

Prepp

Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPS



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

SSC MTS Previous Year Paper (Held on: 14 July 2022 Shift 2)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

Instructions

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

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

General Intelligence & Reasoning

1. Which two numbers (not digits) and two signs need to be interchanged to make the given equation correct? (+1, -0.25)

$$14 + 7 \div 729 \times 81 - 9 = 500$$

- a. 81 and 9, \div and \times
- b. 14 and 9, $-$ and \times
- c. 7 and 729, $+$ and $-$
- d. 81 and 7, $+$ and \times
-
2. Six people, Ankita, Babita, Sheela, Damini, Pinky and Kamini are sitting in two parallel rows, three of them are facing north and the other three are facing south. Ankita is facing south. Kamini sits immediate right of Sheela. Sheela is facing Damini. Ankita does not sit at any of the extreme ends. Pinky is facing the same direction as Kamini. Who is sitting to the left of Ankita? (+1, -0.25)
- a. Babita
- b. Kamini
- c. Pinky
- d. Sheela

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

$$35 + 3 \div 3 - 5 + 1 = 40$$

- a. 40 and 35
- b. 1 and 5
- c. 1 and 35
- d. 35 and 5

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

Statement I: Most of the engineering students are adults.

Statement II: Harsh is an adult.

Conclusion I: Harsh is an engineering student.

Conclusion II: Some engineering students are not adults.

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

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

96, 144, ?, 240, 288

- a. 210

- b. 192
- c. 188
- d. 224

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

SAM : UES :: RAT : TEZ :: LOI : ?

- a. NSO
- b. NTO
- c. NUO
- d. NSP

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

Statements :

Some remotes are batteries.

All batteries are chargers.

No charger is a cable.

Conclusions :

I) Some remotes are cables.

- II) Some batteries are cable.
- a. Neither conclusion I nor II follows
 - b. Only conclusion I follows
 - c. Both conclusions I and II follow
 - d. Only conclusion II follows

8. Seven persons H, I, J, K, L, M, and N are arranged in ascending order according to their heights. The person with the shortest height stands at the first position, and the person with the tallest height stands at the end of the line. (+1, -0.25)

H is standing immediately behind L, who is standing immediately behind K. Only two persons stand between M and N. I stands second from the front. M is not the shortest person. Who is standing first in the row?

- a. K
- b. N
- c. J
- d. L

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





10. In a certain code language, 'PAIDY' is written as 'NYGBW', and 'FORST' is written as 'DMPQR'. How will 'HARKG' be written in that language? (+1, -0.25)

- a. FYPJE
- b. FYPIE
- c. FYQTE
- d. FXQIE

11. In a certain code language, 'AGC' is coded as '42', and 'BAD' is coded as '16'. How will 'KIC' be coded in that language? (+1, -0.25)

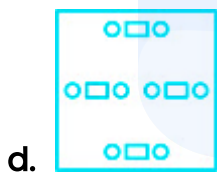
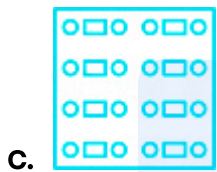
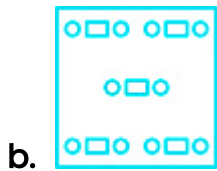
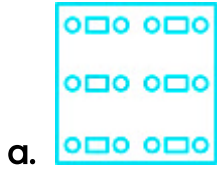
- a. 297

- b. 562
- c. 594
- d. 542

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



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



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14. Select the letter-cluster that can replace the question mark (?) in the following series. (+1, -0.25)

RAB, SZD, TYF, UXH, ?

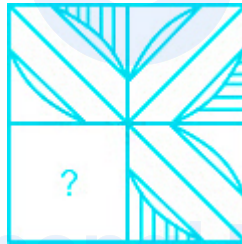
- a. VWJ
- b. VWK
- c. WVJ
- d. VVJ

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

COMPUTER : EOPWTGR :: SHOWER : UHQWGR :: NEEDLE : ?

- a. NGEFLG
- b. NGEFLE
- c. PEDGNE
- d. PEGDNE

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



- a.
- b.
- c.



d.

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

(11, 22, 44) (15, 12, 42)

- a. (3, 3, 15)
- b. (21, 42, 63)
- c. (12, 24, 39)
- d. (18, 8, 44)

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

(Note: Operation should be done on integer numbers, without dividing the number into its component digits. For example mathematical operations like addition/subtraction/multiplication etc. on 13 - 13 can be done in 13. 13 can be divided into 1 and 3. dividing by and then performing mathematical operations on 1 and 3 is not allowed)

20 : 30 :: 42 : 56 :: 72 : ?

- a. 96
- b. 84
- c. 82
- d. 90

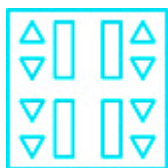
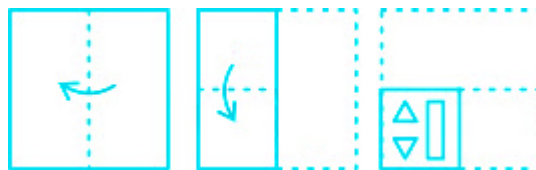
19. In a certain code language, 'J' is written as '10' and 'ACT' is written as '24'. (+1, -0.25)
How will 'BEAR' be written in that language?

- a. 25
- b. 27
- c. 24
- d. 26

20. In a certain code language, if orange is called apple, apple is called grape, grape is called watermelon, watermelon is called chikoo, and chikoo is called onion, then which of the following code is for orange? (+1, -0.25)

- a. grape
- b. apple
- c. orange
- d. watermelon

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



a.



b.

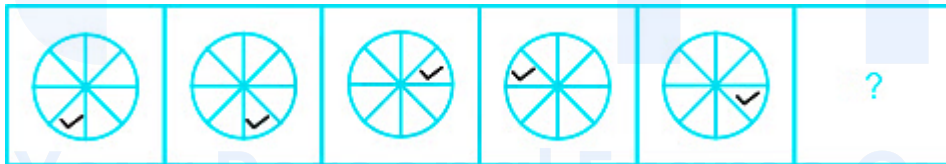


c.



d.

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



a.



b.



c.





d.

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

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

7854 : 5632 :: 8424 : 6202 :: 4444 : ?

- a. 2222
- b. 1424
- c. 1242
- d. 2424

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

PG : DM :: GO : ?

- a. ME
- b. LD
- c. EM

d. DL

25. V, W, X, Y and Z are five men sitting in a line facing the South - while M, N, O, P and Q are five ladies sitting in a second line parallel to the first line and are facing the North. W who is immediate next to the left of Y, is opposite Q. X and N are diagonally opposite to each other. Z is opposite to O who is immediate next to the right of M. P who is to the immediate left of Q, is opposite to Y. M is at one end of the line. Who is sitting opposite to N? (+1, -0.25)

a. W

b. Y

c. X

d. V

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Numerical Aptitude

26. The incomes of Ramesh and Suresh are in the ratio of 5 : 7, and their expenditures are in the ratio of 1 : 2. If each of them saves ₹15,000, then what is Suresh's income? (+1, -0.25)
- a. ₹25,000
 - b. ₹35,000
 - c. ₹45,000
 - d. ₹15,000
-
27. An 800-meter long train crosses a stationary pole in 15 seconds. What is the speed of the train? (+1, -0.25)
- a. 192 km/h
 - b. 156 km/h
 - c. 174 km/h
 - d. 210 km/h
-
28. A shopkeeper earns a profit of 16% if he allows a discount of 20% on the marked price of an article. What will be the profit percent earned by the shopkeeper if he sold the article at its marked price? (+1, -0.25)
- a. 45%
 - b. 35%
 - c. 36%

d. 55%

29. The average of eight consecutive odd numbers is 16. If the odd number immediately preceding the smallest of the given eight odd numbers is also included, then what will be the new average? (+1, -0.25)

a. 15

b. 14

c. 9

d. 13

30. If $P : Q = 2 : 7$, then what is the value of $(Q - P) : (Q + P)$? (+1, -0.25)

a. 2 : 3

b. 5 : 9

c. 6 : 7

d. 5 : 6

31. The following table shows the number of males and the number of females in three different housing societies in a city. (+1, -0.25)

Society Name	Male	Female
SocietyX	180	112
SocietyY	210	240
Society Z	110	208

What is the difference between the total number of females and the total number of males in all the three societies taken together?

- a. 50
- b. 58
- c. 60
- d. 48

32. The volume of a cuboid is 3600 cm^3 . If the length and the breadth of the cuboid are 20 cm and 12 cm, respectively, then what is the height of this cuboid? (+1, -0.25)

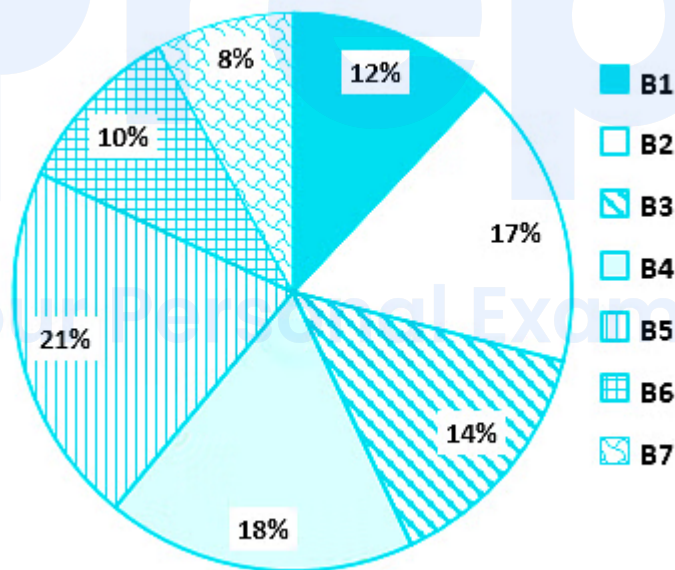
- a. 18 cm
- b. 14 cm
- c. 16 cm
- d. 15 cm

33. Salary of Prakash was ₹75,000. If he gets an increment of 8%, then what will be his new salary? (+1, -0.25)

- a. ₹81,000
- b. ₹80,000
- c. ₹1,08,000
- d. ₹77,000

34. What is the greatest number which divides each of 150, 270 and 180 exactly? (+1, -0.25)
- a. 50
 - b. 30
 - c. 10
 - d. 3

35. The following pie chart shows the amount of loan given by each of seven different banks as a percentage of the total loan given by these 7 banks taken together. (+1, -0.25)



What will be the angle made by sector B2?

- a. 64.2°
- b. 58.2°
- c. 61.2°

d. 67.2°

36. 8 men can make 12 chairs in 12 days if they work for 6 hours a day. If 9 chairs are to be made by 12 men in 6 days, then how many hours a day does each one of them need to work? (+1, -0.25)

a. 7.5 hours

b. 6 hours

c. 5.5 hours

d. 7 hours

37. What will be the compound interest on a sum of ₹4,50,000 at the rate of 10% per annum in 2 years, if interest is compounded annually? (+1, -0.25)

a. ₹50,500

b. ₹94,500

c. ₹54,450

d. ₹85,450

38. The total surface area of a closed hemisphere is 16632 cm^2 . What is the sum of the radius and the diameter of this hemisphere? [Use $\pi = \frac{22}{7}$] (+1, -0.25)

a. 172 cm

b. 168 cm

c. 126 cm

d. 154 cm

39. In university exams where the total maximum marks were 500, Mohit gets 20% more than Surendra, Surendra gets 20% more than Lalit, and Lalit gets 15% less than Darshan. If Mohit gets 366 marks, what percentage of the full marks does Darshan get? [Give your answer correct to 2 decimal places.] **(+1, -0.25)**

a. 82.50%

b. 59.80%

c. 58.02%

d. 80.50%

40. A 36 cm long, 22 cm broad, and 49 cm high cuboid is melted and moulded into a solid sphere. What will be the radius of this sphere? [Use $\pi = \frac{22}{7}$] **(+1, -0.25)**

a. 21 cm

b. 7 cm

c. 49 cm

d. 22 cm

41. Rahul and Shyam, working together, can do a piece of work in 5 hours; Rahul alone can do the same work in 15 hours. How much time will Shyam alone take to do that work? **(+1, -0.25)**

a. 12 hours

- b. 8.5 hours
- c. 7.5 hours
- d. 15 hours

42. Abhishek climbs up a hill at a speed of 3 mi/h and comes down at a speed of 5 mi/h. If the total time taken for the two-way journey is 10 hours, then what is the distance between the hilltop and the foothill? (+1, -0.25)

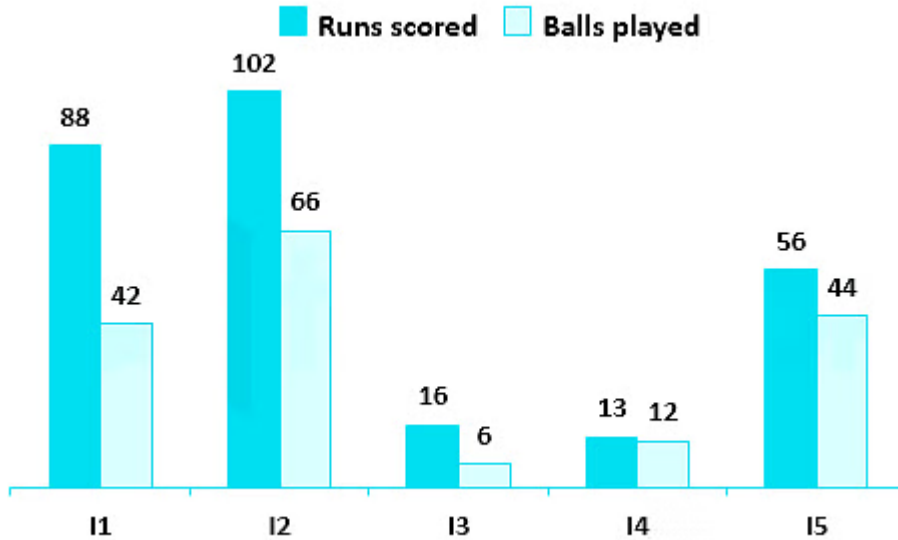
- a. 20.75 mi
- b. 18.75 mi
- c. 11.25 mi
- d. 37.5 mi

43. What is the value of $\frac{17+8\div 4\times 3}{18+4\div 2\times 5}$? (+1, -0.25)

- a. $\frac{25}{26}$
- b. $\frac{23}{28}$
- c. $\frac{33}{26}$
- d. $\frac{35}{41}$

44. The following bar chart shows the runs scored and the balls played by a batsman in 5 different innings. (+1, -0.25)

$$\text{Strike rate} = \frac{\text{Runs scored}}{\text{Balls played}} \times 100$$



What is the difference between the strike rates of I2 and I5? [Give your answer correct to 2 decimal places.]

