Rightarrow 6000$$

$$\text{loss\%} = \left(\frac{6000}{14000}\right) \times 100$$

$$\Rightarrow \left(\frac{3}{7}\right) \times 100$$

$$\Rightarrow 300/7$$

$$\Rightarrow 42 \frac{6}{7} \%$$

\therefore The loss percentage is $42 \frac{6}{7} \%$

74. Answer: a

Explanation:

Given

Ratio of mean and median = 4 : 5

Formula used

$$\text{Mode} = 3 \text{ Median} - 2 \text{ Mean}$$

Calculation

let the mean is $4x$ and median is $5x$

$$\text{Mode} = 3(5x) - 2(4x)$$

$$\text{Mode} = 15x - 8x$$

$$\text{Mode} = 7x$$

Ratio of mode and mean = $7x : 4x$

$$\Rightarrow 7 : 4$$

\therefore The ratio of its mode and mean is 7 : 4

75. Answer: a

Explanation:

Given

Loss = 12.5%

Profit = 11.2%

Formula used

selling price = cost price - loss

or

selling price = cost price + profit

Calculation

Let the cost price is Rs.x

Selling price = $x - 12.5\%$ of x

$$\Rightarrow 87.5x/100$$

when profit then, Selling price = $x + 11.2\%$ of x

$$\Rightarrow 111.2x/100$$

According to question

$$87.5x/100 + 118.5 = 111.2x/100$$

$$\Rightarrow 118.5 = (111.2x/100) - (87.5x/100)$$

$$\Rightarrow 118.5 = 23.7x/100$$

$$\Rightarrow (118.5 \times 100)/23.7 = x$$

$$\Rightarrow 500 = x$$

\therefore Cost price is Rs.500 .

76. Answer: a

Explanation:

The correct answer is Lavani.

★ Key Points

- **Lavani** is a folk dance of Maharashtra .
- Women wearing ankle bells (Ghungroo) and 9-yard saree perform this dance on dholak beats.
- The performers are called ' Nauvari ' and the style of saree wearing is called Kashta .
- It is performed on the themes of heroism, love devotion, sorrow, politics, or religion.

★ Additional Information

- Other famous folk dances are:-

Folk dances	State
Rajasthan	Ghoomar, Kalbeliya and Kachchhi Ghodi
Kerela	Mudiyettu, Kaliyottam and Kolam Thullal
Karnataka	Yakshagna and Dollu Kunitha
Dandi Gair	This is found in the Marwar region and Geendad is found in the Shekhawati region.

77. Answer: a

Explanation:

The correct answer is Battery.

★ Key Points

- **Battery acid** is **sulfuric acid** that has been diluted with water to attain a 37% concentration level.
- This particular type of acid is used in sealed lead-acid batteries.
- Batteries contain acid because it's fundamental to the electrochemical reaction that takes place.
- Also referred to as battery electrolyte, battery acid is the medium that carries the electrical flow between positive and negative electrodes.
- Batteries use a combination of lead plates and an electrolyte consisting of a diluted sulphuric acid to convert electrical energy into potential chemical energy and back again.
- Although this acid allows us to have portable power in the form of SLA batteries, the actual acid can be extremely dangerous.
- It's corrosive nature literally melts any bodily tissue it comes in contact with. When it comes in contact with soil it will actually contaminate it for an extended period of time depending on the concentration of the acid.

★ Additional Information

- **Vinegar:**
 - Vinegar is a combination of acetic acid and water made by a two-step fermentation process.
 - First, yeast feed on the sugar or starch of any liquid from a plant food such as fruits, whole grains, potatoes, or rice.
 - This liquid ferments into alcohol.
 - The alcohol is then exposed to oxygen and the acetic acid bacteria *Acetobacter* to ferment again over weeks or months, forming vinegar.
 - Vinegar contains five to eight per cent solution of acetic acid in water.
 - Vinegar is an essential component of most pickling brines, where acetic acid also functions as a natural preservative.
 - Vinegar is also used to stimulate chemical reactions that take place during cooking and baking.

78. Answer: c

Explanation:

The correct answer is Pondicherry.

★ Key Points

- Pondicherry is a union territory in India,
- Pondicherry was the capital of the French colony in India.
- Pondicherry is also called 'India's Little France'.
- The French laid their supremacy on Pondicherry in the year 1673.
- French East India Company set up a trading centre at Pondicherry in 1674.
- The name Pondicherry was renamed Puducherry in 2006.

