



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



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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 (25-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. 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. frothyest
- b. frothiest
- c. frrothiest
- d. frrothyest

2. 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)

People used to preserve

A-companionship in absentia

B- letters for years as these humble pieces

C- of paper afforded

- a. BAC
- b. BCA
- c. ACB
- d. ABC

3. 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)

The art of movement (has been), in complicated ways, culture-driven.

- a. have been
- b. is been
- c. was been
- d. no improvement

-
4. 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)

Cyclones (was identified) by the year of their occurrence, and remembered for the devastation they caused.

- a. is identified
- b. were identify
- c. were identified
- d. no improvement

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

Portray in words

- a. Ensconce
- b. Depict
- c. Veil

d. Obscure

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

Extreme self-confidence or audacity

- a. Petrified
 - b. Abashed
 - c. Skittish
 - d. Chutzpah
-

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

Never-never land

- a. An imaginary utopian place or situation.
 - b. A place that is worse than hell.
 - c. A place that you know that you will never be able to visit.
 - d. A popular place about which you have heard such stories that you would not like to go there.
-

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

Kitty-corner

- a. A place where ladies meet to party.
- b. A very small place.
- c. Favourite place of cats.
- d. Things located diagonally opposite each other.

9. 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)

Change is more often than _____ the trigger for struggles in the leadership arena. Leaders usher _____ organisational change, which creates a natural tension as the status quo fights back. With various factors in the mix, _____ imbalance is created that impacts leaders and followers in multiple and varying ways. _____, the leader gets the roughest edge as he is seemingly the most '_____ one.

more often than _____ the trigger for struggles

- a. no
- b. none
- c. not
- d. nor

10. 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)

Change is more often than _____ the trigger for struggles in the leadership arena. Leaders usher _____ organisational change, which creates a natural tension as the status quo fights back. With various factors in the mix, _____ imbalance is created that impacts leaders and followers in multiple and varying ways. _____, the leader gets the roughest edge as he is seemingly the most ' _____ ' one.

Leaders usher _____ organisational change,

- a. inside
- b. onto
- c. in
- d. as

11. 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)

Change is more often than _____ the trigger for struggles in the leadership arena. Leaders usher _____ organisational change, which creates a natural tension as the status quo fights back. With various factors in the mix, _____ imbalance is created that impacts leaders and followers in multiple and varying ways. _____, the leader gets the roughest edge as he is seemingly the most ' _____ ' one.

factors in the mix, _____ imbalance is created

- a. an
- b. a

c. only

d. the

12. 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)

Change is more often than _____ the trigger for struggles in the leadership arena. Leaders usher _____ organisational change, which creates a natural tension as the status quo fights back. With various factors in the mix, _____ imbalance is created that impacts leaders and followers in multiple and varying ways. _____, the leader gets the roughest edge as he is seemingly the most ' _____ ' one.

multiple and varying ways. _____, the leader

a. Ironically

b. Irony

c. Ironical

d. Ironic

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)

Change is more often than _____ the trigger for struggles in the leadership arena. Leaders usher _____ organisational change, which creates a natural tension as the status quo fights back. With various factors in the mix, _____ imbalance is created that impacts leaders and followers in multiple and varying ways.

_____, the leader gets the roughest edge as he is seemingly the most '_____' one.

as he is seemingly the most '_____' one.

- a. powerful
- b. powering
- c. powerfully
- d. power

14. 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. Auxiliarry
- b. Auxiliary
- c. Auxiliary
- d. Auxliary

15. 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)

The lawyer said to them, "Call the witness."

- a. The lawyer commanded them to call the witness.
- b. The witness be called by the lawyer.
- c. The lawyer asked for the witness.

d. The lawyer called the witness.

16. 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)

The teacher should check the homework.

- a. The homework is checked by the teacher.
 - b. The homework will be checked by the teacher.
 - c. The teacher is responsible for checking homework.
 - d. The homework should be checked by the teacher.
-

17. Rearrange the parts of the sentence in correct order. (+2, -0.5)

The whole biosphere, like

P : a chemically dynamic state

Q : the individual organisms that

R : live inside it, exists in

- a. RQP
 - b. QRP
 - c. QPR
 - d. PQR
-

18. 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)

Objective

- a. Straight
 - b. Fair
 - c. Prejudiced
 - d. Detached
-

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

Guile

- a. Cleverness
 - b. Suspicious
 - c. Dishonesty
 - d. Honesty
-

20. 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)

Austerity

- a. Strict
- b. Tolerant

c. Kindness

d. Moist

-
21. 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)

Empirical

a. Hypothetical

b. Unproved

c. Theoretical

d. Practical

-
22. 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)

Many lost dogs ----- been given back to their owners.

a. have

b. is

c. has

d. would

-
23. 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)

She does not agree, and _____ does Anita.

- a. also
- b. even
- c. neither
- d. so

-
24. 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)

It is easy to fall victim (1)/ not only to those who may hurt or mistreats us, (2)/ but also to our own anger. (3)/ No error (4)

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

-
25. 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)

Each nation aspire to do well, (1)/ but there are glaring economical (2)/ inequalities among them. (3)/ No error (4)

- a. 3
- b. 1

c. 2

d. 4

Prepp

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General Intelligence

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

Sorrow : Black :: ? : ?

- a. Danger : Green
- b. Pink : Pencil
- c. Red : Green
- d. Rank : Star

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

43 : 66 :: 91 : ?

- a. 108
- b. 114
- c. 126
- d. 124

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

MPQ : JMN :: KSV : ?

- a. HPS

- b. GQS
 - c. GQT
 - d. HPT
-

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

- a. Lungs
 - b. Brain
 - c. Eyes
 - d. Liver
-

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 given alternatives. (+2, -0.5)

- a. 61 – 66
 - b. 41 – 46
 - c. 32 – 37
 - d. 43 – 46
-

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

- a. ZVQM

- b. XTPL
 - c. TPLH
 - d. NJFB
-

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

1. Draining 2. Drainer 3. Draught 4. Dramatic 5. Drank

- a. 5, 2, 3, 1, 4
 - b. 1, 4, 5, 2, 3
 - c. 2, 1, 4, 5, 3
 - d. 3, 2, 5, 1, 4
-

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

56, 70, 98, 140, 196, ?

- a. 206
 - b. 266
 - c. 256
 - d. 236
-

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)

GM, KJ, OG, SD, ?

