



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 2017 (Tier-I) Previous Year Paper (15-Mar-2018) (Shift 3)

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. Directions: In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'. (+2, -0.5)

He was not (1)/ grateful for (2)/ Rahul for helping his cause. (3)/ No error (4)

- a. 1
- b. 2
- c. 3
- d. 4

-
2. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'. (+2, -0.5)

On the one hand, life seems transient like a dewdrop (1)/ and on the other hand, it is permanent (2)/ with the potential for eternal continuity. (3)/ No error (4)

- a. 1
- b. 2
- c. 3
- d. 4

-
3. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option. (+2, -0.5)

The big tree was _____ the lake.

- a. In
- b. Within
- c. Across
- d. Off

-
4. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option. (+2, -0.5)

_____ people in slum areas have access to toilets even in Delhi.

- a. The little
- b. Few
- c. Little
- d. Every

-
5. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word. (+2, -0.5)

Heretic

- a. Faithful
- b. Cynic
- c. Loyalist
- d. Righteous

6. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word. (+2, -0.5)

Covenant

- a. Difference
- b. Conversation
- c. Bond
- d. Devotion

7. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word. (+2, -0.5)

Lechery

- a. Lust
- b. Binge
- c. Excess
- d. Benevolence

8. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word. (+2, -0.5)

Inhibit

- a. Check
- b. Stop

c. Frustrate

d. Allow

9. Rearrange the parts of the sentence in correct order.

(+2, -0.5)

Logo centrist is the search for a

P: rational language that is able to

Q: all its aspects perfectly and accurately

R: know and represent the world and

a. RPQ

b. PQR

c. QPR

d. PRQ

10. A sentence has been given in Active/Passive Voice. Out of the four given alternatives, select the one which best expresses the same sentence in Passive/Active Voice.

(+2, -0.5)

I am observing the animals.

a. The animals are observed.

b. The animals is being observed.

c. The animals are being observed.

d. The animals are under observation.

11. A sentence has been given in Direct/Indirect Speech. Out of the four given alternatives, select the one which best expresses the same sentence in Indirect/Direct Speech. (+2, -0.5)

Kavita asked me, "How is your mother?"

- a. Kavita asked me how was my mother.
- b. Kavita asked her how my mother is.
- c. Kavita asked how mother was.
- d. Kavita asked me how my mother was.

12. In the following question, a word has been written in four different ways out of which only one is correctly spelt. Select the correctly spelt word. (+2, -0.5)

- a. Camouflage
- b. Cameousflage
- c. Camouflege
- d. Camioflaeg

13. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

The new civilisation of Righteousness and _____, and therefore of Brotherhood, of ordered Liberty, of Peace, of _____, cannot be built up until the elements are removed _____ have brought the old civilisation crashing about our ears. _____ is it

necessary that the War shall be fought out to its appointed end, and that
----- premature peace shall leave its object unattained.

Righteousness and -----, and therefore of Brotherhood,

- a. Judge
- b. Judgments
- c. Justice
- d. Judiciary

14. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

The new civilisation of Righteousness and -----, and therefore of Brotherhood, of ordered Liberty, of Peace, of -----, cannot be built up until the elements are removed ----- have brought the old civilisation crashing about our ears. ----- is it necessary that the War shall be fought out to its appointed end, and that ----- premature peace shall leave its object unattained.

Peace, of -----, cannot be built up u

- a. Happy
- b. Happier
- c. Happiest
- d. Happiness

15. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

The new civilization of Righteousness and _____1_____, and therefore of Brotherhood, of ordered Liberty, of Peace, of _____2_____, cannot be built up until the elements are removed _____3_____ have brought the old civilization crashing about our ears.

_____4_____ is it necessary that the War shall be fought out to its appointed end, and that _____5_____ premature peace shall leave its object unattained.

elements are removed _____3_____ have brought

- a. What
- b. When
- c. Which
- d. Where

16. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

The new civilization of Righteousness and _____1_____, and therefore of Brotherhood, of ordered Liberty, of Peace, of _____2_____, cannot be built up until the elements are removed _____3_____ have brought the old civilization crashing about our ears.

_____4_____ is it necessary that the War shall be fought out to its appointed end, and that _____5_____ premature peace shall leave its object unattained.

crashing about our ears. _____4_____ is it necessary

- a. If
- b. Because
- c. Why
- d. Therefore

17. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

The new civilisation of Righteousness and _____, and therefore of Brotherhood, of ordered Liberty, of Peace, of _____, cannot be built up until the elements are removed _____ have brought the old civilisation crashing about our ears. _____ is it necessary that the War shall be fought out to its appointed end, and that _____ premature peace shall leave its object unattained.

appointed end, and that _____ premature peace

- a. Not
- b. Or
- c. No
- d. Never

18. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase. (+2, -0.5)

Add insult to injury

- a. To further a loss with mockery to worsen an unfavorable situation.

- b. A disgrace becomes worse when friends and family disown you.
 - c. The world usually slanders a fallen person rather than help him.
 - d. A suffering is compounded if you are hurt at the same place again.
-

19. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase. (+2, -0.5)

Tie the knot

- a. Get into a fight.
 - b. Get angry.
 - c. Get more complicated.
 - d. Get married.
-

20. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence. (+2, -0.5)

Rub a part of the body to restore warmth or sensation

- a. Asunder
 - b. Chafe
 - c. Gelid
 - d. Nippy
-

21. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence. (+2, -0.5)

Lasting for a very short time

- a. Ephemeral
- b. Immortal
- c. Incessant
- d. Perennial

-
22. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement". (+2, -0.5)

A case in point is Sydney, Australia, where last year more than 8,000 pedestrians (is fined) for illegally crossing city streets.

- a. Was fined
- b. Were fined
- c. Were being fine
- d. No improvement

-
23. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement". (+2, -0.5)

We (have been) away for a long time, you know, and so we're anxious to get home again.

- a. Has been
- b. Is been

- c. Have being
 - d. No improvement
-

24. The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph. (+2, -0.5)

Inform all the other

A-would be punished

B-giving them a lift too

C-officers that anyone

- a. CAB
- b. BCA
- c. CBA
- d. BAC

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25. In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word. (+2, -0.5)

- a. Scentillate
- b. Scintilate
- c. Scintillate
- d. Scentilate

General Intelligence

26. In the following question, select the related word pair from the given alternatives. (+2, -0.5)

Court : Lawyer :: ? : ?

- a. Restaurant : Waiter
- b. Doctor : Hospital
- c. Carnivorous : Lion
- d. Servant : House

-
27. In the following question, select the related number from the given alternatives. (+2, -0.5)

48 : 196 :: 52 : ?

- a. 184
- b. 198
- c. 212
- d. 238

-
28. In the following question, select the related letter pair from the given alternatives. (+2, -0.5)

GSR : HTP :: ? : ?

- a. KTU : LUW

- b. CLK : DNL
 - c. SPM : TRO
 - d. RJH : SKF
-

29. In the following question, select the odd word from the given alternatives. (+2, -0.5)

- a. Odometer
 - b. Thermometer
 - c. Degree
 - d. Barometer
-

30. In the following question, four number pairs are given. The number on left side of (-) is related to the number on the right side of (-) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the (+2, -0.5)

- a. 23 – 529
 - b. 19 – 361
 - c. 11 – 121
 - d. 17 – 269
-

31. In the following question, select the odd letter/letters from the given alternatives. (+2, -0.5)

- a. DKR

b. JQX

c. IPT

d. LSZ

32. Arrange the given words in the sequence in which they occur in the dictionary. **(+2, -0.5)**

1. Warp

2. Warrior

3. Wary

4. Wash

5. Wallet

a. 51234

b. 54123

c. 12543

d. 34521

33. In the following question, select the missing number from the given series. **(+2, -0.5)**

9, 9, 18, 54, 216, ?

a. 1020

b. 1080

c. 636

d. 740

-
34. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. (+2, -0.5)

AN, CQ, ET, ?, IZ

- a. HX
- b. GL
- c. NW
- d. GW

-
35. Akash leaves from his school at 5:30 a.m. He starts walking towards the south and covers a distance of 20 km. He turns left and walks 15 km to reach point A. He turns right and walks 14 km. He again turns right and walks 10 km. How far (in km) and in which direction is he now from point A? (+2, -0.5)

- a. $3\sqrt{43}$, South-West
- b. $3\sqrt{43}$, South-East
- c. $2\sqrt{74}$, South-West
- d. $2\sqrt{74}$, South-East

-
36. From the given alternatives, select the word which CANNOT be formed using the letters of the given word. (+2, -0.5)

REAPPROACHMENT

- a. Rage
- b. Approach
- c. Rent
- d. Cheap

37. In a certain code language, "friend is honest" is written as "hu lip ma", "honest are men" is written as "lip fi kit" and "men never clever" is written as "fi ti gi". What is the code for "men" in that code language? (+2, -0.5)

- a. lip
- b. fi
- c. hu
- d. ma

38. In a certain code language, '-' represents '+', '+' represents 'x', 'x' represents '÷' and '÷' represents '-'. Find out the answer to the following question. (+2, -0.5)

$$9 - 14 + 15 \times 10 \div 16 = ?$$

- a. 12
- b. 14
- c. 18
- d. 26

39. The following equation is incorrect. Which two signs should be interchanged to correct the equation? (+2, -0.5)

$$20 + 12 \times 35 - 20 \div 10 = 31$$

- a. $\div$ and $-$
- b. $+$ and $\times$
- c. $+$ and $\div$
- d. $\times$ and $+$

40. If $5 \Delta 1 = 40$, $9 \Delta 9 = 0$ and $7 \Delta 1 = 60$, then find the value of $4 \Delta 9 = ?$ (+2, -0.5)

- a. 80
- b. 30
- c. 50
- d. 90

41. Which of the following terms follows the trend of the given list? (+2, -0.5)

ABCABcABC, ABCAbCABC, ABCaBCABC, ABcABCABC, AbCABCABC,

-----.

- a. ABCABCaBC
- b. aBCABCABC
- c. ABCABcABC
- d. ABCAbCABC

42. Parul cycles 3 km East, then turns South and cycles 1 km, then turn West and cycles 2.5 km, then turns to her right and cycles 1 km. Where is she now with reference to her starting position? (+2, -0.5)

- a. 5.5 km East
- b. 0.5 km West
- c. 0.5 km East
- d. 5.5 km West

43. **Direction:** In the following question, two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements. (+2, -0.5)

Statement

I: All the pictures are photographs.