★ Important Points

- Puducherry comprises the erstwhile French colonies viz. Puducherry, Karaikal, Mahe, and Yanam.
 - The Puducherry and Karaikal regions are surrounded by Tamilnadu.
 - Mahe is surrounded by Kerala.
 - Yanam is surrounded by Andhra Pradesh.
- Pondicherry was under French rule for 138 years.
- The British "East India Company" captured Puducherry in 1761 from the French and restored the French Company administration by the Treaty of Paris in 1763.
- The British "East India Company" returned the Puducherry to the French "East India Company" in 1816.
- It was merged with the Indian Union on 1st November 1954.
- Puducherry became officially an integral part of India in 1963.

★ Additional Information

- Calicut is the oldest city in Kerala.
 - Calicut was the former capital of Lakshadweep.
- Cochin is popularly known as the "**queen of the Arabian sea**".
 - Kochi is the first e-port in India.
- Goa is the smallest state in India.
 - Goa got independence from the Portuguese in 1961.

79. Answer: c

Explanation:

The correct answer is Harrod-Domar Model.

★ Key Points

- First Five Year Plan:
 - The **first Indian prime minister, Jawaharlal Nehru**, presented the **First Five-Year Plan** to the Parliament of India.
 - The First Five-year Plan was launched in **1951** and mainly **focused** on the **development of the primary sector**.
 - The First Five-Year Plan was based on the Harrod-Domar model with few modifications.
 - The target growth rate was **2.1%** annual gross domestic product (GDP) growth; the achieved growth rate was **3.6%** the net domestic product went up by 15
 - Many **irrigation projects** were initiated during this period, including the Bhakra, Hirakud, Mettur Dam, and Damodar Valley dams.
 - At the end of the plan period in 1956, five Indian Institutes of Technology (IITs) were started and The University Grants Commission (UGC) was set up.
 - Contracts were signed to start five steel plants, which came into existence in the middle of the Second Five-Year Plan.
 - The plan was **quasi-successful** for the government.

★ Additional Information

- Planning Commission, an agency of the government of India established in 1950 to oversee the country's economic and social development, chiefly through the formulation of five-year plans.
- Five-year plan first-time was Introduced by Stalin in the Soviet region .
- First Five Year Plan(1951-1956):
 - It is based on Harrod-Domar Model.
 - It mainly focused on Agriculture.

- Community Development Program is also introduced in this Plan.
- Second Five Year Plan(1956-1961):
 - It is based on Mahalanobis Model.
 - It mainly focused on Industry.
 - Steel plants at Bhilai, Durgapur, and Rourkela were established with the help of Russia, Britain (the U.K), and West Germany respectively.
- Fourth Five Year Plan(1969-1974):
 - It is based on Ashok Rudra Alon Model.
 - The smiling Buddha project was also introduced in this Plan.
 - 14 Commercial Banks were also Nationalised in this Plan.
- Fifth Five-Year Plan(1974-1979):
 - It is based on D.P.Dhar Model.
 - The slogan "Garrebe Hatao" was also introduced in this plan.
 - Regional Rural Bank was established In this Plan (2 October 1975).

80. Answer: c

Explanation:

The correct answer is Pankaj Advani.

★ Key Points

- India's ace cueist Pankaj Advani in 2019 clinched the 35th men's Asian Snooker Championship to complete a career grand slam in cue sports.
- Advani conquered the ACBS Asian Snooker events - 6-red (short format) and 15-red (long format) - along with the IBSF World Championships in both formats too.
- Advani defeated Thanawat Tirapongpaiboon 6-3 in the final to become the only one to win the Asian and World championships in all formats .
- He won the world championship 23 times and was also the winner of the IBSF world snooker championship 15 times .
- He was born on 24th July 1986 in Pune, Maharashtra .
- He is known as " Prince Boy of India " and "The Golden boy" .

- He was awarded as Padma Bhushan in 2018 and Rajiv Gandhi Khel Ratna in 2005 and 2006.
- Padma Shri in 2009 and Arjuna award in 2004.
- He is the champion in Billiards and Snooker.
- He is the first Indian to win a world championship in the 6-red snooker.

★ Additional Information

- Peter Gilchrist won the 2019 Pacific International Billiard Championship.
 - The runner up was Sourav Kothari.
 - This championship was held in Melbourne, Australia.
- Aditya Mehta won the National Snooker Championship 2016 by defeating Manan Chandra in the finals.
- Aditya Mehta also won the National Snooker Championship 2020 by defeating Pankaj Advani.

81. Answer: d

Explanation:

The correct answer is Twinkle Khanna.

- Twinkle Khanna is the author of the book 'Mrs Funnybones: She's Just Like You and a Lot Like Me'.