- a. 21.21
- b. 24.24
- c. 33.33
- d. 27.27

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45. $\frac{1}{2}$ of 4 kg of an alloy is lead and the rest of it is tin. $\frac{1}{6}$ of 5 kg of another alloy is lead and the rest of it is tin. Find the ratio of lead and tin in the mixture of the given quantities of these two alloys. (+1, -0.25)

- a. 4 : 9
- b. 2 : 3
- c. 17 : 37
- d. 13 : 17

46. Simple interest on a certain sum is $\frac{54}{75}$ of the sum. What is the rate of interest per annum if the value of the rate of interest per annum is half the time period (in years) of investment? (+1, -0.25)

- a. 6.5%
- b. 6%
- c. 7.5%
- d. 7%

47. The average of 10 numbers is 37. If each number is decreased by 2, what will be the new average? (+1, -0.25)

- a. 37
- b. 35
- c. 39
- d. 32

48. The cost price of a watch is ₹2,800. A shopkeeper sells it at a gain of 3.75%. What is the selling price of the watch? (+1, -0.25)

- a. ₹2,885
- b. ₹2,905
- c. ₹2,925
- d. ₹2,875

49. 60% of the cost price of a glass is 25% of its selling price. What is the profit percentage? (+1, -0.25)

- a. 120%
- b. 180%
- c. 95%
- d. 140%

50. If $A = \frac{4 \div 8 \times 2}{3 + 14 \div 7}$ and $B = \frac{6 \div 2 - 4}{5 \div 15 \times 6}$, then what is the value of $A - B$? (+1, -0.25)

- a. $\frac{2}{3}$
- b. $\frac{4}{5}$
- c. $\frac{7}{10}$
- d. $\frac{1}{2}$



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General English

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

John ran pretty fast, _____ he did not win the race.

- a. so
- b. though
- c. and
- d. for

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

Out of the blue

- a. Found commonly
- b. Act cleverly
- c. Completely unexpectedly
- d. Go away secretly

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

An iron hand

- a. Alone, without assistance
- b. Strict control
- c. Memorising lessons

d. Straight talk

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

I like to read the newspaper _____ the morning.

- a. on
 - b. by
 - c. at
 - d. in
-

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

Garnish the drink with cranberries or a slice of fresh peach.

- a. Embellish
 - b. Wend
 - c. Blemish
 - d. Dismantle
-

56. Select the option that rectifies the incorrectly spelt words in the given sentence. (+1, -0.25)

Go, rest in the dark shadowe of the graet forest.

- a. Go, rest in the dark shaddow of the great forest.
- b. Go, rest in the dark shadow of the great forest.

- c. Go, rest in the dark shadowe of the great forest.
- d. Go, rest in the dark shadow of the grate forest.

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

He have not been in the right mental state since 2017.

- a. were not being in
- b. has not been in
- c. have been not at
- d. No improvement required

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

Scientists have made dramatic progress in understanding an universe and the mechanisms of biology.

- a. in understanding an universe
- b. No error
- c. Scientists have made dramatic progress
- d. and the mechanisms of biology

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

We are planning to go to Delhi _____ train.

- a. on
 - b. by
 - c. of
 - d. at
-

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

Killing one self

- a. Regicide
 - b. Suicide
 - c. Homicide
 - d. Matricide
-

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

Once upon a time there was a very rich man which lived with his three daughters.

- a. who did lived with
- b. who lived with
- c. who live by
- d. No improvement required

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

Despite the pain in his leg, / Nicholas completed / the marathon.

- a. Despite the pain in his leg,
- b. No error
- c. Nicholas completed
- d. the marathon

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

Subhash had just returned from work in 9 p.m.

- a. the work on
- b. working in
- c. No improvement required
- d. work at

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

Insecure

- a. Suspicious
- b. Anxious

- c. Confident
 - d. Massive
-

65. Select the most appropriate **ANTONYM** of the underlined word in the given sentence. (+1, -0.25)

She remained resolute in her belief.

- a. barbaric
 - b. inflexible
 - c. wavering
 - d. sluggish
-

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

The merchant distributes work among the weavers based on the orders received.

- a. for weavers
 - b. No improvement required
 - c. towards the weavers
 - d. at the weavers
-

67. Select the correctly spelt word. (+1, -0.25)

- a. Fracsion
 - b. Frcation
 - c. Fraction
 - d. Fractition
-

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

Uncanny

- a. Spooky
 - b. Reckless
 - c. Deranged
 - d. Insightful
-

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

This pandemic have / profoundly changed our / way of living.

- a. profoundly changed our
 - b. No error
 - c. way of living
 - d. This pandemic have
-

70. Select the most appropriate **ANTONYM** of the given word.

(+1, -0.25)

Brashness

- a. Intelligence
- b. Nerve
- c. Timidity
- d. Boldness

71. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

(+1, -0.25)

All plants and animals need water to survive. There can be no life (1) _____ earth without water. Why is water (2) _____ important? It is (3) _____ 60 percent of our body weight is made up of water. Our bodies use water in all the cells, organs, and tissues, to help (4) _____ body temperature and (5) _____ other bodily functions.

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

- a. upon
- b. into
- c. at
- d. on

72. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

(+1, -0.25)

All plants and animals need water to survive. There can be no life (1) _____ earth without water. Why is water (2) _____ important? It is (3) _____ 60 percent of our body weight is made up of water. Our bodies use water in all the cells, organs, and tissues, to help (4) _____ body temperature and (5) _____ other bodily functions.

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

- a. so
- b. as
- c. few
- d. much

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

All plants and animals need water to survive. There can be no life (1) _____ earth without water. Why is water (2) _____ important? It is (3) _____ 60 percent of our body weight is made up of water. Our bodies use water in all the cells, organs, and tissues, to help (4) _____ body temperature and (5) _____ other bodily functions.

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

- a. therefore
- b. That
- c. Because
- d. so that

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

All plants and animals need water to survive. There can be no life (1) _____ earth without water. Why is water (2) _____ important? It is (3) _____ 60 percent of our body weight is made up of water. Our bodies use water in all the cells, organs, and tissues, to help (4) _____ body temperature and (5) _____ other bodily functions.

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

- a. quantify
- b. collect
- c. grate
- d. regulate

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

All plants and animals need water to survive. There can be no life (1) _____ earth without water. Why is water (2) _____ important? It is (3) _____ 60 percent of our body weight is made up of water. Our bodies use water in all the cells, organs, and tissues, to help (4) _____ body temperature and (5) _____ other bodily functions.

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

- a. subjugate
- b. obtain

- c. release
- d. maintain

prepp

Your Personal Exams Guide

General Awareness

76. Who among the following won the Formula One 2022 Saudi Arabian Grand Prix? (+1, -0.25)
- a. Max Verstappen
 - b. Charles Leclerc
 - c. Sebastian Vettel
 - d. Lewis Hamilton
-
77. Which of the following awards has been conferred upon Kailash Kher? (+1, -0.25)
- a. Padma Bhushan
 - b. Bharat Ratna
 - c. Padma Shri
 - d. Padma Vibhushan
-
78. When tax collection exceeds the required expenditure, the budget is said to be in _____ (+1, -0.25)
- a. deficit
 - b. balance
 - c. surplus
 - d. economic spread
-

79. Lactic acid is commonly found in _____ (+1, -0.25)

- a. tomatoes
 - b. milk
 - c. vinegar
 - d. cumin
-

80. Which of the following fundamental rights deals with 'Protection of Interests of Minorities'?

(+1, -0.25)

- a. Right to Equality
 - b. Educational and Cultural Rights
 - c. Right to Freedom
 - d. Right Against Exploitation
-

81. Which Act passed by British Government of India abolished the Council of India?

(+1, -0.25)

- a. Charter Act of 1853
 - b. India Council Act of 1892
 - c. Government of India Act of 1935
 - d. Indian Independence Act of 1947
-

82. As per Thermodynamics, _____ system cannot exchange both energy and mass with its surroundings. (+1, -0.25)

- a. isolated
- b. open
- c. closed
- d. artificial

83. According to the data from the economic think-tank, the Centre for Monitoring Indian Economy (CMIE), which of the following states witnessed the lowest unemployment rate as of January 2022? (+1, -0.25)

- a. Telangana
- b. Andhra Pradesh
- c. Kerala
- d. Haryana

84. At which place in India does the river Yamuna meet the river Ganges? (+1, -0.25)

- a. Prayagraj
- b. Lucknow
- c. Varanasi
- d. Sitapur

85. According to the Indian Constitution, what is the tenure of the members of the State Legislative Council in India? (+1, -0.25)

- a. 10 years
- b. 3 years
- c. 4 years
- d. 6 years

86. The headcount (number of persons) ratio is used to measure _____. (+1, -0.25)

- a. Agricultural population
- b. Literacy rate
- c. International immigration
- d. Poverty

87. Which of the following animals is warm-blooded? (+1, -0.25)

- a. Butterfly
- b. Turtle
- c. Frog
- d. Cat

88. Baishagu festival is associated with the state of _____ in India. (+1, -0.25)

- a. Assam
 - b. Arunachal Pradesh
 - c. Bihar
 - d. Manipur
-

89. Raut nacha is performed by mostly tribals of a state of India. Which of the following states is it? (+1, -0.25)

- a. Karnataka
 - b. Chhattisgarh
 - c. Meghalaya
 - d. Bihar
-

90. The Appropriation Bill, 2022 was introduced in the Lok Sabha on 24 March 2022 by the Ministry of ----- (+1, -0.25)

- a. Tribal affairs
 - b. Foreign
 - c. Home
 - d. Finance
-

91. Who among the following Indian choreographers won the World Choreography Award 2020 and was also nominated for the Emmy Awards? (+1, -0.25)

- a. Prabhu Deva
 - b. Pandit Birju Maharaj
 - c. Saroj Khan
 - d. Suresh Mukund
-

92. Who wrote the hymn 'Vande Mataram'? (+1, -0.25)

- a. Bhagat Singh
 - b. Bal Gangadhar Tilak
 - c. Mahatma Gandhi
 - d. Bankim Chandra Chatterjee
-

93. Who among the following actresses received the TIME 100 Impact Awards 2022? (+1, -0.25)

- a. Deepika Padukone
 - b. Kajal Aggarwal
 - c. Priyanka Chopra
 - d. Vidya Balan
-

94. Inamgaon, an important Archaeological site is situated on _____ river. (+1, -0.25)

- a. Ulhas
- b. Ghod

- c. Kukadi
 - d. Indrayani
-

95. What is the height of the goal-post according to FIFA? (+1, -0.25)

- a. 6 foot
 - b. 8 foot
 - c. 10 foot
 - d. 12 foot
-

96. Who wrote the book 'The Legend of Lakshmi Prasad'? (+1, -0.25)

- a. Twinkle Khanna
 - b. Karishma Kapoor
 - c. Kajol
 - d. Raveena Tandon
-

97. _____ is also known as industrial agriculture. (+1, -0.25)

- a. Intensive farming
 - b. Plantation agriculture
 - c. Subsistence farming
 - d. Shifting agriculture
-

98. _____ has often been called the incubator of Western civilisation. (+1, -0.25)

- a. Red Sea
 - b. Caspian Sea
 - c. Mediterranean Sea
 - d. Black sea
-

99. _____ was the capital of Chalukya dynasty. (+1, -0.25)

- a. Badami
 - b. Kanchipuram
 - c. Pataliputra
 - d. Rajgir
-

100. Bharhut Stupa depict the Jataka tales and stories. It is located in which of the following states? (+1, -0.25)

- a. Andhra Pradesh
- b. Uttar Pradesh
- c. Madhya Pradesh
- d. Bihar

Answers

1. Answer: a

Explanation:

Given equation: $14 + 7 \div 729 \times 81 - 9 = 500$.

BODMAS Table:

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

Let's check each option one by one.

Option 1) 81 and 9, ÷ and ×

Given: $14 + 7 \div 729 \times 81 - 9 = 500$.

After interchanging the Symbols & Numbers we get;

$$\Rightarrow 14 + 7 \times \underline{729 \div 9} - 81 = 500$$

$$\Rightarrow 14 + \underline{7 \times 81} - 81 = 500$$

$$\Rightarrow \underline{14 + 567} - 81 = 500$$

$$\Rightarrow \underline{581 - 81} = 500$$

$$\Rightarrow 500 = 500$$

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

Option 2) 14 and 9, - and ×

Given: $14 + 7 \div 729 \times 81 - 9 = 500$

After interchanging the Symbols & Numbers we get;

$\Rightarrow 9 + \underline{7 \div 729} - 81 \times 14 = 500$

$\Rightarrow 9 + 0.097 - \underline{81 \times 14} = 500$

$\Rightarrow \underline{9 + 0.097} - 1134 = 500$

$\Rightarrow 9.097 - 1134 = 500$

$\Rightarrow -1124.903 \neq 500$

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

Option 3) 7 and 729, + and -

Given: $14 + 7 \div 729 \times 81 - 9 = 500$

After interchanging the Symbols & Numbers we get;

$\Rightarrow 14 - \underline{729 \div 7} \times 81 + 9 = 500$

$\Rightarrow 14 - \underline{104.15 \times 81} + 9 = 500$

$\Rightarrow \underline{14} - 8436.15 + 9 = 500$

$\Rightarrow \underline{23} - 8436.15 = 500$

$\Rightarrow -8413.15 \neq 500$

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

Option 4) 81 and 7, + and \times

Given: $14 + 7 \div 729 \times 81 - 9 = 500$

After interchanging the Symbols & Numbers we get;

$\Rightarrow 14 \times \underline{81 \div 729} + 7 - 9 = 500$

$\Rightarrow 14 \times 0.11 + 7 - 9 = 500$

$\Rightarrow 1.54 + 7 - 9 = 500$

$\Rightarrow 8.54 - 9 = 500$

$\Rightarrow -0.46 \neq 500$

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

Hence, the correct answer is "Option 1" .

2. Answer: a

Explanation:

Given: Six people, Ankita, Babita, Sheela, Damini, Pinky and Kamini.

