



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



BPSC



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

SSC CHSL 2021 (Tier-I) Previous Year Paper (03-Jun-2022) (Shift 1)

Total Time: 1 Hour

Total Marks: 200

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	English Language	25	50	0.5	2
2	General Intelligence	25	50	0.5	2
3	Quantitative Aptitude	25	50	0.5	2
4	General Awareness	25	50	0.5	2

- 1.) A total of 60 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.

English Language

1. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+2, -0.5)

In 1920s, new technology has allowed filmmakers to attach to each film a soundtrack of speech.

- a. allowed
- b. has allowed
- c. was allowed
- d. No substitution required

-
2. Select the INCORRECTLY spelt word (+2, -0.5)

- a. Spacios
- b. Lyre
- c. Irrespective
- d. Soluble

-
3. Select the most appropriate meaning of the given idiom. (+2, -0.5)

Get away

- a. To equalise
- b. To fall off
- c. To visit

d. To leave

4. Select the option that expresses the given sentence in active voice. (+2, -0.5)

The disabled should not be oppressed.

- a. The disabled have not been oppressed
 - b. Do not oppress the disabled
 - c. Let not the disabled be oppressed.
 - d. We should not be oppressing the disabled
-

5. Select the most appropriate ANTONYM of the given word. (+2, -0.5)

Attract

- a. Flex
 - b. Repel
 - c. Rash
 - d. Destroy
-

6. Select the most appropriate meaning of the given idiom. (+2, -0.5)

Between Scylla and Charybdis

- a. Between two favours
- b. Between two charms
- c. Between two possibilities

d. Between two dangers

7. Select the most appropriate option to fill in the blank. (+2, -0.5)

We love to swing from the branches _____ the pond.

- a. over
 - b. on
 - c. in
 - d. under
-

8. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+2, -0.5)

Is he remembering our help?

- a. No substitution required
 - b. Did he remembered
 - c. Has he remember
 - d. Does he remember
-

9. Select the INCORRECTLY spelt word. (+2, -0.5)

- a. Audasious
- b. Incredible

- c. Baffling
 - d. Prevalent
-

10. Select the INCORRECTLY spelt word. (+2, -0.5)

- a. Retrospect
 - b. Guarmet
 - c. Magnanimous
 - d. Clandestine
-

11. Select the most appropriate meaning of the given idiom. (+2, -0.5)

Be at a loose end

- a. Defining moment
 - b. On a turning point
 - c. In much trouble
 - d. To have nothing to do
-

12. Select the option that can be used as a one-word substitute for the given group of words. (+2, -0.5)

Lasting for a very short period of time

- a. Permanent
- b. Ceaseless

- c. Pungent
 - d. Ephemeral
-

13. Select the sentence which has no spelling error. (+2, -0.5)

- a. She has her own vockbulary words from English and Hindi.
 - b. Reading stories developed her vocabluary.
 - c. Vocabulary raises the standard of the English language.
 - d. He incorporates daily vocablary in his gestures.
-

14. The following sentence has been split into four segments. Identify the segment that contains a grammatical error. (+2, -0.5)

After he had / ate that lobster,/ he began to / feel sick

- a. feel sick
 - b. ate that lobster
 - c. After he had
 - d. he began to
-

15. Select the most appropriate synonym of the word given in the brackets to fill in the blank. (+2, -0.5)

It will be _____ (illogical) to accept the demands of the protesters this time

- a. unfavourable

- b. absurd
 - c. biased
 - d. factual
-

16. Select the option that expresses the given sentence in active voice. (+2, -0.5)

I was not hired by her.

- a. She did not hire me.
 - b. She was not hired
 - c. She was not been hired me.
 - d. She was not hiring me.
-

17. Select the most appropriate meaning of the underlined word in the given sentence. His strategy is to protract negotiations until the enemy are exhausted while assembling the forces necessary to crush them (+2, -0.5)

- a. Prolong
 - b. Cease
 - c. Accept
 - d. Control
-

18. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+2, -0.5)

She shall complete her graduation by 2023.

- a. shall have completed
- b. No substitution required
- c. will be completed
- d. would complete

19. Select the INCORRECTLY spelt word

(+2, -0.5)

- a. Commisarate
- b. Decennial
- c. Nausea
- d. Curriculum

20. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

(+2, -0.5)

- A. It provides a high-quality learning opportunity, improves student outcomes and skills, and expands educational choice options
 - B. Therefore, location, time, and quality are no longer considered factors in seeking degree courses or higher education because of online education.
 - C. Online education is an amenable instructional delivery process that includes any learning that takes place via the internet.
 - D. Its potential advantages involve increased educational access.
- a. ABCD

- b. DCAB
- c. CDAB
- d. CBDA

21. **Direction:** In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. Readers have been (1) _____ conditioned that they feel embarrassed to admit that they find it hard (2) _____ stomach the work of a literary giant for fear it would betray their plebian taste. The (3) _____ is that a few read, and fewer enjoy, the novels of those who sit on the literary pedestal. We have (4) _____ ourselves to be persuaded that a book with a story can't be quite in the same class as a book that leaves us to (5) _____ what is unsaid. (+2, -0.5)

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

- a. well
- b. deeply
- c. rightly
- d. so

22. **Direction:** In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. Readers have been (1) _____ conditioned that they feel embarrassed to admit that they find it hard (2) _____ stomach the work of a literary giant for fear it would betray their plebian taste. The (3) _____ is that a few read, and fewer enjoy, the novels of those who sit on the literary pedestal. We have (4) _____ ourselves to be persuaded that a book with a story can't be quite in the same class as a book that leaves us to (5) _____ what is unsaid. (+2, -0.5)

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

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

23. **Direction:** In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. Readers have been (1) _____ conditioned that they feel embarrassed to admit that they find it hard (2) _____ stomach the work of a literary giant for fear it would betray their plebian taste. The (3) _____ is that a few read, and fewer enjoy, the novels of those who sit on the literary pedestal. We have (4) _____ ourselves to be persuaded that a book with a story can't be quite in the same class as a book that leaves us to (5) _____ what is unsaid. (+2, -0.5)

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

- a. story
- b. term
- c. myth
- d. fact

24. **Direction:** In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. Readers have been (1) _____ conditioned that they feel embarrassed to admit that they find it hard (2) _____ stomach the work of a literary giant for fear it would betray their plebian taste. The (3) _____ is that a few read, and fewer enjoy, the (+2, -0.5)

novels of those who sit on the literary pedestal. We have (4) _____ ourselves to be persuaded that a book with a story can't be quite in the same class as a book that leaves us to (5) _____ what is unsaid.

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

- a. cared
- b. allowed
- c. thrown
- d. transited

25. **Direction:** In the following passage, some words have been deleted. Read (+2, -0.5)

the passage carefully and select the most appropriate option to fill in each blank. Readers have been (1) _____ conditioned that they feel embarrassed to admit that they find it hard (2) _____ stomach the work of a literary giant for fear it would betray their plebian taste. The (3) _____ is that a few read, and fewer enjoy, the novels of those who sit on the literary pedestal. We have (4) _____ ourselves to be persuaded that a book with a story can't be quite in the same class as a book that leaves us to (5) _____ what is unsaid.

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

- a. deny
- b. malign
- c. interpret
- d. accept

General Intelligence

26. 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 fourth term related to third term. (+2, -0.5)

16 : 576 :: 8 : 80 :: 22 : ?

- a. 1455
- b. 1452
- c. 1458
- d. 1456

-
27. Which of the following numbers will replace the question mark (?) in the given series? (+2, -0.5)

10, 21, 35, 56, 90, 145, 231, 360, ?

- a. 436
- b. 546
- c. 463
- d. 564

-
28. Two different positions of the same dice are shown, the six faces of which are numbered from 11 to 16. Select the number that will be on the face opposite to the one showing '14'. (+2, -0.5)



- a. 11
- b. 12
- c. 16
- d. 15

29. Two different positions of the same dice are shown, the six faces of which are numbered from 1 to 6. Select the number that will be on the face opposite to the one showing '2'. (+2, -0.5)



- a. 5
- b. 3
- c. 1
- d. 6

30. Select the option that is related to the fourth term in the same way as the first term is related to the second term and the fifth term is related to the sixth term (+2, -0.5)

8 : 508 :: ? : 2193 :: 2 : 4

a. 17

b. 13

c. 19

d. 15

31. In a certain code language, "IS" is coded as "169", and "AM" is coded as "11". (+2, -0.5)
How will "IN" be coded in that language?

a. 23

b. 124

c. 128

d. 126

32. The second number in the given number-pairs is obtained by performing (+2, -0.5)
certain mathematical operation(s) on the first number. The same
operation(s) is/are followed in all the number-pairs, except one. Find that
odd number-pair.

a. 3 : 16

b. 6 : 49

c. 12 : 169

d. 9 : 64

33. In a certain code language, 'RESET' is written as '36538540' and 'START' is (+2, -0.5)
written as '384013640'. How will 'STOP' be written in that language?

- a. 38401532
- b. 38401516
- c. 38401632
- d. 38403032

34. Select the mirror image of the given combination when the mirror is placed at MN as shown in the figure. (+2, -0.5)



- a. 3w8e4h
- b. 3w8e4h
- c. 3w8e4h
- d. 3w8e4h

35. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series. (+2, -0.5)

BE _ KPC _ HKP _ EHKP _ EHKP

- a. FEQH

b. F D Q H

c. H D Q E

d. H E D E

36. Select the correct mirror image of the given combination when the major is placed at MN as shown below. (+2, -0.5)



a.

h47r7y5

b.

h47r7y5

c.

h47r7y5

d.

h47r7y5

37. Three Statements are given followed by Three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements. (+2, -0.5)

Statements:

All cakes are sweets.

No sweet is a biscuit.

Some chocolates are biscuits.

Conclusions:

I. Some biscuits are cakes.

II. Some chocolates are sweets.

III. No cake is a chocolate.

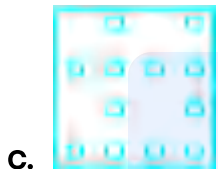
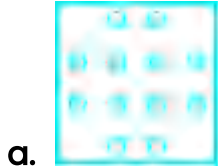
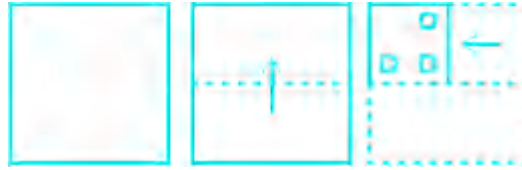
- a. Only conclusion II follows.
- b. None of the conclusions follow.
- c. Both conclusions I and III follow
- d. Both conclusions I and II follow

38. Which letter-cluster will replace the question mark (?) to complete the given series? (+2, -0.5)

SYGZ, NIRT, ?, DCNH, YMYB

- a. ITXN
- b. ISCN
- c. JTZN
- d. JSVN

39. A paper is folded and cut as shown. How will it appear when unfolded? (+2, -0.5)



Your Personal Exams Guide

40. Select the set in which the numbers are related in the same way as are the numbers of the following set. (+2, -0.5)

(45, 9, 12)

(21, 3, 14)

(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)

- a. (55, 5, 11)
- b. (66, 6, 17)
- c. (80, 10, 15)
- d. (70, 5, 13)

41. Which of the following numbers will replace the question mark (?) in the given series? (+2, -0.5)

762, 755, 741, 720, 692, ?

- a. 657
- b. 655
- c. 664
- d. 641

42. 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. (+2, -0.5)

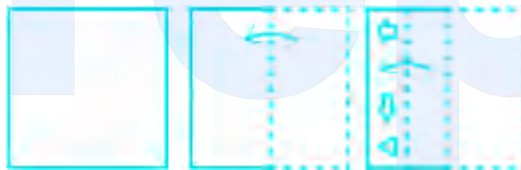
UNCLEAR : CNULRAE :: PRIVACY : IRPVYCA :: NUCLEAR : ?

- a. CUNLREA
- b. CUNLRAE
- c. UNCLRAE
- d. NLCURAE

43. The second number in the given number pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) are followed in all the number pairs, except one. Find that odd number pair (+2, -0.5)

- a. 25 : 5
- b. 80 : 4
- c. 36 : 3
- d. 12 : 2

44. A paper is folded and cut as shown below. How will it appear when unfolded? (+2, -0.5)



- a.
- b.
- c.



d.

45. If 15 July 2002 is a Monday, then what will be the day of the week on 16 October 2005? (+2, -0.5)

- a. Sunday
- b. Saturday
- c. Monday
- d. Tuesday

46. If 'A' denotes '+', 'B' denotes '×', 'C' denotes '−' and 'D' denotes '÷', then what will come in place of '?' in the following equation? (+2, -0.5)

$$(84 \text{ D } 14) \text{ A } 17 \text{ C } 13 \text{ B } (75 \text{ D } 15) \text{ A } 9 \text{ B } 7 = ?$$

- a. 23
- b. 17
- c. 13
- d. 21

47. In a certain code language, 'ELBOW' is written as 'DLYOV' and 'ANKLE' is written as 'VOPMZ'. How will 'WRIST' be written in that language? (+2, -0.5)

- a. GHRID

- b. IRWST
 - c. TSEIW
 - d. GHRJC
-

48. A is the brother of C. B is the only sister of D who is the maternal uncle of C. If E is the father of C, then how is A related to B? (+2, -0.5)

- a. Nephew
 - b. Uncle
 - c. Cousin
 - d. Son
-

49. Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term. (+2, -0.5)

27 : 75 :: 45 : ? :: 39 : 111

- a. 129
 - b. 136
 - c. 118
 - d. 139
-

50. 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. (+2, -0.5)

64 : 18 :: 196 : 24 :: 529 : ?