- a. XB
- b. WA
- c. VC
- d. WZ

35. Pointing to a man in the photograph Manisha said, "He is the father of the only daughter of my mother". How is Manisha related to that man? (+2, -0.5)

- a. Niece
- b. Mother
- c. Daughter
- d. Aunt

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

- a. Tune
- b. Until
- c. Very
- d. Try

37. In a certain code language, "FILMY" is written as "BNORU". How is "RISKY" written in that code language? (+2, -0.5)

- a. CRHLI

- b. BPHRI
- c. RHCHY
- d. YBPHR

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

$$15 - 12 + 5 \times 9 \div 12 = ?$$

- a. 25
- b. 5
- c. 39
- d. 7

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

$$5 - 16 \times 30 \div 10 + 4 = 49$$

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

40. If $13 \& 8 = 10$, $11 \& 6 = 10$ and $17 \& 4 = 26$, then find the value of $15 \& 1 = ?$ (+2, -0.5)

- a. 18
 - b. 6
 - c. 4
 - d. 28
-

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

CABABABAB, ACBABABAB, ABCABABAB, ABACBABAB, ABABCABAB,

- a. ACBABABAB
 - b. ABABACBAB
 - c. ABABABCAB
 - d. CABABABAB
-

42. A villager walks 3 km East, then turns South and walks 1.5 km, then turns East and walks 2 km, then turns to his left and walks 1.5 km. Where is he now with respect to the starting position? (+2, -0.5)

- a. 5 km East
 - b. 5 km West
 - c. 1 km West
 - d. 1 km East
-

43. In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems 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: No wires are cables.

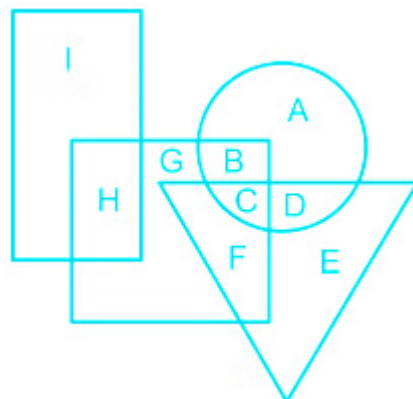
Statement II: No coils are wires.

Conclusion I: No cables are coils.

Conclusion II: Some coils are cables.

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

44. In the following figure, rectangle represents Teachers, circle represents Illustrators, triangle represents Writers and square represents Asians. Which set of letters represents Asians who are either Illustrators or Writers or both? (+2, -0.5)



- a. GBA

- b. BCF
 - c. FCD
 - d. FE
-

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)

UHQ, OBK, IVE, CPY, ?

- a. WJS
 - b. XKT
 - c. YLU
 - d. VIR
-

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

32, 36, 42, 50, 60, ?

- a. 78
 - b. 68
 - c. 72
 - d. 70
-

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 (+2, -0.5)

Logic/Rule/Relation. Three are similar on basis of same
Logic/Rule/Relation. Select the odd one out from the given alternatives.

- a. (6, 19, 13)
- b. (7, 21, 15)
- c. (18, 55, 37)
- d. (15, 46, 31)

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)



a.



b.

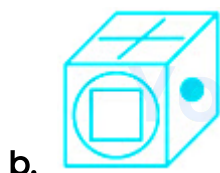
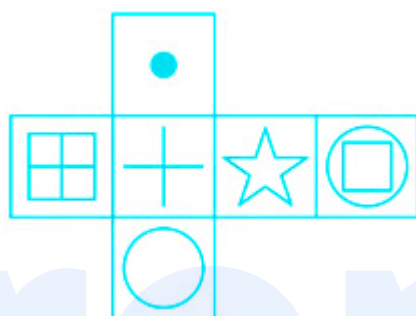


c.



49. Which of the following cubes in the answer figures cannot be made based on the unfolded cube in the question figure?

(+2, -0.5)



50. A word is represented by only 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 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 'J' can be represented by 32, 41 etc and 'V' can be represented by 76, 97 etc. Similarly, you have to identify the set for the word 'ANTS'. (+2, -0.5)

Matrix-I					
	0	1	2	3	4
0	H	B	C	L	B
1	F	G	M	C	H
2	E	D	G	H	M
3	L	G	J	C	A
4	K	J	E	H	I

Matrix-II					
	5	6	7	8	9
5	P	O	T	R	Q
6	P	Q	N	Q	P
7	R	V	Y	Y	U
8	N	W	N	R	W
9	S	O	V	Y	Z

- a. 23, 89, 43, 78
- b. 31, 66, 42, 95
- c. 34, 67, 57, 95
- d. 22, 89, 13, 88

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54. If x and y are different positive integer numbers and $3x/y = 4$ then find the minimum value of $(3x + 4y)$. (+2, -0.5)

- a. 6
- b. 1
- c. 8
- d. 24

55. How many tangents can be drawn to the two circles, whose radii are equal to 4 cm and 5 cm respectively and the distance between the two centres is 5 cm. (+2, -0.5)

- a. 1
- b. 3
- c. 0
- d. 2

56. The distance between the centre of two circles having radii 5 cm and 6 cm is $\sqrt{10}$ cm. find the length (in cm) of direct common tangent. (+2, -0.5)

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

57. If X is 60% more than Y, then Y is what percent of X? (+2, -0.5)

- a. 66.66
- b. 37.5
- c. 44.4
- d. 62.5

58. Rahul spends some part of his income and saves the remaining part. The ratio of his expenditure and saving is 6 : 1. If Rahul's income is Rs 42000, then what will be his expenditure (in Rs)? (+2, -0.5)

- a. 34000
- b. 30000
- c. 36000
- d. 32000

59. Aman, Kamal and Ratan start a business. The ratio of their investments is 12 : 4 : 3. If at the end the ratio of their profits is 3 : 16 : 9, then what is the ratio of time period of their investment? (+2, -0.5)

- a. 3 : 64 : 9
- b. 4 : 36 : 9
- c. 9 : 64 : 81
- d. 1 : 16 : 12

60. Out of the five subjects, the average marks of Suman in first 3 Subjects was 81 and the average marks in the last 3 subjects was 74. If her marks in the third subject was 65, then what was her average marks in all the subjects? (+2, -0.5)
- a. 79
 - b. 80
 - c. 75
 - d. 76
-
61. A certain sum of money becomes double of itself in 5 years at a rate of simple interest. In how many years will it become 16 times of itself at the same rate of simple interest? (+2, -0.5)
- a. 60
 - b. 75
 - c. 20
 - d. No option is correct.
-
62. Pankaj sells a trouser at a loss of 10%. If he buys it for 20% less price and sells it for Rs. 9 more, then he gains 15%. What is the cost price (in Rs) of the trouser? (+2, -0.5)
- a. 400
 - b. 350
 - c. 440

d. 450

63. If the ratio of marked price and selling price is 14 : 11, then what is the discount percentage? (+2, -0.5)

a. 42.58

b. 21.42

c. 33.33

d. 36.36

64. Arrange the following in the decreasing order? $(\sqrt{23} - \sqrt{21})$, $(\sqrt{19} - \sqrt{17})$, $(\sqrt{21} - \sqrt{19})$ (+2, -0.5)

a. $(\sqrt{19} - \sqrt{17}) > (\sqrt{21} - \sqrt{19}) > (\sqrt{23} - \sqrt{21})$

b. $(\sqrt{23} - \sqrt{21}) > (\sqrt{19} - \sqrt{17}) > (\sqrt{21} - \sqrt{19})$

c. $(\sqrt{21} - \sqrt{19}) > (\sqrt{23} - \sqrt{21}) > (\sqrt{19} - \sqrt{17})$

d. $(\sqrt{23} - \sqrt{21}) > (\sqrt{21} - \sqrt{19}) > (\sqrt{19} - \sqrt{17})$

65. X and Y can complete a work in 5 days. Y and Z can complete the same work in 6 days. Z and X can complete the same work in $15/2$ days. In how many days will X, Y and Z together complete the work? (+2, -0.5)

a. 3

b. 2

c. 4

d. 2/5

66. Two stations L and M are 180 km apart from each other. A train leaves from L to M and simultaneously another train leaves from M to L. Both trains meet after 9 hours. If the speed of the first train is 10 km/hr more than the second train, then what is the speed (in km/hr) of the slower train? (+2, -0.5)