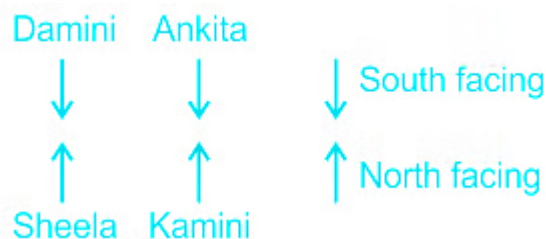
Three of them are facing north and the other Three are facing south.

1) Ankita is facing south and She does not sit at any of the extreme ends.



2) Kamini sits immediate right of Sheela.

3) Sheela is facing Damini.



4) Pinky is facing the same direction as Kamini.

And, Babita will sit on the remaining place.



'Babita' is sitting to the left of Ankita.

Hence, the correct answer is **"Babita"**.

3. Answer: b

Explanation:

Given equation: $35 + 3 \div 3 - 5 + 1 = 40$.

BODMAS Table:

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

Let's check each option one by one.

Option 1) 40 and 35

Given: $35 + 3 \div 3 - 5 + 1 = 40$

After interchanging the numbers we get;

$$\Rightarrow 40 + \underline{3 \div 3} - 5 + 1 = 35$$

$$\Rightarrow \underline{40 + 1} - \underline{5 + 1} = 35$$

$$\Rightarrow \underline{42 - 5} = 35$$

$$\Rightarrow 37 \neq 35$$

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

Option 2) **1 and 5**

$$\text{Given: } 35 + 3 \div 3 - 5 + 1 = 40$$

After interchanging the numbers we get;

$$\Rightarrow 35 + \underline{3 \div 3} - 1 + 5 = 40$$

$$\Rightarrow \underline{35 + 1} - 1 + \underline{5} = 40$$

$$\Rightarrow \underline{41 - 1} = 40$$

$$\Rightarrow 40 = 40$$

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

Option 3) **1 and 35**

$$\text{Given: } 35 + 3 \div 3 - 5 + 1 = 40$$

After interchanging the numbers we get;

$$\Rightarrow 1 + \underline{3 \div 3} - 5 + 35 = 40$$

$$\Rightarrow \underline{1 + 1} - 5 + \underline{35} = 40$$

$$\Rightarrow \underline{37 - 5} = 40$$

$$\Rightarrow 32 \neq 40$$

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

Option 4) **35 and 5**

$$\text{Given: } 35 + 3 \div 3 - 5 + 1 = 40$$

After interchanging the numbers we get;

$$\Rightarrow 5 + \underline{3 \div 3} - 35 + 1 = 40$$

$$\Rightarrow \underline{5 + 1} - 35 + \underline{1} = 40$$

$$\Rightarrow \underline{7} - \underline{35} = 40$$

$$\Rightarrow -28 \neq 40$$

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

Hence, the correct answer is "Option 2".

4. Answer: c

Explanation:

Given,

Statement I: Most of the engineering students are adults.

Statement II: Harsh is an adult.

Conclusion:

(i) Harsh is an engineering student - False (According to the statement, Most of the engineering students are adults, but for just Harsh is an adult, we can't say definitely Harsh is an engineering student).

(ii) Some engineering students are not adults - **True** (Most does not means All, so from statement I, we can say definitely that Some engineering students are not adults).

So, Only conclusion II follows .

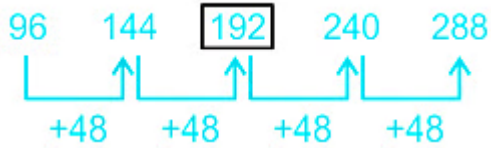
Hence, the correct answer is "Option 3".

5. Answer: b

Explanation:

The logic followed here is:

Given series: 96, 144, ?, 240, 288



So, '192' will complete the series.

Hence, the correct answer is "192".

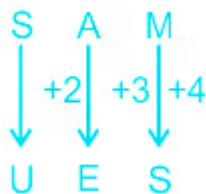
6. Answer: a

Explanation:

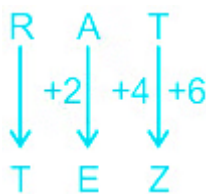
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:

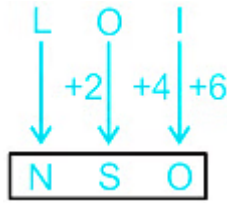
For, SAM : UES



For, RAT : TEZ



Similarly, for LOI,



Hence, the correct answer is "Option 1".

7. Answer: a

Explanation:

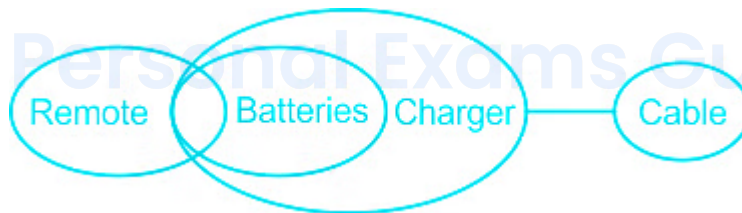
Statement:

Some remotes are batteries.

All batteries are chargers.

No charger is a cable.

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



Conclusions:

(i) Some remotes are cables - False (Because No definite relation given between remotes and cables).

(ii) Some batteries are cable - False (Because All batteries are chargers and No charger is a cable).

Here, Neither conclusion I nor II follows .

Hence, the correct answer is "Option 1".

8. Answer: b

Explanation:

Given: Seven persons H, I, J, K, L, M, and N.

1) I stands second from the front.

__ > I > __ > __ > __ > __ > __

2) H is standing immediately behind L, who is standing immediately behind K.

K > L > H

3) Only two persons stand between M and N.

M/N > __ > __ > N/M

4) M is not the shortest person.

N > I > __ > M > K > L > H

And, J will be at the remaining place,

N > I > J > M > K > L > H

Here, 'N' is standing first in the row.

Hence, the correct answer is "N".

9. Answer: a

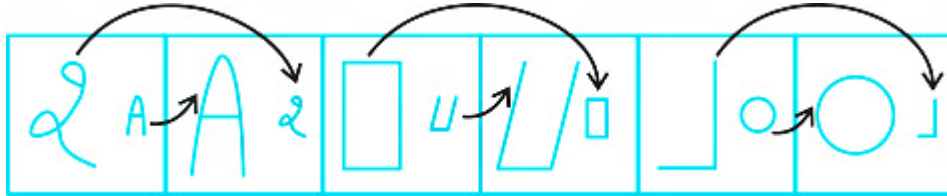
Explanation:

The logic followed here is:

1st shape is getting smaller and shifted in another side in next box.

2nd shape is getting larger and shifted in another side in next box.

So, the series will be:



Hence, the correct answer is "Option 1" .

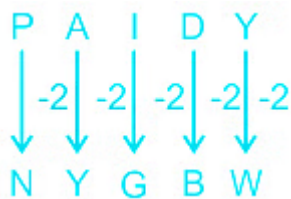
10. Answer: b

Explanation:

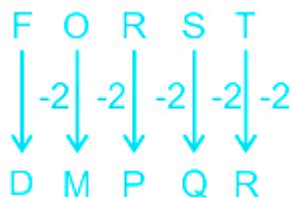
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:

For, 'PAIDY' is written as 'NYGBW',



For, 'FORST' is written as 'DMPQR',



Similarly, for HARKG



So, 'HARKG' will be written as 'FYPIE'.

Hence, the correct answer is "Option 2".

11. Answer: c

Explanation:

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

The logic followed here is: **(Multiplication of Place value) × 2 = Given Code,**

'AGC' is coded as '42'

$$A = 1, G = 7, C = 3$$

$$\Rightarrow (1 \times 7 \times 3) \times 2$$

$$\Rightarrow 21 \times 2 = 42.$$

'BAD' is coded as '16'

$$B = 2, A = 1, D = 4$$

$$\Rightarrow (2 \times 1 \times 4) \times 2$$

$$\Rightarrow 8 \times 2 = 16.$$

Similarly, for 'KIC'

$$K = 11, I = 9, C = 3$$

$$\Rightarrow (11 \times 9 \times 3) \times 2$$

$$\Rightarrow 297 \times 2 = 594.$$

So, 'KIC' will be coded as '594'.

Hence, the correct answer is "Option 3".

12. Answer: a

Explanation:

The image embedded in given figure is as shown below:

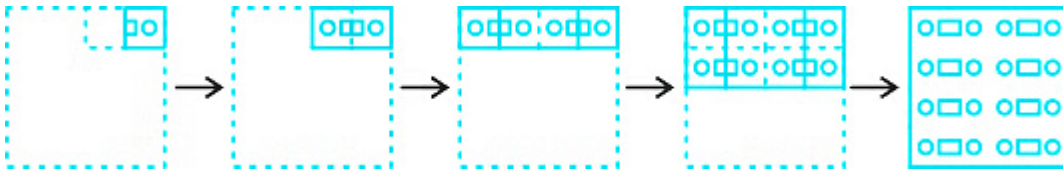
No.	Option	Question	Answer
1.			Embedded
2.			Not Embedded
3.			Not Embedded
4.			Not Embedded

Hence, "Option 1" is the correct answer.

13. Answer: c

Explanation:

The paper when unfolded will appear as shown below:



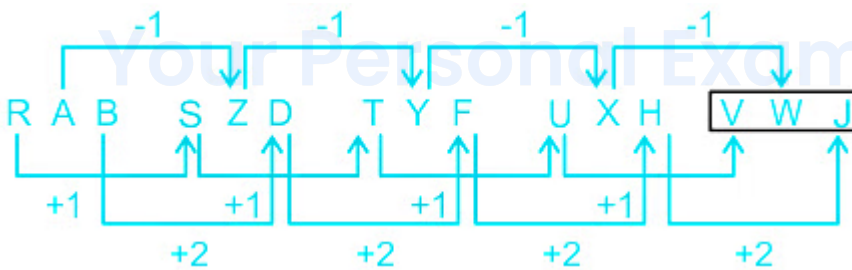
Hence, "Option 3" is the correct answer.

14. Answer: a

Explanation:

The logic followed here is:

Given: RAB, SZD, TYF, UXH, ?



So, "VWJ" will complete the missing series.

Hence, the correct answer is "VWJ".

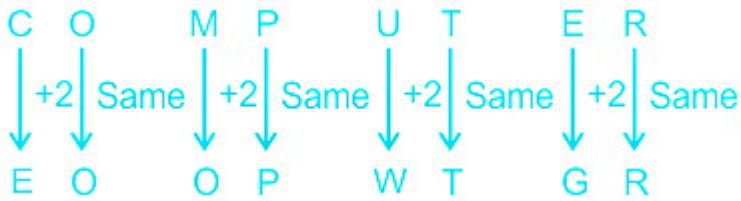
15. Answer: d

Explanation:

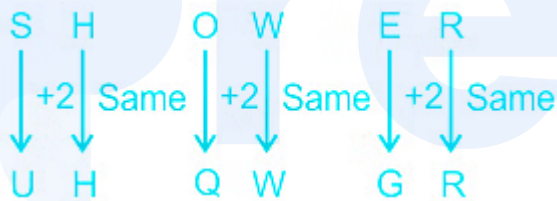
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:

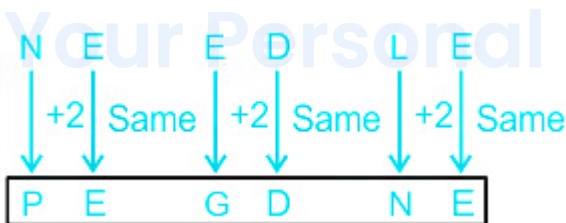
For, COMPUTER : EOOPWTGR



For, SHOWER : UHQWGR



Similarly, for NEEDLE

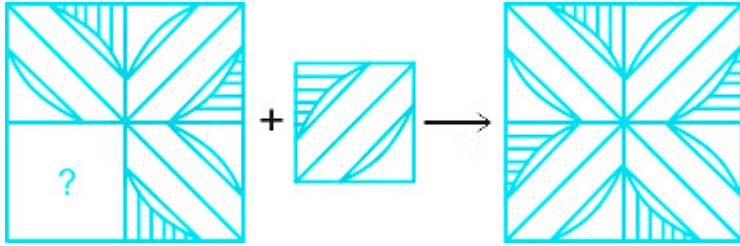


Hence, the correct answer is "Option 4" .

16. Answer: b

Explanation:

The image that completes the pattern is:



Hence, the correct answer is "Option 2" .

17. Answer: d

Explanation:

The logic followed here is:

(1st number \times 2) + 2nd number = 3rd number .

Now,

(11, 22, 44)

$\Rightarrow (11 \times 2) + 22$

$\Rightarrow 22 + 22 = 44.$

For (15, 12, 42)

$\Rightarrow (15 \times 2) + 12$

$\Rightarrow 30 + 12 = 42.$

Now, checking the options:

Option 1: (3, 3, 15)

$\Rightarrow (3 \times 2) + 3$

$\Rightarrow 6 + 3 = 9 \neq 15.$

Option 2: (21, 42, 63)

$$\Rightarrow (21 \times 2) + 42$$

$$\Rightarrow 42 + 42 = 84 \neq 63.$$

Option 3: (12, 24, 39)

$$\Rightarrow (12 \times 2) + 24$$

$$\Rightarrow 24 + 24 = 48 \neq 39.$$

Option 4: (18, 8, 44)

$$\Rightarrow (18 \times 2) + 8$$

$$\Rightarrow 36 + 8 = 44 = 44.$$

Hence, the correct answer is "Option 4".

18. Answer: d

Explanation:

The logic followed here is:

Now, $20 : 30$

$$= 20 + \underline{10} = 30.$$

For, $42 : 56$

$$= 42 + \underline{10 + 4} = 56.$$

Similarly, for $72 : ?$

$$= 72 + \underline{10 + 4 + 4} = 90.$$

Hence, the correct answer is "Option 4".

19. Answer: d

Explanation:

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

The logic followed here is: **Sum of Place value = Given Code.**

'J' is written as '10',

⇒ J = 10.

'ACT' is written as '24'.

A = 1, C = 3, T = 20

⇒ 1 + 3 + 20 = 24.

Similarly, for BEAR

B = 2, E = 5, A = 1, R = 18

⇒ 2 + 5 + 1 + 18 = 26.

So, 'BEAR' will be coded as '26'.

Hence, the correct answer is "Option 4" .