II: All paintings are pictures.

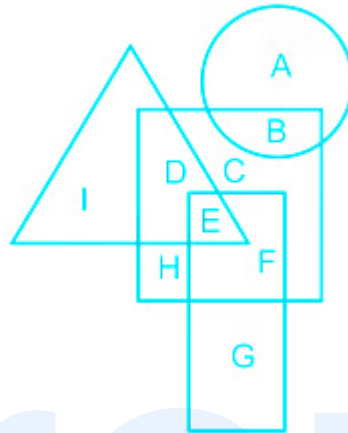
Conclusion

I: All photographs are paintings.

II: All paintings are photographs.

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

44. In the following figure, rectangle represents Engineers, circle represents Food stylists, triangle represents Potters and square represents Joggers. Which set of letters represents Joggers who are either Engineers or Food stylists? (+2, -0.5)



- a. DCB
- b. BEF
- c. HEF
- d. DEH

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45. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. (+2, -0.5)

RPK, TSM, VVO, XYQ, ?

- a. ZBS
- b. APQ
- c. ACT
- d. YAR

46. In the following question, select the missing number from the given series. (+2, -0.5)

8, 16, 43, 107, 232, ?

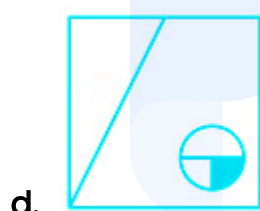
- a. 342
- b. 448
- c. 248
- d. 528

47. In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives. (+2, -0.5)

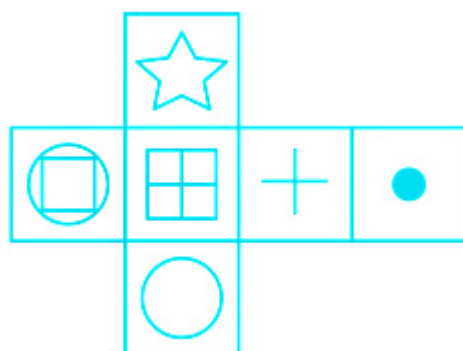
- a. (6, 24, 18)
- b. (9, 36, 27)
- c. (7, 28, 21)
- d. (5, 20, 10)

48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure? (+2, -0.5)





49. Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure? (+2, -0.5)





50. A word is represented by the only a set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example 'D' can be represented by 12, 43 etc and 'R' can be represented by 95, 97 etc. Similarly, you have to identify the set for the word 'PLUS'.

(+2,
-0.5)

MATRIX – I						MATRIX – II					
	0	1	2	3	4		5	6	7	8	9
0	H	J	D	B	J	5	W	V	S	U	W
1	B	I	D	L	K	6	Y	T	O	T	P
2	I	L	F	C	K	7	Z	O	S	S	Q
3	B	F	M	L	D	8	T	Q	T	Z	Q
4	H	J	A	G	H	9	R	S	R	N	V

a. 69, 21, 58, 77

b. 14, 99, 34, 66

c. 24, 68, 43, 79

d. 43, 58, 24, 55

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Quantitative Aptitude

51. Find the average of all prime numbers from 1 to 50.

(+2, -0.5)

- a. 21.867
- b. 22.857
- c. 23.887
- d. 24.867

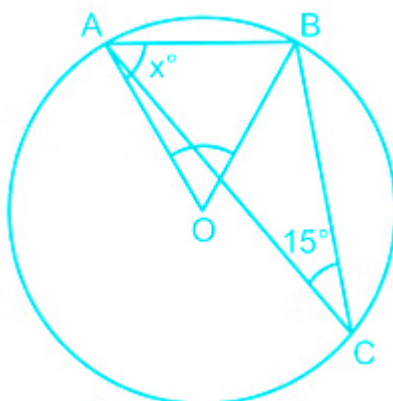
52. Find the least number among $\frac{5}{9}$, $\sqrt{\frac{9}{49}}$, 0.43 and $(0.7)^2$.

(+2, -0.5)

- a. $\frac{5}{9}$
- b. $(0.7)^2$
- c. $\sqrt{\frac{9}{49}}$
- d. 0.43

53. For the figure given below, find the angle OAB (in degrees).

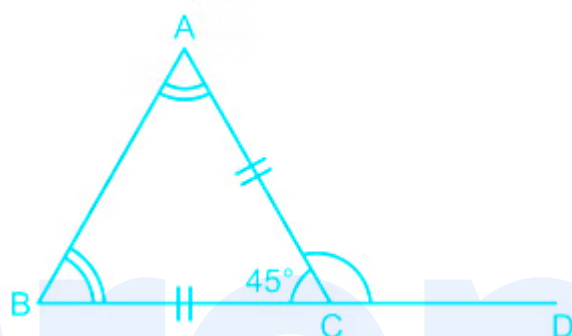
(+2, -0.5)



- a. 25

- b. 50
- c. 75
- d. 90

54. For the figure given below, find the value (in degrees) of $2\angle A + \angle B$. (+2, -0.5)



- a. 180°
- b. 202.5°
- c. 250°
- d. 279°

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55. If the side of a square is increased by 20%, then what will be the percentage increase in its perimeter? (+2, -0.5)

- a. 20
- b. 40
- c. 100
- d. 50

56. The ratio of salary of X, Y and Z is 15 : 3 : 8. If Z gets Rs. 3960 more than Y, then what is the salary (in Rs) of X? (+2, -0.5)

- a. 11880
- b. 12360
- c. 9900
- d. 10240

57. In a mixture, sugar and milk are in the ratio 4 : 5. If 7 litres of milk is added to it, then the ratio of sugar and milk in the new mixture becomes 2 : 3. What is the total quantity (In litres) of sugar in new mixture? (+2, -0.5)

- a. 35
- b. 28
- c. 42
- d. 24

58. A boy spent Rs. 20 to purchase toffees at Rs. 1 each. Next day, he purchased some toffees for Rs. 40 with a discount of 50 paise per toffee. What is the average price per toffee (in paise)? (+2, -0.5)

- a. 45
- b. 60
- c. 40
- d. 55

59. Simple interest on a sum of Rs. 6800 for 18 months is Rs. 2244. What is the rate (in percentage) of interest per annum? (+2, -0.5)

- a. 24
- b. 18
- c. 20
- d. 22

60. On selling 56 chairs, Mohan earns a profit equal to the selling price of 6 chairs. What is the profit percentage? (+2, -0.5)

- a. 9.28%
- b. 10.71%
- c. 12%
- d. 13.7%

61. The marked price of an article is Rs 1200 and retailer gets a discount of 25%. If he sells that article for Rs 1200, then what is the profit percentage of retailer? (+2, -0.5)

- a. 33.33
- b. 25
- c. 37.5
- d. 16.66

62. If $\sqrt{20} + \sqrt{125} = 15.65$, then what is the value of $\sqrt{45} + \sqrt{5}$? (+2, -0.5)

- a. 6.98
- b. 8.94
- c. 9.98
- d. 11.27

63. Both A and B together can complete a work in 20 days and B alone can complete the same work in 36 days. In how many days will A alone complete the work? (+2, -0.5)

- a. 30
- b. 50
- c. 45
- d. 42

64. A train moves at the speed of 40 m/s and crosses a bridge of length 550 metres in 25 seconds. What is the length (in metres) of the train? (+2, -0.5)

- a. 400
- b. 450
- c. 480
- d. 500

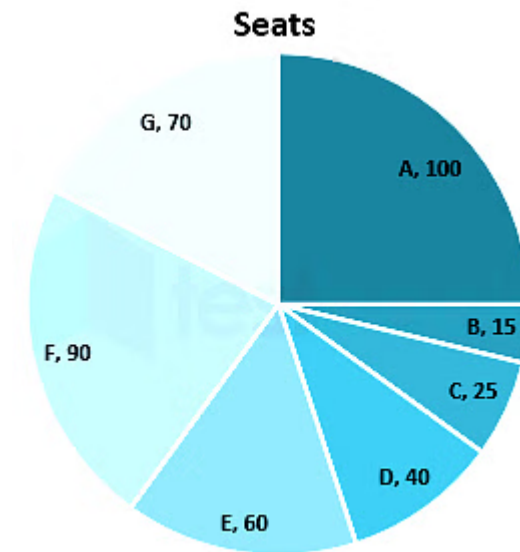
65. If $3\sqrt{7} + \sqrt{343} = 26.45$, then find the value of $\sqrt{252} + 20\sqrt{7}$ (+2, -0.5)

- a. 39.4
- b. 68.77
- c. 56.8
- d. 92.3

66. If $\frac{y}{x} = \frac{1}{3}$ then find the value of $\frac{x^2+y^2}{x^2-y^2}$ (+2, -0.5)

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

67. **Direction:** The pie chart shows the number of seats that each party has in the lower house of the parliament. Study the diagram and answer the following questions. (+2, -0.5)

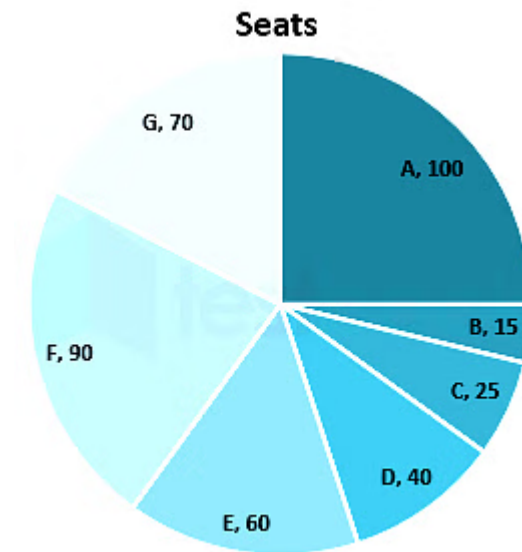


If parties D, E and F form a coalition they would be still short of how many seats to reach the half way mark?