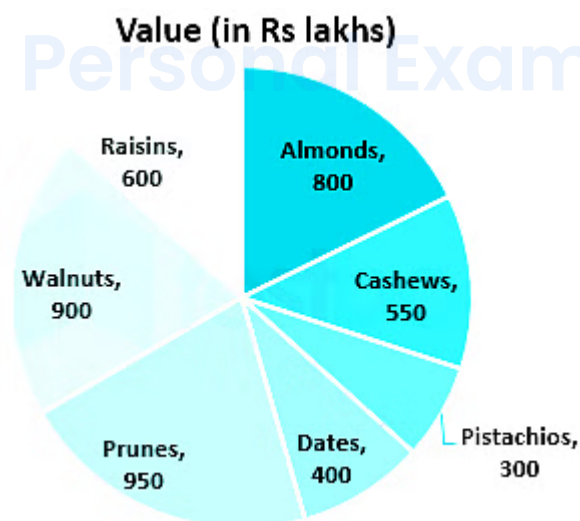
a. 9

b. 12

c. 15

d. 5

67. **Direction:** The pie chart shows the value of the total annual production of dry fruits of a country. Study the diagram and answer the following questions. (+2, -0.5)

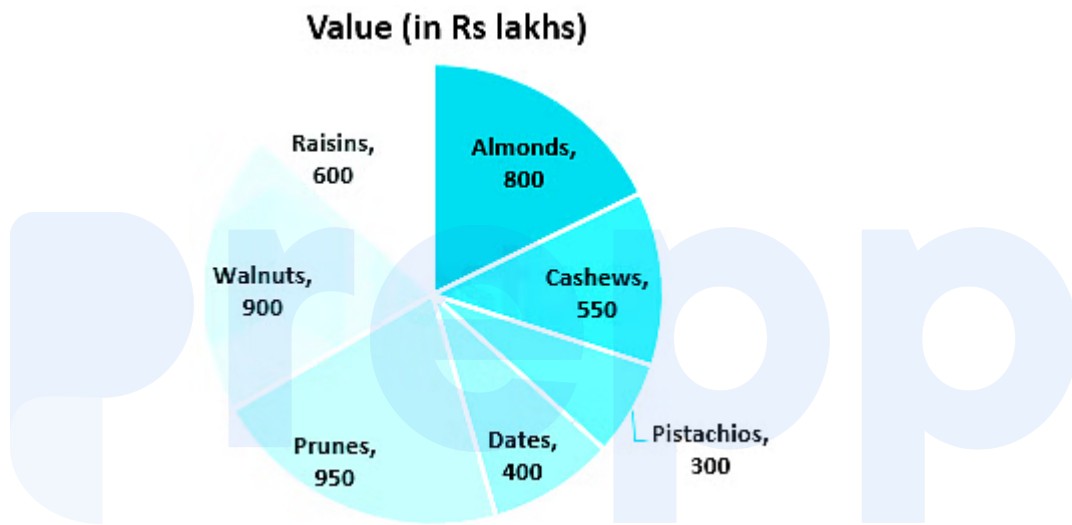


The value of annual production of which dry fruit item is the most?

a. Prunes

- b. Raisins
- c. Walnuts
- d. Almonds

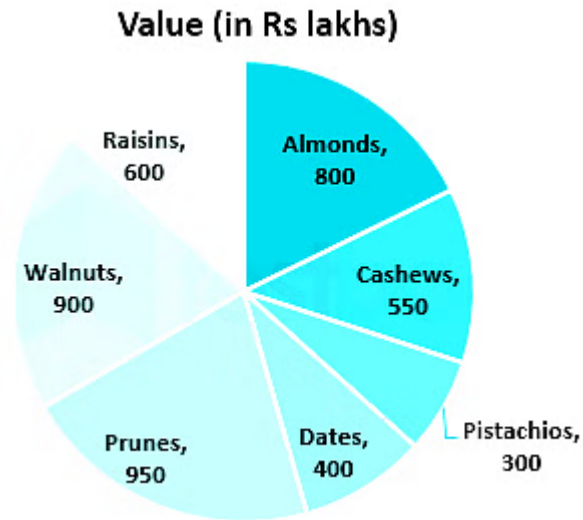
68. **Direction:** The pie chart shows the value of the total annual production of dry fruits of a country. Study the diagram and answer the following questions. (+2, -0.5)



What is the total value (in Rs lakhs) of the annual dry fruit production of the country?

- a. 3000
- b. 4000
- c. 3600
- d. 4500

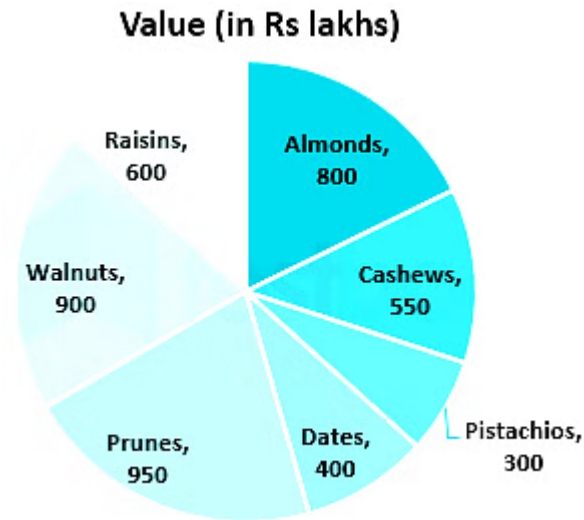
69. **Direction:** The pie chart shows the value of the total annual production of dry fruits of a country. Study the diagram and answer the following questions. (+2, -0.5)



The measure of the central angle of the sector representing the annual production of dates is _____ degrees.

- a. 24
- b. 32
- c. 36
- d. 28

70. Direction: The pie chart shows the value of the total annual production of dry fruits of a country. Study the diagram and answer the following questions. (+2, -0.5)



If the average value of almonds produced is Rs 800 per kg then how many kgs of almonds were produced?