20. Answer: b

Explanation:

The logic followed here is:

Word	is Called
Orange	Apple
Apple	Grape
Grape	Watermelon
Watermelon	Chikoo
Chikoo	Onion

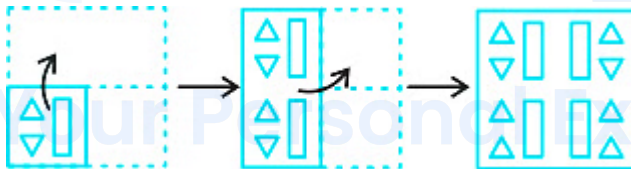
So, 'Orange' is called 'Apple'.

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

21. Answer: c

Explanation:

The paper when unfolded will appear as shown below:



Hence, "Option 3" is the correct answer.

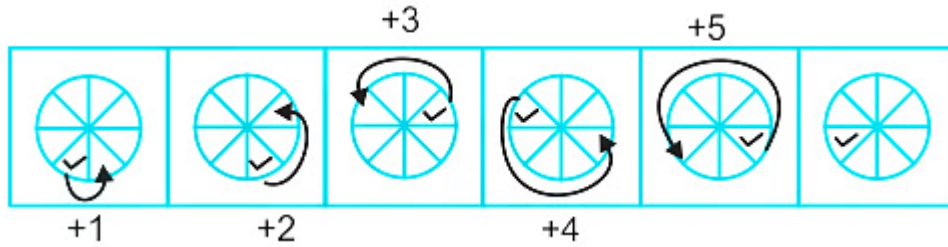
22. Answer: c

Explanation:

The logic followed here is:

The Symbols of Check Mark is shifting +1, +2, +3, +4, +5 in the following circles.

So, the series will be:



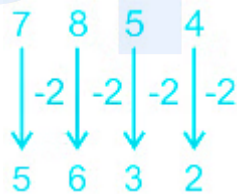
Hence, the correct answer is "Option 3".

23. Answer: a

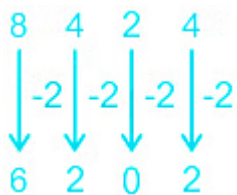
Explanation:

The logic followed here is:

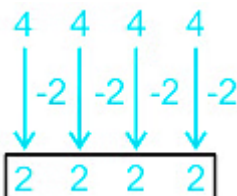
For, 7854 : 5632



For, 8424 : 6202



Similarly, for 4444 : ?



Hence, the correct answer is "Option 1".

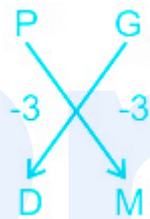
24. Answer: b

Explanation:

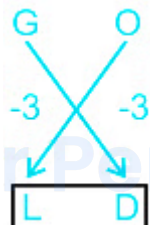
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:

For, PG : DM



Similarly, for GO : ?



So, 'GO' will be coded as 'LD'.

Hence, the correct answer is "Option 2" .

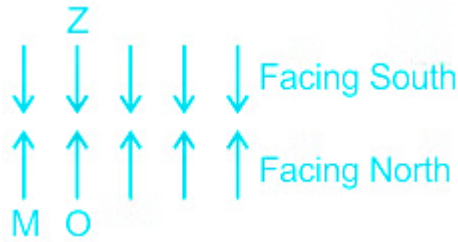
25. Answer: d

Explanation:

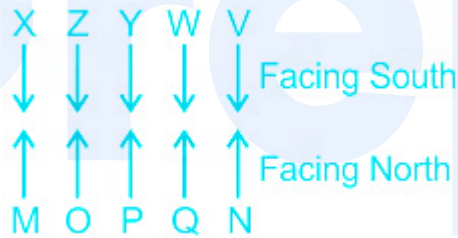
Given: V, W, X, Y and Z are five men facing South,

And M, N, O, P and Q are five ladies facing North.

- 1) M is at one end of the line.
- 2) Z is opposite to O who is immediate next to the right of M.



- 3) X and N are diagonally opposite to each other.
- 4) W who is immediate next to the left of Y, is opposite Q.
- 5) P who is to the immediate left of Q, is opposite to Y.



Who, 'V' is sitting opposite to N.

Hence, the correct answer is "V".

26. Answer: b

Explanation:

Given :

Income ratio = 5 : 7

Expenditure ratio = 1 : 2

Saving of each = Rs. 15,000

Formula Used :

$$a : b = c : d$$

Product of Extremes = Product of Means

Calculation :

$$\text{Income Ratio} = 5 : 7$$

Ramesh income be Rs. $5x$ and Suresh income be Rs. $7x$

Expenditure = Salary – Saving

$$\text{Ramesh expenditure} = 5x - 15000$$

$$\text{Suresh expenditure} = 7x - 15000$$

According to question,

$$(5x - 15000) : (7x - 15000) = 1 : 2$$

$$\Rightarrow 10x - 30000 = 7x - 15000$$

$$\Rightarrow 3x = 15000$$

$$\Rightarrow x = 5000$$

So, Ramesh Income = $5x = 5 \times 5000 = \text{Rs.}25,000$

Suresh Income = $7x = 7 \times 5000 = \text{Rs.}35,000$

\therefore Option 2 is the correct answer.

27. Answer: a

Explanation:

Given:

Length of the train = 800 m

Time = 15sec

Concept Used:

Speed of the train = (length train/ time taken to travel)

Calculation:

Length of the train = 800

Time is taken = 15 seconds

Speed of the train = (length train/ time taken to travel)

$$\Rightarrow 800/15 \times 18/5 = 192 \text{ km/hr}$$

\therefore Option 1 is the correct answer.

28. Answer: a

Explanation:

Calculation

Let the marked price be Rs. 100

After discount price be = $100 \times (1 - 20/100) = \text{Rs } 80$

Let the price for which he has bought that object be Rs. y , Now from the problems statement

$$\Rightarrow y (1 + 16/100) = 80$$

$$\Rightarrow 1.16 y = 80$$

$$\Rightarrow y = 80/1.16 = 68.96$$

Now, when an article is sold at M.P then

$$\therefore \text{Profit \%} = (100 - 68.96)/(68.96) \times 100 = 45.01\% \text{ or } 45\%$$

\therefore Option 1 is the correct answer.

29. Answer: a

Explanation:

Given:

An average of 8 consecutive odd numbers = 16

Formula used:

Average = Sum of all observations/Total number of observations

$$\text{Sum of A.P.} = (n/2) \times [2a + (n - 1)d]$$

Where n is the total terms, a is the first term, and d is the common difference

Calculation:

$$\text{The sum of all 8 consecutive odd numbers} = 8 \times 16$$

$$\Rightarrow \text{Sum of all numbers} = 128$$

As they are consecutive even numbers, so they are in A.P.

$$\text{Sum} = (n/2) \times [2a + (n - 1) \times d]$$

$$\Rightarrow 128 = (8/2) \times [2a + (8 - 1) \times 2]$$

$$\Rightarrow 128 = (4) \times [2a + 14]$$

$$\Rightarrow 2a = 32 - 14$$

$$\Rightarrow a = 9$$

First, the odd number is 9,

As the smallest number is 9 and 7 is the odd number immediately preceding by 9.

So, a total of the number will be $128 + 7 = 135$

And total number = 9

New average = $135/9 = 15$

\therefore The new average of all numbers = 15

30. Answer: b

Explanation:

Calculation:

If $P : Q = 2 : 7$

Let $P = 2k$ & $Q = 7k$

So, $(Q - P) : (Q + P) = (7k - 2k) : (7k + 2k) = 5k : 9k = 5 : 8$

\therefore Option 2 is the correct answer.

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31. Answer: c

Explanation:

Calculation:

Total Male = $180 + 210 + 110 = 500$

Total female = $112 + 240 + 208 = 560$

Difference = $560 - 500 = 60$

\therefore Option 3 is the correct answer.

32. Answer: d

Explanation:

Given:

$$L = 20 \text{ cm}$$

$$B = 12 \text{ cm}$$

$$V = 3200 \text{ cm}^3$$

Formula used:

$$V = L \times B \times H$$

$$V = \text{Volume}$$

$$L = \text{Length}$$

$$B = \text{Breadth}$$

$$H = \text{Height}$$

Solution:

$$3200 = 20 \times 12 \times H$$

$$H = 3200/240$$

$$H = 15 \text{ cm}$$

Hence, the correct option is 4.

33. Answer: a

Explanation:

Given:

Increment of the salary = 8%

The salary was = Rs. 75000

Calculation:

Salary after increment = 75000 + 8% of 75000

$\Rightarrow 75000 \times 108/100 = \text{Rs. } 81000$

\therefore The new salary is Rs. 81000

34. Answer: b

Explanation:

Given:

The numbers 150, 270 and 180

Concept used:

HCF - Highest common factor

Calculation:

The greatest possible length means the Greatest common length of the 3 numbers

$\text{HCF} (150, 210, 180) = 30$

The answer is 30

35. Answer: c

Explanation:

Calculations:

According to the question,

$$100\% = 360^\circ$$

Then, 17%

$$\Rightarrow 360^\circ \times 17/100$$

$$\Rightarrow 61.2^\circ$$

Hence, The Required value is 61.2° .

36. Answer: b

Explanation:

Given:

8 men can make 12 chairs in 12 days if they work for 6 hours a day

Formula used:

If M_1 number of people can do W_1 work, in D_1 days, working T_1 hours and M_2 number of people can do W_2 work, in D_2 days, working T_2 hours, then the relation between them will be.

$$\frac{M_1 \times D_1 \times T_1}{W_1} = \frac{M_2 \times D_2 \times T_2}{W_2}$$

Calculation:

Let the men be x .

According to the question,

$$\Rightarrow (8 \times 12 \times 6)/12 = \{(x) \times 12 \times 6\}/9$$

$$\Rightarrow x = 6$$

∴ Option 2 is the correct answer.

37. Answer: b

Explanation:

Given:

$$P = \text{Rs. } 450000$$

$$n = 2$$

$$r = 10\%$$

Formula used:

$$C = P[(1 + r/100)^n - 1]$$

$$S = P + C$$

Where

C = compound interest

P = Principal

r = rate

n = number of periods

S = sum after n periods

Calculation:

$$C = P[(1 + r/100)^n - 1]$$

$$\Rightarrow C = 450000[(1 + 10/100)^2 - 1] = \text{Rs. } 94500$$

∴ Option 2 is the correct answer.

38. Answer: c

Explanation:

Given:

The total surface area of a closed hemisphere is 4158 cm^2 .

Formula used:

$$\text{TSA of hemisphere} = 3\pi r^2$$

$$\text{Diameter} = 2(\text{Radius})$$

Calculation:

According to the question,

$$16632 = 3\pi r^2$$

$$\Rightarrow r^2 = \frac{16632}{3\pi}$$

$$\Rightarrow r^2 = \frac{(16632 \times 7)}{66}$$

$$\Rightarrow r^2 = \frac{116424}{66}$$

$$\Rightarrow r = \sqrt{1764} = 42$$

$$\text{Now Diameter} = 2 \times (42) = 84 \text{ m}$$

$$\text{The sum of the radius and the diameter} = 84 + 42 = 126 \text{ m}$$

\therefore Option 3 is the correct answer.

39. Answer: b

Explanation:

Given:

Total maximum marks = 500

Mohit gets 20% more than Surendra.

Surendra gets 20% more than Lalit.

Lalit gets 15% less than Darshan.

Marks gets by Mohit = 366

Calculation:

Mohit = $120/100$ of Surendra

Surendra = $120/100$ of Lalit

Lalit = $85/100$ of Darshan

\therefore Surendra = $5/6 \times$ Mohit ;

Surendra = $5/6 \times 366 = 305$

Lalit = $5/6 \times$ Surendra;

Lalit = $5/6 \times 305 = 254.16$

Darshan = $20/17 \times$ Lalit

Darshan = $20/17 \times 254.16 = 299.01$

\therefore Required Percentage:

$\Rightarrow 299.01/500 \times 100$

$\Rightarrow 59.80\%$

\therefore 59.8% of full marks did Darshan get.

40. Answer: a

Explanation:

Given:

Dimensions of cuboid = 36 cm × 22 cm × 49 cm

Formula used:

Volume of cuboid = $l b h$

Where, l = length, b = breadth, h = height

Volume of sphere = $(4/3)\pi r^3$

Concept used:

The solid sphere is formed by melting the Cuboid, their volumes will be equal

Calculation:

According to the question:

The volume of the cuboid = Volume of a sphere

$$\Rightarrow l b h = (4/3)\pi r^3$$

$$\Rightarrow 36 \times 22 \times 49 = (4/3) \times (22/7) \times r^3$$

$$\Rightarrow r^3 = (27 \times 49 \times 7)$$

$$\Rightarrow r^3 = (7^3 \times 3^3)$$

$$\Rightarrow r = (7 \times 3) = 21$$

\therefore The radius is 21 cm.

41. Answer: c

Explanation:

Given:

Rahul = R, Shyam = S

R = 15

R + S = 5

Formula used:

Time = 1/Efficiency

Solution:

$\frac{1}{15} + \frac{1}{S} = \frac{1}{5}$

$\frac{1}{S} = \frac{2}{15}$

S = 7.5 hours

Hence, the correct option is 3.

42. Answer: b

Explanation:

Given:

Shreya hikes up a hill at 3 mi/h and comes down at 5 mi/h. The total time taken for the two-way journey is 10 hours.

Formula used:

Distance = speed × distance

Calculation:

Let the distance of the one-way journey be d and the time taken to go up be t hours .

Then, the time taken to come down is '10 - t' hours.

Then, for up the hill $d = 3t.....(1)$

For down the hill $d = 5(10 - t).....(2)$

Equate both the equations.

$$\Rightarrow 3t = 5(10 - t)$$

$$\Rightarrow t = 50/8$$

Substitute the value of t in first equation.

$$\Rightarrow d = 3 \times 50/8$$

$$\Rightarrow d = 18.75 \text{ mi}$$

\therefore The distance between the hilltop and the foothill is 18.75 miles.

43. Answer: b

Explanation:

Given:

$$\frac{17+8 \div 4 \times 3}{18+4 \div 2 \times 5}$$

Concept used:

Follow the BODMAS rule to solve this question, as per the order given below,

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

Calculation:

$$\frac{17+8\div 4\times 3}{18+4\div 2\times 5}$$

$$\Rightarrow \frac{17+2\times 3}{18+2\times 5}$$

$$\Rightarrow \frac{17+6}{18+10}$$

$$\Rightarrow \frac{23}{28}$$

∴ Option 2 is the correct answer.