- a. 30
- b. 35
- c. 39
- d. 33

Prepp

Your Personal Exams Guide

Quantitative Aptitude

51. Manoj and his wife Swathi fill a tank with water fetched from a well. Manoj fetches 5 litres of water in 4 minutes whereas Swathi fetches 4 litres of water in 5 minutes. Find the time taken by them together to fetch 205 litres of water. (+2, -0.5)
- 2 hours
 - 80 minutes
 - 100 minutes
 - 1 hour 30 minutes
-
52. If ABC is a triangle in which $DE \parallel BC$ and $AD : DB = 9 : 8$, then $DE : BC$ is (+2, -0.5)
-
- 9 : 17
 - 9 : 15
 - 8 : 17
 - 9 : 13
-
53. A group of 36 students has an average present age of 14 years. When the age of the teacher is included, the average age rises by one. Calculate the teacher's age (in years). (+2, -0.5)
- 53
 - 54

c. 52

d. 51

54. A die is thrown 1,000 times with the frequencies for the outcomes 1, 2, 3, 4, 5 and 6 as given in the following table. How many times is the number appearing on the die greater than or equal to 5? (+2, -0.5)

Outcome	1	2	3	4	5	6
Frequency	179	150	157	149	175	190

a. 365

b. 535

c. 190

d. 356

55. if $a^2 + b^2 + \frac{1}{a^2} + \frac{1}{b^2} = 4$, $a \neq 0$, $b \neq 0$, then the value of $a^4 + b^4$ is: (+2, -0.5)

a. 32

b. 256

c. 64

d. 2

56. In an election between two candidates, 15% of the voters did not cast their votes and 10% of the votes polled were found invalid. The successful (+2, -0.5)

candidate got 55% of the valid votes and won by a majority of 6120 votes.
The number of voters enrolled on the voters list was:

- a. 70000
- b. 80000
- c. 72000
- d. 75000

57. Four runners started running simultaneously from a point on a circular track. They took 400 seconds, 600 seconds, 720 seconds and 900 seconds to complete one round. After how much time did they meet at the starting point for the first time since the race started? (+2, -0.5)

- a. 4200 sec
- b. 2400 sec
- c. 3600 sec
- d. 1800 sec

58. The marked price of a laptop is ₹50,000. A shopkeeper gives the following four schemes of discount to his customers. Which one is more beneficial to the customers? (+2, -0.5)

- i) Discount of ₹10,000
- ii) Discount of flat 25%
- iii) Discount of 10% of 10%
- iv) Discount of 15% of 10%

- a. i
- b. iv
- c. ii
- d. iii

59. if $x + \frac{1}{x} = 10$, then find the value of $\frac{7x}{x^2+1-8x}$. (+2, -0.5)

- a. 3.5
- b. 4.5
- c. 2.5
- d. 5.5

60. A woman sold her earphone for ₹2,000 and got a percentage profit equal to the numerical value of cost price. The cost price of the earphone is: (+2, -0.5)

- a. ₹500
- b. ₹200
- c. ₹600
- d. ₹400

61. Simplify : $450 + 752 - 125 \times \frac{3}{100}$ of $1000 - \{650 \div (16 - 3)\}$ (+2, -0.5)

- a. 3200
- b. 2598

c. -3750

d. -2598

62. 64% of the students of a class are girls and 81.25% of the girls have chosen soccer as their favourite sport. If 143 girls have chosen soccer as their favourite sport, what is the total number of students in the class? **(+2, -0.5)**

a. 270

b. 280

c. 300

d. 275

63. The ratio of the distances Ravina and Suhel had to travel from their respective houses to their workplaces was 4 : 7. If Suhel had to travel 63 km, how much did Ravina have to travel? **(+2, -0.5)**

a. 40 km

b. 32 km

c. 39 km

d. 36 km

64. If a solid piece of iron in the form of a cuboid, of dimensions 49 cm × 33 cm × 24 cm, is moulded to form a solid sphere, then the radius of the sphere is _____. [Use $\pi = 22/7$] **(+2, -0.5)**

a. 16 cm

- b. 10 cm
 - c. 18 cm
 - d. 21 cm
-

65. The average of 16 numbers is 23. The average of the first 7 numbers is 21 and that of the last 8 numbers is 24. Find the 8th number. (+2, -0.5)

- a. 28
 - b. 27
 - c. 29
 - d. 26
-

66. A retailer offers the following discount schemes for an article to his customers. (+2, -0.5)

- A. Two equal successive discounts of 15% .
- B. Two successive discounts of 12% and 18%.
- C. Buy 7 articles and get 3 free.

Which scheme is favorable to a customer? (assuming buys articles in a multiple of 10)

- a. Only A
- b. Only C
- c. Both A and C are the same
- d. Only B

67. If $\operatorname{cosec} \theta + \cot \theta = 5$, then $\operatorname{cosec} \theta$ is equal to _____.

(+2, -0.5)

- a. $(5 + \frac{1}{5})$
- b. $\frac{1}{2}(3 + \frac{1}{3})$
- c. $\frac{1}{2}(5 + \frac{1}{5})$
- d. $(3 + \frac{1}{3})$

68. Champa buys type 1 sugar at ₹45 per kg. He mixes it with type 2 sugar having a price of ₹48 per kg. The final mixture becomes worth ₹46 per kg. What is the ratio of the quantities of type 1 sugar to type 2 sugar in the final mixture?

(+2, -0.5)

- a. 1 : 2
- b. 2 : 3
- c. 3 : 2
- d. 2 : 1

69. The height of a right circular cone is 6 cm and its base diameter is 16 cm. Find the volume of this cone.

(+2, -0.5)

- a. $384 \pi \text{ cm}^3$
- b. $786 \pi \text{ cm}^3$
- c. $128 \pi \text{ cm}^3$
- d. $512 \pi \text{ cm}^3$

70. If the length of the diagonal of a cube is $6\sqrt{3}$ cm, length of the edge of the cube is: (+2, -0.5)

- a. 6 cm
- b. 4 cm
- c. 2 cm
- d. 3 cm

71. If the 9-digit number $5p42978n6$ is divisible by 72, what is the value of $(2p - 1)$, where n is the second largest of all the possible values of n ? Given that p and n are natural numbers. (+2, -0.5)

- a. 17
- b. 21
- c. 15
- d. 11

Your Personal Exams Guide

72. The table below gives the profit/loss of a company during each of five consecutive years. Study the table and answer the question that follows. [Note: A negative value will denote a loss.] (+2, -0.5)

Year	2016	2017	2018	2019	2020
Profit/Loss (in Rs. lakh)	20	30	-10	-5	35

What was the total profit or loss of the company during the last three years given in the table, taken together?

- a. Profit of Rs.25 lakhs
- b. Loss of Rs.20 lakhs
- c. Profit of Rs.40 lakhs
- d. Profit of Rs.20 lakhs

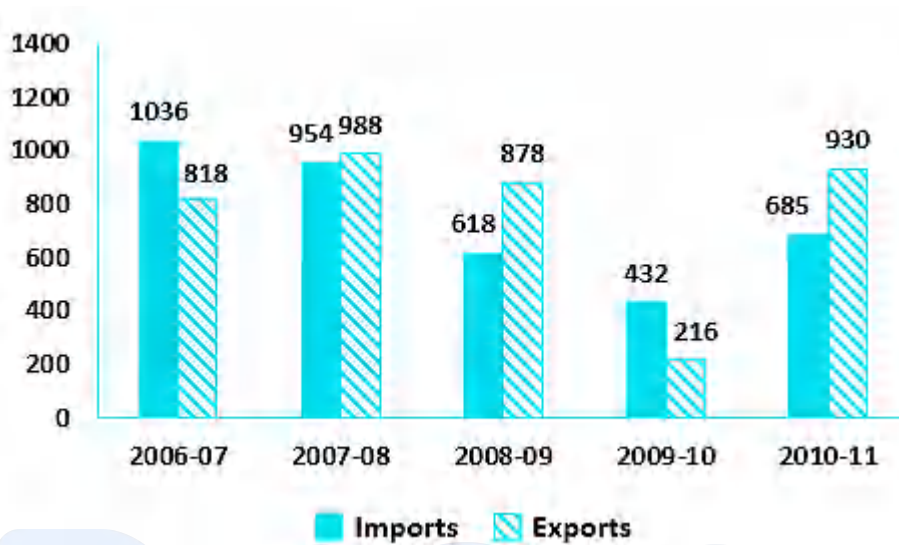
73. If $x - 2y = 3$ and $2xy = 5$, then find the value of $(x + 2y)^2$ (+2, -0.5)

- a. 29
- b. 27
- c. 30
- d. 28

74. A sum of money amounts to ₹4,624 in 2 years and to ₹4,913 in 3 years at a certain rate of interest, when interest is compounded per annum. The sum is ----- (+2, -0.5)

- a. ₹4,412
- b. ₹4,335
- c. ₹4,260
- d. ₹4,096

75. Study the following graph which shows imports and exports (in ₹ crores) of a company during 2006-07 to 2010-11 and answer the question. (+2, -0.5)



In which of the following years was (Imports-Exports) minimum?

- a. 2010-11
- b. 2009-10
- c. 2008-09
- d. 2006-07

General Awareness

76. Padma Bhushan awardee Ustad Sabri Khan was a _____ player. (+2, -0.5)

- a. sarangi
- b. Flute
- c. santoor
- d. Sarod

77. In which month of 2021 was the Gram Ujala Yojana, aimed at providing high-quality electricity at an affordable cost to villages across the country, launched in Varanasi, Uttar Pradesh? (+2, -0.5)

- a. August
- b. March
- c. September
- d. April

78. Who is the author of 'The Interpreter of Maladies'? (+2, -0.5)

- a. Alberto Vourvoulis
- b. Anita Desai
- c. Jhumpa Lahiri
- d. Amitav Ghosh

79. Who among the following won the National Film Award for Best Choreography at the 67th National Film Awards? (+2, -0.5)

- a. Remo Dsouza
- b. Farah Khan
- c. Prabhu Deva
- d. Raju Sundaram

80. How do humans acclimatise at high altitudes where atmospheric pressure is low for normal breathing? (+2, -0.5)

- a. By decreasing red blood cell production, decreasing the binding affinity of haemoglobin and by increasing breathing rate
- b. By increasing red blood cell production, decreasing the binding affinity of haemoglobin and by increasing breathing rate
- c. By hibernating
- d. By increasing white blood cell production, decreasing the binding affinity of haemoglobin and by increasing breathing rate

81. The given equation describes the _____ relation. (+2, -0.5)

$$s = ut + \frac{1}{2}at^2$$

- a. position-time
- b. distance-time
- c. position-velocity

d. velocity-time

82. What components are often called the building blocks of the body that play a vital role in helping to repair and strengthen muscle tissues after exercise? (+2, -0.5)

- a. Carbohydrates
 - b. Micronutrients
 - c. Fats
 - d. Proteins
-

83. Which of the following characters are correct about Phylum Echinodermata? (+2, -0.5)

- a. Roundworms, pseudocoelomate
 - b. Coelom present, bilateral symmetry
 - c. Gastrovascular cavity, flatworms, acoelomate
 - d. Gastrovascular cavity, coelom present
-

84. Which kind of sport is bungee jumping? (+2, -0.5)

- a. Adventure sport
- b. Recreational sport
- c. Para sport
- d. Special sport

85. Which music director duo of India made their debut in the 'Forbes India Celebrity 100 List 2015'? (+2, -0.5)

- a. Shiv-Hari
- b. Ajay-Atul
- c. Anand-Milind
- d. Vishal-Shekhar

86. Kelucharan Mohapatra, awarded with Padma Vibhushan in 2000, was a dancer of which of the following dances? (+2, -0.5)

- a. Mohiniyattam
- b. Kathak
- c. Manipuri
- d. Odissi

87. Out of the given four alternatives, select the one that is NOT a constitutional body. (+2, -0.5)

- a. Finance Commission
- b. Election Commission
- c. National Human Rights Commission
- d. Union Public Service Commission

88. Which disease refers to the inflammation of the liver caused by a variety of infectious viruses and non-infectious agents leading to a variety of health problems? **(+2, -0.5)**

- a. Tuberculosis
 - b. Pneumonia
 - c. Hepatitis
 - d. Diabetes
-

89. Padma Bhushan, Kanak Rele was conferred with the award for her significant contribution to which of the following dance forms? **(+2, -0.5)**

- a. Mohiniyattam
 - b. Kuchipudi
 - c. Kathak
 - d. Bharatnatyam
-

90. Who among the following was the author of the famous work "Sangita Ratnakara"? **(+2, -0.5)**

- a. Sharngadeva
 - b. Lochan Kavi
 - c. Jaidev
 - d. Ramamatya
-

91. In January 2022, in which city an initiative – Deaddiction, Reformation and Entrepreneurial Assistance for Making a Safe Society (Dreams) was launched to rehabilitate drug addicts? (+2, -0.5)

- a. Amritsar
- b. Kolkata
- c. Bhubaneswar
- d. New Delhi

92. Which Indian cartoonist's autobiography is titled 'The Tunnel of Time'? (+2, -0.5)

- a. Ajit Ninan
- b. RK Laxman
- c. OV Vijayan
- d. Mario Miranda

93. Which of the following is the first city in history to host the Paralympic Games for a second time? (+2, -0.5)

- a. Tokyo
- b. Sydney
- c. Brisbane
- d. Beijing

94. In India, CRR is fixed by _____. (+2, -0.5)

- a. Ministry of Finance
 - b. Ministry of External Affairs
 - c. Reserve Bank of India
 - d. Life Insurance Corporation of India
-

95. Which crop grows best in areas with hot, humid climate and requires temperature between 21°C to 37°C with well distributed rainfall or irrigation facilities of about 100 cm? (+2, -0.5)

- a. Rice
 - b. Bajra
 - c. Pulses
 - d. Oilseeds
-

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96. In which region of India are Kotli Dun and Patli Dun located? (+2, -0.5)

- a. Between greater Himalayas and the Shiwaliks
 - b. Between lesser Himalayas and outer Himalayas
 - c. Between eastern Himalayas and the Shiwaliks
 - d. Between lesser Himalayas and the Shiwaliks
-

97. Among the following, whose autobiography is 'Daughter of Destiny: An Autobiography'? (+2, -0.5)

- a. Kamala Das
- b. Urvashi Butalia
- c. Malala Yousafzai
- d. Benazir Bhutto

98. Name the only Indian athlete who received the Padma Bhushan Award for the year 2022 (+2, -0.5)

- a. Vandana Katariya
- b. Faisal Ali Dar
- c. Sankaranarayana Menon Chundayil
- d. Devendra Jhajharia

99. Who was recognised as 'Asthana Nartaki' (resident dancer) of the Tirumala Tirupati Devasthanam? (+2, -0.5)

- a. Yamini Krishnamurthy
- b. Chinta Ravi Bala Krishna
- c. Sunder Prasad
- d. Mohanrao Kallianpurkar

100. Who among the following has been conferred the prestigious title of 'Maestro' by London's Royal Philharmonic Orchestra, with whom he had been the only Asian to have composed a full symphony as on 6th March 2022? (+2, -0.5)
- a. Ilaiyaraaja
 - b. AR Rahman
 - c. Devi Sri Prasad
 - d. Gopi Sundar

Prepp

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Answers

1. Answer: a

Explanation:

The correct answer is: **allowed**

★ Key Points

- **Allow** (verb) means to give permission for somebody/something to do something or for something to happen.
- We use "**have/has + v3**" in the **present perfect tense** when an action that started in the past and is directly related to the present, such as actions that are still continuing or that indicate a change over time.
- The given sentence talks about the period of 1920.
- So, the sentence must be written in the **simple past tense**, when the action started and finished in the past.
- The structure should be **Subject + V2+ object.**

Therefore, **option 1** is the correct answer that can substitute the underlined segment in the given sentence.