★ Key Points

Author	Book
Sudha Murty	<ul style="list-style-type: none"> • The Serpent’s Revenge • The Bird with the Golden Wings • Wise and Otherwise • How I Taught My Grandmother to Read: and Other Stories
Twinkle Khanna	<ul style="list-style-type: none"> • Pyjamas are Forgiving • Mrs Funnybones • The Legend of Lakshmi Prasad
Kiran Desai	<ul style="list-style-type: none"> • The Inheritance of Loss • Hullabaloo in the Guava Orchard
Arundhati Roy	<ul style="list-style-type: none"> • The God of Small Things • The Ministry of Utmost Happiness

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82. Answer: c

Explanation:

The correct answer is Mount Saramati.

★ Key Points

- **Mount Saramati** is a peak rising above the surrounding peaks at the mountainous border of Nagaland state, India and the Naga Self-Administered Zone, in Myanmar, Sagaing Region.
- It is situated in the Kiphire District of Nagaland, India, close to the village of Thanamir.

- With a height of 3,826 meters and a prominence of 2,885 meters, it is referred to as the Crown of Nagaland and attracts a lot of tourists to this state rich in indigenous tradition.
- One of Southeast Asia's most notable peaks is Saramati. Between India and Myanmar, it creates a natural border.

★ **Additional Information**

- **Mount Kalsubai:**

- The Indian state of Maharashtra is home to Mount Kalsubai, a mountain in the Western Ghats.

Its top rises 1,646 meters above sea level and is the highest point in Maharashtra.

The mountain range is part of the Kalsubai Harishchandragad Wildlife Sanctuary.

- **Mount Doddabetta:**

- At 2,637 meters, Mount Doddabetta is the Nilgiri Mountains' tallest peak.
- Around the mountain, there is a protected forest area. On the Ooty-Kotagiri Road in the Nilgiris District of Tamil Nadu, India, it is located 9 kilometres from Ooty.
- Along with Anamudi, Mannamalai, and Meesapulimala, it is the fourth-highest peak in South India.

- **Mount Dhupgarh:**

- The Mahadeo Hills (Satpura Range) in Madhya Pradesh, India, are home to Mount Dhupgarh, also known as Dhoopgarh.
- It is 1,352 meters above sea level and is situated near Pachmarhi in the Hoshangabad district. It's common to observe sunsets from the top of the hill.

83. **Answer: c**

Explanation:

The correct answer is Goa.

★ Key Points

- As of September 2020, Goa has the lowest no. of districts.
- Goa is divided into 2 districts: North Goa and South Goa, which are further divided into 12 talukas.
- Dharbandora is the smallest taluka in the state.
- The Western Ghats physically divide the Deccan highlands from the state of Goa, which is located on the southwest coast of India inside the Konkan area.
- By both size and population, it is the fourth-smallest state in India.
- According to the human development index, it has the third-best score among Indian states.
- Vasco da Gama is the state's largest city, and Panaji is the state's capital.
- **The chief minister of Goa is Mr Pramod Sawant.**

★ Additional Information

- **Arunachal Pradesh:**
 - As of July 2020, Arunachal Pradesh comprised 26 districts, with more districts proposed. Most of the districts are inhabited by various tribal groups.
 - Arunachal Pradesh is a state in Northeastern India. It was formed from the erstwhile North-East Frontier Agency region and became a state on 20 February 1987.
 - The capital of Arunachal Pradesh is Itanagar and the Chief Minister is Mr Pema Khandu.
- **Nagaland:**
 - The Indian state of Nagaland has 16 administrative districts.
 - Nagaland is a state in northeastern India. It is bordered by the state of Arunachal Pradesh to the north, Assam to the west, Manipur to the south and the Sagaing Region of Myanmar to the east. Its capital city is Kohima and its largest city is Dimapur.
 - The capital is Kohima and the Chief minister is Neiphiu Rio.
- **Sikkim:**
 - There are 6 districts in Sikkim, an Indian state, each overseen by a Central Government appointee, the district collector, who is in charge of the administration of the civilian areas of the districts

- There are a total of eight towns and nine subdivisions in Sikkim.
- Capital is Gangtok and the Chief minister is Prem Singh Tamang.

84. Answer: b

Explanation:

The correct answer is 1916.

★ Key Points

Lucknow Pact:

- The Lucknow Pact is an agreement between the INC and the All India Muslim League.
- The Lucknow Pact was an agreement reached between the Indian National Congress and the Muslim League (AIMLM) at a joint session of both the parties held in Lucknow in December 1916.
- Through the pact, the two parties agreed to allow representation to religious minorities in the provincial legislatures.