- a. 1000000
- b. 10000
- c. 1000
- d. 100000

71. The length of one side and the diagonal of a rectangle are 10 cm and 26 cm respectively. Find the length of its other side (in cm). (+2, -0.5)

- a. 24
- b. 48
- c. 58
- d. 29

72. If the perimeter of a semi-circle is 144 cm, then find its radius (in cm). (+2, -0.5)

- a. 58
 - b. 28
 - c. 56
 - d. 29
-

73. Find the curved surface area (in cm^2) of a right circular cylinder of diameter 21 cm and height 10 cm. (+2, -0.5)

- a. 660
 - b. 594
 - c. 530
 - d. 472
-

74. What is the value of $(\frac{1}{2} - \sec 30^\circ)$? (+2, -0.5)

- a. $(1 - \sqrt{6})/\sqrt{2}$
 - b. $(\sqrt{3} - 1)/2$
 - c. $(\sqrt{3} - 4)/2\sqrt{3}$
 - d. $(2 - \sqrt{3})/\sqrt{3}$
-

75. In $\triangle ABC$ measure of angle B is 90° . If $\sec A = 25/7$, and $AB = 14$ cm, then what is the length (in cm) of side BC? (+2, -0.5)

- a. 50

b. 26

c. 48

d. 20

Prepp

Your Personal Exams Guide

General Awareness

76. Who has written the book "The Theory of Wages"? (+2, -0.5)
- a. Irving Fisher
 - b. Thomas Robert Malthus
 - c. J.R.Hicks
 - d. David Hume
-
77. At present how many stock exchanges are listed in Securities and Exchange Board of India (SEBI)? (+2, -0.5)
- a. 10
 - b. 9
 - c. 15
 - d. 20
-
78. Chola State had to face the attack of which of the following Rashtrakuta's rulers? (+2, -0.5)
- a. Krishna III
 - b. Dhruv
 - c. Govind III
 - d. Amoghvarsha
-

79. Which of the following decisive battles had established the dominion of the British in India? **(+2, -0.5)**

- a.** Third Battle of Panipat
 - b.** Battle of Buxar
 - c.** Battle of Wandiwash
 - d.** Battle of Plassey
-

80. Soo Canal connects to which of the following? **(+2, -0.5)**

- a.** Superior to Huron
 - b.** Superior to Michigan
 - c.** Michigan to Huron
 - d.** Erie to Huron
-

81. Idukki hydroelectric power project is situated in which state? **(+2, -0.5)**

- a.** Kerala
 - b.** Arunachal Pradesh
 - c.** Karnataka
 - d.** Himachal Pradesh
-

82. Maharishi Gautam is associated to which Indian philosophy (Darshana)? **(+2, -0.5)**

- a. Yog
 - b. Vaisheshika
 - c. Nyaya
 - d. Samkhya
-

83. Bangladesh on October 4, 2017, signed a \$ 4.5 billion loan deal with which country for developing its infrastructure, health and education? (+2, -0.5)

- a. Iran
 - b. India
 - c. Pakistan
 - d. China
-

84. Which novel had been got the DSC Prize for South Asian Literature for 2017 held in Dhaka, Bangladesh? (+2, -0.5)

- a. Selection Day
 - b. The Association of Small Bombs
 - c. The story of a Brief Marriage
 - d. The Living
-

85. The devastating earthquake of 7.8 magnitudes came in Nepal in -----.

- a. February 2014

- b. September 2014
 - c. July 2015
 - d. April 2015
-

86. Which of the following is a major component of German silver? (+2, -0.5)

- a. Tin
 - b. Copper
 - c. Silver
 - d. Chlorine
-

87. In nuclear reactors, which of the following is used as a moderator? (+2, -0.5)

- a. Platinum
 - b. Iron
 - c. Graphite
 - d. Uranium
-

88. Which organ of the government consists of elected representatives of People? (+2, -0.5)

- a. Judiciary
- b. Legislature
- c. Media

d. All options are correct.

89. Who gave the concept of 'Separation of Powers' related to different forms of governments? (+2, -0.5)

- a. Plato
 - b. Aristotle
 - c. Hobbes
 - d. Montesquieu
-

90. Which among the following forms a common passage for both the sperms and urine in human males? (+2, -0.5)

- a. Ureter
 - b. Urethra
 - c. Vas deferens
 - d. Seminal vesicle
-

91. Which of the following is not a constituent of phloem? (+2, -0.5)

- a. Sieve tubes
 - b. Companion cells
 - c. Phloem parenchyma
 - d. Tracheids
-

92. In November 2017, under the Credit-Linked Subsidy Scheme (CLSS), increase in the carpet area for Middle Income Group II (MIG- II) has been approved. The carpet area for MIG-II will be increased to -----.

(+2, -0.5)

- a. 175 square metre
- b. 150 square meter
- c. 200 square metre
- d. 250 square metre

93. Scientists have created world's shortest ----- laser pulse with duration of just 43 attoseconds.

(+2, -0.5)

- a. Gamma ray
- b. Alpha ray
- c. Beta ray
- d. X-ray

94. In August 2017, the 12th Five Year Plan was reviewed by NITI Aayog. The centre has now adopted a ----- year vision document.

(+2, -0.5)

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

95. Which edition of Rashtriya Sanskriti Mahotsava was held in Bengaluru under the 'Ek Bharat Shreshtha Bharat Programme' from 14 January to 20 January 2018? (+2, -0.5)

- a. Third
- b. Fifth
- c. First
- d. Seventh

96. Find the acceleration (in m/s^2) produced in a body of mass 3 kg when a force of 6N is applied to it. (+2, -0.5)

- a. 4
- b. 2
- c. 36
- d. 18

97. In a _____ wave particles of the medium vibrate in a direction parallel to the direction of wave propagation. (+2, -0.5)

- a. Transverse
 - b. Surface
 - c. Longitudinal
 - d. Field
-

98. The underground water and the water in rivers, lakes and ponds is also (+2, -0.5)
-----.

- a. salt
- b. sour
- c. fresh
- d. saline

99. Which of the statements given below is/are correct? (+2, -0.5)

- A) England won the 2017 Women's Cricket World Cup.
- B) Canada hosted the 2017 AIBA World Boxing Championships.
- C) In 2017, Rohit Sharma captained the IPL team Mumbai Indians.

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

100. In HTML, ----- tag is used to specify each item displayed in the (+2, -0.5)
list.

- a. <SELECT>
- b. <OPTION>
- c. <TEXTAREA>
- d. <INPUT>

Answers

1. Answer: b

Explanation:

The correct answer is **frothiest**

★ Key Points

- **Frothiest** – full of or covered with a mass of small bubbles (froth)
- It is the **superlative** form of the adjective **frothy**, meaning *composed of many small air bubbles* (froth)

★ Additional Information

- Degrees of comparisons of the adjective 'frothy':
 - *Frothy* (Positive), *Frothier* (Comparative), *Frothiest* (Superlative)

Thus the correct answer is Option 2

2. Answer: b

Explanation:

The correct answer is **BCA**

★ Key Points

- The paragraph starts with '*people used to preserve*'. Hence the next sentence should say **what they used to preserve (noun)**
- 'A' starts with the **noun 'companionship'**, 'B' starts with the **noun 'letters'**, and 'C' starts with the **preposition 'of'**, it can be either 'A' or 'B'
- Among 'A' and 'B', if we choose 'A', both the options **ACB** and **ABC** would render the paragraph grammatically absurd and structurally meaningless. This

is because both **A-B** and **A-C** in this order are grammatically incompatible phrases