Corrected sentence: *In the 1920s, new technology allowed filmmakers to attach to each film a soundtrack of speech.*

2. Answer: a

Explanation:

The correct answer is: **Spacios**

★ Key Points

- **Spacios = Spacious** means having a lot of space; large in size. (बहुत जगह होना; आकार में बड़ा)
 - Example - *The hotel rooms are **spacious** and comfortable.*

Therefore, except for option 1, the rest of the options are correctly spelt.

★ Additional Information

- **Lyre** means an ancient musical instrument consisting of a U-shaped frame with strings attached to it. (एक प्राचीन वाद्य यंत्र जिसमें एक यू-आकार का फ्रेम होता है, जिसमें तार लगे होते हैं)
- **Irrespective** means regardless or in spite, and it is almost always followed by the word "of." (परवाह किए बिना या बावजूद)
- **Soluble** means that will dissolve in liquid. (तरल पदार्थ में घुल जाने वाला; घुलनशील, विलेय)

3. Answer: d

Explanation:

The correct answer is: **To leave**

★ Key Points

- The idiom "**Get away**" means to leave or escape from a person or place. (किसी व्यक्ति या स्थान से दूर जाना या बचना)
 - Example - *We walked to the next beach to get away from the crowds.*
- So, it is clear that the most appropriate meaning of the given idiom "**Get away**" is "**To leave**"

Hence, the correct answer is option 4.

4. Answer: b

Explanation:

The correct answer is **Do not oppress the disabled**.

★ Key Points

- Given sentence "**The disabled should not be oppressed**" is in **Simple Present Tense** and in **Passive voice**.
- The rule for changing a simple Present Indefinite tense form into an Active voice is as follows:
 - Interchange the subject with the object and vice-versa.
 - While converting the negative sentences with should into an active voice, the subject starts with Do not.
 - Convert the verb "Disable" into a past participle or 3rd form of the verb.
 - "Should not" will change into "Do not."
 - Structure: **Subject + first form of verb + Object**.
- **Example:** *The car should not be moved. (Active Voice)*

Do not move the car. (Passive Voice)

★ Additional Information

- The **Active voice** is used when the subject of the sentence does the action.
- The **Passive voice** is used when we focus on the object of the sentence.

5. Answer: b

Explanation:

The correct answer is **Repel**.

★ Key Points

- **Attract** refers to drawing something or someone toward them by virtue of their traits, particularly positive ones.
 - **Example:** *Flowers attract butterflies.*
- **Repel** refers to making something or someone stops approaching you or attacking you.
 - **Example:** *The smell of the place repelled tourists.*

- **Attract** and **Repel** have different meanings.

Therefore, the correct option is **Repel**.

★ Additional Information

- **Flex** refers to expressing extreme joy or pride about an accomplishment or possession, typically in a way that irritates others.
- **Rash** refers to numerous little red dots on the skin.
- **Destroy** refers to seriously harming something such that it cannot be utilised.

6. Answer: d

Explanation:

The correct answer is **Between two dangers**.

★ Key Points

- The most appropriate meaning of the given idiom "**Between Scylla and Charybdis**" is "**Between two dangers**."
- **Between Scylla and Charybdis** refers to being forced to choose between two unappealing options.
 - **Example:** *Mike does not see that his actions will bring him between Scylla and Charybdis.*
- Therefore, as per the points mentioned above, we find that the correct answer is **Between two dangers**.

★ Additional Information

- Meaning and examples of some idioms of the play "**Between**."

Idioms	Meaning	Example
Between a rock and a hard place	Being forced to decide between two terrible options.	<i>He is between a rock and a hard place.</i>
Between the devil and the deep blue sea.	You have to decide between two unpleasant options when you are in a challenging circumstance.	<i>When I was a student, I was always caught between the devil and the deep blue sea having to choose whether to buy food or stop eating junk food.</i>

7. Answer: a

Explanation:

The correct answer is **Over**.

★ Key Points

- In the given options the correct option to be filled in the blank is **Over**.
- The word "**over**" is used to describe a movement or position that is superior to another.
- It can also be used while referring to movement across a surface.
 - **Example:** *A bird flew over my home.*
- Thus, the correct option is **Over**.

The correct sentence is: **We love to swing from the branches over the pond.**

★ Additional Information

- We use the word "**on**" when referring to a place on a surface.

- We use the preposition "**in**" when describing a location in relation to a bigger area.
- We use the word "**under**" when referring to something that is beneath or beneath another.

8. Answer: d

Explanation:

The correct answer is **Does he remember**.

★ Key Points

- "Does he remember" is grammatically incorrect in this sentence.
- The correct usage is "Does he remember" instead of "Is he remembering."
- **The tense used in this sentence is Interrogative Simple Present Tense.**
- Structure of Interrogative Simple Present Tense: " **Do or Does**" + **Subject** + **first form of a verb** + **Object**.
 - **Example:** *Does she read the novels she bought?*

The correct sentence is: **Does he remember our help?**

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9. Answer: a

Explanation:

The incorrectly spelt word is "Audasious."

★ Key Points

- In the given options " Audasious" is incorrectly spelt. Its correct spelling is "Audacious."
- Let's look at its meaning.
- Audacious: **Demonstrating a readiness to take chances or offend people.**
 - **Example:** *He described the speech as audacious.*

- Therefore, as per the points mentioned above, we find that the correct answer is **Audacious** .

★ Additional Information

Let's look at the meaning of other options also:

Word	Meaning
Incredible	Extremely tough to believe, impossible and extremely good
Baffling	Difficult for anyone to comprehend or express
Prevalent	Existing frequently or occurring frequently

10. Answer: b

Explanation:

The incorrectly spelt word is "**Guarmet**."

Key Points

- In the given options "**Guarmet**" is incorrectly spelt. Its correct spelling is "**Gourmet**."
- Let's look at its meaning.
- **Gourmet**: A person with a passion for and extensive knowledge of food .
 - **Example**: *She is a chef and a gourmet.*
- Therefore, as per the points mentioned above, we find that the correct answer is "Gourmet."

★ Additional Information

Let's look at the meaning of other options also:

Word	Meaning
Retrospect	Considering something from the past right now
Magnanimous	Kind and courteous to an enemy or a foe you have defeated
Clandestine	Prepared or completed covertly, especially when referring to something that is not permitted by law

11. Answer: d

Explanation:

The correct answer is **To have nothing to do.**

★ Key Points

- The most appropriate meaning of the given idiom "**Be at a loose end**" is "**To have nothing to do.**"
- **Be at a loose end** refers to a state of being idle.
 - **Example:** *If you find yourself at a loose end, you could always read the novel.*
- Therefore, as per the points mentioned above, we find that the correct answer is **To have nothing to do.**

★ Additional Information

- Let's look at the meaning and examples of some idioms of the play "**Loose.**"

Idioms	Meaning	Example
Loose as a goose	Very comfortable and calm.	<i>She is under a lot of pressure, but she still looks as loose as a goose.</i>
Cut one loose	To abruptly end a connection, whether it be personal or professional.	<i>She cut me loose with no explanation.</i>

12. Answer: d

Explanation:

The correct answer is "Ephemeral."

★ Key Points

- The appropriate answer is "Ephemeral" which means "Lasting for a very short period of time."
- Ephemeral: Lasting merely a short period of time.
 - **Example:** *Fame in the industry is Ephemeral.*
- Therefore, the correct option is **Ephemeral**.

★ Additional Information

- **Permanent** refers to something that lasts forever.
- **Ceaseless** refers to something having no end or appearing to have no end.
- **Pungent** refers to strong and harsh flavours or aromas.

13. Answer: c

Explanation:

The correct answer is **"Vocabulary raises the standard of the English language."**

★ Key Points

- In "He incorporates daily vocablary in his gestures" the incorrect spelling is **vocablary**.
- In "Reading stories developed her vocabluary" the incorrect spelling is **vocabluary**.
- In "She has her own vockbulary words from English and Hindi" the incorrect spelling is **vockbulary**.
- The correct spelling is **Vocabulary**.
- **Vocabulary**: All the words that a specific person is familiar with and uses.
 - **Example:** *Reading increases your vocabulary.*

14. Answer: b

Explanation:

The correct answer is **Ate that lobster.**

★ Key Points

- "A te that lobster " is grammatically incorrect in this sentence.
- The correct usage is **"Eaten that lobster"** instead of "A te that lobster. "
- **The tense used in this sentence is Past Perfect tense.**
- Structure of Past Perfect tense: **Subject + had + V3 form + Object.**
 - **Example:** *She had already left the party when I reached there.*

The correct sentence is: **After he had eaten that lobster, he began to feel sick.**

15. Answer: b

Explanation:

The correct answer is **Absurd**.

★ Key Points

- **Illogical** means not prudent, smart, or rational, typically because they are motivated by their emotions rather than critical consideration.
 - **Example** : *Her statements are totally illogical.*
- **Absurd** refers to things which are either foolish and unreasonable or amusingly silly.
 - **Example** : *The answers that she gave in the test were totally absurd.*
- "Illogical" and "Absurd" are similar in meaning.

Therefore, the correct option is **Absurd**.

★ Additional Information

- **Unfavourable** refers to not offering you a competitive edge or a high likelihood of success.
- **Biased** refers to showing an excessive affinity for or aversion to a person depending on one's own preferences.
- **Factual** refers to utilising or containing facts.

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16. Answer: a

Explanation:

The correct answer is '**She did not hire me**' .

★ Key Points

- The given sentence is in **Simple Past Tense** and in **Passive voice**.
- Rules to change a **Passive** voice to an **Active** voice :
- The subject and object are interchanged i.e. the subject become the object and the object becomes the subject.

- Passive pronouns (her) change to active pronouns (she).
- Active pronouns (I) change to passive pronouns (me).
- 'By' is removed.
- The structure :
 - **Object + was/were+ not +V3+ by Subject** (Passive voice)
 - **Subject +did+ not+v1+ object** (Active voice)
 - Example- She was not taken by him. (Passive voice)
 - He did not take her. (Active voice)

★ Additional Information

- In passive voice, a sentence emphasizes the object performing an action.
- In active voice, a sentence emphasizes the subject performing an action.

17. Answer: a

Explanation:

The correct answer is '**prolong**'.

★ Key Points

- To **Protract** means to make something last for a long time or last longer than necessary.
 - Example- He has certainly taken his time, even **protracting** the process.
- To **Prolong** means to extend the duration of something to make it longer.
 - Example- An idea that **prolonged** the life of the engine by years.
- It is clear that '**Prolong**' is the most appropriate meaning for the underlined word '**protract**'.

★ Additional Information

- **Control** means the power to influence something.
 - Example- The whole project is under the **control** of the project manager.
- **Accept** means consent to receive or undertake something.
 - Example- He **accepted** the position as the new CEO of the company.

- **Cease** means to come or bring to an end.
 - Example- The hostilities **ceased** and normal life was resumed.
-

18. Answer: a

Explanation:

The correct answer is '**shall have completed**' .

★ Key Points

- The sentence is in **Future perfect tense**.
- The structure for future perfect tense : **Subject + (auxiliary verb + have) + V3**
- So the right sentence would be:
 - *She **shall have completed** her graduation by 2023 .*

★ Additional Information

- The future perfect tense refers to a completed action in the future.
 - When we use this tense, we project ourselves forward into the future and look back at an action that will be completed sometime later than now.
 - It is often used with a time expression.
 - Example- **Won't they have arrived** by 5 pm?
-

19. Answer: a

Explanation:

The correct answer is '**commisarate**' .

★ Key Points

- In the given options, '**commisarate**' is an incorrectly spelt word.
- The right spelling would be '**commiserate**' .
- **Commiserate** means to express or feel sympathy or pity.

- Example-She went over to **commiserate** with Rose on her unfortunate circumstances.

★ Additional Information

- **Decennial** means recurring every 10 years.
 - Example- It is time for the **decennial** census.
- **Nausea** means a feeling of sickness with an inclination to vomit.
 - Example- A wave of **nausea** engulfed him as soon as he saw the rotting dead body.
- **Curriculum** means the subjects comprising a course of study in a school or college.
 - Example- I was in charge of developing the **curriculum** and its course components for this academic year.

20. Answer: c

Explanation:

The correct answer is 'CDAB'.

★ Key Points

- Sentence **C** comes first as it gives an introduction and definition regarding the subject matter i.e online education.
- Sentence **D** comes second as it carries the definition to the advantages point.
- Sentence **A** comes next as it continues the advantages part.
- Sentence **B** comes last as it concludes the whole discussion about online education.
- Hence, the right order is **CDAB**.

21. Answer: d

Explanation:

The correct answer is '**so**'.

★ Key Points

- Here '**so**' has a similar meaning to that of 'very'.
- In sentences like this, '**so**' is used to add emphasis and to make the meaning stronger.
- Example- He is **so** proud of his son.
- Hence it is the most appropriate option to fill in the blank.