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

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68. Direction: The pie chart shows the number of seats that each party has in the lower house of the parliament. Study the diagram and answer the following questions. (+2, -0.5)

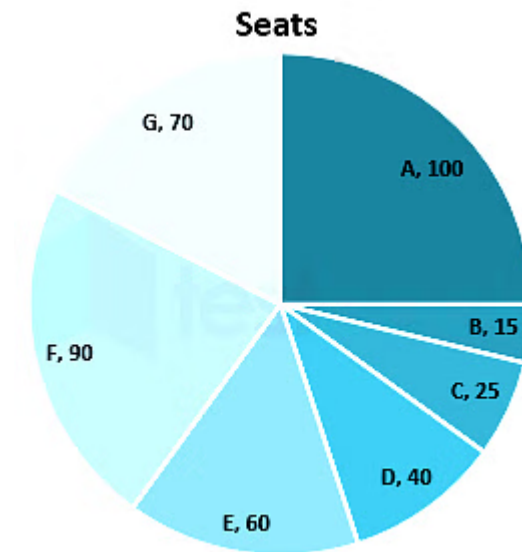


The measure of the central angle of the sector representing number of seats of party F is _____ degrees.

- a. 60
- b. 90
- c. 81
- d. 100

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69. Direction: The pie chart shows the number of seats that each party has in the lower house of the parliament. Study the diagram and answer the following questions. (+2, -0.5)

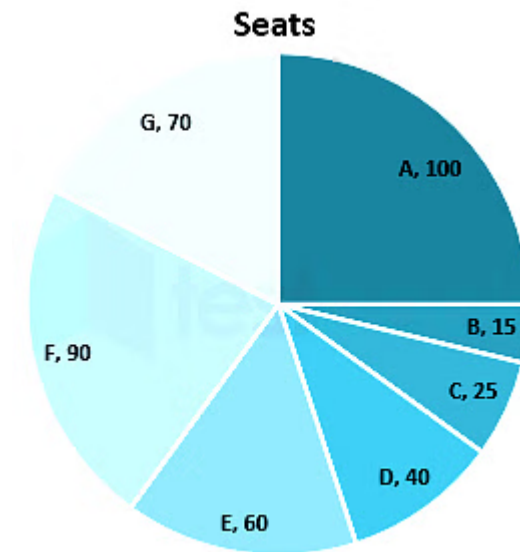


If the data shows the seats of all the parties then the lower house of parliament has how many seats in total?

- a. 400
- b. 300
- c. 450
- d. 360

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70. Direction: The pie chart shows the number of seats that each party has in the lower house of the parliament. Study the diagram and answer the following questions. (+2, -0.5)



Which party has the second highest seats?

- a. F
- b. G
- c. A
- d. D

71. If the lengths of the two parallel sides of a trapezium are 4 cm and 6 cm and its area is 25 cm^2 . Find the distance between its parallel sides (in cm). (+2, -0.5)

- a. 2.5
- b. 10
- c. 5
- d. 7.5

72. If the circumference of a circle is 44 cm, then what must be its area (in cm^2)? (+2, -0.5)

- a. 308
- b. 240
- c. 154
- d. 480

73. The volume of a hemisphere is 5749.33 cm^3 . Find its diameter (in cm). (+2, -0.5)

- a. 14
- b. 56
- c. 42
- d. 28

74. ΔPQR is right angled at Q. If $\angle P = 45^\circ$, then find the value of $(\operatorname{cosec} R + 1/3)$. (+2, -0.5)

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

75. In ΔPQR measure of angle Q is 90° . If $\cos P = 5/13$, and $PQ = 2.5 \text{ cm}$, then what is the length (in cm) of side PR? (+2, -0.5)

- a. 6
- b. 6.5
- c. 4
- d. 5.6

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General Awareness

76. Recession is _____. (+2, -0.5)
- a. reduction in production and employment for want of sufficient demand for goods
 - b. rise in the cost of production, especially because of wage increase
 - c. increase in money supply without a matching increase in production
 - d. No option is correct.
-
77. Who of the following is considered as the father of "Green Revolution" in the world? (+2, -0.5)
- a. Dr. Norman Borlaug
 - b. Dr. MS Swaminathan
 - c. Dr. Manmohan Singh
 - d. Dr. Henry Ford
-
78. Which of the following minerals is not found in the plateau regions? (+2, -0.5)
- a. Coal
 - b. Iron ore
 - c. Mineral oil
 - d. Manganese
-

79. Which are the two major rivers which emerge from the Amarkantak Plateau, but they flow in different directions? **(+2, -0.5)**

- a. Chambal and Betwa
 - b. Chambal and Sone
 - c. Narmada and Sone
 - d. Narmada and Betwa
-

80. The Saka Era was founded in the year_____. **(+2, -0.5)**

- a. 57 B.C
 - b. 78 A.D
 - c. 319 A.D
 - d. 248 A.D
-

81. Which ruler of Vijayanagar allowed the Portuguese to build a church in his empire? **(+2, -0.5)**

- a. Venkat II
 - b. Achyut Rai
 - c. Thirumal
 - d. Krishna Deva Rai
-

82. Anoushka Shankar is related to which musical instrument? **(+2, -0.5)**

- a. Sitar
 - b. Tabla
 - c. Veena
 - d. Mohan Veena
-

83. Which country, on 25 October 2017 announced that it will introduced a minimum wage for workers? (+2, -0.5)

- a. Bahrin
 - b. Kuwait
 - c. Oman
 - d. Qatar
-

84. Who is the winner of the third Indian Council for cultural Relations (ICCR) distinguished indologist award – 2017? (+2, -0.5)

- a. Hiroshi Marui
 - b. Owen King
 - c. Larry Sloman
 - d. Peggy Whitson
-

85. Ping-pong Diplomacy is related to which of the following countries? (+2, -0.5)

- a. Myanmar

- b. Japan
 - c. China
 - d. Taiwan
-

86. What is the valency of magnesium? (+2, -0.5)

- a. 1
 - b. 2
 - c. 3
 - d. 4
-

87. What is the general formula of Alkene? (+2, -0.5)

- a. C_nH_{2n}
 - b. C_nH_{2n+2}
 - c. C_nH_{2n-2}
 - d. C_nH_{2n-1}
-

88. According to Article 80 of Indian Constitution, Rajya Sabha can have a maximum strength of 250 members. Out of these 250 members how many are representatives of States and Union Territories? (+2, -0.5)

- a. 230
- b. 236

c. 238

d. 242

89. Under which Article of Indian Constitution an emergency can be declared on the grounds of failure of constitutional machinery in the States? **(+2, -0.5)**

a. Article 350

b. Article 352

c. Article 356

d. Article 368

90. During the day which process is the major driving force in the movement of water in the xylem? **(+2, -0.5)**

a. Transpiration pull

b. Evaporation

c. Suction

d. Translocation

91. Which of the following part of plant cell, is selectively permeable? **(+2, -0.5)**

a. Cell wall

b. Cell membrane

c. Cytoplasm

d. Nucleus

92. In September 2017, Link – IV Pipeline Canal of Saurashtra Narmada Avtaran Irrigation (SAUNI) Yojana was launched in _____. **(+2, -0.5)**

- a.** Madhya Pradesh
 - b.** Rajasthan
 - c.** Gujarat
 - d.** Maharashtra
-

93. What is the name of world's first artificial intelligence politician developed by New Zealand? **(+2, -0.5)**

- a.** NICK
 - b.** PAUL
 - c.** SAM
 - d.** TOM
-

94. In October 2017, Insolvency and Bankruptcy Board of India (IBBI) relaxed norms for information utilities. Listed Indian companies can now hold _____ of the paid-up equity share capital or total voting power rights in such firms. **(+2, -0.5)**

- a.** 80%
- b.** 90%
- c.** 100%

d. 50%

95. 9 January 2018, the Companies (Amendment) Act, 2017 amended some provisions of _____. (+2, -0.5)

- a. Companies Act, 1956
 - b. Companies Act, 2011
 - c. Companies Act, 2013
 - d. Companies Act, 2014
-

96. What is the heat generated (in J) in a heating element of resistance $1000\ \Omega$ when a current of 0.1 A passes through it for 25 seconds? (+2, -0.5)

- a. 250
 - b. 2500
 - c. 125
 - d. 1250
-

97. 1 pascal equals 1 _____. (+2, -0.5)

- a. N m^2
 - b. N m^{-2}
 - c. N m
 - d. N m^{-1}
-

98. By volume, 78% of air is _____.

(+2, -0.5)

- a. nitrogen
- b. oxygen
- c. hydrogen
- d. helium

99. Which of the statements given below are correct?

(+2, -0.5)

- A) In 2017, Max Verstappen raced in Formula One for Red Bull Racing.
 - B) In 2017, Steve Smith captained the IPL team Rising Pune Supergiant.
 - C) In 2017, Sergio Agüero played for the Premier League team Manchester City.
- a. Only A
 - b. A and C
 - c. Both B and C
 - d. A, B and C

100. In Microsoft Word, _____ provides tools for formatting like bold, italic, underline etc.

(+2, -0.5)

- a. Standard tool bar
- b. Menu bar
- c. Formatting tool bar

d. Status bar

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Answers

1. Answer: b

Explanation:

The correct answer is '2' i.e. error lies in this part of the sentence.

★ Key Points

In this part of the sentence, the usage of 'for' is incorrect. Instead, use 'to'.

- According to grammar, 'grateful for' means 'If you are grateful for something that someone has given you or done for you' and 'grateful to' means 'you're grateful to a person.'
- In the given sentence, in part 3 the usage of a proper noun is there; hence we need to use 'to' preposition with 'grateful'.
- Let's see an example-
 - She was grateful to him for being so good to her.

So the correct sentence is- *He was not **grateful to** Rahul for helping his cause.*

2. Answer: d

Explanation:

The correct answer is '4' i.e. there is no error in the sentence.

★ Key Points

- Let's see the formation of the sentence.
 - 'On the one hand' is a **prepositional phrase** in which 'on' is a preposition and 'the one hand' is a noun phrase.
 - 'Life' is a noun that is the subject of the sentence and 'seems' is a verb that is a verb for this subject.

- **'transient' is an adjective** that is a subject complement of the subject **'life'** because it is connected with the linking verb **'seem'** i.e. **why it is a subject complement.**
- **'and' is coordinate conjunction** and **'on the other hand'** is a connector here.
- **'It'** pronoun is used for **'life'** and **again 'is'** is a linking verb and **'permanent'** is an adjective that is used for the subject **'it'** and **'with'** is a preposition and **'the potential'** is a prepositional phrase and **'for'** is a preposition **'eternal continuity'** is a noun phrase which is a prepositional object of **'for'**
- Hence, there is no grammatical mistake, the structure is correct.