- However, if we choose '**B**', while the order **BAC** gives a grammatically erratic paragraph due to **B-A** in that order being grammatically incompatible phrases, the order **BCA** gives a grammatically and semantically coherent paragraph

Thus the correct answer is: *People used to preserve letters for years as these humble pieces of paper afforded companionship in absentia*

3. Answer: d

Explanation:

The correct answer is **no improvement**

★ Key Points

- Auxiliary verbs like *is, am, are, was, were* that state a fact are grammatically incompatible with the past participle of the verb '*to be*', i.e., *been*
- This eliminates Options 2 and 3
- Option 1, '*have been*', is used to denote plural subjects and thus violates the subject-verb agreement
- *Been*, when used with the root verb '*has*', makes up the (**Singular**) **Present Perfect Tense** indicating something which has occurred as a phenomenon (here, *the art of movement* being *culture-driven*)

Thus the correct sentence is: *The art of movement has been, in complicated ways, culture-driven.*

4. Answer: c

Explanation:

The correct answer is **were identified**

★ Key Points

- Let's look at each option:
 - is identified:** Since the subject *cyclones* is plural, the auxiliary verb 'is' which denotes a singular noun, would form a grammatically incorrect sentence
 - were identify:** This is a grammatically incorrect phrase as with the auxiliary verb 'were', past tense of the root verb 'identify', i.e., 'identified' should be used
 - were identified:** This forms a grammatically correct **Simple Past Tense** with **plural subject-verb agreement**

Thus the correct sentence is: *Cyclones were identified by the year of their occurrence, and remembered for the devastation they caused.*

5. Answer: b

Explanation:

The correct answer is **Depict**

★ Key Points

- Let's look at the meaning of each of the options given:

Ensnore	establish or settle someone in a comfortable, safe place
Depict	represent by a drawing, painting, words, or other art forms
Veil	a piece of fine material worn by women to protect or conceal the face; a cover
Obscure	not discovered or known about; uncertain

Thus the correct answer is Option 2

6. Answer: d

Explanation:

The correct answer is **Chutzpah**

★ Key Points

- Let's examine the meaning of each of the words given:

Petrified	so frightened that one is unable to move; terrified; afraid
Abashed	to make someone feel embarrassed, disconcerted, or ashamed
Skittish	an animal, especially a horse that is nervous or excitable; easily scared
Chutzpah	extreme self-confidence or audacity

Thus the correct answer is Option 4

7. Answer: a

Explanation:

The correct answer is **An imaginary utopian place or situation**

★ Key Points

- An **idiom** is an expression whose meaning is different from the meanings of the individual words in it
- Let's look at some similar idioms as above and their respective meanings

clean as a whistle	place or person or thing that is immaculate
hive of activity	place where a lot is happening, and everyone present is busy doing something
middle of nowhere	place that is very remote, far from any city or town
a den of iniquity	a place where wrong and dirty things happen

Thus the correct answer is Option 1

★ Additional Information

The word '**utopian**' means modelled on or aiming for a state in which everything is perfect; idealistic.

8. Answer: d

Explanation:

The correct answer is **Things located diagonally opposite each other.**

★ Key Points

- **Kitty-corner**- In a diagonal position from, especially outward from the corner of a square. A variant of the more technical term "cater-corner," with "cater" meaning "to set or move diagonally."
 - Example- " *Thankfully the daycare is kitty-corner to my office, so dropping the kids off in the morning is really easy.*"

9. Answer: c

Explanation:

The correct answer is **not**

★ Key Points

- On looking at the above-given passage, we observe that it is based upon how a change in some organisation may create problems or difficulties for presently going activities and impacts both leaders and followers.
- Also, it describes that the most powerful leader gets most of the benefits through such changes.
- Since the starter of the passage has the main verb **is**, so to make the statement negative, it can only go with **not**

Thus the complete sentence is: *Change is more often than **not** the trigger for struggles in the leadership arena.*

10. Answer: c

Explanation:

The correct answer is **in**

★ Key Points

- Word 'usher' means you show them where they should go, often by going with them.
- And, changes are made in the organisation.
- Hence, the phrase is '*usher in*'

Thus the complete sentence is: *Leaders usher **in** organisational change,*

11. Answer: a

Explanation:

The correct answer is **an**

★ Key Points

- Since, the blank is followed by a vowel sound, hence, article **an** is appropriate.

Thus the complete sentence is: *With various factors in the mix, **an** imbalance is created that impacts leaders and followers in multiple and varying ways.*

★ Confusion Points

- Don't put '**the**' because the passage has not mentioned this '**imbalance**' earlier or it is not about a particular imbalance.

12. Answer: a

Explanation:

The correct answer is **ironically**

★ Key Points

- The sentence goes on to assert that the leader gets the roughest edge
- To express in what way or manner he/she gets the roughest edge, we use the adverb '*ironically*' which means 'happening in a way contrary to what is expected, and typically causing wry amusement because of this'

Thus the correct phrase is: ***Ironically**, the leader gets the roughest edge...*

13. Answer: a

Explanation:

The correct answer is **powerful**

★ Key Points

- Since, 'most' is used before the blank to describe the leader, it should be filled with an adjective, which is, powerful.

Thus the correct phrase is: "...as he is seemingly the most **powerful** one."

14. Answer: b

Explanation:

The correct answer is **Auxiliary**

★ Key Points

- The word auxiliary is correctly spelt. It means providing supplementary or additional help and support.
-

15. Answer: a

Explanation:

The correct answer is **The lawyer commanded them to call the witness**

★ Key Points

- Since the lawyer is giving a command of calling the witness, we use the word 'commanded' while converting from direct to indirect speech
 - The inverted commas and comma is replaced by the word 'commanded' and this verb is connected with the infinitive 'to' to indicate the object of the verb
-

16. Answer: d

Explanation:

The correct answer is **The homework should be checked by the teacher**

★ Key Points

- When changing from Active to Passive, the subject (*teacher*) and object (*homework*) are interchanged
- The present form of the verb (*check*) is changed to past participle form (*be + checked*)
- The relation between the action and the doer is represented by the preposition 'by'
- Thus the structure is: Object(the homework) + modal verb (should) + be + V3(checked) + by + subject (the teacher).

17. Answer: b

Explanation:

The correct answer is **QRP**

★ Key Points

- Clearly, a sentence does not end with a conjunction that or preposition in
- Hence, options 3 and 4 are eliminated
- Since the starting sentence starts with describing the noun '*biosphere*' and ends with the preposition *like*, it should be followed by a similar noun/pronoun

Thus the correctly ordered sentence is: *The whole biosphere, like the individual organisms that live inside it, exists in a chemically dynamic state*

18. Answer: c

Explanation:

The correct answer is **Prejudiced**

★ Key Points

- The meaning of 'objective' :- not influenced by personal feelings or opinions in considering and representing facts; impartial; unbiased; fair; straight; detached.
- The meaning of 'prejudiced' :- biased; partial; one-sided; unfair

19. Answer: d

Explanation:

The correct answer is **Honesty**

★ Key Points

Let's look at the meaning of the marked and correct option-

- **Guile**- Insidious cunning in attaining a goal; crafty or artful deception; cunning, ploys
- **Honesty**- the quality of being truthful or honest; uprightness, honour, integrity

Hence, from the above meanings, we find that both options i.e. **Guile and Honesty** are opposite in meaning.