22. Answer: c

Explanation:

The correct answer is '**to**'.

★ Key Points

- Here the word '**stomach**' is used as a verb.
- **Stomach** as a verb means to bear without overt reaction or resentment.
 - Example- She couldn't **stomach** the ongoing office politics.
- There is already a verb present in the same sentence (**find**), so there is a need for a **to-infinitive** to include the other verb in the sentence.
- Among the given options, 'to' is the most appropriate one because it makes the verb a to-infinitive form.

23. Answer: d

Explanation:

The correct answer is '**fact**'.

★ Key Points

- **Fact** means a thing that is known or proven to be true.

- Example- He blatantly ignored some historical **facts** while writing that book.
- Since the point being tried to be made is a statement that is supposedly true, '**fact**' is the most appropriate option to fill in the blank.

★ Additional Information

- A **Story** means an account of real or imaginary people told for entertainment.
 - Example- Jumanji is a **story** of adventure and thrill.
- The **term** means a word or phrase used to describe a thing or to express a concept, especially in a particular branch or field of study.
 - Example- The scientific **term** for human beings is Homosapiens.
- **Myth** means a traditional story concerning the early history of people or explaining a natural phenomenon involving supernatural beings or events.
 - Example- He found the ancient Celtic **myths** too fascinating.

24. Answer: b

Explanation:

The correct answer is Allowed

★ Key Points

-
- The word **allowed** is past form of word allow which means let (someone) have or do something.
- *Example* : My mother **allowed** me to go for picnic.

★ Additional Information

- The word **cared** means

Example :

- The word **thrown** means

Example :

- The word **transited** means

Example :

25. Answer: c

Explanation:

The correct answer is Interpret.

★ Key Points

- **The verb** is a term that serves as the major component of the predicate of a sentence and is used to describe an action, state, or event, such as hear, become, or happen.
- The word **Interpret** is a verb which means to give a definition of (information or actions).
- Example: I am sorry, I **interpret** something wrong.

★ Additional Information

- The word **deny** means a state that one refuses to admit the truth or existence of.
 - Example: You can't **deny** that you don't like Jim.
 - The word **accept** means agreement to receive or perform (something offered).
 - Example: I **accept** I broke the vase.
 - The word **malign** means wicked in character or outcome.
 - Example: She had a strong and **malign** influence.
-

26. Answer: b

Explanation:

Explanation :

Logic: Second number completely divide by.

1) 576 is divisible by 16

And

2) 80 is also divisible by 8 .

Among the options (we have to select the option that will be divisible by 22)

3) 1452 is divisible by 22 .

Hence, 1452 is the correct answer .

27. Answer: b

Explanation:

The pattern followed here is:



Hence, the correct answer is "546".

28. Answer: a

Explanation:

Explanation :

Let's take common number in both the dices

12 and 13 both are common in both the dices. Now move clockwise direction in both dice.

13-12-14 first dice

13-11-12 second dice

13 is opposite to 12 and 12 is opposite to 13

so, 14 is opposite to 11 as shown below



Hence, 11 is the **correct answer**.

29. Answer: a

Explanation:

Given :



Explanation :

The two dices with one face common in the figures

Then write it in a clockwise order starting from the common face then the positional value become the opposite face.

Here 2 is the common face in both the dices. The opposite faces are

6 → 1

3 → 4

2 → 5

Hence, 5 is the correct answer.

30. Answer: b

Explanation:

The logic followed here is:

Logic: (First number)³ - 4 = Second number

$$\begin{array}{ccc} 8 & : & 508 \\ \downarrow & & \downarrow \\ 8^3 - 4 & = & 508 \end{array} \quad \begin{array}{ccc} 13 & : & 2193 \\ \downarrow & & \downarrow \\ 13^3 - 4 & = & 2193 \end{array} \quad \begin{array}{ccc} 2 & : & 4 \\ \downarrow & & \downarrow \\ 2^3 - 4 & = & 4 \end{array}$$

Hence, the correct answer is "13"

31. Answer: b

Explanation:

Table of English alphabet positional value

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

According to given coding language

IS



$$9 \times 19 = 171 - 2 = 169$$

AM



$$1 \times 13 = 13 - 2 = 11$$

Similarly,

IN



$$9 \times 14 = 126 - 2 = 124$$

Hence, **124** is the **correct answer**.

32. Answer: d

Explanation:

Logic : $(\text{First number} + 1)^2 = \text{Second number}$

Lets check each option:

1) $3 : 16$

$$\Rightarrow (3 + 1)^2 \Rightarrow (4)^2 \Rightarrow 16$$

2) $6 : 49$

$\Rightarrow (6 + 1)^2 \Rightarrow (7)^2 \Rightarrow 49$

3) $12 : 169$

$\Rightarrow (12 + 1)^2 \Rightarrow (13)^2 \Rightarrow 169$

4) $9 : 64$

$\Rightarrow (9 + 1)^2 \Rightarrow (10)^2 \Rightarrow 100 \neq 64$

So, **9 : 64** is the odd one out.

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

33. Answer: a

Explanation:

The positional values of English alphabet is as follows:

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

The pattern followed here is:

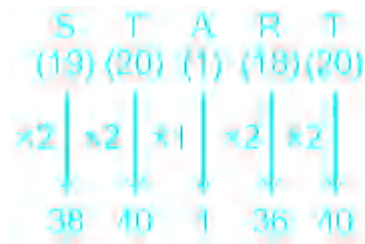
Twice the value of consonant whereas vowel is written as it is.

'RESET' is written as '36538540'



And

'START' is written as '384013640'



Similarly,

'STOP' will be written as:



Hence, '38401532' is the correct answer.

34. Answer: c

Explanation:

The correct mirror image of the given figure when the mirror is placed at MN.



Hence, "Option 3" is the correct answer.

35. Answer: d

Explanation:

Given : B E _ K P C _ H K P _ E H K P _ E H K P

Lets check each option:

1) F, E, Q, H $\Rightarrow$ B, E, F, K, P - C, E, H, K, P - Q, E, H, K, P - H, E, H, K, P

No pattern is followed.

2) F, D, Q, H $\Rightarrow$ B, E, F, K, P - C, D, H, K, P - Q, E, H, K, P - H, E, H, K, P

No pattern is followed.

3) H, D, Q, E $\Rightarrow$ B, E, H, K, P - C, D, H, K, P - Q, E, H, K, P - E, E, H, K, P

No pattern is followed.

4) H, E, D, E $\Rightarrow$ B, E, H, K, P - C, E, H, K, P - D, E, H, K, P - E, E, H, K, P

In this series, pattern is followed.

Hence, 'option 4' is the correct answer.

36. Answer: c

Explanation:

The correct mirror image of the given figure when the mirror is placed at MN:

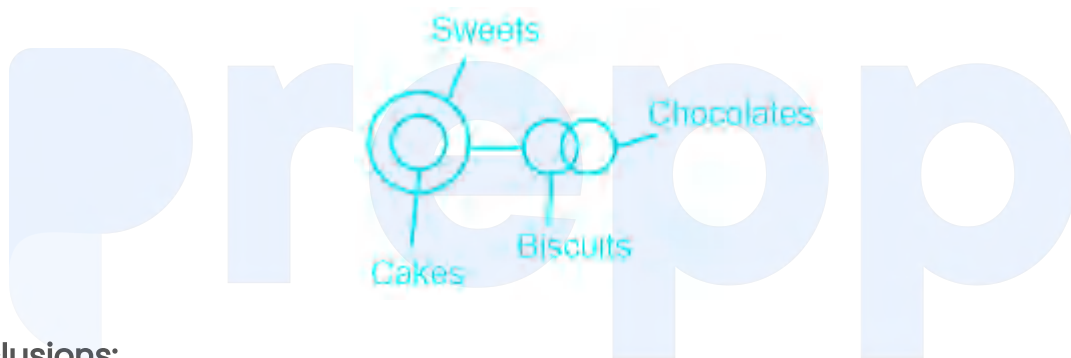


Hence, "Option 3" is the correct answer.

37. Answer: b

Explanation:

The least possible Venn diagram:



Conclusions:

- I. Some biscuits are cakes → **False** (As no sweet is a biscuit and all cakes are sweets. So some biscuits are cakes is not true)
- II. Some chocolates are sweets → **False** (As no sweet is a biscuit and some chocolates are biscuits. So some chocolates sweets is not true)
- III. No cake is a chocolate → **False** (As all cakes are sweets. So cake can definitely be a chocolate. So it is not true)

Hence, the correct answer is "N one of the conclusions follow".

38. Answer: b

Explanation:

The table of English alphabet positional value

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

According to positional value

S	5	N	5	I	5	D	5	Y
Y	+10	I	+10	S	+10	C	+10	M
G	-15	R	-15	C	-15	N	-15	Y
Z	-6	T	-6	N	-6	H	-6	B

Note: $G(7) = 7 + 26 = 33$, $33 - 15 = 18(R)$ As alphabet series end with 26, We take 26 as 0 or starting point.

$C(3) = 26 + 3 = 29$, $29 - 15 = 14(N)$, As alphabet series end with 26, We take 26 as 0 or starting point.

Hence, "ISCN" is the correct answer.

39. Answer: a

Explanation:

The paper when unfolded will appear as shown below:



Hence, 'option 1' is the correct answer.

40. Answer: c

Explanation:

Logic : (First number $\div$ Second number) + 7 = Third number

1) (45, 9, 12)

$$\Rightarrow (45 \div 9) + 7$$

$$\Rightarrow 5 + 7 = 12$$

And,

2) (21, 3, 14)

$$\Rightarrow (21 \div 3) + 7$$

$$\Rightarrow 7 + 7 = 14$$

Lets check each option:

1) (55, 5, 11)

$$\Rightarrow (55 \div 5) + 7$$

$$\Rightarrow 11 + 7 = 18 \neq 11$$

2) (66, 6, 17)

$$\Rightarrow (66 \div 6) + 7$$

$$\Rightarrow 11 + 7 = 18 \neq 17$$

3) (80, 10, 15)

$$\Rightarrow (80 \div 10) + 7$$

$$\Rightarrow 8 + 7 = 15$$

$$4) (70, 5, 13)$$

$$\Rightarrow (70 \div 5) + 7$$

$$\Rightarrow 14 + 7 = 21 \neq 13$$

Hence, 'option 3' is the correct answer.

41. Answer: a

Explanation:

The pattern followed here is:



Hence, "657" is the correct answer.

42. Answer: b

Explanation:

The positional values of English alphabet is as follows:

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

The pattern followed here is:

UNCLEAR is written as CNULRAE



And,

PRIVACY is written as IRPVYCA



Similarly, Your Personal Exams Guide

NUCLEAR is written as:



Hence, '**CUNLRAE**' is the correct answer.

43. Answer: a

Explanation:

Explanation : The pattern followed here is :

Logic: First number = (second no)² × (second no. +1)

Option 1 : 25 : 5

$$\Rightarrow 25 \neq 5^2 \times 6$$

Option 2 : 80 : 4

$$\Rightarrow 80 = 4^2 \times 5$$

Option 3 : 36 : 3

$$\Rightarrow 36 = 3^2 \times 4$$

Option 4 : 2 : 12

$$\Rightarrow 12 = 2^2 \times 3$$

Hence, 25 : 5 is the correct answer .

44. Answer: c

Explanation:

The paper when unfolded will be as shown below:



Hence, 'option 3' is the correct answer.

45. Answer: a

Explanation:

Given : 15 July 2002 is a Monday

- Total number of days in a normal year = 365
- Number of odd days in a normal year = $365 \div 7 = 1$
- Total number of days in a leap year = 366
- Number of odd days in a leap year = $366 \div 7 = 2$
- 15 July 2002 (Monday) + 1 odd day (2003) + 2 odd days (2004) + 1 odd day (2005) = 15 July 2005 (Friday)
- Total number of days from 15 July 2005 to 16 October 2005 = 16 (July) + 31 (August) + 30 (September) + 16 (October) = 93
- Total number of odd days from 15 July 2005 to 16 October 2005 = $93 \div 7 = 2$
- Now starting from 15 July 2005, every 7th day will be a Friday.
- Therefore, Friday + 2 = **16 October 2005 i.e., Sunday**

Hence, 'option 1' is the correct answer.

46. Answer: d

Explanation:

BODMAS Rule:

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

Explanation :

Letter	Symbol
A	+
B	×
C	-
D	÷

If we apply BODMAS rule on the given equation

$$\Rightarrow (84 \text{ D } 14) \text{ A } 17 \text{ C } 13 \text{ B } (75 \text{ D } 15) \text{ A } 9 \text{ B } 7$$

$$\Rightarrow (84 \div 14) + 17 - 13 \times (75 \div 15) + 9 \times 7$$

$$\Rightarrow 6 + 17 - 13 \times 5 + 9 \times 7$$

$$\Rightarrow 6 + 17 - 65 + 63$$

$$\Rightarrow 86 - 65$$

$$\Rightarrow 21$$

Hence, **21** is the **correct answer**.

47. Answer: a

Explanation:

The positional values of English alphabet is as follows:

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

The pattern followed here is: **Opposite letters**

'ELBOW' is written as 'DLYOV'



'ANKLE' is written as 'VOPMZ'



Similarly,

'WRIST' will be written as:



Hence, "GHRID" is the correct answer.

48. Answer: d

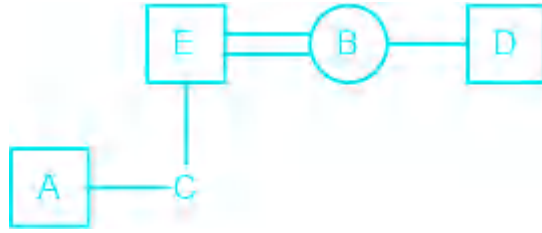
Explanation:

Family Chart:

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

Given :

- A is the brother of C
- B is the only sister of D who is the maternal uncle of C.
- E is the father of C.



Hence, the correct answer is "Son".