Hence, the Lucknow Pact was signed in 1916.

Provisions of pact

- Self Government in India.
- Abolition of Indian Council.
- Separation of the executive from judiciary.
- 1/3rd representation to be given to Muslims in the Central Government.
- Separate electorates for all communities until a joint electorate is demanded by all.

★ Important Points

Results of Lucknow Pact

- Hindu-Muslim unity

- A separate communal electorate formally established communal politics in India.
 - Put Muslim League at the forefront in National Politics.
-

85. Answer: c

Explanation:

The correct answer is Andhra Pradesh.

★ Key Points

prepp

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State	Name of the puppet show	Kind of Puppet
<u>Andhra Pradesh</u>	<u>Tholu Bommalata</u>	<u>Leather Shadow Puppets</u>
Andhra Pradesh	Koyya Bommalata	String Puppet
<u>Karnataka</u>	<u>Gombeyatta</u>	<u>Shadow puppet</u>
Karnataka	Togalu Gombeyatta	String Puppet
Orissa	Ravanachhaya	Shadow puppet
Orissa	Kundhei	String Puppet
Kerala	Pavakoothu	Glove Puppet
Tamil Nadu	Bommalattam	String Puppet
<u>Rajasthan</u>	<u>Kathputli</u>	<u>String Puppet</u>
West Bengal	Putul Nautch	Rod Puppet

86. Answer: d

Explanation:

The correct answer is Swaraj Kaushal.

- Swaraj Kaushal was the youngest ever Governor of an Indian state as of July 2020.

★ Key Points

- **Swaraj Kaushal** was born on 12 th July 1952 in Delhi.
- At present, he is an Indian criminal lawyer practising in New Delhi.
- He was designated as a senior advocate by the supreme court of India at age 34.
- He served as the governor of Mizoram at the age of 37 from 1990 to 1993.
- He married Sushma Swaraj on 13 th July 1975.
- Sushma Swaraj has served as the minister of external affairs of India from 2014 to 2019.
- She died of a cardiac arrest at AIIMS Delhi in 2019.

★ Important Points

- **About Mizoram:**
 - **Capital:**Aizwal .
 - Governor : **Kambhampati Hari Babu**
 - Chief Minister : Zoramthanga
 - The state is located in the northeastern part of India.

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87. Answer: d

Explanation:

The correct answer is 1982.

★ Key Points

- The **National Bank for Agriculture and Rural Development (NABARD)** is the supreme authority in India for regulating both the top cooperative banks and regional rural banks generally.
- The Ministry of Finance, Government of India, is in charge of it.

- "Matters relating to policy, planning, and operations in the field of credit for agricultural and other economic activities in rural areas of India" have been given to the bank.
- In order to carry out the National Bank for Agriculture and Rural Development Act 1981, NABARD was founded on July 12, 1982, in accordance with the recommendations of the B.Sivaramman Committee (by Act 61, 1981 of Parliament).
- It is one of the top organizations offering Rs. 14080 crores (100% share).
- 30 billion rupees are the authorized share capital.
- State cooperative banks, district cooperative central banks, and regional rural banks are all under the control of NABARD, which also performs statutory inspections of these institutions.

★ Additional Information

- **About NABARD:**
 - **Full-Form:** National Bank for Agriculture and Rural Development
 - **Establishment Year:** 12 July 1982
 - **Headquarters:** Mumbai
 - **Chairman:** Govinda Rajulu Chintala
 - **Purpose:** Agriculture Development, Rural Development, Credit Planning, Refinance, Supervision of Regional Rural Banks, Supervision of Apex Cooperative Banks

88. Answer: a

Explanation:

The correct answer is Navdeep Singh Suri.

★ Key Points

- **Navdeep Singh Suri**, India's envoy to the United Arab Emirates, has been honoured with the **First Class Order of Zayed II award in 2019**.
- He was awarded by UAE President Sheikh Khalifa bin Zayed Al Nahyan for his contribution to the development and strengthening of friendly relations and

cooperation between India and UAE during his tenure.

• **About United Arab Emirates:**

- **Capital:** Abu Dhabi
- **President:** Mohammed bin Zayed Al Nahyan
- **Currency:** United Arab Emirates dirham
- **Prime minister:** Mohammed bin Rashid Al Maktoum

★ Additional Information

- In June 2020, **Raveesh Kumar** has been appointed as India's next Ambassador to Finland.
- Taranjit Sandhu former India's high commissioner to Sri Lanka moved to the USA, succeeding Harsh Vardhan Shringla

89. **Answer: c**

Explanation:

The correct answer is vinegar.