Let's look at the meaning of other given options-

- **Cleverness**- ability to understand and learn quickly and easily
- **Suspicious**-having or showing a cautious distrust of someone or something
- **Dishonesty**-deceitfulness shown in someone's character or behaviour

20. Answer: a

Explanation:

The correct answer is **Strict**

★ Key Points

- The meaning of 'Austerity' – sternness or severity of manner or attitude; strict; intolerant
- 'Tolerant' and 'kindness' are the opposites
- 'Moist' means something which has water content

21. Answer: d

Explanation:

The correct answer is **'Practical'**

★ Key Points

- Let's first find out the meaning of 'empirical':– based on, concerned with, or verifiable by observation or experience rather than theory or pure logic; verified; actual; real; factual; **practical** .
- Now, find the meaning of '**Hypothetical**' – supposed but not necessarily real or true; theoretical; **unproved**
- Clearly, the word **practical** is the most similar meaning to the given word.

22. Answer: a

Explanation:

The correct answer is **have**

★ Key Points

- Since subject 'dogs' is a plural noun, hence according to the sub-verb agreement, the plural verb should be used. Thus, options 2 & 3 are incorrect
- And, modal verb does not come directly with v3 form. Hence, option 4 is also incorrect.

Thus the correct sentence is: *Many lost dogs **have** been given back to their owners.*

23. Answer: c

Explanation:

The correct answer is '**neither**'

★ Key Points

- '**Neither**' as an **adverb**, is used to introduce a further negative statement, e.g., "He didn't remember, and **neither** did I"
- '**Also**' means '*in addition to*'. Using '**also**' here is grammatically incorrect as it is not negative in nature
- '**Even**' means '*including...*'. Using '**even**' here is grammatically incorrect as it is not negative in nature
- '**So**' means '*thus, as a result,...*'. Using '**so**' here is grammatically incorrect as it is not negative in nature and in fact, tends to give contradictory meaning

Complete Sentence: *She does not agree, and **neither** does Anita.*

24. Answer: c

Explanation:

The correct answer is '**2**'

★ Key Points

- Since modal verb **may** is used in part 2 and then followed by **plural** verb **hurt** and connected with the conjunction **or**, the modal verb applies on second verb **mistreat** also.
- Hence, replace **mistreats** with **mistreat**

Correct sentence – *It is easy to fall victim not only to those who may hurt or **mistreat** us, but also to our own anger.*

25. Answer: b

Explanation:

The correct answer is 'I'

★ Key Points

- Adjective **Each** is followed by a singular noun and a singular verb.
- Example– Each book were written with a pen or a brush. (wrong)
Each book was written with a pen or a brush. (right)
- Thus, replace **aspire** with **aspires**.

Correct sentence – *Each nation **aspires** to do well, but there are glaring economical inequalities among them.*

26. Answer: d

Explanation:

Here, Pattern is such that first word defines the feelings, position, possession etc. and the second word is a colour which defines the first word i.e.

Sorrow : Black → Sorrow is a feeling or state of mind which is indicated by black colour.

Red : Green → It doesn't follow the pattern as colour is given first.

Rank : Star → Rank is position of any individual which is indicated by stars.

Danger : Green → Danger is a state or situation which is indicated by red colour not green.

Pink : Pencil → It doesn't follow the pattern as colour is given first.

Hence, Rank : Star is the correct alternative.

27. Answer: b

Explanation:

Here pattern is such that 2nd number is 23 more than the 1st number i.e.

$$43 : 66 \rightarrow 43 + 23 = 66.$$

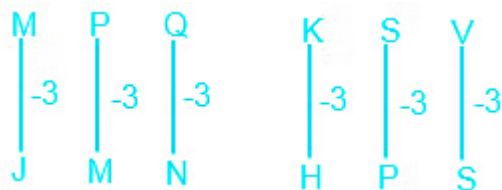
$$\text{Similarly, } 91 : ? \rightarrow 91 + 23 = 114.$$

Thus, 114 is the correct alternative.

28. Answer: a

Explanation:

The pattern here is as follows,



Therefore, HPS is the correct answer.

29. Answer: c

Explanation:

Brain, Liver and Lungs are the internal body organs which cannot be seen from outside in a human body whereas Eyes are the body part which can be seen from outside in a human body and is an external body organ.

Thus, Eyes is the odd one.

30. Answer: d**Explanation:**

Out of the given options, 43 – 46 is odd one because in all other options 2nd term is 5 more than the 1st term i.e.

$$61 - 66 \rightarrow 61 + 5 = 66$$

$$41 - 46 \rightarrow 41 + 5 = 46$$

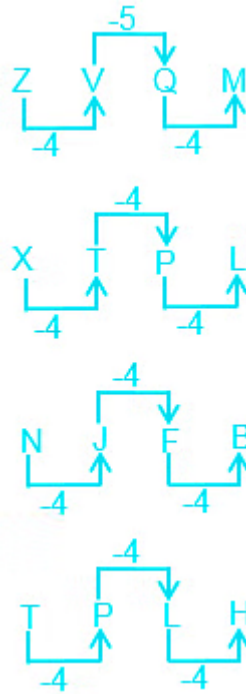
$$32 - 37 \rightarrow 32 + 5 = 37$$

But in $43 - 46 \rightarrow 43 + 5 = 48$ which is not equal to 46.

Thus, 43 – 46 is odd one.

31. Answer: a**Explanation:**

Here, it follows a pattern of -4 between two consecutive characters as shown below:



Hence, ZVQM is the odd one.

32. Answer: c

Explanation:

The dictionary sequence is :

Dra **ine** r → Dra **ini** ng → Dra **matic** → Dra **nk** → Dra **ught**.

Thus, 21453 will be the correct sequence.

33. Answer: b

Explanation:

The relation between the numbers is as follows,

$$56 + (14 \times 1) = 56 + 14 = 70$$

$$70 + (14 \times 2) = 70 + 28 = 98$$

$$98 + (14 \times 3) = 98 + 42 = 140$$

$$140 + (14 \times 4) = 140 + 56 = 196$$

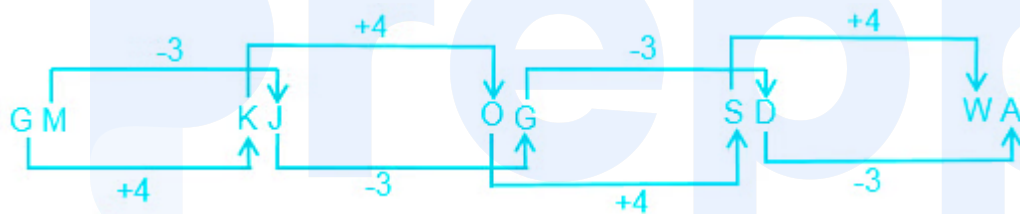
$$196 + (14 \times 5) = 196 + 70 = 266$$

Hence, the next number is 266.