49. Answer: a

Explanation:

Logic : $(\text{First number} - 2) \times 3 = \text{Second number}$

1) $27 : 75$

$$\Rightarrow (27 - 2) \times 3$$

$$\Rightarrow 25 \times 3 \Rightarrow 75$$

2) $39 : 111$

$$\Rightarrow (39 - 2) \times 3$$

$$\Rightarrow 37 \times 3 \Rightarrow 111$$

Similarly,

3) $45 : ?$

$$\Rightarrow (45 - 2) \times 3$$

$$\Rightarrow 43 \times 3 \Rightarrow 129$$

Hence, '129' is the correct answer.

50. Answer: d

Explanation:

Logic : Square root of first number + 10 = second number

1) $64 : 18$

$$\Rightarrow \sqrt{64} + 10$$

$$\Rightarrow 8 + 10 = 18$$

And,

2) $196 : 24$

$$\Rightarrow \sqrt{196} + 10$$

$$\Rightarrow 14 + 10 = 24$$

Similarly,

3) $529 : ?$

$$\Rightarrow \sqrt{529} + 10$$

$$\Rightarrow 23 + 10 = 33$$

Hence, the correct answer is "33".

51. Answer: c

Explanation:

GIVEN:

Manoj fetches 5 litres of water in = 4 minutes

Swathi fetches 4 litres of water in = 5 minutes

FORMULA USED:

Efficiency = Total work / Time taken to do work

CALCULATION:

Efficiency of Manoj = Total unit / time taken = $5/4$ litres/min

Efficiency of Swathi = Total unit/ time taken = $4/5$ = litres/min

⇒ Efficiency of Manoj and Swathi together

⇒ $(5/4 + 4/5)$ litres/min

⇒ $41/20$ litres/min

Total unit = 205 litres

⇒ Time taken = Total unit/Total efficiency

⇒ $= 205 \div (41/20)$

⇒ $205 \times \frac{20}{41} = 100$ minutes.

Hence, time taken together is 100 minutes.

52. Answer: a

Explanation:

GIVEN:

In triangle ABC, $DE \parallel BC$

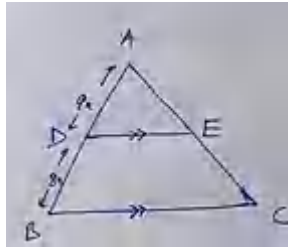
$AD/DB = 9/8$

CONCEPT USED:

Basic Proportionality Theorem (BPT) = If line DE is parallel to side BC of triangle ABC that intersects the other sides into two points, line DE divides AB and AC in proportion.

$$AD/AB = AE/AC = DE/BC$$

CALCULATION:



In triangle ABC, $AD/DB = 9/8$

$$\Rightarrow AD/AB = DE/BC$$

$$\Rightarrow 9/(9+8) = DE/BC$$

$$\Rightarrow 9/17 = DE/BC$$

Hence, $DE : BC = 9:17$.

53. Answer: d

Explanation:

GIVEN:

Average of age of 36 students = 14 years

Average of teacher and students = 15 years

FORMULA USED:

Average = sum of values / number of values

CALCULATION:

$$\Rightarrow \text{Sum of students} / 36 = 14$$

$$\Rightarrow \text{sum of age of students} = (36 \times 14) = 504.$$

$$\Rightarrow (\text{sum of students} + \text{teacher}) / 37 = 15$$

$$\Rightarrow \text{sum of age of students and teacher} = (37 \times 15) = 555$$

$$\begin{aligned} \Rightarrow \text{Age of teacher} &= (\text{sum of age of students and teacher}) - \text{sum of age of student} \\ &= (555 - 504) = 51 \text{ years.} \end{aligned}$$

Hence, the teacher is 51 year old.

54. Answer: a

Explanation:

GIVEN:

die is thrown = 1000 times

CONCEPT USED:

Frequency = no. of times a particular outcome appears

CALCULATION:

Number appearing on the dice greater than or equal to five i.e. N(5 and 6)

$$\Rightarrow (\text{frequency of outcome 5} + \text{frequency of outcome 6})$$

$$\Rightarrow (175 + 190) = 365.$$

Hence, 365 times the number which is equal to 5 or greater than 5 appears.

55. Answer: d

Explanation:

GIVEN:

$$a^2 + b^2 + \frac{1}{a^2} + \frac{1}{b^2} = 4$$

FORMULA USED:

$$(a - b)^2 = a^2 + b^2 - 2ab$$

where a = 1st term, b = 2nd term

CALCULATION:

The given equation is $a^2 + b^2 + \frac{1}{a^2} + \frac{1}{b^2} = 4$

the equation can be rearranged as,

$$\Rightarrow (a^2 + \frac{1}{a^2} - 2) + (b^2 + \frac{1}{b^2} - 2) = 0.$$

$$\Rightarrow (a^2 + \frac{1}{a^2} - 2.a^2.\frac{1}{a^2}) + (b^2 + \frac{1}{b^2} - 2.b^2.\frac{1}{b^2}) = 0. \text{ Now, this is in the form of } a^2 - b^2 - 2.a.b.$$

$$\Rightarrow (a - \frac{1}{a})^2 + (b - \frac{1}{b})^2 = 0.$$

$$\text{Hence, } (a - \frac{1}{a})^2 = 0. \text{ and } (b - \frac{1}{b})^2 = 0.$$

(as they are in the square form, hence, both individuals have to be zero, to satisfy the equation).

$$\text{Now, } (a - \frac{1}{a})^2 = 0.$$

$$\Rightarrow a = 1/a$$

$$\Rightarrow a^2 = 1 \text{ so, } a^4 = 1$$

$$(b - \frac{1}{b})^2 = 0.$$

$$\Rightarrow b^2 = 1 \text{ so, } b^4 = 1$$

$$\text{Now, } (a^4 + b^4) = (1 + 1) = 2.$$

Hence, the value is 2.

56. Answer: b

Explanation:

GIVEN:

Votes by which the successful candidate won the election = 6120

CALCULATION:

Let the initial votes be x

15% of the voters did not cast their votes and 10% of the votes were declared invalid

Hence, Total valid votes = $x \times (85/100) \times (90/100)$

Successful candidate received 55% of valid votes

⇒ non -successful candidate received 45% of valid votes

⇒ Difference = $(55 - 45) = 10\%$

Votes by which successful candidate won the election = 6120

⇒ $x \times (85/100) \times (90/100) \times (10/100) = 6120$

⇒ $x = 80,000$.

Hence, the number of voters enrolled on the voter list were 80,000.

57. Answer: c

Explanation:

Given:

four runners to complete 1 round takes 400 sec, 600 sec, 720 sec, and 900 sec respectively

Concept used:

Lowest Common Multiple (L.C.M)

Calculation:

When the four runners will meet at the starting point, they would have completed different numbers of rounds

Hence, the time at which they will meet will be the L.C.M of the individual time taken by them

$\Rightarrow$ L.C.M. of 400, 600, 720, and 900 = 3600 sec.

Hence, they will meet after 3600 seconds.

58. Answer: c

Explanation:

GIVEN:

Marked price = Rs50,000

FORMULA USED:

Discount = Marked price $\times$ Discount Rate

Selling price = $(1 - d_1/100) \times (1 - d_2/100) \times \text{M.P.}$ Where M.P. $\rightarrow$ Marked price,

d_1 and $d_2 \rightarrow$ Successive discount rates respectively.

Selling price = Marked price - Discount

CALCULATION:

On considering 1st condition we have,

Discount = Rs10,000 and M.P. = Rs50,000

$\Rightarrow$ Selling price = (M.P.- Discount)

$$\Rightarrow 50,000 - 10,000$$

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

On considering 2nd condition we have,

Discount Rate = 25% , M.P. = Rs50,000,

$$\Rightarrow \text{Discount} = \text{M.P.} \times \text{Discount Rate}$$

$$\Rightarrow 50,000 \times 25/100 = \text{Rs}12,500$$

Hence,

$$\Rightarrow \text{Selling price} = (\text{M.P.} - \text{Discount})$$

$$\Rightarrow 50,000 - 12,500 = \text{Rs}37,500$$

On considering 3rd condition we have,

$d_1 = 10\%$ $d_2 = 10\%$, M.P. = Rs50,000

$$\text{Selling price} = (1 - d_1/100) \times (1 - d_2/100) \times \text{M.P.}$$

$$\Rightarrow (1 - 10/100) \times (1 - 10/100) \times 50,000$$

$$\Rightarrow 9/10 \times 9/10 \times 50,000 = \text{Rs}40,500$$

On considering 4th condition we have,

$d_1 = 15\%$, $d_2 = 10\%$, M.P. = Rs50,000

$$\Rightarrow \text{Selling price} = (1 - 15/100) \times (1 - 10/100) \times 50,000$$

$$\Rightarrow 17/20 \times 9/10 \times 50,000 = \text{Rs}38,250$$

Since, on condition 2nd i.e. on discount of flat 25% we have lowest selling price .
Hence, it is more beneficial to the customers.

Hence, condition 2nd i.e.(ii), is in option no.3 .So, it is the required answer .

59. Answer: a

Explanation:

GIVEN:

$$x + \frac{1}{x} = 10$$

CALCULATION:

As, we have $x + \frac{1}{x} = 10$

$$\Rightarrow x^2 + 1 = 10x$$

$$\Rightarrow x^2 = 10x - 1$$

Now , on putting the value of x^2 in the equation $\frac{7x}{x^2+1-8x}$ we get,

$$\Rightarrow \frac{7x}{(10x-1)+1-8x} = \frac{7x}{2x} = 7/2 \text{ or } 3.5$$

Hence, the value is 3.5.

60. Answer: d

Explanation:

Given

selling price of earphone= 2000Rs

profit percentage = numerical value of cost price

Formula used

$$\text{profit percentage} = \frac{Sp - Cp}{Cp} \times 100$$

Sp = selling price= 2000Rs

Cp = cost price

Calculation

from the question,

$$= \text{Profit percentage}, = \frac{Sp - Cp}{Cp} \times 100$$

$$\Rightarrow CP = (2000 - CP)/(CP) \times 100$$

Let CP be x,

$$\Rightarrow x = (2000 - x)/x \times 100$$

$$\Rightarrow x^2 = (2000 - x) \times 100$$

$$\Rightarrow x^2 + 100x - 2,00,00$$

$$\Rightarrow x^2 + 500x - 400x - 2,00,000 = 0$$

$$\Rightarrow x(x + 500) - 400(x + 500)$$

$$\Rightarrow (x - 400)(x + 500) = 0$$

$$\Rightarrow x = 400 \text{ as CP can not be negative}$$

The cost price of the earphone is Rs. 400

61. Answer: d

Explanation:

$$450 + 752 - 125 \times \frac{3}{100} \text{ of } 1000 - \{650 \div (16 - 3)\}$$

applying BODMAS rule

$$\Rightarrow 450 + 752 - 125 \times \frac{3}{100} \text{ of } 1000 - \{650 \div (13)\}$$

$$\Rightarrow 450 + 752 - 125 \times \frac{3}{100} \text{ of } 1000 - 50$$

$$\Rightarrow 450 + 752 - 125 \times 30 - 50$$

$$\Rightarrow 450 + 752 - 3750 - 50$$

$$\Rightarrow 1202 - 3750 - 50 = - 2598$$

62. Answer: d

Explanation:

Given

percentage of girls 64%

girls chosen soccer 81.25%

number of girls chosen soccer is 143

Calculation

Total percentage of the class=100%

let total number of students in class is T

girls chosen soccer is 81.25% of the 64% of T

$$\text{So } \frac{64}{100} \times \frac{81.25}{100} \times T = 143$$

$$\Rightarrow T = 275$$

The total number of students in the class is 275

63. Answer: d

Explanation:

The ratio of distance 4:7

If Ravina traveled 4 km then Suhel travels 7 km

So if Suhel travel 63 km that is 9×7

So Ravina travelled $9 \times 4 = 36$ km

Ravina travels 36km

64. Answer: d

Explanation:

Given:

solid cuboid dimension = 49 cm $\times$ 33 cm $\times$ 24 cm

Formula used:

The volume of a cuboid = $a \times b \times c$, where a,b, c are dimensions

The volume of a sphere = $\frac{4}{3} \times \pi \times r^3$, where r is the radius

Calculation:

For remolding volume of sphere is equal to volume of cuboid

$$\Rightarrow \frac{4}{3} \times \pi \times r^3 = 49 \times 33 \times 24$$

$$\Rightarrow r^3 = 9261$$

$$\Rightarrow r = \sqrt[3]{9261} = 21$$

solving this we get $r=21$ cm

$\therefore$ The radius of the sphere is 21 cm.