★ Key Points

- **Vinegar** is a combination of acetic acid and water made by a two-step fermentation process.
- First, yeast feed on the sugar or starch of any liquid from a plant food such as fruits, whole grains, potatoes, or rice.
- This liquid ferments into alcohol.
- The alcohol is then exposed to oxygen and the acetic acid bacteria Acetobacter to ferment again over weeks or months, forming vinegar.
- **Vinegar** contains five to eight per cent solution of acetic acid in water.
- Vinegar is an essential component of most pickling brines, whereas acetic acid also functions as a natural preservative.
- Vinegar is also used to stimulate chemical reactions that take place during cooking and baking.

- Vinegar is also frequently used in marinades because the acid helps tenderize meat by breaking down its fibre.
- Distilled vinegar has traditionally been used as a disinfectant in the home.

★ Additional Information

- **Lime or quicklime:**
 - Calcium oxide, CaO , also known as lime or more specifically quicklime, is a white or greyish white solid produced in large quantities by roasting calcium carbonate so as to drive off carbon dioxide.
 - At room temperature, CaO will spontaneously absorb carbon dioxide from the atmosphere, reversing the reaction.
 - It will also absorb water, converting itself into calcium hydroxide and releasing heat in the process.
 - The bubbling that accompanies the reaction is the source of its name as “quick,” or living, lime.
- **Alcohol:**
 - Alcohol is a type of organic compound that carries at least one hydroxyl functional group ($-\text{OH}$) bound to a saturated carbon atom.
 - The term alcohol originally referred to the primary alcohol ethanol (ethyl alcohol), which is used as a drug and is the main alcohol present in alcoholic drinks.

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90. Answer: c

Explanation:

The correct answer is the Adrenal Gland.

★ Key Points

- Adrenal gland:
 - Our body has a pair of adrenal glands.
 - Each is located in the anterior part of the kidney.
 - Adrenal glands produce hormones that help in the regulation of metabolism, immune system, blood pressure, stress and anger

response, and other vital functions.

- Due to the irregular functioning of the adrenal gland stress and anger occurs.

★ Additional Information

Column A (Glands)		Column B (Conditions)	
(a)	Thyroid	(iii)	Goitre
(b)	Pancreas	(i)	Diabetes
(c)	Adrenal gland	(ii)	Stress and anger
(d)	Pituitary gland	(iv)	Stimulated growth

91. Answer: b

Explanation:

The correct answer is Jharkhand.

★ Key Points

- Jharkhand is the source of the rivers Brahmani, Kharkai and Subarnarekha.
- **Brahmani River:**
 - The origin of this river is from Dudhwa hill of Dumka district.
 - Its major tributaries are the Gumro and Arrow rivers.
 - The Brahmani originates in the Santhal Parganas in Jharkhand and then flows through the Birbhum district, bisecting the Rampurhat subdivision.
- **Kharkai River:**
 - The Kharkai River is a river in eastern India.
 - It is one of the major tributaries of the Subarnarekha River.
 - It flows through the Adityapur region of Jamshedpur.
 - The valley of the lower Kharkai is quite wide and rice is the primary crop.

- Iron ore is mined in the mountains of the headwaters of the Kharkai, and there is a steel plant at Jamshedpur.
- **Subarnarekha River:**
 - The Subarnarekha River flows through the Indian states of Jharkhand, West Bengal and Odisha.
 - Gold was mined near the origin of the river at a village named Piska near Ranchi.
 - This is why it was named Subarnarekha, meaning "streak of gold".

92. Answer: c

Explanation:

The correct answer is Pumice.

★ Key Points

- **Pumice** is a light-coloured, extremely porous igneous rock that forms during explosive volcanic eruptions.
- Many specimens have a high enough porosity that they can float on water until they slowly become waterlogged.
- Large masses of floating pumice are known as "pumice rafts."
- They are large enough to be tracked by satellites and are a hazard to ships that sail through them.
- **Thus, Pumice Has a Very Low Specific Gravity.**
- The pumice is used as a decorative ground cover in landscaping and planters.
- It is used as a drainage rock and soil conditioner in plantings.
- It is used as aggregate in lightweight concrete, as landscaping aggregate, and as an abrasive in a variety of industrial and consumer products.

★ Additional Information

- **Slate:**
 - Slate is a fine-grained, foliated, homogeneous metamorphic rock derived from an original shale-type sedimentary rock composed of clay or volcanic ash through low-grade regional metamorphism.