34. Answer: b

Explanation:

The pattern is as follows,



Hence, the next term is WA.

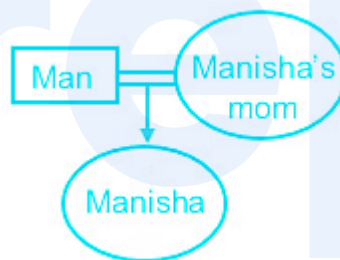
35. Answer: c

Explanation:

The diagram below depicts the meaning of the symbols used in figure.

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

According to the text in the diagram,



Hence, Manisha is the daughter of that man.

36. Answer: b

Explanation:

Let's check each option,

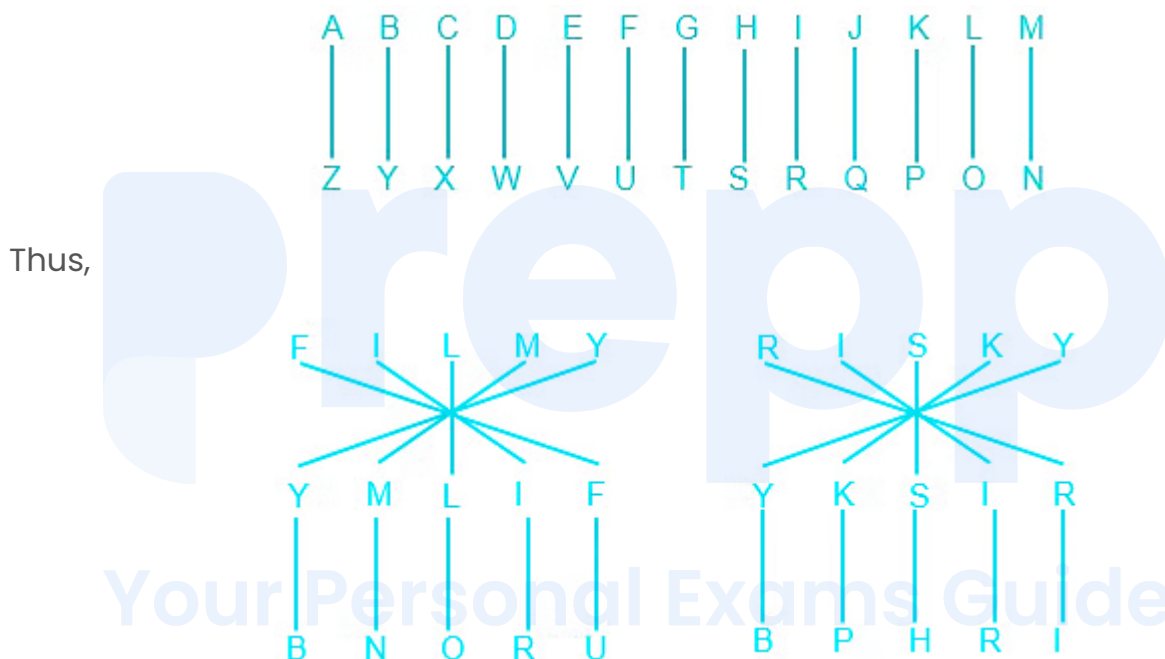
- 1) TUNE → can be formed as **UN IV ERSI TY**.
- 2) UNTIL → cannot be formed as there is no 'L' in UNIVERSITY.
- 3) VERY → can be formed as UNI **VER** SIT **Y**.
- 4) TRY → can be formed as UNIVE **RSI TY**.

Hence, UNTIL can't be formed from word UNIVERSITY.

37. Answer: b

Explanation:

All the letters of the word are reversed first and then the reversed letters are coded by replacing the letter by its opposite letter in alphabetical order i.e. A is replaced by Z, B by Y, C by X D by W and so on as shown in the figure below:



Hence, BPHRI is the correct alternative.

38. Answer: c

Explanation:

The given equation is: $15 - 12 + 5 \times 9 \div 12 = ?$

Here,

$$'-' \rightarrow 'x',$$

$$'÷' \rightarrow ' + ',$$

$$' + ' \rightarrow '÷'$$

$$'x' \rightarrow '-'$$

So let's replace the sign in the above equation.

$$15 - 12 + 5 \times 9 \div 12 \rightarrow 15 \times 12 \div 5 - 9 + 12 = 36 + 3 = 39$$

Hence, 39 is the correct alternative.

39. Answer: a

Explanation:

The given equation is : $5 - 16 \times 30 \div 10 + 4 = 49$

Let's check each option,

$$1) - \text{ and } + \rightarrow 5 + 16 \times 30 \div 10 - 4 = 49 = 49$$

$$2) \div \text{ and } \times \rightarrow 5 - 16 \div 30 \times 10 + 4 = 3.66 \neq 49$$

$$3) \times \text{ and } - \rightarrow 5 \times 16 - 30 \div 10 + 4 = 81 \neq 49$$

$$4) \div \text{ and } - \rightarrow 5 \div 16 \times 30 - 10 + 4 = 3.375 \neq 49$$

Hence, by interchanging - and + the equation will be correct.

40. Answer: d

Explanation:

The pattern here is as follows, two numbers are given separated by '&'. We get the answer by multiplying the difference of the two numbers by 2.

Let A and B are two numbers such that $A \& B$ then

$$A \& B = (A - B) \times 2 \text{ i.e.}$$

$$13 \& 8 = (13 - 8) \times 2 = 5 \times 2 = 10$$

$$11 \& 6 = (11 - 6) \times 2 = 5 \times 2 = 10$$

$$17 \& 4 = (17 - 4) \times 2 = 13 \times 2 = 26$$

$$\text{Similarly, } 15 \& 1 = (15 - 1) \times 2 = 14 \times 2 = 28.$$

Hence, 28 is the correct alternative.

41. Answer: b

Explanation:

The pattern here is the letter 'C' is shifting its position one step towards its right in every step i.e.