3. Answer: c

Explanation:

The correct answer is **'Across'**

★ Key Points

- Let's see the usage of the given prepositions-
 - **In-** is a preposition that means 'expressing the situation of being enclosed or surrounded by something.'
 - Let's see an example
 - He was in his car.
 - **Within-** Is a preposition that means a place, area, or object, it is inside it or surrounded by it.'
 - Let's see an example-
 - Clients are entertained within private dining rooms.
 - **Across-** Is a preposition that means a place or a boundary, they go from one side of it to the other.'
 - Let's see an example-
 - She walked across the floor and lay down on the bed.
 - **Off-** Is a preposition that means 'something else or moves off it, it is no longer touching that thing.'
 - Let's see an example-
 - He took his feet off the desk.

- So according to the meaning of the preposition, the correct answer is '**Across**'

So the correct sentence is- *The big tree was **across** the lake.*

4. Answer: b

Explanation:

The correct answer is '**Few**'

★ Key Points

- According to grammar, the meaning of 'few' is 'You use a few to indicate that you are talking about a small number of people or things.'
- Let's see an example-
 - A train would pass through there every few minutes at that time of day.

So the correct sentence is- *Few people in slum areas have access to toilets even in Delhi.*

5. Answer: b

Explanation:

The correct answer is '**Cynic**'

★ Key Points

- Let's see the meaning of the given words-
 - **Heretic** → means 'A person believing in or practicing heresy'
 - **Cynic** → means 'A person who believes that people are motivated purely by self-interest.'
 - **Loyalist** → means 'A person who remains loyal to the established ruler or government.'
 - **Righteous** → means 'morally right or justifiable'

- **Faithful** → means 'remaining loyal or steadfast.'
- So according to the meaning of the given words, the correct answer is '**Cynic**'

6. Answer: c

Explanation:

The correct answer is '**Bond**'

★ Key Points

- Let's see the meaning of the given words-
 - **Covenant** → means 'A solemn agreement'
 - **Difference** → means 'A way in which people or things are different'
 - **Bond** → means 'A binding agreement'
 - **Devotion** → means 'Love, loyalty, or enthusiasm'
 - **Conversation** → means 'A spoken exchange of news and ideas between people'
- So according to the meaning of the given words, the correct answer is '**Bond**'

7. Answer: d

Explanation:

The correct answer is '**Benevolence**'

★ Key Points

- Let's see the meaning of the given words-
 - **Lechery** → means 'A lecherous person'
 - **Lust** → means 'A passionate desire'
 - **Excess** → means 'An amount that is more than necessary'
 - **Benevolence** → means 'well-meaning and kindly'
 - **Binge** → means 'A period of excessive indulgence'

- So, according to the meaning of the given words, the correct answer is 'Benevolence'

8. Answer: d

Explanation:

The correct answer is 'Allow'

★ Key Points

- Let's see the meaning of the given words-
 - **Inhibit** → means 'Hinder or restrain'
 - **Check** → means 'examine the accuracy and quality'
 - **Stop** → means 'Come or cause to come to an end'
 - **Frustrate** → means 'prevent from progressing'
 - **Allow** → means 'let (someone) have or do something'
- So according to the meaning of the given words, the correct answer is 'Allow'

9. Answer: d

Explanation:

The correct answer is 'PRQ'

★ Key Points

- A sentence can't end with **and** or **that is able to** => Only Q can be third. Rule out 2) and 3). *For a* => must be followed by a singular noun. Thus, P is first. Option 4) *PRQ* is the correct answer.

So the correct sentence is- Logo centrism is the search for a rational language that is able to know and represent the world and all its aspects perfectly and accurately.

10. Answer: c

Explanation:

The correct answer is 'The animals are being observed'

★ Key Points

- The given sentence is in the Active voice.
- Let's see the transformation of the Active voice in the Passive voice.
 - The subject of the sentence in the Active voice becomes the object of the sentence in the passive voice.
 - The tense of the sentence will remain the same in the passive voice.
 - If the sentence has an infinitive and doesn't have the object you need to make the passive of the infinitive phrase.
- In the given sentence, the subject is 'I' and the tense of the sentence is 'present continuous tense' the object of the sentence is 'the animals'
- The structure for the present continuous tense is- **be(is/am/are) + Being + V₃**

So the correct sentence in the passive voice is- *The animals are being observed.*

★ Additional Information

- In the given sentence, the 'by me' has not been added because it is optional as 'the verb observe' is both the transitive and intransitive verb hence, in the passive voice its meaning is conveyed that someone has been observing the things. So the given sentence is correct.

11. Answer: d

Explanation:

The correct answer is 'Kavita asked me how my mother was.'

★ Key Points

- The given sentence is in 'direct speech' and this is an interrogative sentence.
- Let's see the transformation of the interrogative sentences-
 - *Change in helping verb (Is, are, am, was, who, has, have, had, will, can, could, do, does, did. Interrogative pronoun, adverb, adjective (what, whom, where, why, how, which, what)*
 - *We can change the verb of reporting speech according to the sense, but shouldn't be changed in the sentence... like we can say we can "asked" "demanded" in the place of "said" and no use of the conjunction "that".*
 - *If the sentence starts with an interrogative pronoun or adjective and interrogative adverb, an indirect sentence also starts with these but without conjunction.*
 - Let's see an example-
 - She said to me, "how are you?" (Direct speech)
 - He asked me how I was. (Indirect speech.)
- So the correct Indirect speech is written in **option- 4**

12. Answer: a

Explanation:

The correct answer is 'Camouflage'

★ Key Points

- The correct spelling of the given word is- **Camouflage**
- The meaning of the given word is- **The disguising of the military personnel and equipment by painting or covering them up making them blend in with their surroundings.**
- Let's see an example-
 - They were dressed in camouflage and carried automatic rifles.

★ Additional Information

- As a noun, 'Camouflage' is an uncountable noun. The meaning of this is 'is the way in which some animals are colored and shaped so that they cannot easily be seen in their natural surroundings.'

- Let's see an example-
 - Their **camouflage** is enhanced by the growth of algae on their fur.
-

13. Answer: c

Explanation:

The correct answer is '**Justice**'

★ Key Points

- Let's see the meaning of the given words-
 - **Judge** is a noun that means a public officer appointed to decide cases in a law court.'
 - **Judgment** is a noun that means 'the ability to make considered decisions'
 - **Justice** is a noun that means 'the administration of the law or authority in maintaining this.'
 - **Judiciary** is a noun that means 'the judicial authorities of the country.'
 - So according to the meaning of the words, the correct answer is '**justice**'
-

14. Answer: d

Explanation:

The correct answer is '**Happiness**'

★ Key Points

- **According to grammar,** *in the given blank, we need a noun because before the blank there is a preposition and we know that after the preposition we need a prepositional object and it can be a noun/pronoun/gerund.*
- Let's see the parts of speech of the words-
 - **Happy** is an adjective
 - **Happier** is an adjective (in a comparative form)

- **Happiest** is an adjective (in a superlative form)
 - **Happiness** is a noun.
 - So the correct answer is '**Happiness**'
-

15. Answer: c

Explanation:

The correct answer is '**Which**'

★ Key Points

- **According to grammar**, in the given blank, we need an object for the verb-phrase 'are removed' and we know that the object can be a noun/noun clause hence to make a noun clause we need a noun/pronoun.
 - So, for things we can use the relative pronoun 'which' hence, the correct answer is '**option 3**'
-

16. Answer: c

Explanation:

The correct answer is '**why**'

★ Key Points

- Let's see the parts of speech of the given words-
 - 'If' is an adverb
 - 'Because' is conjunction.
 - 'Why' is a pronoun.
 - 'Therefore' is conjunction.
 - In the given blank, we need a pronoun for the verb 'is' an object is an object of the sentence. So the correct answer is '**Option 3**'
-

17. Answer: c

Explanation:

The correct answer is 'No'

★ Key Points

- The blank is supposed to indicate **zero quantity** of a noun (peace).
 - So the correct answer is 'Option 3'
-

18. Answer: a

Explanation:

The correct answer is 'To further a loss with mockery to worsen an unfavorable situation.'

★ Key Points

- The meaning of the given idiom 'Add insult to injury' is 'to make an unfair or unacceptable situation even worse'
 - Let's see an example-
 - The Council of State opposed the president's suggestion and **added insult to injury** by leaking its hostile and secret comments to the press.
-

19. Answer: d

Explanation:

The correct answer is 'Get married.'

★ Key Points

- The meaning of the given idiom '**Tie the knot**' is- **to get married**
 - Let's see an example-
 - The couple **tied the knot** last year after a 13-year romance.
-

20. Answer: b

Explanation:

The correct answer is '**Chafe**'

★ Key Points

- Let's see the meaning of the given words-
 - **Asunder** → means 'Apart'
 - **Chafe** → means 'make or become sore by rubbing'
 - **Gelid** → means 'icy, extremely cold'
 - **Nippy** → means 'able to move quickly'
 - So according to the meaning of the given words, the correct answer is '**Chafe**'
-

21. Answer: a

Explanation:

The correct answer is '**Ephemeral**'

★ Key Points

- Let's see the meaning of the given words-
 - **Ephemeral** → means 'lasting or used for a very short time.'
 - **Immortal** → means 'living forever'
 - **Incessant** → means 'Continuing without pause or interruption'
 - **Perennial** → means 'Lasting for a long time; enduring or continually'
- So, according to the meaning of the given words, the correct answer is '**Ephemeral**'

22. Answer: b

Explanation:

The correct answer is '**Were fined**'

★ Key Points

- According to grammar, the usage of '**were fined**' is correct because, in the given sentence, the time reference is given i.e. 'last year' and the subject of the clause 'where' is 'pedestrians' so, we need to use the plural verb for this subject.
- Also, we need to use the passive voice because the doer of the verb 'fined' is somebody else.

So the correct sentence is- *A case in point is Sydney, Australia, where last year more than 8,000 pedestrians were fined for illegally crossing city streets.*

23. Answer: d

Explanation:

The correct answer is '**No improvement**'

★ Key Points

- According to grammar, '*for a long time*' means '*to describe something that has existed or been a particular thing for a long time.*' Hence, this activity has been started in the past and still exists in.
- So, use the present perfect tense.
- Let's see an example-
 - He hasn't watched TV for a long time.