- It is the finest grained foliated metamorphic rock.
- **Obsidian:**
 - It is a naturally occurring volcanic glass formed when lava extruded from a volcano cools rapidly with minimal crystal growth. It is an igneous rock.
 - Obsidian is hard, brittle, and amorphous; it, therefore, fractures with sharp edges.
- **Granite:**
 - It is a coarse-grained (phaneritic) intrusive igneous rock composed mostly of quartz, alkali feldspar, and plagioclase.
 - It forms from magma with a high content of silica and alkali metal oxides that slowly cools and solidifies underground.

93. Answer: d

Explanation:

The correct answer is Maharashtra.

★ Key Points

- At a distance of 6 km from Lonavala Railway Station, **Bhushi Dam** is a masonry dam on the **Indrayani River in Lonavala, Maharashtra**.
- Bhushi Dam is one of the top Lonavala tourist places and a very popular weekend getaway from Pune and Mumbai.
- The Dam is located in the backdrop of scenic hilly terrains between **Lonavala and INS Shivaji**.
- The dam was built in the late 1860s for the Great Indian Peninsular Railway as a source of water for their steam engines.
- Water from the dam was carried to Lonavala, Khandala and the reversing station of the railways by cast-iron pipes.
- **Bhushi Lake** is a **placid water body**, formed by the **watercourse of Bhushi Dam**.

★ Additional Information

States	Lakes
West Bengal	<ul style="list-style-type: none"> • Sumendu lake. • Rabindra Sarovar. • Rasikbil lake. • Subhash Sarovar lake.
Telangana	<ul style="list-style-type: none"> • Hussain Sagar. • Laknavaram cheruvu. • Himayat Sagar lake. • Shamirpet lake.
Andhra Pradesh	<ul style="list-style-type: none"> • Kolleru lake. • Pulicat lake. • Cumbum lake.

94. Answer: b

Explanation:

The correct answer is James P Allison.

★ Key Points

- **James P Allison**, an American immunologist and Nobel laureate, is a professor and chair of immunology as well as the executive director of the MD Anderson Cancer Center's immunotherapy platform.
- For the most lethal malignancies, his insights have produced new cancer therapies.
- He is best known for helping to elucidate the mechanism behind T cell activation and for pioneering the first immune checkpoint inhibitor drug for treating cancer.

- He was awarded the Nobel Prize in Physiology or Medicine for this work in 2018.
- In 2014, he was awarded the Breakthrough Prize in Life Sciences.

★ Additional Information

- **Michael W Young:**
 - Michael W Young is an American biologist and geneticist.
 - He has dedicated over three decades to research studying genetically controlled patterns of sleep and wakefulness within *Drosophila melanogaster*.
 - He was awarded the 2017 Nobel Prize in Physiology or Medicine along with Jeffrey C. Hall and Michael Rosbash "for their discoveries of molecular mechanisms controlling the circadian rhythm".
- **Jeffrey Hall:**
 - He is an American geneticist and chronobiologist.
 - In 2017, along with Michael W. Young and Michael Rosbash, he was awarded the 2017 Nobel Prize in Physiology or Medicine "for their discoveries of molecular mechanisms controlling the circadian rhythm".
- **Michael Rosbash:**
 - Michael Rosbash is an American geneticist and chronobiologist.
 - Rosbash's research group cloned the *Drosophila* period gene in 1984 and proposed the Transcription Translation Negative Feedback Loop for circadian clocks in 1990.

95. Answer: a

Explanation:

The correct answer is Pingali Venkaiah.

★ Key Points

- **Pingali Venkayya** was a freedom fighter and the designer of the Indian National Tricolour who went on to become synonymous with the spirit of free and independent India.

- Venkayya served as a soldier in the British Army in South Africa during the Anglo Boer war in Africa.
- He met the Mahatma in Vijayawada and showed him his publication with the various designs of the flag.
- Acknowledging the need for a national flag, Gandhi then asked Venkayya to design a fresh one at the national congress meeting in 1921.
- The flag was officially adopted by the Indian National Congress in 1931.
- In 2009, a stamp was also issued to commemorate him, and the Andhra Pradesh government recommended his name for the Bharat Ratna in 2014.
- In 2015, the then Urban Development Minister M. Venkaiah Naidu renamed the AIR Vijaywada after Venkayya and unveiled his statue on its premises.