44. Answer: d

Explanation:

Calculation:

According to the question:

$$\Rightarrow I_2 = 102/66 \times 100 = 154.54$$

$$\Rightarrow I_5 = 56/44 \times 100 = 127.27$$

Difference between I₂ & I₅

$$\Rightarrow 154.54 - 127.27$$

$$\Rightarrow 27.27$$

∴ Option 4 is the correct answer.

45. Answer: c

Explanation:

Calculation:

$\frac{1}{2}$ of 4 kg of an alloy is lead and the rest of it is tin.

Quantity of lead in the first alloy = $\frac{1}{2}$ of 4 kg = 2 kg Eq.(i).

Quantity of tin in the first alloy = $4 - 2 = 2$ kg Eq.(ii).

$\frac{1}{6}$ of 5 kg of another alloy is lead and the rest of it is tin.

Quantity of lead in the second alloy = $\frac{1}{6}$ of 5 kg = $\frac{5}{6}$ Eq.(iii).

Quantity of tin in the first alloy = $5 - \frac{5}{6}$

$(30 - 5)/6 = \frac{25}{6}$ Eq.(iv).

The ratio of lead and tin in the mixture of the given quantities of these two alloys.

Eq.(i) + Eq.(iii) : Eq.(ii) + Eq.(iv)

$2 + \frac{5}{6} : 2 + \frac{25}{6}$

$\frac{17}{6} : \frac{37}{6}$

17 : 37

\therefore Option 3 is the correct answer.

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46. Answer: b

Explanation:

Given:

Simple Interest (SI) = $\frac{54}{75} \times$ Principle

Formula used:

$SI = (P \times R \times T)/100$

Calculation:

According to the question,

Let the Time is T.

So, according to the question $T = 2R$

Simple Interest (SI) = $\frac{54}{75} \times$ Principle

$$\Rightarrow \frac{54}{75} \times P = \frac{(P \times R \times 2R)}{100}$$

$$\Rightarrow R^2 = 36$$

$$\Rightarrow R = 6\%$$

\therefore The rating percentage of the interest will be 6%.

47. Answer: b

Explanation:

Concept:

When each number is decreased by "n" then the average will also be decreased by "n".

Calculation:

$$\text{New average} = 37 - 2 = \mathbf{35}$$



Important Points When each number is increased by "n" then the average will also be increased by "n".

When each number is multiplied by "n" then the average will also be multiplied by "n".

When each number is divided by "n" then the average will also be divided by "n".

48. Answer: b

Explanation:

Given:

$$CP = 2800$$

$$\text{Gain\%} = 3.75\%$$

Formula used:

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

Calculation:

$$\Rightarrow SP = 2800 \times (100 + 3.75)/100$$

$$\Rightarrow SP = 28 \times 103.75$$

$$\Rightarrow 2905$$

\therefore The selling price of the watch = ₹2,905

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49. Answer: d

Explanation:

Given:

60% of the cost price of a glass is 25% of its selling price.

Calculation:

According to the question:

$$\Rightarrow 25\%SP = 60\%CP$$

$$\Rightarrow 25SP = 60CP$$

$$\Rightarrow SP/CP = 60/25$$

$$\Rightarrow SP/CP = 12/5$$

Let,

$$SP = 12 \text{ and } CP = 5$$

$$\text{Profit} = 12 - 5 = 7$$

$$\text{Profit\%} = (7/5) \times 100 = 140\%$$

\therefore The correct answer is 140%

50. Answer: c

Explanation:

Given:

$$A = \frac{4 \div 8 \times 2}{3 + 14 \div 7} \text{ and } B = \frac{6 \div 2 - 4}{5 \div 15 \times 6}$$

Concept used:

Follow the BODMAS rule to solve this question, as per the order given below,

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

Calculation:

$$A = \frac{4 \div 8 \times 2}{3 + 14 \div 7}$$

$$\Rightarrow A = \frac{1}{3+2}$$

$$\Rightarrow A = \frac{1}{5}$$

$$B = \frac{6 \div 2 - 4}{5 \div 15 \times 6}$$

$$\Rightarrow B = \frac{3-4}{2}$$

$$\Rightarrow B = \frac{-1}{2}$$

The value of A - B

$$\Rightarrow 1/5 - (-1/2)$$

$$\Rightarrow 1/5 + 1/2$$

$$\Rightarrow 7/10$$

∴ Option 3 is the correct answer.

51. Answer: b

Explanation:

The correct answer is 'though'.

★ Key Points

- 'Though' is used to indicate that the information in a clause contrasts with the other part of the sentence.
- Here 'though' is the most appropriate choice as it shows the contrast between the first clause 'John ran pretty fast' with 'he did not win the race'.
- It nullifies the buildup done in the first half of the sentence.
 - Example- I don't get up early, though I woke up at 5 am today.

★ Additional Information

- 'So', 'for', 'and' are coordinating conjunctions that give equal importance to the words or sentences they connect.
 - Example- I drank too much last night, **so** I've got a hangover.
 - She must have been famished, **for** she ate everything immediately.
 - I take milk **and** sugar in my tea.

52. Answer: c

Explanation:

The correct answer is '**completely unexpectedly**' .

★ Key Points

- '**Out of the blue**' means without warning or unexpectedly.
- Example- She called me **out of the blue**.
- It is clear that '**completely unexpected**' is the most appropriate meaning among the options for the given idiom.

★ Additional Information

- **Drop a bombshell** - To make an unexpected announcement that will change the situation.
- Example- The chairman **dropped a bombshell** when he announced a merger with the company's biggest rival.
- **Jaw drop** - Showing total amazement.
- Example- When the prize was announced, the winner's **jaw dropped** .

53. Answer: b

Explanation:

The correct answer is '**strict control**'.

★ Key Points

- 'An iron hand' means rigorous or overbearing control.
 - Example- He rules the town with **an iron hand**.
- This idiom also goes by the phrase 'iron fist' which means the same.
- It is clear that 'strict control' is the most appropriate meaning among the options for the given idiom.

★ Additional Information

- **Run the show** - Dominate or be in charge of an area or activity.
 - Example- You're **running the show** - what do we do now?
- **Pull the strings** - Be in control of events or other people's actions.
 - Example- It is uncomfortable to know that someone else is **pulling the strings**.

54. Answer: d

Explanation:

The correct answer is 'in'.

★ Key Points

- 'In' is used in phrases that describe a more general period of time unlike 'at' or 'on' which are used for a more specific time.
 - Example- She is planning to move **in** December. (It can be any day among the 30 days)
- Since morning is a general period of time extending over many hours, 'in' is the most appropriate choice to fill in the blank.

55. Answer: a

Explanation:

The correct answer is '**embellish**'.

★ Key Points

- **Garnish** means decorate or adorn, especially food.
 - Example- **Garnish** each serving with a dollop of sour cream.
- **Embellish** means making something more attractive by adding decorative details or features.
 - Example- It was a blue silk lehenga **embellished** with golden embroidery.
- It is clear that both the meanings are similar. So '**embellish**' is the most appropriate choice among the other options.

★ Additional Information

- **Wend** means going in a specified direction, typically slowly or by an indirect route.
 - Example- They **wended** their way across the city.
- **Blemish** means a small mark or spot which spoils the appearance of something.
 - Example- The girl's hands were without a **blemish**.
- **Dismantle** means to take to pieces.
 - Example- The engines were **dismantled** and the bits piled into a heap.

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56. Answer: b

Explanation:

- The correct answer is '**Go, rest in the dark shadow of the great forest.**'

★ Key Points

- Sentence 2 has the wrong spelling of '**great**' as '**grate**'.
- Sentence 3 has the wrong spelling of '**shadow**' as '**shaddow**'.
- Sentence 4 also has the wrong spelling of '**shadow**' as '**shadowe**'.
- Hence, Sentence 1 i.e. '**Go, rest in the dark shadow of the great forest**' is the rectified sentence with all correct spellings.

57. Answer: b

Explanation:

The correct answer is 'has not been in'.

★ Key Points

- The given sentence is in **Present Perfect Continuous** tense.
- The subject in the given sentence is **Third Person Singular** pronoun.
- So the appropriate auxiliary to be used is 'has' and not 'have'.
- Hence the option 'has not been in' is the most appropriate choice of improvement.

★ Additional Information

- The structure for **Present Perfect Continuous Tense** :
 - **Subject + auxiliary (have/has) been + (V1 + ing)**
 - Example- **She has been working** since 2005.

58. Answer: a

Explanation:

The correct answer is 'in understanding an universe'.

★ Key Points

- In the given sentence, the noun '**universe**' is specific or particular.
- The definite article '**the**' should be used before singular or plural nouns when the noun is specific or plural.
- So the part '**understanding an universe**' has an error because the wrong kind of article is used before '**universe**'.

★ Additional Information

- Rules for using articles :

RULES	FOR COUNTABLE NOUNS	FOR UNCOUNTABLE NOUNS
Specific identity not known	a, an	(no article)
Specific identity known	the	the
Things in general	(no article)	(no article)

59. Answer: b

Explanation:

The correct answer is 'by'.

★ Key Points

- The preposition 'by' is used to describe **how** we are traveling somewhere.
- Example- He went by **car**.
- So the most appropriate option is 'by' to fill in the blank.

60. Answer: b

Explanation:

The correct answer is 'suicide'.

★ Key Points

- **Suicide** means the act of killing oneself intentionally.
 - Example- She often had thoughts of **suicide** but she never sought help. I think she should have.
- It is clear that **suicide** is the most appropriate option as a one-word substitution for the given group of words.

★ Additional Information

- **Regicide** means the act of killing a king.
 - Example- He was found guilty of **regicide** and got executed.
- **Homicide** means the killing of one person by another or murder.
 - Example- The police concluded that it was a **homicide, not** an accident.
- **Matricide** means the killing of one's mother.
 - Example- He is a cold-blooded **matricide** for he killed his own mother with his own hands.

61. Answer: b

Explanation:

The correct answer is 'who lived with'.

★ Key Points

- The given sentence is in **Simple Past tense** .
- The correct structure would be **Subject + V2** and the correct form for 'live' would be '**lived**' .
- The pronoun '**who**' is used when referring to a person.
 - Example- She is the one **who** stole the car.
- So the right improvement would be: '**who lived with**' .

62. Answer: b

Explanation:

The correct answer is 'no error'.

★ Key Points

- The given sentence is in **Simple Past Tense**.
- The right structure would be: **Subject + V2**
- The given sentence is following the right tense structure and all other grammar rules.
- So there is no error in any part of the sentence.

63. Answer: d

Explanation:

The correct answer is 'work at'.

★ Key Points

- The preposition '**at**' is used to indicate a specific time or location.
 - Example- She will be here **at** 5 in the evening.
 - You can meet her **at** Lulu mall this Saturday.
- Since there is mention of a particular time in the sentence, the correct preposition to be used is '**at**'.
- So '**work at**' is the most appropriate choice.

★ Additional Information

- The preposition '**in**' is used to indicate a more general period of time location or position within or inside something.
 - Example- We get up very early **in** the morning.
 - We went for a swim **in** the lake.
 - They will be **in the** office at that time.
- The preposition '**on**' is used to indicate specific days, dates, or named days like calendar dates, a day of the week, or a special significant day.

- Example- We met **on** January 12.
 - Let's meet **on** Tuesday.
 - I don't want to work **on** my birthday.
-

64. Answer: c

Explanation:

The correct answer is '**confident**'.

★ Key Points

- **Insecure** means uncertain or anxious about oneself.
 - Example- He is a rather **insecure** young man.
 - Being **confident** means feeling or showing certainty in oneself or one's abilities and qualities.
 - Example- The company needs **confident** people who can approach more people.
 - It is clear that '**confident**' and '**insecure**' are opposite in meaning. So it is the most appropriate antonym.
-

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65. Answer: c

Explanation:

The correct answer is '**wavering**'.

★ Key Points

- **Resolute** means admirably purposeful
- Example- She is as **resolute** as her mother.
- **Wavering** means becoming weaker or faltering.
- Example- She gave a **wavering** smile.

- It is clear that these two are opposite in meaning so '**wavering**' is the most appropriate choice for an antonym.

★ Additional Information

- Being **inflexible** means unwilling to change or compromise.
 - Example- Once she had made up her mind, she was **inflexible**.
- **Sluggish** means lacking energy or alertness.
 - Example- Alex woke up late feeling tired and **sluggish**.
- **Barbaric** means savagely cruel, primitive, or unsophisticated.,
 - Example- He carried out **barbaric** acts in the name of war.

66. Answer: b

Explanation:

The correct answer is "No improvement required".

★ Key Points

- The given sentence is grammatically and contextually correct. All the rules of grammar are accurately applied in the sentence.
- In the first place, "**among the weavers**" is correctly placed in the sentence. As we know "**weavers**" is a **plural noun** so, the **preposition "among"** is appropriate to apply.
- Let us understand the implication of the correct preposition:
- **Among** : It indicates incorporated or in the center of a larger **collection** of **individuals** or things.
 - Example: *Among the cabinet ministers, there was very little harmony.*
 - Example: *Only when David was among his buddies did he feel at ease.*
- Therefore, the correct answer is: *No improvement is required*

Let's understand the implication of the prepositions applied in the remaining options:

★ Additional Information

- **For** : to discuss a cause or **purpose** for anything.
 - Example: *I'm leaving for breakfast now.*
- **Towards** : approaching someone or something from the **side** or close by.
 - Example: *She got to her feet and headed toward Nitin.*
- **At**:to speak of an era or **location** .
 - Example: *Manisha is present at the institution.*

67. Answer: c

Explanation:

The correct answer is " **Fraction** ".

★ Key Points

Let us understand the meaning of the correct word:

- **Fraction** : a **small part** or amount; a division of a number.
 - Example: *I believed the aircraft was going to explode for a fraction of a second.*
 - Example: *Before answering, she paused for a fraction of a second.*
- Therefore, the **correctly** spelt word out of the given options is " **fraction** ".
- Hence, the correct answer is: *Fraction*

★ Additional Information

Some of the synonyms of the correctly spelt word "fraction" is:

- Small part
- **Fragment**
- Snippet
- Snatch
- **Little**
- Bit
- **Trifle**
- Scrap

68. Answer: a

Explanation:

The correct answer is " **Spooky** ".