So the correct sentence is- *We **have been** away for a long time, you know, and so we're anxious to get home again.*

24. Answer: c

Explanation:

The correct answer is 'CBA'

★ Key Points

- *All the other* must be followed by a plural noun. Only C qualifies this => C is first. Rule out 2) and 4). 1) is ruled out as **punished giving them** makes no sense in any way. Option 3) *CBA* is the correct answer.

Inform all the other officers that anyone giving them a lift too would be punished.

25. Answer: c

Explanation:

The correct answer is 'Scintillate'

★ Key Points

- The correct spelling of the given words is- **Scintillate**
- The meaning of the given word is- '**emit flashes in the light; sparkle**'
- Let's see an example-
 - the diamond ring **scintillated** in the sunlight

26. Answer: a

Explanation:

Just as a lawyer (profession) works in a court (place), similarly a waiter works in a restaurant.

Hence, the answer is Restaurant : Waiter.

27. Answer: c

Explanation:

Here the pattern followed is:

$$(48 \times 4) + 4 = 196$$

Similarly,

$$(52 \times 4) + 4 = 212$$

Hence, the correct answer is 212.

28. Answer: d

Explanation:

Here the pattern followed is:

$$G + 1 = H,$$

$$S + 1 = T,$$

$$R - 2 = P$$

Similarly,

$$R + 1 = S,$$

$$J + 1 = K,$$

$$H - 2 = F$$

Hence, the answer is RJH : SKF

29. Answer: c

Explanation:

Odometer, Thermometer, Barometer are used to measure whereas degree is the unit of measurement.

Hence, Degree is the correct answer.

30. Answer: d

Explanation:

1) $23 - (23)^2 = 529$

2) $19 - (19)^2 = 361$

3) $11 - (11)^2 = 121$

4) $17 - (17)^2 = (289) 269$

Hence, 17 - 269 is the correct answer.

31. Answer: c

Explanation:

1) $DKR \rightarrow D + 7 = K; K + 7 = R$

2) $JQX \rightarrow J + 7 = Q; Q + 7 = X$

3) $IPT \rightarrow I + 7 = P; P + 7 = W (T)$

4) $LSZ \rightarrow L + 7 = S; S + 7 = Z$

Hence, IPT is the correct answer.

32. Answer: a

Explanation:

The dictionary order would be,

5. Wallet

1. Warp

2. Warrior

3. Wary

4. Wash

Hence, the correct answer is 51234.

33. Answer: b

Explanation:

$9 \times 1 = 9$; $9 \times 2 = 18$; $18 \times 3 = 54$; $54 \times 4 = 216$; $216 \times 5 = 1080$

Hence, the correct answer is 1080.

34. Answer: d

Explanation:

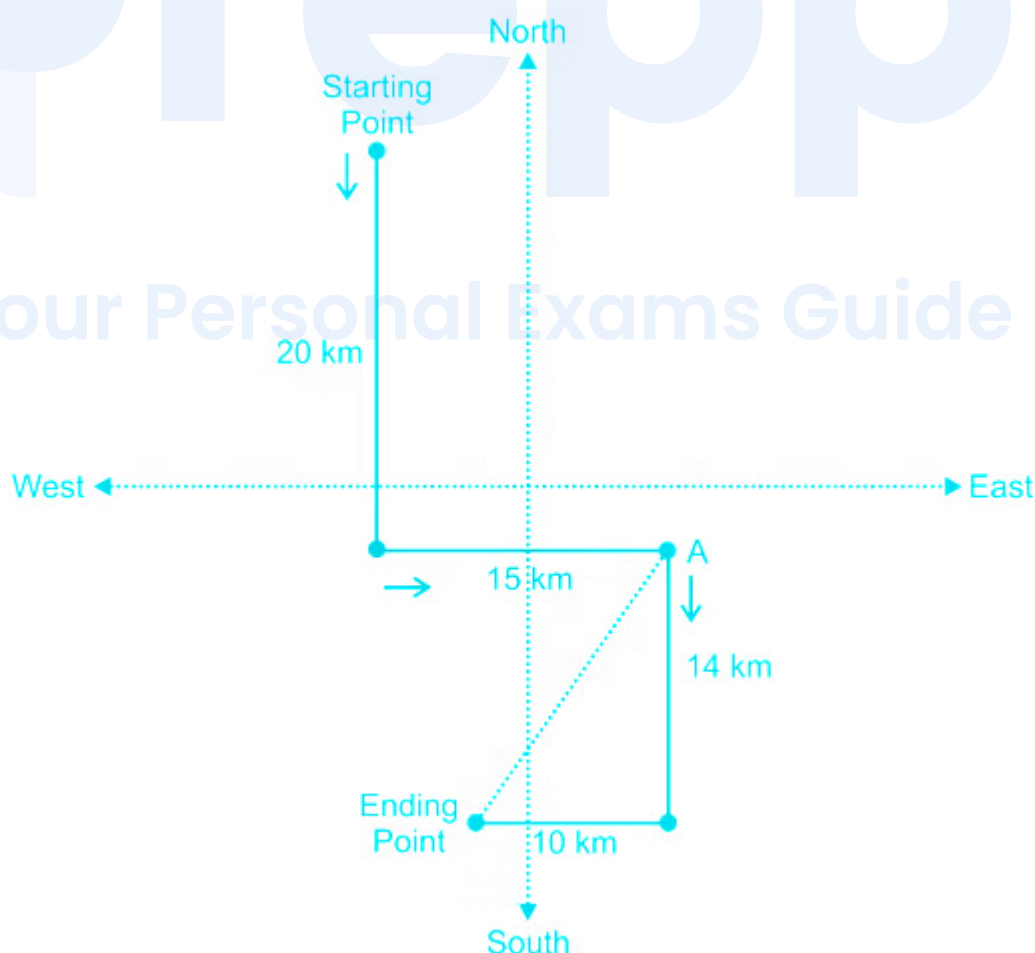
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N



Hence, the answer is GW.

35. Answer: c

Explanation:



The distance of his endpoint from point A

$$= \sqrt{10^2 + 14^2}$$

$$= \sqrt{100 + 196}$$

$$= 2\sqrt{74}$$

Hence, the distance between Akash and Point A is $2\sqrt{74}$ km and he is towards South - West from point A.

36. Answer: a

Explanation:

- 1) RAGE - REAPPROACHMENT (cannot be formed because G is missing)
- 2) APPROACH - REAPPROACHMENT (can be formed)
- 3) RENT - REAPPROACHMENT (can be formed)
- 4) CHEAP - REAPPROACHMENT (can be formed)

37. Answer: b

Explanation:

On following the given pattern we get that :

friend is honest → hu lip ma
honest are men → lip fi kit
men never clever → fi ti gi

Hence, 'fi' is the correct answer.

38. Answer: b

Explanation:

Symbols	-	+	÷	×
Code	+	×	-	÷

After interchanging the codes, we get

$$9 - 14 + 15 \times 10 \div 16$$

$$= 9 + 14 \times 15 \div 10 - 16$$

$$= 9 + 14 \times 1.5 - 16$$

$$= 9 + 21 - 16$$

$$= 30 - 16$$

$$= 14$$

Hence, the correct answer is 14.

39. Answer: a

Explanation:

$$1) \div \text{ and } - \rightarrow 20 + 12 \times 35 \div 20 - 10 = 31$$

$$2) + \text{ and } \times \rightarrow 20 \times 12 + 35 - 20 \div 10 = 273$$

$$3) + \text{ and } \div \rightarrow 20 \div 12 \times 35 - 20 + 10 = 48.33$$

$$4) - \text{ and } + \rightarrow 20 - 12 \times 35 + 20 \div 10 = - 398$$

Hence, the correct answer is ($\div$ and $-$)

40. Answer: c

Explanation:

The pattern followed here is,

$$5 \Delta 1 \rightarrow (5 - 1) \times 10 = 40,$$

$$9 \Delta 9 \rightarrow (9 - 9) \times 10 = 0,$$

$$7 \Delta 1 \rightarrow (7 - 1) \times 10 = 60$$

Similarly,

$$4 \Delta 9 \rightarrow (4 - 9) \times 10 = - 50$$

Hence, the correct answer is $- 50$.

41. Answer: b

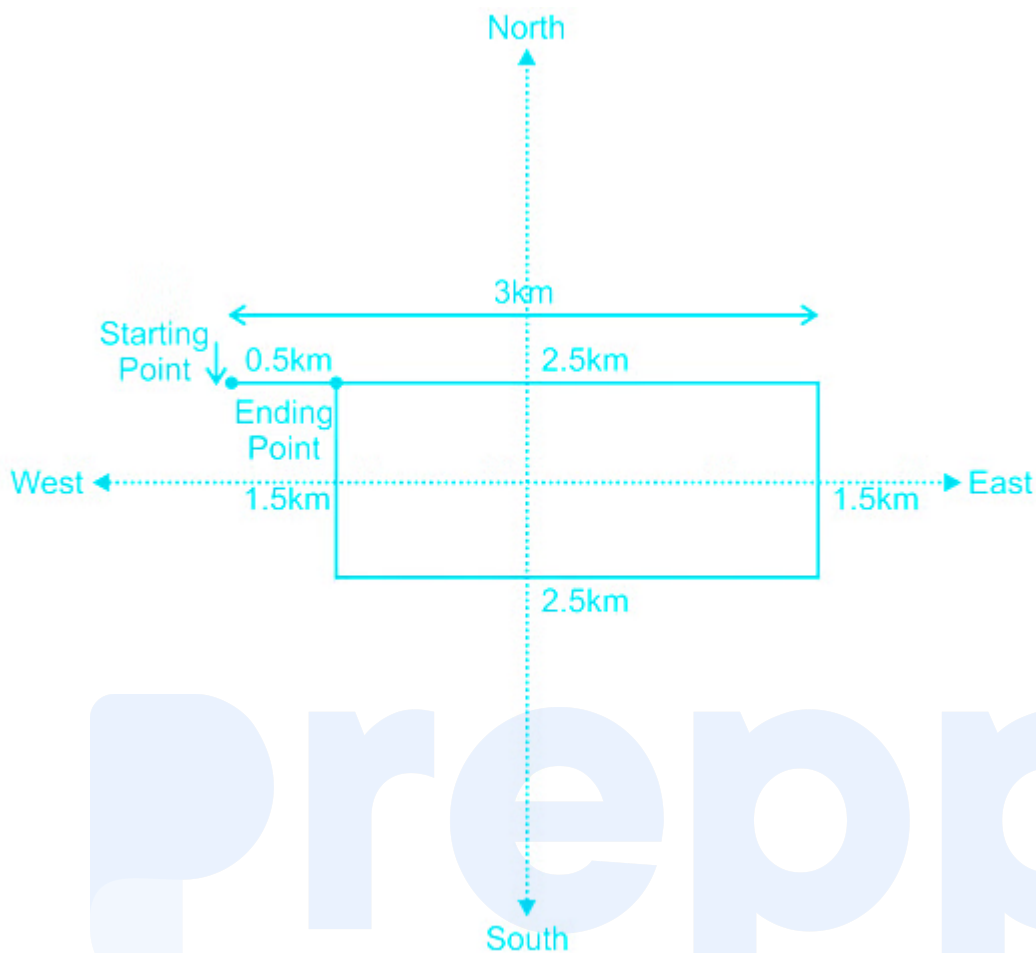
Explanation:

According to the sequence, the previous letter becomes smaller at every next step.