65. Answer: c

Explanation:

Given

average of 16 numbers=23

average of 7 numbers=21

average of 8 numbers=24

Calculation

sum of 16 numbers = average $\times$ number

$$\Rightarrow 23 \times 16 = 368$$

sum of the first 7 numbers = $21 \times 7 = 147$

sum of the last 8 numbers = $24 \times 8 = 192$

sum of 16 numbers

$\Rightarrow$ sum of first 7 numbers + 8th number + sum of last 8 numbers

$$\Rightarrow 368 = 147 + 8 \text{ th number} + 192$$

$$\Rightarrow 8 \text{ th number} = 29$$

The 8th number is 29

66. Answer: b

Explanation:

Formula used

Two successive discounts x and y

The total discount = $-x - y + \frac{x \times y}{100}$

Calculation:

Case 1: two successive discounts of 15%

Total discount = 27.75%

Case 2: two successive discounts of 12% and 18%

Total discount=27.84%

Case 3: buying 7 articles and get 3 free

let cost price of an article = Rs 1

He got 10 articles with price of seven

$$\text{Discount} = \frac{10-7}{10} \times 100 = 30\%$$

so the most discount is offered in case 3

67. Answer: c

Explanation:

$$\operatorname{cosec} \theta + \cot \theta = 5$$

Formula used:

$$1 + \cos \theta = 2\cos^2(\theta/2)$$

$$\sin \theta = 2\sin(\theta/2)\cos(\theta/2)$$

$$\sin \theta = p/h \text{ and } \cos \theta = b/h$$

where $p \rightarrow$ perpendicular $h \rightarrow$ hypotenuse

$b \rightarrow$ base

Calculation:

$$\Rightarrow \frac{1}{\sin \theta} + \frac{\cos \theta}{\sin \theta} = \frac{1 + \cos \theta}{\sin \theta} = 5$$

$$\Rightarrow \frac{2\cos^2(\theta/2)}{2\sin(\theta/2)\cos(\theta/2)} = 5$$

$$\Rightarrow \frac{\cos(\theta/2)}{\sin(\theta/2)} = \cot(\theta/2) = 5$$

Now,

$$\sin(\theta/2) = \frac{1}{\sqrt{26}} \text{ and } \cos(\theta/2) = \frac{5}{\sqrt{26}}$$

$$\operatorname{cosec} \theta = \frac{1}{\sin \theta} = \frac{1}{2\sin(\theta/2)\cos(\theta/2)}$$

substituting, we get

$$\operatorname{cosec} \theta = \frac{1}{2 \times \frac{1}{\sqrt{26}} \times \frac{5}{\sqrt{26}}} = \frac{26}{10} = \frac{1}{2} \left(5 + \frac{1}{5} \right)$$

★ Alternate Method

As we know that,

$$\operatorname{cosec}^2 \theta - \cot^2 \theta = 1$$

$$\Rightarrow (\operatorname{cosec} \theta + \cot \theta)(\operatorname{cosec} \theta - \cot \theta) = 1$$

$$\Rightarrow 5 \times (\operatorname{cosec} \theta - \cot \theta) = 1$$

$$\Rightarrow \operatorname{cosec} \theta - \cot \theta = 1/5 \text{ -----(1)}$$

$$\text{and } \operatorname{cosec} \theta + \cot \theta = 5 \text{ -----(2)}$$

Adding equation(1) and equation(2)

$$\Rightarrow 2\operatorname{cosec} \theta = 5 + 1/5$$

$$\Rightarrow \operatorname{cosec} \theta = 1/2 (5 + 1/5)$$

68. Answer: d

Explanation:

Given:

Cost of first variety = Rs. 45/kg

Cost of second variety = Rs. 48/kg

Selling price of mixture = Rs. 46/kg

Formula used:

Rule of alligation:

$$\left(\frac{\text{Quantity of cheaper}}{\text{Quantity of dearer}} \right) = \frac{[(\text{Cost price of dearer}) - (\text{Mean price})]}{[(\text{Mean price}) - (\text{Cost price of cheaper})]}$$

Calculations:

According to question, the mean price of the mixture is Rs. 46/kg.

Let the ratio of the two varieties be R.

Using the rule of alligation,

$$\Rightarrow R = (48 - 46)/(46 - 45)$$

$$\Rightarrow R = 2/1$$

$$\Rightarrow R = 2 : 1$$

$\therefore$ The ratio in which the two varieties must be mixed to sell the mixture for Rs. 46/kg is 2 : 1.

69. Answer: c

Explanation:

Given:

The diameter of base of a right circular cone = 16 cm.

The height of the right circular cone = 6 cm.

Formula used:

The volume of a cone = $(1/3)\pi r^2 h$

$$l^2 = r^2 + h^2$$

where, r = Base radius of a cone, h = Height of a cone and l = Slant height of a cone

Calculation:

The diameter of the base = 16 cm,

$$\text{Radius} = 16/2 = 8 \text{ cm}$$

The volume of the cone = $(1/3)\pi r^2 h$

$$\Rightarrow (1/3) \times \pi \times 8^2 \times 6$$

$$\Rightarrow 128\pi \text{ cm}^3$$

$\therefore$ The volume of the cone is $128\pi \text{ cm}^3$.

70. **Answer: a**

Explanation:

Given:

Length of diagonal of Cube = $6\sqrt{3}$ cm

Concept used:

Diagonal of a cube of side a = $a\sqrt{3}$

Calculations:

Let the side of the cube be " a ".

According to question,

$$\text{Diagonal} = 6\sqrt{3}$$

$$\Rightarrow a\sqrt{3} = 6\sqrt{3}$$

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

Hence, The side is 6 cm

$\therefore$ Length of side of the cube is 6 cm.

71. Answer: c

Explanation:

Given:

The 9 - digit number $5p42978n6$ is divisible by 72.

Calculations:

Number should be divisible by 72. then, number should be divisible by 8 and 9 both.

Largest possible value of n to be divisible by 8 is = 9

And second largest possible value of n to be divisible by 8 = 5

$$\Rightarrow 856/8 = 107$$

For $n = 5$, then

Number should be divisible by 9 -

$$= (5 + p + 4 + 2 + 9 + 7 + 8 + 5 + 6)$$

$$= 46 + p$$

Therefore, $(46 + p)$ should be divisible by 9 then for $p = 4$ this condition will satisfy.

So, possible value of $p = 8$

Then, $2p - 1$

$$= 2(8) - 1$$

$$= 16 - 1$$

$$= 15$$

$\therefore$ The value of $(2p - 1)$ is 15.

72. Answer: d

Explanation:

Given

Taking last three years

in year 2018 = 10 lakh loss

in year 2019 = 5 lakh loss

Combining those two, total 15 lakh loss

Then in the year 2020 = 35 lakh profit

So, $35 - 15 = 20$ lakh profit

So for last three years there is a profit of 20 lakhs

73. Answer: a

Explanation:

GIVEN:

$$x - 2y = 3$$

$$2xy = 5$$

FORMULA USED:

$$(a + b)^2 = a^2 + b^2 + 2ab$$

$$(a - b)^2 = a^2 + b^2 - 2ab$$

CALCULATION:

$$\text{Now, } (x - 2y) = 3,$$

on squaring both sides we get,

$$\Rightarrow (x - 2y)^2 = 3^2$$

$$\Rightarrow x^2 + 4y^2 - 2 \times x \times 2y = 9$$

$$\Rightarrow x^2 + 4y^2 = 9 + 4xy \quad \text{-----(1)}$$

$$\text{Also, it is given } 2xy = 5$$

$$\Rightarrow xy = 5/2 \quad \text{-----(2)}$$

$$\text{Now, } (x + 2y)^2 = x^2 + 4y^2 + 4xy$$

put the value of $x^2 + 4y^2$ from equation (1) and the value of xy from equation (2),

$$\Rightarrow (x + 2y)^2 = (9 + 4xy) + 4 \times 5/2$$

$$\Rightarrow (9 + 4 \times 5/2) + 10$$

$$\Rightarrow (19 + 10) = 29.$$

Hence, the value is 29.

74. Answer: d

Explanation:

Given

Amount after 2 year = Rs 4624

Amount after 3 year = Rs 4913

Formula used

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

Calculation

$$\text{Rate of interest is given by} = \frac{4913-4624}{4624} \times 100 = 6.25 \%$$

$$4624 = P \left(1 + \frac{6.25}{100}\right)^2$$

$$P = \text{Rs } 4096$$

The sum is Rs.4096

75. Answer: b

Explanation:

Calculations:

The sum of imports-exports in year 2006-07 = $1036 + 818 = 1854$

The sum of imports-exports in year 2007-08 = $954 + 988 = 1942$

The sum of imports-exports in year 2008-09 = $618 + 878 = 1496$

The sum of imports-exports in year 2009-10 = $432 + 216 = 648$

The sum of imports-exports in year 2010-11 = $685 + 930 = 1615$

Here, $648 < 1496 < 1615 < 1854 < 1942$

∴ The imports-exports is minimum in year 2009-10.

76. Answer: a

Explanation:

The correct answer is sarangi.

★ Key Points

- **Ustad Sabri Khan**
 - Indian sarangi player Ustad Sabri Khan was born on May 21, 1927 .
 - He was a member of the Sainia Gharana .
 - The famous vocalist Mian Tansen, who performed in the court of the Mughal Emperor Akbar, is the root of this Gharana's musical heritage .
 - His father, Ustad Chajju Khan , continued his training after being introduced to the sarangi by his grandfather, Ustad Haji Mohammed Khan .
 - On All India Radio, Sabri Khan worked as a staff artist and performed sarangi with a wide variety of vocalist artists .
 - Ustad Sabri Khan received numerous honours and awards in recognition of his contribution to Indian classical music , including:
 - Sahitya Kala Parishad Award
 - Uttar Pradesh Sangeet Natak Academy Award (1990)
 - National Sangeet Natak Academy Award (1986),
 - Padma Shree(1992)
 - Padma Bhushan(2006)

★ Additional Information

- **Sarangi**
 - A bowed stringed instrument with a resonator covered in skin is called a sarangi .
 - Typically, a single block of wood is used to handcraft a sarangi.
 - The seventeen sympathetic strings on this instrument are constructed of steel, while the four playing strings are made of goat gut .

- The sarangi is a **common instrument in India with numerous regional variations** , but it plays a significant role in **the Hindustani music of North India** .
- The **sarangi** is the only musical instrument that can **accurately produce all of the nuances of vocal music**, including khayal, dhrupad, khayal, thumri, tappa, ghazal, and even bhajan, with embellishments and intonations .

77. Answer: b

Explanation:

The correct answer is March.

★ Key Points

- **Gram Ujala Yojana**
 - On **March 24, 2021**, the Gram Ujala scheme was introduced in Varanasi in the Lok Sabha constituency of **Prime Minister Modi** by **Union Power and Renewable Energy Minister R.K. Singh** .
 - The government provides the **lowest-priced LED lights in the globe in rural areas as part of the programme for Rs 10** .
 - In a news statement, the **Power Ministry** stated that the **high-quality LED bulbs will be provided to rural Varanasi residents for Rs.10 each** as part of the Gram Ujala programme by **Convergence Energy Services Limited**, an **entirely owned subsidiary of EESL- Energy Efficiency Services Limited** .
 - The main aim of this scheme is to **provide high-quality electricity at an affordable cost to villages across the country**.
 - According to the official press release, **phase 1** of the programme will distribute **1.5 crores LED bulbs**, which will significantly impact the nation's **efforts to combat climate change by enabling energy savings of 2025 million kWh/year** .
 - It will also show **CO2 reductions of 1.65 million T CO2/year** .

★ Additional Information

- The programme will only be put into effect in the **2,579 villages of the five districts of Bihar, Uttar Pradesh, Telangana, Andhra Pradesh, and Karnataka** .
- The recipient would be permitted to **exchange a maximum of five LED lights** under the programme.
- **Carbon credits** have been used exclusively to fund the plan.
- The new programme will replace the **incandescent and CFL (compact fluorescent lamp) bulbs now being used by rural consumers with new LED bulbs** .
- Within just two days of its launch, the government programme in **Arrah, Bihar, had distributed 6,150 items** .
- Once **rural households submit their incandescent lights** under the Gram Ujala Scheme, **12-watt and 7-watt bulbs with a 3-year warranty will be provided** .

78. Answer: c

Explanation:

The correct answer is Jhumpa Lahiri.

★ Key Points

- **The Interpreter of Maladies**
 - **Jhumpa Lahiri** , an American author of Indian descent, published a book collection of **nine short stories in 1999** called Interpreter of Maladies .
 - In **2000** , it was awarded the **Hemingway Foundation/PEN Award** and the **Pulitzer Prize for Fiction** .
 - Since then it has sold over **15 million copies worldwide** .
 - It is also one of **Oprah Winfrey's top ten books** and was named **The New Yorker's Best Debut of the Year** .
 - **Indians and Indian Americans who are caught between their traditions and the "New World"** are the subjects of the stories.
- **Jhumpa Lahiri**
 - Jhumpa Lahiri, an **American writer who was born on July 11, 1967** , is well-known for her **English-language short stories, novels, and essays as well as her more recent works in Italian** .

- Lahiri received the **National Humanities Medal** in 2014 .
- She joined **Barnard College of Columbia University** in 2022 where she served as the **Millicent C. McIntosh Professor of English and Director of Creative Writing** .

★ Additional Information

Author	Books
Alberto Vourvoulis	The City and the World: New York's Global Future (1997)
Anita Desai	Cry, the Peacock (1963) Fire on the Mountain (1977)
Amitav Ghosh	The Circle of Reason (1986) River of Smoke (2011)

79. Answer: d

Explanation:

The correct answer is Raju Sundaram.

★ Key Points

- **Raju Sundaram** won the National Film Award for Best Choreography at the 67th National Film Awards.
 - **Indian dancer, actor, and director Basava Raju Sundaram** predominantly produces dance choreography for Tamil, Kannada, and Telugu films.
 - He acted in movies including **Jeans (1998), 123 (2002), I Love You Da (2002), and Quick Gun Murugun (2009)** .
 - He also **directed** one movie, **Aegan (2008)** .

- He is the **elder brother of choreographers Prabhu Deva and Nagendra Prasad and the son of dancer Mugur Sundar** .
- At the **67th National Film Awards**, he received the **National Film Award for Best Choreography for a song from "Maharshi" (2019)** .
- The song was performed by **Vedala Hemachandra and Vishnupriya Ravi and was titled "Everest anchuna."**
- **Sri Mani** wrote the **song's lyrics**, and **Devi Sri Prasad** composed the melody .
- Other Telugu movies choreographed by Raju Sundaram include " Republic," "Krack," "Saaho," "Bharat Ane Nenu," and "Gudumba Shankar."

★ Additional Information

- 67th National Film Awards
 - The 67th National Film Awards were presented on **March 22, 2021, at a press conference to recognise the top Indian films certified in India between January 1, 2019, and December 31, 2019** .
 - The awards event, where the **Directorate of Film Festivals** honours the **best in Indian cinema with its yearly National Film Awards** , was initially scheduled for **3 May 2020** but was postponed because of the **COVID-19 pandemic** .
 - Later, on **October 25, 2021** , it was delivered.
 - At **Vigyan Bhawan in New Delhi** , the **67th National Awards** are being distributed.

80. Answer: b

Explanation:

The correct answer is By increasing red blood cell production, decreasing the binding affinity of haemoglobin and by increasing breathing rate.