★ Additional Information

- **Badal Gupta:**
 - The Secretariat Building, also known as the Writers' Building, was attacked by Benoy Basu, Dinesh Gupta, and Badal Gupta at Dalhousie Square in Calcutta during the Indian Revolutionary War against British control in India.
- **Tanguturi Prakasam:**
 - He was the Madras Presidency's chief minister and an anti-colonialist, social reformer, and political figure from India.
 - After the division of Madras State along linguistic lines, Tanguturi was elected as the first chief minister of the former Andhra state.
 - Tanguturi was referred to as the "Lion of Andhra" or "Andhra Kesari."
- **Tirot Sing:**
 - He was one of the Khasi people's chiefs in the early 19th century and was also known as U Tirot Sing Syiem.
 - He was descended from the Syiemlieh family.
 - He was the Syiem (chief) of the Khasi Hills' Nongkhlaw.
 - In an effort to seize control of the Khasi Hills, Tirot Sing declared war against the British and engaged in combat.
 - He passed away on July 17, 1835. Meghalaya observes U Tirot Sing Day in honour of his passing.

96. Answer: a

Explanation:

The correct answer is Arunachal Pradesh.

★ Key Points

- Mopin a festival of the Galo tribe of Arunachal Pradesh is celebrated in April every year .
 - The Mopin festival is an important festival of the Galong tribe of Arunachal Pradesh which is celebrated in the month of Lumi (April) every year.
 - Mopin is thought to bring wealth and prosperity to households and to the Gallon community as a whole. It is also believed that the festival drives away evil shadows and spreads God's blessing of universal happiness.

★ Additional Information

- Doljatra , also known as Dolyatra is a regional public holiday in the Indian state of West Bengal.
 - It may also be known as Dol Purnima in Assam and Odisha.
 - It is celebrated on the same day as Holi, the last full moon in the Hindu calendar, and also has the moniker 'Festival of Colours'.
- Ali-Aye-Ligang is a spring festival associated with agriculture, especially with the beginning of the Ahu paddy cultivation.
 - It is celebrated by the Missing or Mishing an indigenous tribe of Assam, India.
 - The festival marks the onset of sowing seeds.
- Me-Dam-Me-Phi is the most important Ancestor worship communal festival in the Ahom religion celebrated by the Ahom people on 31 January every year in memory of the departed.

97. Answer: b

Explanation:

The correct answer is 7th.

★ Key Points

- 'Police' and 'Public Order' are State subjects under the Seventh Schedule to the Constitution of India and therefore, it is the primary duty of the State Governments to prevent, detect, register and investigate crime and prosecute the criminals.

★ Additional Information

- **Schedules of the Indian Constitution:**
 - The **first schedule:**
 - contains the list of states and union territories and their territories.
 - The **second schedule:**
 - contains provisions of the President, Governors of States, Speaker and the Deputy Speaker of the House of the People and the Chairman and the Deputy Chairman of the Council of States and the Speaker and the Deputy Speaker of the Legislative Assembly and the Chairman and the Deputy Chairman of the Legislative Council of a State, the Judges of the Supreme Court and of the High Courts and the Comptroller and Auditor-General of India.
 - The **third Schedule:**
 - contains the Forms of Oaths or Affirmations.
 - The **fourth Schedule:**
 - contains provisions as to the allocation of seats in the Council of States.
 - The **fifth Schedule:**
 - contains provisions as to the Administration and Control of Scheduled Areas and Scheduled Tribes.
 - The **Sixth Schedule:**
 - contains provisions as to the Administration of Tribal Areas in the States of Assam, Meghalaya, Tripura and Mizoram.
 - The **seventh Schedule:**

- contains the Union list, State list and the concurrent list.
- The **eighth Schedule**:
 - contains the list of recognized languages.
- The **ninth Schedule**:
 - contains provisions for the validation of certain Acts and Regulations.
- The **tenth Schedule**:
 - contains provisions as to disqualification on grounds of defection.
- The **eleventh Schedule**:
 - contains the powers, authority and responsibilities of Panchayats.
- The **twelfth Schedule**:
 - contains the powers, authority and responsibilities of Municipalities.

98. Answer: d

Explanation:

The correct answer is Mihir Sen.

★ Key Points

- Mihir Sen, a well-known long-distance and channel swimmer, traversed the 23 km-long Palk Strait, a constricting body of water connecting Tamil Nadu and the Jaffna District in Sri Lanka's Northern Province. In 1966, he achieved the feat.
- He swam from Dover to Calais in the English Channel for the first time as an Asian in 1958, a few years earlier.
- He traveled the trip in 14 hours and 45 minutes.
- He was the only man to cross all five continents' oceans in a single year. Dardanelles, Bosphorus, Gibraltar, Palk Strait, and the full length of the Panama Canal were among the accomplishments.
- He was listed as the "world's greatest long-distance swimmer" in The Guinness Book of Records for this extraordinary feat.
- In 1959 he was conferred with the Padma Shri and the Padma Bhushan followed in 1967.