Hence, the answer is aBCABCABC.

42. Answer: c

Explanation:



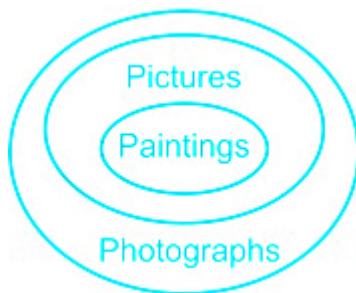
Hence, Parul is 0.5 km east from her starting point.

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43. Answer: b

Explanation:

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



Conclusion

I: All photographs are paintings – false (as it is not definite)

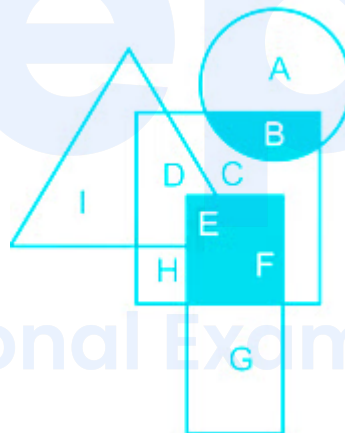
II: All paintings are photographs – true (as all paintings are pictures and all pictures are photographs)

Hence, only conclusion II follows.

44. Answer: b

Explanation:

The set of letters represents Joggers who are either Engineers or Food stylists denoted with shaded parts as:



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

45. Answer: a

Explanation:

$$R + 2 = T; T + 2 = V; V + 2 = X; X + 2 = Z$$

$$P + 3 = S; S + 3 = V; V + 3 = Y; Y + 3 = B$$

$$K + 2 = M; M + 2 = O; O + 2 = Q; Q + 2 = S$$

Hence, the correct answer is ZBS.

46. Answer: b

Explanation:

$$8 + (2^3) = 8 + 8 = 16$$

$$16 + (3^3) = 16 + 27 = 43$$

$$43 + (4^3) = 43 + 64 = 107$$

$$107 + (5^3) = 107 + 125 = 232$$

$$232 + (6^3) = 232 + 216 = 448$$

Hence, the correct answer is 448.

47. Answer: d

Explanation:

$$1) (6, 24, 18) - (6, 6 \times 4 = 24, 6 \times 3 = 18)$$

$$2) (9, 36, 27) - (9, 9 \times 4 = 36, 9 \times 3 = 27)$$

$$3) (7, 28, 21) - (7, 7 \times 4 = 28, 7 \times 3 = 21)$$

$$4) (5, 20, 10) - (5, 5 \times 4 = 20, 5 \times 3 = 15 (18))$$

Hence, (5, 20, 10) is the correct answer.

48. Answer: d

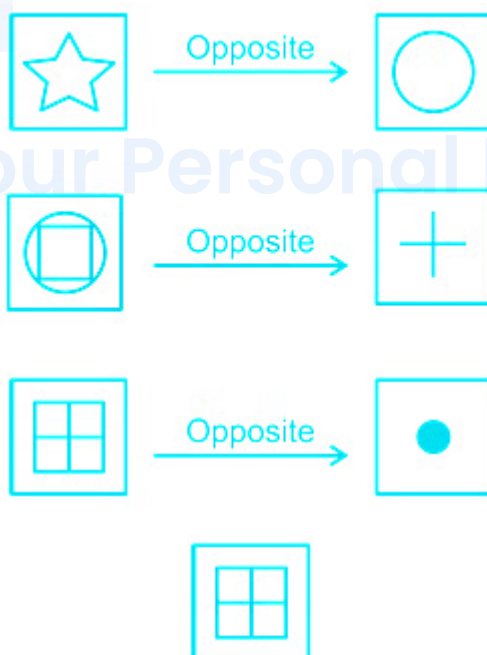
Explanation:



Hence, the correct answer is option 4)

49. Answer: c

Explanation:



and



must be opposite but in option 3), they are adjacent.

Therefore, option 3) is the correct answer.

50. Answer: a

Explanation:

1) 69,21,58,77 – P, L, U, S

2) 14,99,34,66 – J, V, D, T

3) 24,68,43,79 – K, T, G, Q

4) 43,58,24,55 – G, U, K, W

Hence, the correct answer is 69, 21, 58, 77.

51. Answer: a

Explanation:

Calculation:

Prime no. between 1 to 50 are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

The sum of prime no. from 1 to 50

$$\Rightarrow 2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 + 31 + 37 + 41 + 43 + 47$$

$$\Rightarrow 328$$

Number of prime numbers from 1 to 50 = 15

Average of prime no. from 1 to 50

$$\Rightarrow 328/15$$

$$\Rightarrow 21.867$$

$\therefore$ The answer is 21.867.

52. Answer: c

Explanation:

$$5/9 = 0.555$$

$$\sqrt{(9/49)} = 3/7 = 0.428$$

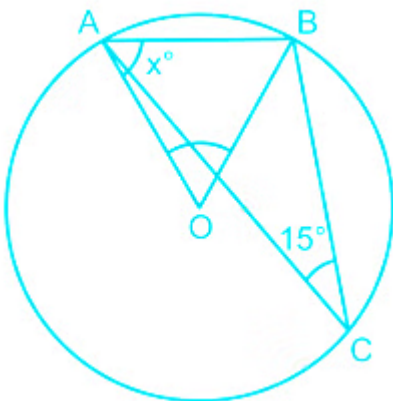
$$0.43 = 0.43$$

$$(0.7)^2 = 0.49$$

So the least no. is $\sqrt{(9/49)}$

53. Answer: c

Explanation:



$$\angle AOB = 2 \angle ACB = 2 \times 15 = 30^\circ$$

OA = OB (Both are radii of circle)

$$\text{So, } \angle OAB = \angle OBA = x^\circ$$

$$x^\circ + x^\circ + 30^\circ = 180^\circ$$

$$\Rightarrow 2x^\circ = 150^\circ$$

$$\Rightarrow x^\circ = 75^\circ$$

$$\therefore \angle OAB = 75^\circ$$

54. Answer: b

Explanation:

Concept used:

- Sum of three angles of a triangle is 180°
- In an isosceles triangle the two angles opposite to the equal sides are equal
- The exterior angle of a triangle is equal to the sum of the two interior opposite angles.

Calculation:

$$\angle ACD \text{ (outer angle)} = 180^\circ - 45^\circ = 135^\circ$$

$$\angle CAB + \angle CBA = \angle ACD \text{ (outer angle)} = 135^\circ$$

$$AC = BC \text{ (Both are same side given)} \text{ so } \angle CAB = \angle CBA = x^\circ$$

$$\Rightarrow x^\circ + x^\circ + 45^\circ = 180^\circ$$

$$\Rightarrow 2x^\circ = 135^\circ$$

$$\Rightarrow x^\circ = 67.5^\circ$$

$$\therefore 2\angle A + \angle B = 2 \times 67.5 + 67.5 = 202.5^\circ$$

55. Answer: a

Explanation:

Given:

The side of the square is increased by 20%

Formulae Used:

Perimeter of square = $4 \times \text{side}$

Calculation:

Let side of square is a

Perimeter of square = $4a$

New side = 120% of $a = 1.2a$

New perimeter = $4 \times 1.2a = 4.8a$

$$\therefore \% \text{ increase in perimeter} = \frac{(4.8a - 4a)}{4a} \times 100 = \frac{0.8a}{4a} \times 100 = 20\%$$

56. Answer: a

Explanation:

Given:

Ratio of salary of $X : Y : Z = 15 : 3 : 8$

Calculation:

$$\Rightarrow X : Y : Z = 15 : 3 : 8$$

Let $X = 15a$, $Y = 3a$, $Z = 8a$

$$\Rightarrow 8a - 3a = 3960$$

$$\Rightarrow a = 792$$

Salary of $X = 15a = 15 \times 792 = \text{Rs.}11880$

$\therefore$ The correct answer is Rs. 11880 .

57. Answer: b

Explanation:

Given:

Previous ratio

Sugar : Milk = 4 : 5

Final ratio:

Sugar : Milk = 2 : 3

Calculation:

Let the initial quantity of sugar = $4a$ and milk = $5a$

According to the question:

$$\Rightarrow 4a / (5a + 7) = 2/3$$

$$\Rightarrow 10a + 14 = 12a$$

$$\Rightarrow 2a = 14$$

$$\Rightarrow a = 7 \text{ liters}$$

Quantity of Sugar in the new mixture = $4a = 4 \times 7 = 28$ liters

∴ The correct answer is 28 liters.

Calculation:

★ Alternate Method

	Sugar	Milk
Previous ratio	4	5
Final ratio	$2 \times 2 = 4$	$3 \times 2 = 6$

So

$$(6 - 5) = 1 \text{ unit} = 7 \text{ liters}$$

$$\text{Quantity of Sugar in the new mixture} = 4 \text{ unit} = 4 \times 7 = 28 \text{ liters}$$

∴ The correct answer is 28 liters.

58. Answer: b

Explanation:

Calculation:

$$\text{Total toffees purchase on first day} = 20/1 = 20$$

$$\text{Total toffees purchased on the next day} = 40/(1 \times 50/100) = 80$$

$$\text{Total toffees purchased} = 20 + 80 = 100$$

$$\text{Total money spent} = 20 + 40 = 60$$

$$\text{The average price per toffee} = 60/100 = \text{Rs.}0.60 = 60 \text{ Paise}$$

∴ The correct answer is 60 Paise.