★ Key Points

- Acclimatisation

- **Acclimatisation** is the long-term adaptation to high altitude , which is primarily carried on by an increase in red blood cell production and capillary tissue perfusion .
- At high altitudes, acclimatisation typically takes 1-3 days .
- The body undergoes a number of adaptations that enable it to function with less oxygen at high altitudes, such as:
 - the depth of breathing increases or by increasing breathing rate.
 - Increased pulmonary arterial pressure "forces" blood into areas of the lung that are typically not used when breathing at sea level.
 - The body creates more red blood cells to transport oxygen , as well as more of an enzyme.
 - By decreasing the binding affinity of haemoglobin .
- In order to reduce the effects of altitude sickness and to balance out increased urination, it's critical to stay hydrated during acclimatisation .
- Despite acclimation, the heart rate and ventilation rate both rise when at rest, whereas the heart rate falls when at its highest degree of activity due to the release of oxygen from haemoglobin to the body's tissues .

★ Additional Information

- **Altitude Sickness**
 - At sea level, there are around 21% more oxygen molecules than usual.
 - While the concentration does not change with the increase in altitude but the amount of oxygen molecules per breath and the atmospheric pressure decreases .
 - At 12,000 feet (3,658 metres) , there are around 40% less oxygen molecules in each breath.
 - Even while at rest, your breathing rate needs to increase for the body to receive enough oxygen .
 - Continued exposure to higher altitudes without enough acclimatisation might result in very serious, even fatal illnesses .

81. Answer: a

Explanation:

The correct answer is position-time.

★ Key Points

- **Second Equation of Motion**

- The second equation of motion is

$$s = ut + \frac{1}{2}at^2$$

- The given equation describes the **position-time relation**.
- With the knowledge of the **numbers for the time, acceleration, and beginning velocity**, we can use this formula to calculate the displacement.
- In the equation $s = ut + \frac{1}{2}at^2$
 - s denotes the **body's displacement** and is expressed in metres (m),
 - u denotes the **body's initial velocity** and is expressed in metres per second (m/s),
 - t denotes the **time required for the body to move** and is expressed in seconds (s),
 - and a denotes the **body's acceleration** and is expressed in metres per second square (m/s⁻²).

★ Additional Information

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Relation	Equation
distance-time	$s = d/t$ where, s denotes the speed of the object , d denotes the distance of the object , and t denotes the time required for the body to move
position-velocity	$2as = v^2 - u^2$ where, S denotes the body's displacement, u denotes the body's initial velocity, v denotes the body's final velocity , and a denotes the body's acceleration
velocity-time	$v = u + at$ where, u denotes the body's initial velocity, v denotes the body's final velocity , a denotes the body's acceleration , and t denotes time required for the body to move

82. Answer: d

Explanation:

The correct answer is Proteins.

★ Key Points

- **Proteins**

- Of all macromolecules, **proteins have the widest diversity of functions and are one of the most abundant organic molecules** in biological systems.
- Because there are **20 different chemically unique amino acids that combine to produce lengthy chains of proteins**, the functions of proteins are **extremely diverse**.
- Protein is essential to **our diet because it helps our bodies create and repair new cells**.
- For children, teenagers, and pregnant women, protein is also crucial for **growth and development**.
- Consumed protein is **converted to amino acids by the body** and then absorbed.
- It is utilised in the **development of muscles and organs, production of hormones and antibodies, storage of fat, and production of energy**.
- Proteins are commonly called as the **building blocks of the body** because they play a vital role in helping to repair and strengthen muscle tissues after exercise.

★ Additional Information

- **Animal products** such as **meats, milk, fish, and eggs** are rich sources of protein, they can also be found in **plant-based foods** like **some grains, beans, soy, legumes, nut kinds of butter, and legumes**.
- **Carbohydrates**
 - **Carbohydrates also called carbs** are one of the **three primary nutrients included in foods and beverages**, along with proteins and fats.
 - The body converts carbohydrates to **glucose**. The primary **fuel for your body's cells, tissues, and organs is glucose, also known as blood sugar**.

- Grains, such as bread, cereals, and rice , are typical sources of carbs.
- Providing energy to all of the body's cells is the main function of carbs
- **Micronutrients**
 - Vitamins and minerals that our body needs in **very small amounts** are known as micronutrients .
 - However, they have a **crucial impact on a body's health** , and a lack of any one of them can result in serious, even **life-threatening illnesses** .
- **Fats**
 - Fat is the **primary energy storage type in the body** and is used as a fuel source by the body.
 - A **moderate amount of fat is required in the diet for optimal health** since it performs numerous other vital activities in the body.
 - Food contains a variety of fats, such as **monounsaturated, polyunsaturated, and saturated fats** .
 - **Butter, oil, nuts, meat, fish, and various dairy products** are a few examples of foods that include fats.

83. Answer: b

Explanation:

The correct answer is Coelom present, bilateral symmetry.

★ Key Points

- **Echinodermata**
 - Members of the phylum Echinodermata are commonly known as **Echinoderms** .
 - Echinoderms are **marine organisms that live in both the intertidal zone and the ocean's depths** .
 - **Characteristics of Echinodermata**
 - They are **round or elongated and have a star-like appearance** .
 - They are **exclusively marine** organisms.
 - The organisms have **spiky skin** .

- **Organ system level organisation** can be seen in them. Most members have a **digestive system in addition to a circulatory system** .
- They have a **coelomic cavity and are triploblastic** .
- The body of an **adult echinoderm has radial symmetry** .
- **Larvae** of echinoderms show **bilateral symmetry** .

★ Additional Information

Characteristics	Phylum
Roundworms, pseudocoelomate	Aschelminthes
Gastrovascular cavity, flatworms, acoelomate	Platyhelminthes
Gastrovascular cavity, coelom present	No phylum

84. Answer: a

Explanation:

The correct answer is Adventure sport.

★ Key Points

- Bungee jumping is an exciting sport , it's also dangerous .
- Free fallers can suffer serious injuries , such as a herniated disc or compression fracture .
- The cord can also rupture or tear and cause spaces between vertebrae .
- Bungee jumping in Rishikesh is the safest Bungee platform in India .
- Nobody has to ever hesitate before doing it as it is operated by experts and well-trained staff from New Zealand .

★ Additional Information

- Recreational sports are competitive physical games such as basketball or baseball that are played for fun as opposed to professionally.

- Fighting for a common goal with a group of players and coaches teaches you how to build teamwork and effectively communicate to solve problems
- Paraspports are sports played by people with a disability, including physical and intellectual disabilities.

85. Answer: b

Explanation:

The correct answer is Ajay-Atul.

★ Key Points

- **Ajay-Atul** is an Indian music composer duo comprising brothers **Ajay Gogavale** and **Atul Gogavale**.
- They won the **Best Music Direction** award at the **56th National Film Awards** from the **Government of India** for contributing music to the **Marathi film Jogwa** in 2008.
- They born in 21 August 1976 (age 45) (**Ajay**); 11 September 1974 (age 47) (**Atul**); in **Pune, Maharashtra, India**.
- Music-director-and-composer brothers **Ajay and Atul Gogavale** are making their **debut** on the **2015 Forbes India Celebrity 100 List**.

★ Additional Information

- **Shiv-Hari** refers to the Indian music director duo of **Shivkumar Sharma**, a **Santoor player**, and **Hariprasad Chaurasia**, a **flutist**. The duo has worked on **Indian classical music pieces** as well as **Indian movie scores**.
- **Anand and Milind Shrivastav** are a duo of **Indian film music composers**. Born to **composer Chitragupt**, they have composed music for over **200 Bollywood films**. The brothers **debuted** in **1984 with Ab Ayega Mazaa** and had their major breakthrough with **Qayamat se Qayamat Tak** in 1988.
- **Vishal-Shekhar** is an Indian music composer, production, singing and songwriting duo consisting of **Vishal Dadlani** and **Shekhar Ravjiani** from **Mumbai**.

86. Answer: d

Explanation:

The correct answer is Odissi.

★ Key Points

- Kelucharan Mohapatra was a **legendary Indian classical dancer ,guru , and exponent of Odissi dance , who is credited with the revival and popularizing of this classical dance form in the 20th century.**
- He is the **first person to receive the Padma Vibhushan from Odisha .**
- He was **born on 8 January 1926 and died on 7 April 2004 , in Bhubaneswar .**
- **Odissi is traditionally a dance-drama genre of performance art , where the artist and musicians play out a story ,a spiritual message or devotional poem from the Hindu texts , using symbolic costumes ,body movement ,abhinaya (expressions), and mudras (gestures and sign language) set out in ancient Sanskrit literature .**

★ Additional Information

- **Mohiniyattam** is an **Indian classical** dance form that **developed** and remained popular in the **state of Kerala . Mohiniyattam** dance gets its name from the word Mohini – **a historical enchantress avatar of the Hindu God Vishnu , who helps the good prevail over evil by developing her feminine powers .**
- **Kathak** is one of the eight major forms of **Indian classical dance . It is the classical dance form of Uttar Pradesh . The origin of Kathak is traditionally attributed to the travelling bards in ancient northern India known as Kathakars or storytellers.**
- The **Manipuri Dance , also referred to as the Manipuri Raas Leela** is one of the eight major Indian classical dance forms, originating from the state of **Manipur. The dance form is imbued with the devotional themes of Madhura Raas of Radha-Krishna and is characterized by gentle eyes and soft peaceful body movements.**

87. Answer: c

Explanation:

The correct answer is National Human Rights Commission.

★ Key Points

- In **India** , a Constitutional body is a body or **institute** established by the **Constitution of India** . They can only be **created** or **changed** by passing a **constitutional amendment bill** , rather than an **Act of Parliament** .
- The **National Human Rights Commission of India** is a **statutory public body** constituted on **12 October 1993** under the **Protection of Human Rights Ordinance of 28 September 1993** .
- It was **given** a statutory basis by the **Protection of Human Rights Act, 1993** .
- **Arun Kumar Mishra** , a **former Judge of the Supreme Court** is the **current chairperson of the commission** (11th chairperson of NHRC).

★ Additional Information

- The **Finance Commissions** are commissions **periodically constituted** by the **President of India** under **Article 280** of the **Indian Constitution** to define the **financial relations** between the **central government of India** and the **individual state governments** .
- The **Election Commission of India** is a **constitutional body** . It was established by the **Constitution of India** to **conduct** and **regulate elections** in the **country** .
- The **Union Public Service Commission** , commonly abbreviated as **UPSC** , is **India's premier central recruitment agency** for recruitment of all the **Group 'A'** **officers** under the **Government of India** .

88. Answer: c

Explanation:

The correct answer is Hepatitis.

★ Key Points

- **Non-infectious diseases** are **caused** by **factors** such as **genetics** ,**malnutrition** ,**environment** , and **lifestyle** . Examples of **non-infectious** diseases include **cancer** ,**Alzheimer's disease** , and **epilepsy** .
- **Infectious diseases** are **disorders caused by organisms** — such as **bacteria** ,**viruses** ,**fungi** ,or **parasites** . Many organisms live in and on our bodies. They're normally harmless or even helpful. But under **certain conditions** ,**some organisms** may **cause disease** . Some **infectious diseases** can be **passed from person to person** .
- **Hepatitis** means **inflammation of the liver** . The **liver** is a **vital organ** that **processes nutrients** ,**filters the blood** , and **fights infections** . When the liver is **inflamed or damaged** , its **function** can be **affected** .
- **Heavy alcohol use** ,**toxins** ,**some medications** , and certain **medical conditions** can **cause hepatitis** .

★ Additional Information

- **Tuberculosis (TB)** is **caused** by a **bacterium** called **Mycobacterium tuberculosis** . The **bacteria** usually **attack** the **lungs** , but **TB bacteria** can **attack any part of the body** such as **the kidney** ,**spine** , and **brain** . Not everyone infected with **TB bacteria** becomes **sick** .
- In **pneumonia** , the **air sacs** may **fill with fluid or pus** . The **infection** can be **life-threatening** to anyone, but particularly to **infants** ,**children** , and **people over 65** . **Symptoms** include **a cough** with **phlegm or pus** ,**fever** ,**chills** , and **difficulty breathing** .
- **Diabetes** is a **chronic** (long-lasting) **health condition** that affects how **your body** turns **food** into **energy** . Your **body** **breaks down** most of the **food you eat** into **sugar (glucose)** and **releases** it into **your bloodstream** . When your **blood sugar** goes up , it **signals** your **pancreas** to **release insulin** .

89. Answer: a

Explanation:

The correct answer is Mohiniyattam.

★ Key Points

- Mohiniyattam is an Indian classical dance form that developed and remained popular in the state of Kerala .Kathakali is another classical dance form in Kerala.
- The dance is performed by women in honour of the Hindu god Vishnu in his incarnation as the enchantress Mohini.
- Kanak Rele is an Indian dancer ,choreographer , and academic best known as an exponent of Mohiniyattom .
- She is the founder-director of the Nalanda Dance Research Centre and the founder-principal of the Nalanda Nritya Kala Mahavidyalaya in Mumbai .
- She was born on 11 June 1937 (age 85 years) in Gujarat .

★ Additional Information

- Kuchipudi is one of the eight major Indian classical dances . It originates from a village named Kuchipudi in the Indian state of Andhra Pradesh .Kuchipudi is a dance-drama performance , with its roots in the ancient Hindu Sanskrit text of Natya Shastra .
- Kathak is one of the eight major forms of Indian classical dance . It is the classical dance form of Uttar Pradesh . The origin of Kathak is traditionally attributed to the travelling bards in of ancient northern India known as Kathakars or storytellers.
- Bharatanatyam is a major form of Indian classical dance that originated in Tamil Nadu . The dance form is also briefly mentioned in the Kannada text Manasollasa written by Someshwara III . It has flourished in the temples and courts of southern India since ancient times .

90. Answer: a

Explanation:

The correct answer is Sharngadeva.

★ Key Points

- The **Sangita-Ratnakara** literally "**Ocean of Music and Dance**", is one of the most important **musicological texts** from **India** .
- **Composed by Sharngadeva** in **Sanskrit** during the **13th century** , both **Hindustani music** and **Carnatic music** traditions of **Indian classical music** regard it as a **definitive text** .
- It is also called '**Saptadhyayi**' as it **consists of seven chapters** .
- **Sharngadeva** or **Sarnga Deva** was the **13th-century Indian musicologist** who **authored Sangita Ratnakara** – the **classical Sanskrit text on music and drama** . It is considered to be the authoritative treatise in **Indian classical music** by both **Hindustani music** and **Carnatic music** .