★ Additional Information

- **Shamsher Khan:**
 - He was an Indian swimmer who represented his nation in the 1956 Olympics.
 - He established a national record in the 200-meter butterfly competition in 1954. He broke the previous national record at the national meet in Bangalore in 1955.
- **Brojen Das:**
 - He was a Bangladeshi swimmer and the first person in his race to complete six consecutive crossings of the English Channel.
- **Virdhawal Khade:**
 - He is an Indian swimmer. He competed in the men's 50, 100, and 200-meter freestyle swimming events at the Beijing Summer Olympics in 2008.
 - He established a national record for India in the 100-meter freestyle.
 - Khade won a bronze medal in the 50-meter butterfly event at the Asian Games in Guangzhou in 2010.
 - It was India's first swimming medal in 24 years at an Asian Games.

99. Answer: b

Explanation:

The correct answer is Banking.

★ Key Points

- **Basel Norms** are the norms issued by the **Basel Committee on Banking Supervision (BCBS)** for the international banking regulations.
- The goal of these norms is to coordinate banking regulations around the world and strengthen the international banking system.
- BCBS consists of 27 representatives from countries across the globe including India.
- Presently the Basel Committee has issued 3 guidelines to realize its objective which are Basel I, II and III.

★ Additional Information

- **Basel I**
 - These rules are introduced in the year **1988** which focused originally on the credit risk faced by the banks.
 - According to these guidelines, all the banks were necessary to maintain a capital adequacy ratio of 8% of the credit risk.
- **Basel II**
 - Basel II was introduced in the year **2004** and aimed at more regulation than Basel I. India is currently following Basel II guidelines.
It introduced three pillars upon which regulation is to be conducted by the banks:
Minimum Capital Requirements, Supervisory Review Process, and Disclosure & Market Discipline.
- **Basel III**
 - It was introduced in **2010**.
 - Its objective was to make a resilient and transparent banking system, improve banking sector shock-absorbing capacity and more focus on Capital Adequacy Ratio.
 - Basel III has created 2 liquidity ratios which are Liquidity Coverage Ratio (LCR) i.e. to have a high-quality liquid asset to meet short-term requirements (30 days) and Net Stable Funds Rate (NSFR) requires banks to maintain a stable funding profile to meet medium-term requirements (1 year).
 - The three pillars of Basel III norms were Enhanced Minimum Capital Requirements, Enhanced Supervisory Review Process and Enhanced Disclosure & Market Discipline.
 - India has introduced Basel III norms in March 2019 but RBI extended the deadline to March 2020 and in light of the COVID-19 pandemic it was further extended by 6 months.

100. **Answer: b**

Explanation:

The correct answer is AS Kiran Kumar.

★ Key Points

- **Aluru Seelin Kiran Kumar** is an Indian space scientist and **former chairman of the Indian Space Research Organization**.
- He is credited with the development of key scientific instruments aboard the **Chandrayaan-1 and Mangalyaan** space crafts.
- He received the **Padma Shri**, India's fourth-highest civilian honour, in **2014** for his contributions to the scientific and technological disciplines.
- Previously, Kiran Kumar was the centre's director for space applications in Ahmedabad.
- In **2019 France's highest civilian award - Chevalier de l'Ordre national de la Lgion d'Honneur** was given to him for his contribution to India-France space cooperation.
- **Shri A.S. Kiran Kumar** is the **President-Elect of The Aeronautical Society of India**.

★ Additional Information

- **Tapan Mishra:**
 - Tapan Mishra is an Indian scientist who has been the Director of the Space Applications Centre and Physical Research Laboratory in ISRO.
 - He later became Senior Advisor to the Chairman, ISRO.
 - In 2021, Misra founded a space-tech startup called SISIR Radar, which manufactures Synthetic Aperture Radars (SAR), a technology that he pioneered in ISRO, for drones and satellites.
- **Mylswamy Annadurai:**
 - Popularly known as Moon Man of India.
 - He is an Indian scientist working as vice president for Tamil Nadu State Council for Science and Technology (TNSCST), Chairman, Board of Governors, National Design and Research Forum(NDRF).
 - Annadurai has been listed among the 100 Global thinkers of 2014 and topped the innovator's list.
- **G Madhavan Nair:**
 - He is an Indian space scientist and a former Chairman of the Indian Space Research Organisation, and Secretary to the Department of Space, Government of India.

- He was Chairman of the Board of Governors of the Indian Institute of Technology Patna until he stepped down due to his involvement in a controversial deal relating to the sale of radio spectrum bandwidth involving Antrix.
- He was subsequently barred from holding any government positions.

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