59. Answer: d

Explanation:

Given:

Principal = Rs.6800

Time = 18 months

S.I = Rs.2244

Formula used:

$$\text{S.I.} = (P \times R \times T)/100$$

Where P = principal; R = rate; T = time

Calculation:

$$\Rightarrow \text{S.I.} = (P \times R \times T)/100$$

$$\Rightarrow 2244 = (6800 \times R \times 18/12)/100$$

$$\Rightarrow 2244 = (6800 \times R \times 1.5)/100$$

$$\Rightarrow R = 224400 / (6800 \times 1.5) = 22\%$$

$\therefore$ The correct answer is 22% .

60. Answer: c

Explanation:

Calculation:

Let the selling price of a chair be Rs. 10

$$\text{S.P of 56 chairs} = 56 \times 10 = 560$$

$$\text{Profit} = \text{selling price of 6 chairs} = 6 \times 10 = 60$$

$$\text{Cost price of 56 chairs} = 560 - 60 = \text{Rs. } 500$$

$$\% \text{ Profit} = 60/500 \times 100 = 12\%$$

$\therefore$ The profit percentage is 12%.

Calculation:

★ Alternate Method

According to the question:

$$\Rightarrow \text{S.P (56)} - \text{C.P(56)} = \text{S.P(6)}$$

$$\Rightarrow \text{S.P (56)} - \text{S.P (6)} = \text{C.P(56)}$$

$$\Rightarrow \text{S.P (50)} = \text{C.P(56)}$$

$$\Rightarrow \text{S.P/C.P} = 28/25$$

$$\text{Profit \%} = \{(28 - 25)/25\} \times 100$$

$$\Rightarrow (3/25) \times 100 = 12\%$$

$\therefore$ The profit percentage is 12%.

61. Answer: a

Explanation:

Given:

M.P of article = Rs.1200

Retailer got the discount = 25%

S.P of article = Rs.1200

Calculation:

Retailer's C.P. of the article = $1200 \times 75/100 = \text{Rs.}900$

S.P of article = Rs.1200

Profit % = $(1200 - 900)/900 \times 100 = 300/900 \times 100 = 33.33\%$

$\therefore$ The correct answer is 33.33% .

62. Answer: b

Explanation:

Given:

$$\sqrt{20} + \sqrt{125} = 15.65$$

Calculation:

$$\Rightarrow \sqrt{20} + \sqrt{125} = 15.65$$

$$\Rightarrow 2\sqrt{5} + 5\sqrt{5} = 15.65$$

$$\Rightarrow \sqrt{5} = 15.65/7$$

Solving the given equation:

$$\Rightarrow \sqrt{45} + \sqrt{5}$$

$$\Rightarrow 3\sqrt{5} + \sqrt{5}$$

$$\Rightarrow 4\sqrt{5} = 4 \times 15.65/7 = 8.94$$

$\therefore$ The correct answer is 8.94 .

63. Answer: c

Explanation:

Given:

Both A and B together can complete a work = 20 days

B can complete a work = 36 days

Concept used:

Efficiency $\times$ Time = Total work

Calculation:

Time taken by B to complete the work = 36 days

Time taken by A and B together to complete the word = 20 days

Let Total work = LCM of 36 and 20 = 180 units

Efficiency of B = $180/36 = 5$ units/day

Efficiency of A and B together = $180/20 = 9$ units/day

Efficiency of A = $9 - 5 = 4$ units/day

Time taken by A to complete the work alone = $180/4 = 45$ days

$\therefore$ The correct answer is 45 days .

64. Answer: b

Explanation:

Given:

Speed of train = 40 m/s

Length of bridge = 550 m

Time to cross the bridge = 25 s

Formula used:

Distance = Relative speed $\times$ Time

Calculation:

Let the length of the train be L

Distance = Relative speed $\times$ Time

Length of train + length of bridge = 40×25

$$\Rightarrow L + 550 = 1000$$

$$\Rightarrow L = 1000 - 550 = 450 \text{ m}$$

$\therefore$ The correct answer is 450 m.

65. Answer: b

Explanation:

$$3\sqrt{7} + \sqrt{343} = 26.45$$

$$\Rightarrow 3\sqrt{7} + 7\sqrt{7} = 26.45$$

$$\Rightarrow 10\sqrt{7} = 26.45$$

$$\Rightarrow \sqrt{7} = 2.645$$

$$\therefore \sqrt{252} + 20\sqrt{7} = 6\sqrt{7} + 20\sqrt{7} = 26\sqrt{7} = 26 \times 2.645 \approx 68.77$$

66. Answer: d

Explanation:

Given:

$$\Rightarrow y/x = 1/3$$

Calculation:

Let $y = k$ and $x = 3k$

Putting the values in the given equation:

$$\Rightarrow (x^2 + y^2)/(x^2 - y^2)$$

$$\Rightarrow \{(3k)^2 + k^2\}/\{(3k)^2 - k^2\}$$

$$\Rightarrow (9k^2 + k^2)/(9k^2 - k^2)$$

$$\Rightarrow 10k^2/8k^2 = 5/4$$

$\therefore$ The correct answer is $5/4$.

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67. Answer: c

Explanation:

Total seats = seats of $(A + B + C + D + E + F + G) = 100 + 15 + 25 + 40 + 60 + 90 + 70 = 400$

Seats to reach the half way mark $= 400/2 = 200$

Total seats of parties D, E and F $= 40 + 60 + 90 = 190$

$\therefore$ Required seats to reach the half way mark $= 200 - 190 = 10$

68. Answer: c

Explanation:

$\therefore$ The central angle of the sector representing number of seats of party F is = (F's seats) / (Total seats) $\times$ 360 = $90/400 \times 360 = 81^\circ$

69. Answer: a

Explanation:

$\therefore$ Total seats = seats of (A + B + C + D + E + F + G) = 100 + 15 + 25 + 40 + 60 + 90 + 70 = 400

70. Answer: a

Explanation:

Calculation:

As shown in the pie chart, the value of F is 90 which is 2nd highest

$\therefore$ answer is F

71. Answer: c

Explanation:

Given:

Length of a parallel side = 4 cm

Length of the other parallel side = 6 cm

Area of trapezium = 25 cm^2

Formula used:

Area of trapezium = $\frac{1}{2} \times (\text{sum of parallel sides}) \times (\text{distance between parallel sides})$

Calculation:

$\Rightarrow \frac{1}{2} \times (\text{sum of parallel sides}) \times (\text{distance between parallel sides}) = \text{Area of trapezium}$

$\Rightarrow \frac{1}{2} \times (4 + 6) \times (\text{distance between parallel sides}) = 25$

$\Rightarrow \text{distance between the parallel sides} = 25/5 = 5 \text{ cm}$

$\therefore$ The correct answer is 5 cm .

72. Answer: c

Explanation:

Given:

Circumference of circle = 44 cm

Formula used:

Circumference of circle = $2\pi r$

Calculation:

Circumference of circle = $2\pi r$

$\Rightarrow 44 = 2 \times \frac{22}{7} \times r$

$\Rightarrow r = 7 \text{ cm}$

Area of the circle = πr^2

$$\Rightarrow 22/7 \times 7 \times 7 = 154 \text{ cm}^2$$

$\therefore$ The correct answer is 154 cm².

73. Answer: d

Explanation:

Given:

$$\text{Volume of Hemisphere} = 5749.33 \text{ cm}^3$$

Formula used:

$$\text{The volume of Hemisphere} = \frac{2}{3} \times \pi r^3$$

Calculation:

$$\text{The volume of Hemisphere} = \frac{2}{3} \times \pi r^3$$

$$\Rightarrow 5749.33 = \frac{2}{3} \times \frac{22}{7} \times r^3$$

$$\Rightarrow r^3 = 130.66 \times 21 = 2743.998 = 2744$$

$$\Rightarrow r^3 = 2744$$

$$\Rightarrow r = 14$$

$$\text{Diameter} = 2r = 2 \times 14 = 28 \text{ cm}$$

$\therefore$ The correct answer is 28 cm.

74. Answer: c

Explanation:

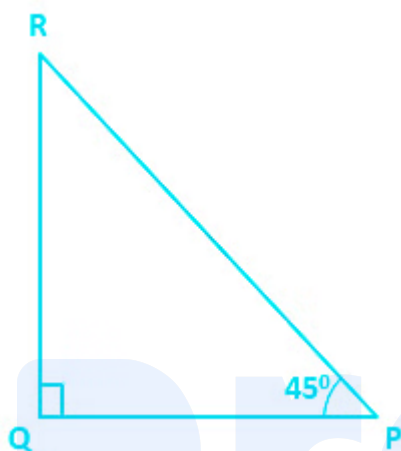
Given:

$$\angle Q = 90^\circ; \angle P = 45^\circ$$

Formula used:

$$\operatorname{Cosec} 45^\circ = \sqrt{2}$$

Calculation:



In $\triangle PQR$

$$\angle P + \angle Q + \angle R = 180^\circ$$

$$\Rightarrow 45^\circ + 90^\circ + \angle R = 180^\circ$$

$$\Rightarrow \angle R = 180^\circ - 135^\circ = 45^\circ$$

Solving the given equation:

$$(\operatorname{cosec} R + 1/3)$$

$$\Rightarrow \operatorname{cosec} 45^\circ + 1/3$$

$$\Rightarrow \sqrt{2} + 1/3 = (3\sqrt{2} + 1)/3$$

$\therefore$ The correct answer is $(3\sqrt{2} + 1)/3$.

75. Answer: b

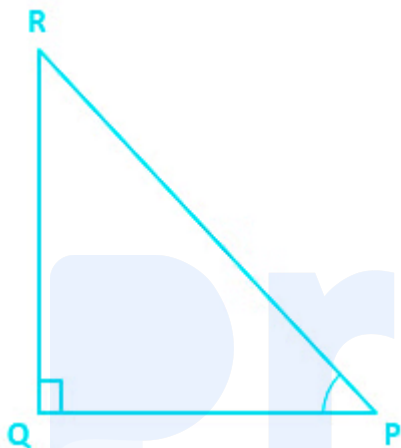
Explanation:

Given:

$$\angle Q = 90^\circ$$

$$\cos P = 5/13; PQ = 2.5 \text{ cm}$$

Calculation:



$$\Rightarrow \cos P = 5/13 = PQ/PR$$

$$\Rightarrow 5/13 = 2.5/PR$$

$$\Rightarrow PR = 13/2 = 6.5 \text{ cm}$$

$\therefore$ The correct answer is 6.5 cm .