★ Key Points

Let us understand the meaning of these words:

- **Uncanny** : very **strange** ; that you cannot easily explain.
 - Example: *The uncanny similarity between Nisha and Priya is striking.*
- **Spooky** : **strange** and frightening; inspiring a feeling of fear.
 - Example: *Being home alone late at night is spooky.*
- As we can see, the word " **spooky** " is **similar** in meaning to " **uncanny** ".
- Therefore, the correct synonym is: *Spooky*

★ Additional Information

Let's understand the implication of the remaining words:

<u>Word</u>	<u>Meaning</u>	<u>Example</u>
Deranged	thinking and behaving in a way that is not normal, especially because of mental illness	<i>He occasionally seems a touch deranged, and I'm worried.</i>
Reckless	not thinking about possible bad or dangerous results that could come from your actions	<i>Hina was charged with reckless driving.</i>
Insightful	having or showing an accurate and deep understanding; perceptive	<i>I am thankful for all the insightful comments.</i>

69. Answer: d

Explanation:

The correct answer is "This pandemic have".

★ Key Points

- The first part of this sentence "this pandemic have" contains an error.
- The word "pandemic" is an **uncountable noun** and it requires a **singular helping verb** after it.
 - Example: *Education is the key to success.*
- Thus, the application of the plural helping verb "have" after "pandemic" is **incorrect** and it must be replaced by the singular verb "has".
- Hence, the correct sentence is: *This pandemic has profoundly changed our way of living.*

★ Additional Information

- The second part of this sentence "profoundly changed our" is grammatically **correct**.
- Furthermore, the last part of this sentence "way of living" is grammatically and contextually **appropriate**.

70. Answer: c

Explanation:

The correct answer is "Timidity".

Let's understand the meaning of these words:

★ Key Points

- **Brashness**: actions that exude **confidence** while being disrespectful.
 - Example: *Brashness became a hallmark of Harry.*
- **Timidity**: the state of being **shy** and uneasy.

- Example: *He spoke with a tiny pause, and he exuded timidity and a shy, reserved demeanor that was almost absurd.*
- From the above explanation, we can see that " **brashness** " and " **timidity** " are **contradictory** in their meanings.
- Hence, the correct antonym is: *Timidity*

★ Additional Information

Let's understand the implication of the remaining options:

<u>Word</u>	<u>Meaning</u>	<u>Example</u>
Intelligence	the ability to understand, learn and think	<i>Arun is a young kid with average intelligence, but he lacks emotional maturity.</i>
Nerve	worried, nervous feelings	<i>He had a case of nerves before his play.</i>
Boldness	a fearless display of bravery and self-assurance	<i>Sarika is renowned for her boldness.</i>

71. Answer: d

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Explanation:

The correct answer is " **on** ".

★ Key Points

Let us understand the implication of the correct preposition:

- **On** : supported by, fixed to, or touching something, especially a **surface** ; in a **place** or position.
 - Example: *I left the novel on the table.*
 - Example: *Jai is the only honest person on this planet.*

- Apparently, the word " on " is **appropriate** for the sentence both contextually and grammatically
- Therefore, the complete sentence is: *There can be no lifeonearth without water.*

★ Additional Information

Let's understand the usage of the remaining prepositions:

<u>Word</u>	<u>Meaning</u>	<u>Example</u>
At	used to show where somebody/something is or where something happens	<i>The main answer is at the bottom of the page.</i>
Into	moving to a position inside or in something	<i>The guest came into the house.</i>
Upon	when describing an event that is quickly preceded by another occurrence, we use the preposition upon	<i>The door on the right, upon entering the hotel, leads to the swimming pool.</i>

72. Answer: a

Explanation:

The correct answer is " so ".

★ Key Points

Let us understand the implication of the correct conjunction:

- **So** : used to **emphasize** an **adjective** or **adverb** , especially when this produces a particular result.
 - Example: *She is so sick that she is unable to leave her bed.*
 - Example: *The actor wore black shades so that nobody would recognize him.*
- Apparently, the word " so " is **appropriate** for the sentence both contextually and grammatically

- Therefore, the complete sentence is: *Why is waterso important?*

★ Additional Information

Let's understand the usage of the remaining conjunctions given in the options:

<u>Word</u>	<u>Meaning</u>	<u>Example</u>
As	used for comparing people or things	<i>I like chocolate as much as sweets.</i>
Few	a small number of; some	<i>A few people attended the ceremony.</i>
Much	to a great degree	<i>I have not contributed much.</i>

73. Answer: c

Explanation:

The correct answer is " **because** ".

★ Key Points

Let us understand the implication of the correct conjunction:

- **Because** : for the **reason** that
 - Example: *She is sick because she ate the rotten fish.*
 - Example: *The actor could not reach the set because of heavy traffic.*
- Apparently, the word " **because** " is **appropriate** for the sentence both contextually and grammatically
- Therefore, the complete sentence is: *It is because 60 percent of our body weight is made up of water.*

★ Additional Information

Let's understand the usage of the remaining conjunctions given in the options:

Word	Meaning	Example
T herefore	as a result	<i>His plane was delayed therefore he could not attend the meeting.</i>
That	used for talking about a person or thing already known or mentioned	<i>That was the year Erika went to London, wasn't it?</i>
S o that	result or consequence	<i>It aids in reducing blood pressure so that we feel more energized.</i>

74. Answer: d

Explanation:

The correct answer is "regulate".

★ Key Points

Let us understand the implication of the correct word:

- **Regulate** : to control something by using laws or rules; to **control** a machine, piece of equipment, etc.
 - Example: *We can regulate the temperature in the factory with this controller.*
 - Example: *We can regulate the temperature in the apartment by rotating the thermostat.*
- Apparently, the word "regulate" is **appropriate** for the sentence both contextually and grammatically
- Therefore, the complete sentence is: *Our bodies use water in all the cells, organs, and tissues, to help regulate body temperature*

★ Additional Information

Let's understand the meaning of the remaining options:

Word	Meaning	Example
Quantify	to describe or express something as an amount or a number	<i>The dangers of tobacco have been quantified by medical professionals.</i>
Collect	to bring a number of things together	<i>Harry used to collect antique coins.</i>
Grate	to rub food into small pieces using a metal tool	<i>He grated cheese over the pizza.</i>

75. Answer: d

Explanation:

The correct answer is "maintain".

★ Key Points

Let us understand the implication of the correct word:

- **Maintain** : to keep something in good condition by checking and repairing it regularly.
 - Example: *While keeping the price constant, we must maintain the quality of our services.*
 - Example: *The pilot was having a difficult time maintaining the plane under control.*
- Apparently, the word " **maintain** " is appropriate for the sentence both contextually and grammatically
- Therefore, the complete sentence is: *Our bodies use water in all the cells, organs, and tissues, to help regulate body temperature and maintain other bodily functions.*

★ Additional Information

Let's understand the meaning of the remaining options:

<u>Word</u>	<u>Meaning</u>	<u>Example</u>
S ubjugate	to defeat somebody/something and make them obey you; to gain control over somebody/something	<i>She subjugated to her mother's oppressive expectations.</i>
O btain	to get something	<i>He obtained the degree with hard work.</i>
R elease	to allow somebody/something to be free	<i>The prisoners were released yesterday.</i>

76. Answer: a

Explanation:

The correct answer is Max Verstappen.

★ Key Points

- Max Verstappen won the Saudi Arabian Grand Prix Tournament held in March 2022.
- Max Verstappen
 - Max Emilian Verstappen is a Belgian-Dutch racing driver who won the Formula One World Championship in 2021.
 - He participates in Formula One for Red Bull Racing under the Dutch flag. He is the son of Jos Verstappen, a former Formula One driver.
- Charles Leclerc
 - Charles Leclerc is a Monaco-born Formula One racing driver who currently competes for Scuderia Ferrari.
 - In 2016, he won the GP3 Series championship, and in 2017, he won the FIA Formula 2 Championship.
- Lewis Hamilton
 - Sir Lewis Carl Davidson Hamilton is a British Formula One driver who currently competes for the Mercedes Formula One team.

- He has won the Formula One World Championship 7 times, equalling the record set by Michael Schumacher.
- Lewis Hamilton has the outright record for the most victories (95), pole positions (98), and podium finishes (165).

★ Additional Information

- Formula One
 - The Fédération Internationale de l'Automobile sanctioned Formula One is the top class of international racing for open-wheel single-seater formula racing cars (FIA).
 - Since its inception in 1950, the World Drivers' Championship, which became the FIA Formula One World Championship in 1981, has been one of the world's premier forms of racing.
 - A Formula One season consists of a series of Grands Prix held across the world on purpose-built circuits as well as closed public highways.

77. Answer: c

Explanation:

The correct answer is Padma Shri.

★ Key Points

- **Kailash Kher**, the Indian singer and composer, was awarded the **Padma Shri**, the fourth highest civilian award in India, in the field of music, in the year 2017.
- The Padma Shri was conferred upon him by the **President of India, Pranab Mukherjee**, on **13th April 2017**, in recognition of his contributions to Indian music.

★ In News

- Padma Awards:
- Ministry of Home Affairs announced the **Padma Awards 2023** on the eve of the **74th Republic Day**.

- The conferment of 106 Padma Awards was approved by the President of India, Droupadi Murmu.
- Padma Awards are announced every year on Republic Day and given in 3 categories:
 - Padma Vibhushan – India's Second Highest Civilian Award which is given for exceptional and distinguished service.
 - Padma Bhushan – India's Third Highest Civilian Award is given for distinguished service of a high order.
 - Padma Shri – India's Fourth Highest Civilian Award for distinguished service in any field.
- The Padma Awards are conferred to personalities of various fields such as Art, Social work, Public Affairs, Science and Engineering, Trade and Industry, Medicine, Literature and Education, Sports and Civil Service.
- Every year President of India will present the awards in an event during March or April which will be held in Rashtrapati Bhawan.
- Awardees will be getting a Medal and a Sanad (certificate) which will be signed by the President.
- The Awards conferred in a particular year should not exceed 120 (excluding Posthumous awards and Awards to Foreigners, NRIs, and OCIs).
- The Padma Awards are conferred based on the recommendations of the Padma Awards Committee. The Committee will be appointed by the Prime Minister.
- Padma Awards Committee will be chaired by Cabinet Secretary, Home Secretary, Secretary to the President and 4 – 6 eminent people.

78. Answer: c

Explanation:

The correct answer is Surplus.

★ Key Points

- A budget surplus occurs when tax collection exceed expenditures.

- The term often refers to a government's financial state, as individuals have "savings" rather than a "budget surplus".
- A surplus is an indication that a government's finances are being effectively managed.
- A surplus implies the government has extra funds.
- Advantages of a budget surplus:
 - These funds can be allocated toward public debt, which reduces interest rates and helps the economy.
 - A budget surplus can be used to reduce taxes, start new programs, or fund existing programs such as Social Security or Medicare.
 - The government might use a budget surplus to cut taxes to stimulate the supply-side of the economy.

★ Additional Information

- Budget
 - A budget is a rough estimate of income and expenses for a specific future period of time; it is organised and revised on a regular basis.
 - A person, family, group of people, organisation, nation, multinational corporation, government, or anything else that makes and spends money can all have a budget.
 - Budgeting is a management-instituted internal process that is frequently not necessary for external reporting at institutions and organisations.

79. Answer: b

Explanation:

The correct answer is Milk.

★ Key Points

Lactic Acid is present in milk.

- It does have a $\text{CH}_3\text{CH}(\text{OH})\text{COOH}$ molecular formula.
- It's strong white, and miscible with water.

- Because of the presence of a carboxyl group adjacent to the hydroxyl group, it is an alpha-hydroxy acid (AHA).
- It is produced by the fermentation of milk.

★ Additional Information

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

80. Answer: b

Explanation:

The correct answer is Educational and Cultural Rights.

★ Key Points

- **Educational and Cultural Rights** -Articles (29-30)
- Article 29: Protection of interests of minorities.
- There are 2 Clauses :
 - The first clause states that Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script, or culture of its own shall have the right to conserve the same.
 - The second clause states that: No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of

State funds on grounds only of religion, race, caste, language, or any of them.

- **Article 30** – Right to Minorities and to establish and administer the educational Institutions.

★ Additional Information

- Fundamental Rights
 - Article 12 – Definition of a state
 - Article 13 – Right to make law
 - Article 13A – Judicial Review
- Article (14–18) – Right to Equality
 - Article 14 – Equality before the law.
 - Article 15 – Prohibition of Discrimination on the basis of religion, race, sex, and place of birth.
 - Article 16 – Equality of opportunity in relation to public employment.
 - Article 17 – Abolish Untouchability.
 - Article 18 – Elimination of titles.
- Article (19–22) – Right to Freedom
 - Article 19 – Protection of certain rights in relation to the freedom of speech, expression, assembly, association, movement, residence, and profession.
 - Article 20 – Protection in respect of conviction for offenses.
 - Article 21 – The Safety of Life and Personal Liberty.
 - Article 21A – Right to Education.
 - Article 22 – In some cases security against detention.
- Article (23–24) – Rights against exploitation
 - Article 23 – Prevention of Trafficking of humans and forced labour.
 - Article 24 – Prevention of employment of children in factories, etc.
- Article (25–28) – Right to freedom of religion
 - Article 25 – freedom of consciences and promotion of free professional, practice, and secularism.
 - Article 26 – Freedom of managing trustworthy matters.
 - Article 27 – Freedom to pay taxes for the promotion of any particular religion.

- Article 28 – Freedom in the form of independent instruction in independent education.

81. Answer: c

Explanation:

The correct answer is Government of India act of 1935.

★ Key Points

The government of India act of 1935

- It abolished the Council of India, established by the Government of India act 1858.
- It abolished diarchy in the provinces and introduced Provincial autonomy.
- It provided for the establishment All India Federation which consists of princely states and provinces as units.
- The Federation never came into existence because the princely state did not join it.
- The provinces became autonomous units of administration in their defined sphere.

★ Additional Information

India Council Act of 1892

- The Indian Councils Act, of 1892, which was an amending Act, increased the number of members to the Central Legislative Assembly to 16 members.
- It was an Act of the Parliament of the United Kingdom that empowered legislative councils in British India by increasing their size.
- Indian Councils Act, 1892 introduced by Richard Assheton Cross.
- It increased the number of additional (non-official) members in the Central and provincial legislative councils but maintained the official majority in them.
- It increased the functions of legislative councils and gave them the power of discussing the budget and addressing questions to the executive.

Charter Act of 1853

- As per provisions of the Charter Act of 1853 Governor General's Legislative Council came to be known as the Central Legislative Council.
- The Central Legislative Council started functioning as a Mini-Parliament.
- Civil Service Examination was introduced. It was a competitive examination for recruitment into civil services.
- Executive and Legislative functions of the Governor-General were separated.
- This Act provided for the addition of 6 new members to the Legislative Council, 4 members were appointed by the Provisional Governments of Bengal, Bombay, Madras, and Agra.