★ Additional Information

- **Lochan kavi** belonged to the **Mithila region, Bihar** , and was also called **Lochan Pandit** .
- **Jaidev** was a **music composer** in **Hindi films** , most known for his work in films :**Hum Dono ,Reshma Aur Shera ,Prem Parbat ,Gharaonda** and **Gaman** . He won the **National Film Award for Best Music Direction** ,three times for **Reshma Aur Shera ,Gaman** and **Ankahee** .
- **Ramamatya** was the **grandson of the illustrious Kallinatha** . He was also the **royal composer and architect** at the **court of king Ramaraja** .

91. Answer: c

Explanation:

The correct answer is Bhubaneswar.

★ Key Points

- In January 2022, in Bhubaneswar an initiative – Deaddiction, Reformation and Entrepreneurial Assistance for Making a Safe Society (Dreams) was launched to

rehabilitate drug addicts.

- **Drug addicts** , who were involved in **snatching , theft , or other property-related offence** in the city, may soon get a **fresh lease of life** .
- The **commission police** have decided to **facilitate** their treatment in **deaddiction centres** , bring them to the **mainstream** and provide them **livelihood support** .
- They will **initially** help **50 drug addicts** under their **new incentives** .
- Police will launch **awareness campaigns** in **slums** and **educational institutes** to make them **free from drugs** .

★ Additional Information

- It is to be noted here that the **city police** launched the **DREAMS project** in **February** this year with an aim to help the **drug addicts** , who were involved in **snatching, theft, or other property-related offences** in the city, to **return to normal life** .
- They were **engaged** in different **activities** like **yoga ,dance , and playing chess** .**Proper food** and **other facilities** were provided at the **deaddiction centers** which helped the **drug addicts** to return to **normalcy now** .

92. Answer: b

Explanation:

The correct answer is RK Laxman.

★ Key Points

- Rasipuram Krishnaswami Laxman was an **Indian cartoonist ,illustrator , and humorist** .
- He is best known for his **creation "The Common Man"** and for his **daily cartoon strip ,You Said It in The Times of India** , which started in **1951**. **R. K.**
- He was **born on 24 October 1921** , in **Mysuru** .
- He **died on 26 January 2015** , at **Deenanath Mangeshkar Hospital and Research Center, Pune** .

- He wrote **You Said it ,Maalgudi Ki Kahaniyan ,The best of Laxman,** and more books.

★ Additional Information

- **Ajit Ninan** is an Indian political cartoonist , best known for **drawing the Centrestage series** of cartoons in India, **Today magazine** and **Ninan's World** in the **Times of India** .Ninan lives in **New Delhi** , where he works for the **Times of India** .
- **Ottupulackal Velukkuty Vijayan** , commonly known as **O. V. Vijayan** , was an Indian author and cartoonist , who was an **important figure** in **modern Malayalam language literature** .
- **Mario Miranda** popularly known as **Mario de Miranda** was an Indian cartoonist and **painter** based in **Loutolim** in the **Indian state of Goa**.

93. Answer: a

Explanation:

The correct answer is Tokyo.

★ Key Points

- The **Paralympic Games** or **Paralympics** , also known as the **Games of the Paralympiad** , is a **periodic series** of **international multi-sport events** involving athletes with a range of **physical disabilities** ,including **impaired muscle power** , **impaired passive range of movement** , **limb deficiency** , **leg length difference** , **short stature** , **hypertonia** , **ataxia** , **athetosis** , **vision impairment** and **intellectual impairment** .
- There are **Winter and Summer Paralympic Games** , which since the **1988 Summer Olympics in Seoul ,South Korea** , are held almost **immediately following** the respective **Olympic Games** .
- The **Paralympics** has grown from a small gathering of **British World War II veterans** in **1948** to become one of the **largest international sporting events** by the **early 21st century** .

- The **Paralympics** has grown from **400 athletes** with a **disability** from **23 countries** in **Rome in 1960** , where they were proposed by doctor **Antonio Maglio** , to **4520 athletes** from **163 National Paralympic Committees** at the **2020 Summer Paralympics** .

★ Additional Information

- **International Paralympic Committee** (including Paralympic athletics, Paralympic swimming, Paralympic shooting, Paralympic powerlifting, Para-alpine skiing, Paralympic biathlon, Paralympic cross-country skiing, Para ice hockey, Para snowboarding).

94. Answer: c

Explanation:

The correct answer is Reserve Bank of India.

★ Key Points

- **Cash Reserve Ratio (CRR)** is the **share of a bank's total deposit that is mandated** by the **Reserve Bank of India (RBI)** to be maintained with the latter as reserves in the form of **liquid cash** .
- The **current cash reserve ratio** is at **4%**, this will be changed to **4.5%** from **May 21st** .
- Objectives of **Cash Reserve Ratio** :
 - **Cash Reserve Ratio** ensures that **a part of the bank's deposit** is with the **Central Bank** and is hence, secure.
 - Another objective of **CRR** is to **keep inflation under control** . During high **inflation in the economy** ,**RBI raises** the CRR to **reduce the amount of money** left with **banks to sanction loans** . It **squeezes the money flow** in the **economy**, reducing investments and bringing down inflation .

★ Additional Information

- The statutory Liquidity Ratio (SLR) is the **proportion of liquid assets** to time and demand liabilities .
 - The rate of SLR is **18.00%** .
-

95. Answer: a

Explanation:

The correct answer is Rice.

★ Key Points

- **Rice**
 - Most people in **India** eat rice as their main crop of sustenance .
 - After **China**, our nation is the **second-largest** rice producer in the world.
 - It is a **Kharif crop** that needs **high temperatures (over 25°C)** ,high levels of **humidity**, and an **average annual rainfall** of at least **100 cm** .
 - It flourishes with the **aid of irrigation** in locations with **lower rainfall** .
 - In **Southern and Eastern India**, it is a **favourite staple cuisine** .
 - Rice is quickly establishing itself in the **North-Western Plain** .
 - **Mixed farming (Crops + Livestock)** is ideally suited to rice-growing regions.
 - **Unpolished rice** is very **nutrient-dense** . It contains plenty of **calcium**, **vitamin B**, and **A** .
 - These **vitamins** are **absent** from polished rice.

★ Additional Information

- **Bajra**
 - Bajra is a **rainfed Kharif crop** of dry and warm climate.
 - It is grown in areas of **40–50 cm of annual rainfall** . The upper limit is **100 cm**.
 - Bajra can be **grown on poor light sandy soils, black and red soils** .
 - It is sown either as a **pure or mixed crop** with **cotton, jowar and ragi** .
- **Pulses**
 - The **edible seeds** of plants in the **legume family** are known as **pulses** .

- India is the world's largest producer of pulses (25 per cent of total output), consumer of pulses (27 per cent of total consumption), and i mporter of pulses (14 per cent).
- It can be cultivated in a variety of climates, although it favours a mild, cool, and rather a dry climate with temperatures between 20 and 25 degrees Celsius and r ainfall between 40 and 50 centimetres .
- Oilseeds
 - The world's top producer of oilseeds is India .
 - About 12% of the country's total cultivated area is dedicated to the cultivation of various oil seeds.
 - It prefers a tropical climate with temperatures between 20° and 30°C and rainfall between 50 and 75 cm .
 - The maximum isohyet for groundnut cultivation is 100 cm .

96. Answer: d

Explanation:

The correct answer is Between the lesser Himalayas and the Shiwaliks.

★ Key Points

- Duns
 - Between the Shiwaliks and the Lesser Himalayas, there are longitudinal valleys called "Duns."
 - The word "dun" is used locally to refer to a valley, especially an open valley in the Sivalik Mountains or between the Sivalik Mountains and higher Himalayan foothills .
 - In Himachal , these valleys are known by the names Patli Dun, Kotli Dun, and Pinjore Dun .
 - Between the lesser Himalayas and Shivalik, there are longitudinal valleys that are referred to as "duns" in the west and "duars" in the east .
 - Unlike normal river valleys, duns are formed structurally and are covered in rocks and gravel that were eroded from the Shiwalik uplands and the Himalayas .

★ Additional Information

- **Longitudinal Valley**

- An elongated valley known as a **Longitudinal valley** is one that is situated **between two nearly parallel mountain ranges** in geologically young fold mountains like the Alps, Carpathians, Andes, or the highlands of Central Asia .
- They are frequently used by and **shaped by a later stream** .
- When the **Indian plate and the Eurasian plate** interacted as a result of **folding** , longitudinal valleys known as **dunes** were formed.
- They are formed between **Shivalik and the lesser Himalayas** .
- The **Himalayan rivers** that flow down into the valleys deposit coarse **alluvium** there.

97. Answer: d

Explanation:

The correct answer is Benazir Bhutto.

★ Key Points

- **Daughter of Destiny: An Autobiography** is a 1988 memoir by Benazir Bhutto , the 11th Prime Minister of Pakistan .
- The book was also **released as Daughter of the East: An Autobiography** from Hamish Hamilton in 1988 .
- The **author** of this **book** is **Benazir Bhutto**.
- **Benazir Bhutto 21 June 1953 – 27 December 2007** was a **Pakistani politician** who served as the **11th and 13th prime ministers of Pakistan** from **1988 to 1990** and from **1993 to 1996** . She was the **first woman** to head a **democratic government** in a **Muslim majority country** .

★ Additional Information

- **Kamala Surayya** , popularly known by her **one-time pen name Madhavikutty** and **married name Kamala Das** , was an **Indian poet in English** as well as an

author in Malayalam from Kerala, India .

- Urvashi Butalia is an Indian feminist writer ,publisher, and activist . She is known for her work in the women's movement of India, as well as for authoring books such as **The Other Side of Silence: Voices from and the Partition of India** and **Speaking Peace: Women's Voices from Kashmir**.
- Malala Yousafzai is a Pakistani activist for female education and the 2014 Nobel Peace Prize laureate . Awarded when she was 17 , she is the world's youngest Nobel Prize laureate , and the second Pakistani and the first Pashtun to ever receive a Nobel Prize .

98. Answer: d

Explanation:

The correct answer is Devendra Jhajharia.

★ Key Points

- Devendra Jhajharia is an Indian Paralympic javelin thrower competing in F46 events .
- He is the first Indian Paralympics player to win two gold medals at the Paralympics .
- He was born on 10 June 1981 (age 41 years) in Churu .
- He was awarded Padma Bhushan ,Major Dhyan Chand Khel Ratna Award for Para-Athletics ,Padma Shri ,Arjuna Award for Athletics .

★ Additional Information

- Vandana Katariya is an Indian field hockey player . She plays as a forward in the Indian national team. Vandana rose to prominence in 2013 , being India's top goal-scorer in the 2013 Women's Hockey Junior World Cup , where India won a bronze medal ; she scored five goals in the tournament , the third by any player .
- Faisal Ali Dar is an Indian sports enthusiast , and the first person to receive the Padma Shri Award in sports from Jammu and Kashmir.

- Sankara Narayana Menon Chundayil popularly known as **Unni Gurukkal** is a **Kalaripayattu gurukkal** or teacher from **Chavakkad** . For his contributions in the field of Kalaripayattu, he has **won several noted awards** including **Kerala Folklore Academy Award** and **India's forth highest civilian honor Padma Shri**.

99. Answer: a

Explanation:

The correct answer is Yamini Krishnamurthy.

★ Key Points

- Mungara Yamini Krishnamurthy is an Indian dancer of Bharatanatyam and Kuchipudi styles of dancing .
- She was born on 20 December 1940, Madanapalle .
- She was awarded Padma Vibhushan , Padma Bhushan , and Sangeet Natak Akademi Award for Dance – Bharatanatyam .
- She has the honour of being Asthana Nartaki (resident dancer) of the Tirumala Tirupati Devasthanam .

★ Additional Information

- Chinta Ravi Bala Krishna is a winner of the Sangeet Natak Akademi's Ustad Bismillah Khan Yuva Puraskar for 2009 , a recipient of the singular honor of Yuva Sutradhari at the Siddhendra Yogi Nrityotsav in 2007 , a Gold Medallist M.A Kuchipudi, as well as being a winner of a host of other awards .
- Pandit Sunder Prasad was a guru of – Jaipur Gharana of the Indian classical dance form, Kathak . He received his training from his father Pandit Chunnilal of Jaipur Gharana .
- Mohanrao Shankarrao Kallianpurkar was a Kathak dancer and teacher from Karnataka , considered to be one of the greatest scholars and teachers of the Kathak dance form. He belongs to the Jaipur school of Kathak .

100. Answer: a

Explanation:

The correct answer is Ilaiyaraaja.

★ Key Points

- **R. Gnanathesikan** , known as **Ilaiyaraaja**, has been conferred the prestigious title of 'Maestro' by London's Royal Philharmonic Orchestra, with whom he had been the only Asian to have composed a full symphony as on 6th March 2022.
- He is an **Indian film composer ,conductor-arranger ,singer , and lyricist** who **works** in the **Indian film industry** , predominantly in **Tamil cinema** in addition to **Telugu cinema** .
- He is a **nominated Member of Parliament** in the **Rajya Sabha** since **July 2022** .
- **Music legend** Ilaiyaraaja stands out with his **phenomenal achievements** bringing in structural changes within the **Tamil film world** .

★ Additional Information

- **Allah Rakha Rahman** is an **Indian film composer ,record producer ,singer , and songwriter** who works predominantly in **Indian cinema** and occasionally **international cinema** . In **2010** , the **Indian government** awarded him the **Padma Bhushan** , the nation's **third-highest civilian award**.
- **Devi Sri Prasad** is an **Indian film composer ,lyricist ,singer-songwriter , and performer** . Popularly known by his **initials DSP** , he is best known for his work in **Telugu films** . He also worked in a few **Tamil films** .
- **Gopi Sundar C. S .** is an **Indian music director ,programmer ,playback singer ,songwriter ,actor , and performer** who works prominently in **Malayalam ,Telugu, and Tamil film industries** .