76. Answer: a

Explanation:

- Recession is the reduction in production and employment for want of sufficient demand for goods.
- In economics, a recession is a business cycle contraction which results in a general slowdown in economic activity.

- It is a period of general economic decline, defined usually as a contraction in the GDP for six months marked by high unemployment, stagnant wages, and fall in retail sales.

77. Answer: a

Explanation:

Dr. Norman Borlaug	Norman Ernest Borlaug was an American agronomist and humanitarian who led initiatives worldwide that contributed to the extensive increases in agricultural production termed the Green Revolution.
Dr. MS Swaminathan	Mankombu Sambasivan Swaminathan is an Indian geneticist and international administrator, renowned for his leading role in India's Green Revolution, a program under which high-yield varieties of wheat.
Dr. Manmohan Singh	Manmohan Singh is an Indian economist and politician who served as the Prime Minister of India from 2004 to 2014
Henry Ford	Henry Ford was a business magnate and the founder of Ford Motors

78. Answer: c

Explanation:

Mineral oil is any of various colourless, odourless, light mixtures of higher alkanes from a mineral source, particularly a distillate of petroleum. The mineral oil cannot be found in the plateau regions because of the relative younger age of the plateaus. It is generally found in the sea beds.

79. Answer: c

Explanation:

- The Narmada, also called the Rewa and previously also known as Nerbuddais a river in central India and the sixth longest river in the Indian subcontinent.
 - Son River of central India is the second largest of the Ganges' southern tributaries after Yamuna River.
-

80. Answer: b

Explanation:

- The Saka Era was founded by Kanishka, the emperor of the Kushana empire from the year 78 A.D.
 - His inscriptions, dated to the years 11 and 52, have been found at Andhau in Kutch region.
 - The Saka era is a historical calendar era, corresponding to Julian year 78.
 - It is commonly known in Indian languages as Shalivahana Saka.
-

81. Answer: a

Explanation:

Venkatapati Raya was the younger brother of Sriranga Deva Raya and the ruler of Vijayanagara Empire with bases in Penukonda, Chandragiri and Vellore. His reign of

three decades saw a revival of the strength and prosperity of the empire. He allowed the Portuguese to build a church in his empire.

82. Answer: a

Explanation:

The correct answer is Anoushka Shankar.

★ Key Points

- Anoushka Shankar
 - Anoushka Shankar is a British-Indian-American sitar player .
 - She was the youngest and first woman to receive a British House of Commons Shield.
 - She has had 7 Grammy Awards nominations and was the first Indian musician to perform live and to serve as a presenter at the ceremony.
 - She performs across multiple genres and styles – classical and contemporary, acoustic and electronic.

★ Additional Information

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• Pandit Shivkumar Sharma • Rahul Sharma • Tarun Bhattacharya • Abhay Sopori.	Santoor Player
• Ustad Zakir Hussain • Alla Rakha • Ustad Tafu Khan.	Tabla Player
• Amjad Ali Khan Bangash • Ali Akbar Khan • Allauddin Khan.	Sarod Player
• Hariprasad Chaurasia • Paras Nath.	Flute Player
• Asad Ali Khan • Zia Mohiuddin Dagar • Ayyagari Syamasundaram	Veena Player
• Pt Ravi Shankar • Shahid Parvez Khan • Budhaditya Mukherjee • Anushka Shankar.	Sitar Player

83. Answer: d

Explanation:

Qatar, on 25 October 2017 announced that it will be introducing a minimum wage for workers. The country has been under global scrutiny over its alleged ill-treatment of migrant labourers. Qatar has one of the highest per capita incomes of 1.25lakh dollars in Purchasing power parity.

84. Answer: a

Explanation:

- The third Indian Council for Cultural Relations (ICCR) Distinguished Indologist Award for the year 2017 was awarded to Professor Hiroshi Marui of Japan.
 - He was presented with this award by President Ram Nath Kovind at a function in Rashtrapati Bhavan, New Delhi. Indology is academic study of history, cultures, languages and literature of India and is a subset of Asian studies.
-

85. Answer: c

Explanation:

Ping-pong diplomacy refers to the exchange of table tennis players between the United States and People's Republic of China in the early 1970s. This form of diplomacy was used to ease out the tensions between the two countries before the cultural revolution of China.

86. Answer: b

Explanation:

Magnesium is a chemical element with symbol Mg and atomic number 12. It is a shiny grey solid which bears a close physical resemblance to the other five elements in the second column of the periodic table.

87. Answer: a

Explanation:

In organic chemistry, an alkene is an unsaturated hydrocarbon that contains at least one carbon-carbon double bond. The words alkene and olefin are often used interchangeably.

The formula of Alkane - $C_nH_{(2n+2)}$

The formula of Alkene - $C_nH_{(2n)}$

The formula of Alkyne - $C_nH_{(2n-2)}$

88. Answer: c

Explanation:

- The Rajya Sabha or Council of States is the upper house of the Parliament of India. Membership of Rajya Sabha is limited by the Constitution to a maximum of 250 members, and current laws have provision for 245 members.
- There are total 245 seats out of which 233 are Elected; 12 Nominated; 4 Vacant (1 Elected and 3 Nominated Seats)

89. Answer: c

Explanation:

- Article 356 in the Constitution of India is a part of Emergency Provisions to deal with any adverse law and order situation or failure of Constitutional Machinery within a State.

- This power can be exercised by President of India only or Governor can also impose Emergency after due consultation with the President.
-

90. **Answer: a**

Explanation:

The correct answer is **Transpiration pull**

EXPLANATION:

- Transpiration pull or the suction force is the force which aids in drawing the water upward from roots to leaves.
 - In leaves, some amount of water is used for photosynthesis and excess water is released into the atmosphere through openings called as stomata.
-

91. **Answer: b**

Explanation:

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Cell wall	It is a rigid layer of polysaccharides lying outside the plasma membrane of the cells of plants, fungi, and bacteria. In the algae and higher plants, it consists mainly of cellulose.
<u>Cell membrane</u>	<u>Cell membrane is the semipermeable membranes</u> surrounding the cytoplasm of a cell.
Cytoplasm	It is the material or protoplasm within a living cell, excluding the nucleus.
Nucleus	The nucleus is an organelle found in eukaryotic cells. Inside its fully enclosed nuclear membrane, it contains the majority of the cell's genetic material.

92. Answer: c

Explanation:

It is the project to pump Narmada water in 115 Dams of arid Saurashtra region after the Prime Minister dedicated to public phase-I of the linking canal in August, 2017. The project is aimed at improving the irrigation facilities in the area after a series of draughts.

93. Answer: c

Explanation:

- Scientists from New Zealand have developed world's first artificial intelligence politician named SAM. It was created by Nick Gerritsen, entrepreneur in New Zealand.
- The virtual politician SAM can answer person's queries regarding local issues such as policies around housing, education and immigration.

94. Answer: c

Explanation:

The correct answer is 100%.

★ Key Points

- Insolvency and Bankruptcy Board of India
 - The Insolvency and Bankruptcy Board of India (IBBI) was established on 1st October 2016 under the Insolvency and Bankruptcy Code, 2016 (IBC).
 - As the body is created by an act of the parliament, it is a statutory body.
 - It is a unique regulator : regulates a profession as well as processes.
 - It has regulatory oversight over the Insolvency Professionals, Insolvency Professional Agencies, Insolvency Professional Entities and Information Utilities.
 - It has also been designated as the 'Authority' under the Companies (Registered Valuers and Valuation Rules), 2017 for regulation and development of the profession of valuers in the country.
 - Current Chairperson – Ravi Mittal

★ Additional Information

Some very important terms:

- Insolvency:
 - Insolvency is a state of financial distress in which a business or person is unable to pay its bills or debts.
 - This person or business is called Insolvent.
- Bankruptcy:

- Bankruptcy is a legal proceeding involving a person or business that is unable to repay its outstanding debts.
- Liquidation:
 - Liquidation in finance and economics is the process of bringing a business to an end and distributing its assets to claimants.

95. Answer: c

Explanation:

The Companies (Amendment) Act, 2017 introduces several amendments to the Companies Act 2013, realigning provisions to improve corporate governance and ease of doing business in India while continuing to strengthen compliance and investor protection

96. Answer: a

Explanation:

CONCEPT:

- When an electric current is passed through a conductor, the conductor becomes hot after some time and produces heat.
- This happens due to the conversion of some electric energy passing through the conductor into heat energy. This effect of electric current is called the heating effect of the current or the Joule heating effect.
- The appliances based on the heating effect of electric current work on both AC and DC supply.
- The amount of heat liberated can be given as
- $H = \frac{Pt}{4.2} \text{ cal} \Rightarrow H = W = Pt = I^2 Rt \text{ joule}$

Electric current passing through conductor = IT

The power dissipated across the copper coil = P

Work done by current = W

The resistance of wire = R

Heat dissipated because of current = H

time period = t

CALCULATION:

Heat generation = $P \times t$

Heat generation = $I^2 \times R \times t$

Where I = Current

R = resistance

t = time

Heat generation = $(0.1)^2 \times 1000 \times 25$

= 250 J

97. Answer: b

Explanation:

The pascal is the SI derived unit of pressure used to quantify internal pressure, stress, Young's modulus and ultimate tensile strength. It is named after the French polymath Blaise Pascal.

1 pascal = 1 N m^{-2}

98. Answer: a

Explanation:

The atmosphere of Earth is the layer of gases, commonly known as air, that surrounds the planet Earth and is retained by Earth's gravity. By volume, dry air contains 78.09% nitrogen, 20.95% oxygen, 0.93% argon, 0.04% carbon dioxide, and small amounts of other gases. Air also contains a variable amount of water vapor, on average around 1% at sea level, and 0.4% over the entire atmosphere.

99. Answer: d

Explanation:

- *Max Emilian Verstappen* is a Belgian–Dutch racing driver who competes under the Dutch flag in Formula One with Red Bull Racing.
 - Steven Smith is an Australian international cricketer and former captain of the Australian national team.
 - Sergio Agüero is an Argentine professional footballer who plays as a striker for Premier League club Manchester City and the Argentine national soccer team.
-

100. Answer: c

Explanation:

The Formatting toolbar is located just below the menu bar. It contains buttons representing commands such as New, Open, Save, and Print. One can customize the buttons that appear on the formatting toolbar using the customize toolbar menu item.