82. Answer: a

Explanation:

The correct answer is isolated.

★ Key Points

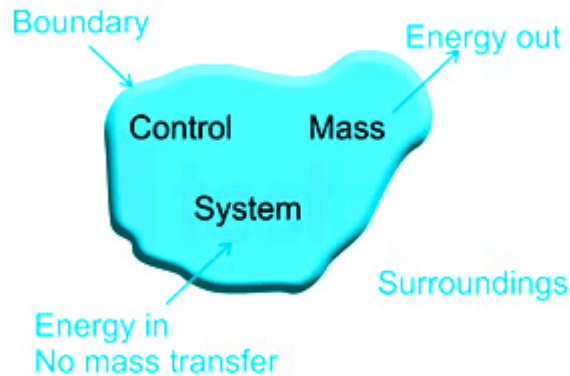
Isolated system:

- In an Isolated system, there is no mass and energy interaction across the system boundary i.e. Interaction between the system and the surroundings is absent. Therefore, the mass and the energy of the isolated system are fixed e.g. Universe.
- When a body of material starts from a non-equilibrium state of inhomogeneity or chemical non-equilibrium and is then isolated, it spontaneously evolves towards its own internal state of thermodynamic equilibrium.
- It is not necessary that all aspects of internal thermodynamic equilibrium be reached simultaneously; some can be established before others. For example, in many cases of such evolution, internal mechanical equilibrium is established much more rapidly than the other aspects of the eventual thermodynamic equilibrium.

★ Additional Information

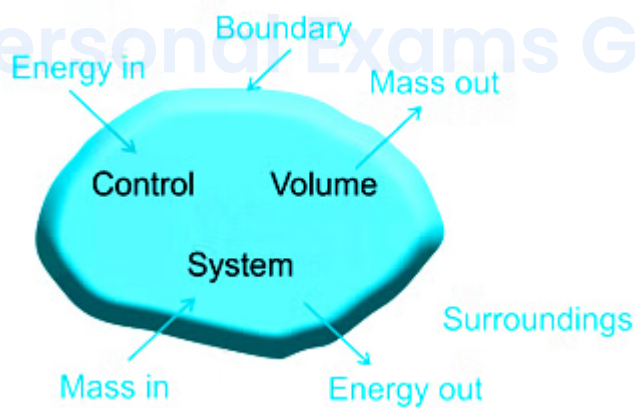
In thermodynamics, we can classify the system into three types. They are as follows:

Closed System:



- There is no mass transfer across the system boundary, but energy transfer takes place in or out of the system.
- The contents of a pressure cooker on a stove with its lid tightly closed and the whistle in position is a closed system as no mass can enter or leave the pressure cooker, but heat can be transferred to it.
- A bomb calorimeter only allows heat to be exchanged. Such a system is called closed.

Open System:



- In this type of system, both mass and energy, transfer takes place across the boundary of the system. Examples include pumps, compressors, reactors, distillation columns, heat exchangers, etc.
- A centrifugal pump is an open system.

83. Answer: a

Explanation:

The correct answer is Telangana.

★ Key Points

- According to the data from the economic think-tank, the Centre for Monitoring Indian Economy (CMIE), the lowest unemployment rate on January 2022 was recorded by Telangana at 0.7%.
- Haryana has the highest unemployment rate in January 2022 at 23.4%.
- It was followed by Jammu & Kashmir (15%), Rajasthan (18.9%), Tripura (17.1%), and Delhi (14.1%).
- Gujarat came in second at 1.2%, followed by Meghalaya at 1.5, Odisha at 1.8%, and Karnataka at 2.9%.

★ Additional Information

- CMIE data show that India's unemployment rate in January 2022 dramatically decreased to 6.57%.
- The rate hasn't been this low since March 2021.
- The unemployment rate increased from 6.97% in November to a four-month high of 7.91% in December 2021.
- According to area-specific data, rural unemployment fell from 7.28% in December 2021 to 5.84% in January 2022.
- 8.16% of urban residents were unemployed, down from 9.30% in December 2021.

84. Answer: a

Explanation:

The correct answer is Prayagraj.

★ Key Points

- The Yamuna river meets the Ganges river at a place called "Triveni Sangam" in Allahabad (now officially known as Prayagraj).
- A city located in the northern Indian state of Uttar Pradesh.
- This is considered a holy site for Hindus and attracts a large number of pilgrims every year.

★ Additional Information

- The Triveni Sangam is part of the Gangetic Plain.
- The Triveni Sangam is the confluence of three rivers the Ganga, the Yamuna, and the Saraswati in Prayagraj.
- This plain is also known as the Ganga-Yamuna plain as it is mainly the land between these two rivers.
- This region is drained by the Yamuna, the Ganga, and its tributaries such as.
 - The Ramganga
 - The Gomti
 - The Ghagara
 - The Gandaka, and
 - The Sharda
- This river brings deposits and sediment along with them making the plain very fertile.
- The clay soil in this region has a depth of up to 4500m.
- Rabi and Kharif crops like Rice, Wheat, Millet, Gram, etc are grown here.

85. **Answer: d**

Explanation:

The correct answer is 6 years.

★ Key Points

- State legislative council

- India has a bicameral system of legislature. Just as Parliament has two Houses, the states can also have a Legislative Council in addition to the Legislative Assembly through Article 169 of the Constitution.
- Six States having a Legislative Council: Andhra Pradesh, Telangana, Uttar Pradesh, Bihar, Maharashtra, Karnataka.
- Recently, the Jammu & Kashmir Legislative Council has been abolished through the J&K Reorganisation Bill, 2019, which reduced the State of J&K to the Union Territories of J&K and Ladakh.
- Abolition of Creation - Article 169
- The Parliament can abolish a legislative council (where it already exists) or create it (where it does not exist) by a simple majority, that is, a majority of the members of each House present and voting, if the legislative assembly of the concerned state, by a special majority, passes a resolution to that effect.
- Special majority implies
 - A majority of the total membership of the assembly and
 - A majority of not less than two-thirds of the members of the assembly present and voting.
- Under Article 171 of the Constitution, the Legislative Council of a state shall not have more than one-third of the total strength of the State Assembly, and not less than 40 members.
- As the Rajya Sabha, the legislative council is a continuing chamber, that is, it is a permanent body and is not subject to dissolution. The tenure of a Member of the Legislative Council (MLC) is six years, with one-third of the members retiring every two years.

★ Additional Information

- State Legislature
 - Chapter III of Part VI of the Constitution is concerned with the State Legislature.
 - It comprises state legislature and executives.
 - Articles 168 to 212 in Part VI of the Constitution deal with the organization, composition, duration, officers, procedures, privileges, powers, and so on of the state legislature.
 - The Legislative Assembly

- It is the popularly elected chamber and is the real Centre of power in a State.
- The maximum strength of an assembly must not exceed 500 or its minimum strength fall below 60.
- But some of the States have been allowed to have smaller Legislative Assemblies, e.g. Sikkim, Arunachal Pradesh, Goa, etc.
- The territorial constituency demarcation should be done as far as possible, such that the ratio between the population of each constituency and the number of seats allotted to it is the same all over the State.
- Apart from these general provisions, there are also special provisions concerning the representation of SC and ST.
- The duration of the Legislative Assembly is five years.
- The Governor has the power to dissolve the Assembly even before the expiry of its term.
- According to 172 Legislative Assembly, is subject to dissolution. Hence, Option 3 is correct.
- The period of five years, may, while a proclamation of emergency is in operation, be extended by the Parliament by law for a period not exceeding one year at a time and not extending in any case beyond a period of six months after the proclamation has ceased to operate (Article 172(1)).

86. Answer: d

Explanation:

The correct answer is Poverty.

★ Key Points

- The headcount ratio (HC) is the simplest way of measuring poverty.
- It gives the percentage of the population which is not above the poverty line.
- It can be formally defined as the ratio of poor people and the total population.

- The poverty gap is a ratio showing the average shortfall of the total population from the poverty line and **the minimum level of income required to secure the basic necessities for survival**.
- In other words, it reflects the intensity of poverty in a nation.
- Headcount ratio and poverty gap are indeed almost universally reported as the two basic poverty measurements, **for both temporal and cross-sectional analysis in both developed and less developed countries**.
- Though widely used, this measure of HC has serious shortcomings, as it is not very sensitive to changes in the income distribution involving poor individuals.
- To give a more appropriate picture of poverty, poverty measures based on the distance between individual incomes and the poverty line should be used.
- This is the case of the poverty gap.

87. Answer: d

Explanation:

The correct answer is Cat.

★ Key Points

- Warm-blooded animals can maintain their body temperature.
- The surface area of the animal is large and prevents heat loss, and thus it can maintain temperature.
- Warm-blooded animals are cats.
- Its surface area/volume ratio is high.
- Breathing rate and heart rate are high in warm-blooded animals.

★ Additional Information

- Cold-blooded animals cannot maintain their body temperature.
- Body temperature changes according to the environment.
- Its surface area/volume ratio is low, and thus they are unable to maintain its body temperature.
- Snakes, lizards, frogs, salamanders, and lower invertebrates are examples.

88. Answer: a

Explanation:

The correct answer is Assam.

★ Key Points

- Baishagu
 - This is a new year festival celebrated every year by the Bodo Kacharis in the month of Baisakh (mid-April).
 - The festival begins with the worship of cows on the first day and continues with the worship of their supreme God, Bathou (identified with Lord Shiva).
 - Community feast and dancing on the second day before it is concluded with a prayer at a designated place called girjasali.

★ Additional Information

- Major festivals of NE India are as follows-

State	Dance
Assam	Ambubsai festival, Bohag Bihu, Baishagu festival, Majuli festival, Dehing Patkai and Pragjyoti festival
Manipur	Yaoshang and Chavang Kut
Meghalaya	Nongkrem festival, Wangala, Bob Dylan and Aahia
Mizoram	Chapchar Kut
Nagaland	Hornbill and Moatsu
Sikkim	Saga Dawa
Tripura	Kharch Puja
Arunachal Pradesh	Solung, Losar, Murung, Mopin, Boori Boot and Monpa

89. Answer: b

Explanation:

The correct answer is Chhattisgarh.

★ Key Points

- Raut Nacha is a ceremonial dance performed mainly by the tribal community of Chhattisgarh.
- Raut Nacha is a dance performed by Yadav/yaduvanshis, a caste that considers them to be descendants of Krishna.
- The dance is close resemblance to Krishna's dance or raas Lela.
- The dance form carries with itself a sacred mythological and religious undertone revered from generations.
- The dance is very similar to the dance of Lord Krishna with gopis.
- Dancers wear bright and colourful dresses and dance at the beat of music and songs sung by other group members.

★ Additional Information

- **Karnataka:**
 - The most popular dance of Karnataka is Yakshagana (song of Yaksha).
 - Yakshagana originated in the royal courts of the Vijayanagara empire.
 - It has two forms–
 1. The Moodalopaya form is commonly performed in the eastern region.
 2. The Pudevlopaya form is more common in the western region.
 - It is strongly influenced by Vaishnava Bhakti Movement.
- **Meghalaya:**
 - Laho Dance is a folk dance of Meghalaya.
 - This northeastern state is famous for its festivities, jovial atmosphere, and music.
 - The tribal communities gather in groups to celebrate these festivals.

- Laho dance form is very famous among the Pnar tribal community in Meghalaya.
 - **Bihar:**
 - Jat-Jatin is popular in the northern parts of Bihar, especially in the regions of Mithila.
 - This dance form is unique in its representation of the tender love and quarrel of a married couple.
-

90. **Answer: d**

Explanation:

The correct answer is Finance.

★ Key Points

- **The Appropriation Bill, 2022 was introduced in the Lok Sabha on 24 March 2022 by the Ministry of Finance.**
 - The Appropriation Bill gives power to the government to withdraw funds from the Consolidated Fund of India for fulfilling the expenditure during the financial year.
 - The government cannot withdraw money from the Consolidated Fund of India till the implementation of the appropriation bill.
 - To meet the direct expenses the Constitution has authorized the Lok Sabha to make any grant in advance for a part of the financial year. This provision is known as the 'Vote on Account'
 - As per Article 114 of the Constitution, the government can withdraw money from the Consolidated Fund only after receiving approval from Parliament.
-

91. **Answer: d**

Explanation:

The correct answer is Suresh Mukund.

★ Key Points

- The Emmy Award-nominated Indian choreographer Suresh Mukund, has won the 10th Annual 'World Choreography Award 2020', (also known as Choreo Awards), becoming the first Indian to win the prestigious honour.
- He won the award in the 'TV REALITY SHOW/COMPETITION' category, for his work on the hit American TV reality show 'World of Dance'.
- Mukund is the director and choreographer of the Indian dance crew 'The Kings', which won the 2019 season of World of Dance.
- The World Choreography Awards, famously known as the "Oscars of Dance", takes place every year, in Los Angeles, to showcase the most innovative and original works by the world's best choreographers featured in television, film, commercials, digital content, and music videos.

★ Additional Information

- Pandit Birju Maharaj was an Indian dancer, composer, and singer.
 - Pandit Birju Maharaj was honoured with the Padma Vibhushan in 1986.
 - He was a descendant of the Maharaj family of Kathak dancers.
 - Pandit Birju Maharaj is the face of the Kalka-Bindadin Gharana of Lucknow.
- The multi-talented actor, director, producer and choreographer **Prabhu Deva**, also known as Michael Jackson of India was awarded the prestigious Padma Shri award in the year of 2019.
- Saroj Khan has choreographed nearly 2000 songs in a career of over four decades.
 - She won 3 National Awards in 2002, 2005, and 2007.

92. Answer: d

Explanation:

The correct answer is Bankim Chandra Chatterjee.

★ Key Points

- The National song of India, 'Vande Matram' was written by Bankim Chandra Chatterjee.
- Vande Mataram was taken from Anand Math. Anand Math also depicts the Sanyasi revolt.
- It was written by Bankim Chandra Chatterjee in the Bengali language in 1882.
- The title 'Vande Matram' means "I praise the Mother".
- It was sung for the first time at the Congress session at Calcutta in 1896 under the Presidentship of Rahimtullah M. Sayani.
- The original Vande Matram comprises of 6 stanzas.

★ Additional Information

- When Bhagat Singh was in prison in 1930–1931 his inmate Randhir Singh tried to convince him of the existence of God and when he failed to do so, he said to Bhagat Singh you have developed an ego which is standing between you and God.
 - In his defence, he wrote an essay titled "Why I am an Atheist" to address whether his atheism was born out of vanity.
- **Bal Gangadhar Tilak** also known as Lokmanya was a famous Extremist leader from Maharashtra.
 - He was born on 23 July 1856.
 - He completed his graduation with B.A. from Deccan College.
 - He established New English School in Pune in 1880.
 - In 1881 he started Kesari (in Marathi) and Maratha (in English) newspapers.
- Books are written by Mahatma Gandhi:
 - The Story of My Experiments with Truth (1927).
 - Hind Swaraj (1909).
 - India of my dreams (1947).
 - Satyagraha in South Africa (1928).

93. Answer: a

Explanation:

The correct answer is Deepika Padukone.

★ Key Points

- **Deepika Padukone** was honoured on the 28th March 2022 night at the **TIME 100 impact awards**.
- This is the second honour by TIME magazine for the actress.
- She was honoured for her work on mental health through her organisation's 'Live Love Laugh' foundation.

★ Additional Information

- Recent Awards and Honours:
 - Reserve Bank of India (RBI) Governor Shaktikanta Das received the 'Governor of the Year' 2023 Award by the international publication Central Banking on 17 March 2023.
 - Tamil writer Sivasankari has been selected for Saraswati Samman for 2022 for her book Survyva Vamsam.
 - GSM Association (GSMA) has conferred Government Leadership Award 2023 to India for implementing best practices in telecom policy and regulation.
 - Dr Mahendra Kumar Mishra, an Indian educator and social worker, was awarded International Mother Language Award on 21 February 2023.
 - Veteran Journalist Dr A.B.K. Prasad has been chosen for the prestigious "Raja Ram Mohan Roy National Award" for excellence in Journalism.
 - MRF Ltd. Chairman and Managing Director K.M. Mammen was presented the ATMA Lifetime Achievement Award by Maruti Suzuki India MD Hisashi Takeuchi.
 - VP Nandakumar, Managing Director & CEO of Manappuram Finance Ltd has been awarded the Hurun India's award 2022 for his remarkable achievements in the world of business.

94. Answer: b

Explanation:

The correct answer is Ghod

★ Key Points

- Inamgaon is an archaeological site located in the Pune district of Maharashtra.
- The site is located on the Bank of River Ghod.
- The excavations have revealed their association with Malwa Culture, Early Jorwe Culture, and Late Jorwe Culture which correspond to **1600 to 1400 BC, 1400 to 1000 BC, and 1000 to 700 BC respectively.**
- The majority of earthenware found there corresponds to Malwa Culture i.e. Black Painted Red Ware.
- The house structure corresponds to all three cultures.
- The site is also famous for the strange burial of 35 years old man.
- The skeletal remains of a man which date back to 1000 BC were placed in a four-legged jar and were buried in the courtyard of a house.

95. Answer: b

Explanation:

Correct Answer **8 foot**

★ Key Points

According to the Football Association, an adult goal should have posts that are 8 foot high and a crossbar that is 24 foot long.

Football:

- It is also called association football or soccer.
- This game involves two teams of 11 players who try to maneuver the ball into the other team's goal without using their hands or arms.
- The team that scores more goals wins.
- Football is the world's most popular ball game in number of participants and spectators.

- Football is a game where we use our foot to kick, pass or dribble the ball for the full game except for the goalkeeper (who can use their full body).

Explanation:

Ball:

- According to law 2 by FA:
- All balls must be:
 - spherical.
 - made of suitable material.
 - of a circumference of between 68 cm (27 ins) and 70 cm (28 ins).
 - between 410 g (14 oz) and 450 g (16 oz) in weight at the start of the match.
 - of a pressure equal to 0.6 – 1.1 atmosphere (600 – 1,100g/cm²) at sea level (8.5 lbs/sq in – 15.6 lbs/sq in)
- All balls used in matches played in an official competition organized under the auspices of FIFA or confederations must meet the requirements and bear one of the marks of the FIFA Quality Programme for Football.
- According to the book, "Encyclopedia of British football"
 - It was agreed in 1872 that a ball must be spherical with a circumference of 68-71 cm.
 - It also had to be cased in leather or other approved material.
 - It had to weigh between 453-396g at the start of the game.

Dimension(Goal-post):

- A goalpost is situated at the end line on each side.
- The goal area consists of the rectangle formed by the goal line.
- Two lines start on the goal-line 5.5 meters (6 yds) from the goalposts.
- It extends 5.5 meters (6 yds) into the pitch from the goal line, and the line joins these.
- It forms a rectangle of 6yds by 20yds.

Thus, the Goal Area of Football is 6yds X 20 yds.

History:

★ Additional Information:

- In the year 1930, the First FIFA World Cup was first inaugurated.
- It took place in Uruguay from 13 to 30 July 1930.
- All matches were played in the Uruguayan capital, Montevideo.

Duration of a football match:

- A football match lasts for two equal halves of 45 minutes.
- It may only be reduced if agreed between the referee and the two teams before the start of the match and is in accordance with competition rules.
- It has a break of 15 minutes also called 'half-time'

96. Answer: a

Explanation:

Correct Answer **Twinkle Khanna**

★ Key Points:

- The "**Legend of Lakshmi Prasad**" is a collection of **four stories on feminism** written by Indian author **Twinkle Khanna**.
- The book was published on **7 November 2016** by **Juggernaut books**.
- Book written by her was **Mrs. Funny bones, Pyjamas are Forgiving**.

Dr. APJ. Abdul Kalam:

★ Additional Information:

- "Wings of Fire" is the autobiography of **Dr. APJ. Abdul Kalam**
- Notable works are:
 - The luminous spark.
 - India 2020.
 - Mission India
 - **Ignited Minds**.
 - **Indomitable Spirit**.
 - **Inspiring Thoughts**.

Other Important authors and their work:-

Author	Books
Jawahar Lal Nehru	<ul style="list-style-type: none"> • Discovery of India • Before Freedom • Letters for a Nation • Glimpses of world history
Moti Lal Nehru	<ul style="list-style-type: none"> • The voice of freedom
Swami Vivekanand	<ul style="list-style-type: none"> • Karma yoga • My Master • Raja yoga • Jana yoga • Bhakti yoga • Meditation and its Methods.

97. Answer: a

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Explanation:

The correct answer is Intensive farming.

★ Key Points:

- An intensive type of farming is practised in areas of high population pressure on land.
- **Intensive farming or intensive agriculture** also known as **industrial agriculture** is characterized by a **low fallow ratio** and higher use of inputs such as **capital and labour per unit of land area**.

- This is in **contrast to traditional agriculture** in which the **inputs per unit of land are lower**.
- It is labour-intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production.
- Intensive subsistence farming yields two types of crops- wet and dry.
- While the wet crops include paddy, the dry ones vary from wheat, pulses, maize, and millets, to sorghum, soya beans, tubers, and vegetables.
- Extensive farming is done in those countries where the landholding size is large e.g. the United States, Canada, etc.
- Extensive farming is almost absent in India except in a few states such as **Punjab, Haryana, and Uttar Pradesh**.

Subsistence farming

★ Additional Information:

- Subsistence agriculture is practised on small patches of land with the help of primitive tools like hoe, dao and digging sticks, and family/community labour.
- This type of farming depends upon monsoon, natural fertility of the soil and suitability of other environmental conditions for the crops grown.

Plantation Farming

- Plantation Farming is farming in an estate where a single cash crop is grown for sale.
- Examples are **Tea, Coffee, Rubber, Bananas, and Spices**.

Shifting cultivation

- Shifting cultivation is a form of agricultural practice in which farmers clear an area of land by slashing vegetation and burning forests for agricultural purposes.
- Shifting cultivation is a mode of farming long followed in the humid tropics.
- This is the practice of planting crops in the exposed, ash-fertilized soil for two or three seasons in succession.

- As the original organic matter reserve in the topsoil decomposed and as the high rainfall would leach out the nutrients from the root zone, the farmers would abandon the cleared plot and move to an adjacent patch of forest.
- This practice is also known as slash-and-burn agriculture or slash-and-burn cultivation.

Different names of the shifting cultivation by countries:

Sr. No.	Country	Shifting Agriculture
1	India	Jhum
2	Central America	Milpa
3	Brazil	Roca
4	Indonesia	Ladang

98. Answer: c

Explanation:

Correct Answer **Mediterranean Sea**

★ Key Points

Mediterranean Sea:

- It separates Europe from Africa, through the Strait of Gibraltar.
- It connects to the Atlantic Ocean.
- It has often been called the **incubator** of Western civilization.
- This ancient "sea between the lands" occupies a deep, elongated, and almost landlocked irregular depression lying between latitudes and longitudes.
- It includes the Sea of Marmara and occupies an area of approximately 970000 square miles.
- To the northeast, it is connected with the Black Sea through the Dardanelles, the Sea of Marmara, and the strait of Bosphorus.

- To the southeast, it is connected with the Red Sea by the Suez Canal.

The Red Sea –

★ Additional Information

- The Red Sea and the Gulf of Aden were formed as the Arabian plate separated from Nubia, as Nubia obliquely collided with the Eurasian plate.
 - NE-directed extension between 35–27Ma leads to continental rifting along the line of the Red Sea and the Gulf of Aden.
- The origin of the Red Sea's name is that it contains cyanobacteria called *Trichodesmium erythraeum*, which turns the normally blue-green water reddish-brown.

Caspian Sea

- The Caspian Sea, which is frequently referred to as the largest lake or a true sea, is the largest inland body of water in the entire planet.
- An endorheic basin, it is located between Europe and Asia, which is bordered by the Caucasus Mountains to the east, the Iranian Plateau to the north, the rich plains of Southern Russia to the south, and the wide steppe of Central Asia to the west.
- With the exception of the extremely salty lagoon of Garabogazköl to the east, it has a surface area of 143,550 sq mi (372,000 km²) and a volume of 78,200 km³.
- The natural heritage of the Caspian sea is shared by five countries including, **Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan.**
- Kazakhstan to the northeast, Russia to the northwest, Azerbaijan to the southwest, Iran to the south, and Turkmenistan to the southeast form the borders of the Caspian Sea.
- The Caspian Sea is famous for its caviar and oil industries and is home to a variety of species.

Black Sea:

- The Black Sea is in the Atlantic Ocean.
- The Black Sea, Russian and Bulgarian Chernoye More, Ukrainian Chorne More, Turkish Karadeniz, Romanian Marea Neagră, large inland sea situated at the

southeastern extremity of Europe.

- It is bordered by Ukraine to the north, Russia to the northeast, Georgia to the east, Turkey to the south, and Bulgaria and Romania to the west.
- The roughly oval-shaped Black Sea occupies a large basin strategically situated at the southeastern extremity of Europe but connected to the distant waters of the Atlantic Ocean by the Bosphorus (which emerges from the sea's southwestern corner), the Sea of Marmara, the Dardanelles, the Aegean Sea, and the Mediterranean Sea.
- Danube, Dnieper, and Don via the Sea of Azov Rioni, Kodori and Inguri Chorokh, Kyzyl-Irmak, Eshil-Irmak, Sakarya, Southern Bug and Dnister are the rivers that flow in the Black sea.



99. Answer: a

Explanation:

The correct answer is **Badami**.

★ Key Points

- The earliest Chalukyas with their capital at Badami (Vatapi) in Karnataka.
- They ruled from mid-6th They declined after the death of their greatest king, PulakesinII in 642 AD.
- They were known as Badami Chalukyas.

Chalukya Rulers:

★ Additional Information:

- Jayasimha was the **first ruler** of the **Chalukyas**.
- Pulakesin I(**Reign: 543 AD – 566 AD**)
 - Founded the empire with his capital at **Vatapi**.
 - Performed **Ashwamedha**.
- Kirtivarman I(**Reign: 566 AD – 597 AD**)
 - Son of **Pulakesin I**.
 - Conquered **Konkan and northern Kerala**.
- Mangalesha (**Reign: 597 AD – 609 AD**)
 - Brother of **Kirtivarman I**.
 - Conquered the **Kadambas and the Gangas**.
 - Was killed by his nephew and son of **Kirtivarman, Pulakesin II**.
- Pulakesin II (609 AD – 642 AD)
 - The **greatest** of the **Chalukya kings**.
 - Extended the Chalukya rule to most parts of the Deccan.
 - He is famous for stopping Northern king Harsha in his tracks while he was trying to conquer southern parts of the country.
 - He had defeated the **Pallava king Mahendravarman I** but was defeated and killed by **Mahendravarman's son** and successor Narasimhavarman I in a series of battles he had with the Pallavas.

Buddhist Council:

Buddhist Council	Time	Place	Ruler	President
First	483 BCE	Rajgriha	Ajatashatru	Mahakasyapa
Second	383 BCE	Vaisali	Kalasoka	Sabbakami
Third	250 BCE	Patliputra	Ashoka	Mogaliputta Tissa
Fourth	1 st CE	Kashmir	Kanishka	Vasumitra

Pallava Dynasty:

- Kanchipuram in Tamil Nadu was the capital of the Pallava dynasty.
- The Pallava dynasty ruled over parts of southern India from 275 CE to 897 CE.

100. Answer: c

Explanation:

The correct answer is Madhya Pradesh.

Bharhut Stupa

★ Key Points

- Bharhut is well-known for the Buddhist stupa (shrine) ruins that Major General Alexander Cunningham found there in 1873.

- The Indian Museum in Kolkata and the Municipal Museum in Allahabad currently house the majority of the stupa's sculpture remnants.
- The stupa was likely started during the reign of Ashoka (c. 250 bce).
- The Mauryan king Ashoka may have constructed the Bharhut stupa for the first time in the third century BCE, but many decorative elements—particularly the doorway and railings—appear to have been added during the Shunga period, with many reliefs dating to the second century BCE or later.

Madhya Pradesh

- Geographically, this location is located at 23° 31' 0" North and 80° 57' 0" East in Shahdol, Madhya Pradesh, India.
- Its original name is Bharhut.
- From roughly 268 to 232 BCE, Ashoka the Great, an Indian ruler of the Maurya Empire and the son of Bindusara, governed nearly the entire Indian subcontinent.
- In ancient Asia, Ashoka encouraged the spread of Buddhism.
- With more than 72 million inhabitants, Madhya Pradesh is the fifth most populous and second-largest state in India by area. Uttar Pradesh, Chhattisgarh, Maharashtra, Gujarat, and Rajasthan are its neighbours to the northeast, east, south, west, and northwest, respectively.

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