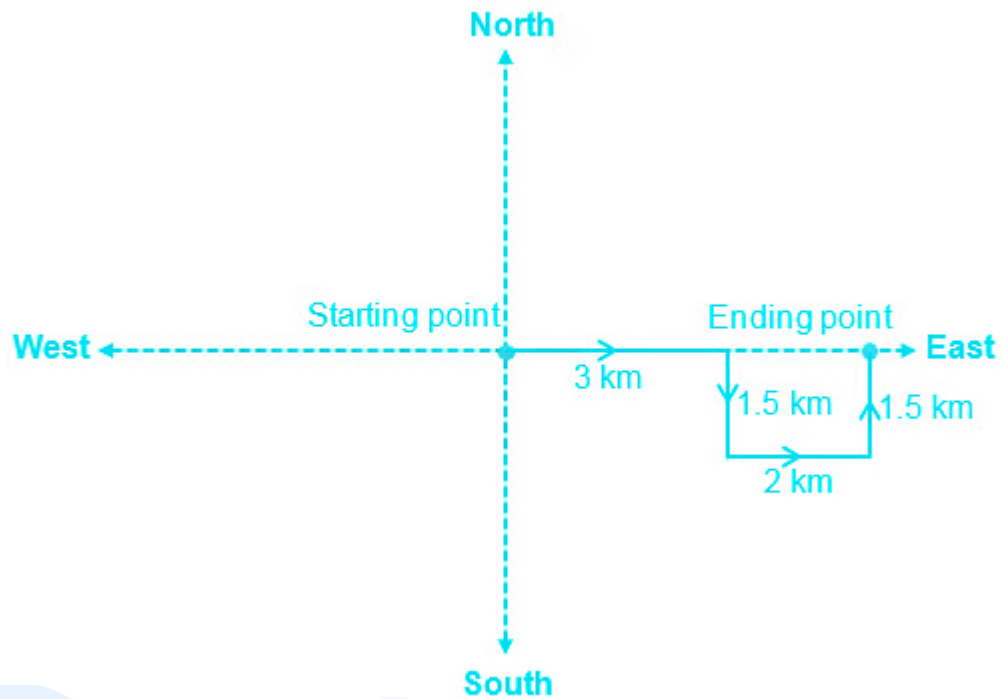
C ABABABAB, A **C**BABABAB, AB **C**ABABAB, ABA **C**BABAB, ABAB **C**ABAB, ABABA **C**BAB

Hence, ABABA **C**BAB is the correct alternative.

42. Answer: a

Explanation:

The diagram below shows the path followed by the villager,

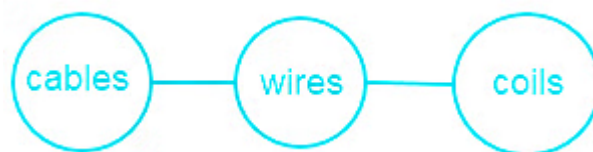


Clearly, we can see that the endpoint is 5 km in the east direction from his starting point.

43. Answer: c

Explanation:

Consider the following least possible Venn diagram,



Conclusions:

- I. No cables are coils → False (It is possible but not definite).
- II. Some coils are cables → False (It is possible but not definite).

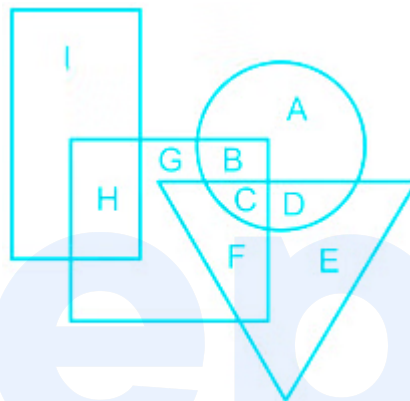
Hence, conclusion I and II forms complementary pair.

Thus, either conclusion I and II follows.

44. Answer: b

Explanation:

Here, Square represents Asians, Circle represents Illustrators and Triangle represents Writers.



Clearly, Asians who are either Illustrators or Writers or both is the intersection of square and circle, square and triangle and intersection of all three square, triangle and circle i.e. BCF

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45. Answer: a

Explanation:

The pattern is as follows,



Hence, the next term is WJS.

46. Answer: c

Explanation:

The relation between the numbers is as follows,

$$32 + 4 = 36$$

$$36 + (4 + 2) = 36 + 6 = 42$$

$$42 + (6 + 2) = 42 + 8 = 50$$

$$50 + (8 + 2) = 50 + 10 = 60$$

$$60 + (10 + 2) = 60 + 12 = 72$$

Hence, the next number is 72.

47. Answer: b

Explanation:

Out of the given options, (7, 21, 15) is odd one because in all other options 2nd number is one more than thrice the 1st number and 3rd number is one more than twice the 1st number i.e.

$$(6, 19, 13) \rightarrow 6 \times 3 + 1 = 19 \text{ and } 6 \times 2 + 1 = 13$$

$$(18, 55, 37) \rightarrow 18 \times 3 + 1 = 55 \text{ and } 18 \times 2 + 1 = 37$$

$$(15, 46, 31) \rightarrow 15 \times 3 + 1 = 46 \text{ and } 15 \times 2 + 1 = 31$$

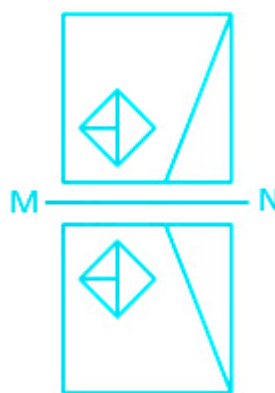
$$\text{But in } (7, 21, 15) \rightarrow 7 \times 3 + 1 = 22 \neq 21 \text{ and } 7 \times 2 + 1 = 15.$$

Thus, (7, 21, 15) is odd one.

48. Answer: c

Explanation:

The mirror image of the question will be:



Hence, we can say that option 3 is the correct mirror image of the given question.

49. Answer: b

Explanation:

If we consider faces with "



" as centre and fold its surrounding faces inside,
we find that face with "



" and "



" are opposite to each other,
faces with "



" and "



" are opposite to each other
and faces with "



" and "



" are opposite to each other.

Here, the cube in option 2 of the answer figure cannot be made based on the unfolded cube in the question because faces with "



" and "



" are opposite to each other which is shown adjacent in option 2.

Hence, option 2 is the correct alternative.

50. Answer: c

Explanation:

Let's check all the options,

1) 23, 89, 43, 78 → HWHY

2) 31, 66, 42, 95 → GQES

3) 34, 67, 57, 95 → ANTS

4) 22, 89, 13, 88 → GWCR

Thus, the correct option is 34, 67, 57, 95.

51. Answer: b

Explanation:

$$(82)^{102} + (183)^{103}$$

Let's take unit digit of both the no. with their powers

$$(2)^{102} + (3)^{103}$$

The power cycle of 2 and 3 is 4

Now divide their powers by 4 and take their remainder.

$$102 \div 4 \text{ then remainder} = 2$$

$$103 \div 4 \text{ then remainder} = 3$$

Now use these remainder as their power.

$$(2)^2 + (3)^3 = 4 + 27 = 31$$

$\therefore$ Unit digit of given equation is = 1

52. Answer: c

Explanation:

$$\sqrt{5\sqrt{5\sqrt{5\sqrt{5}}}}$$

$$\Rightarrow \sqrt{5\sqrt{5\sqrt{5\sqrt{5 \times 5^{1/2}}}}} = \sqrt{5\sqrt{5\sqrt{5\sqrt{5^{3/2}}}}}$$

$$\Rightarrow \sqrt{5\sqrt{5\sqrt{5 \times 5^{\frac{3}{2} \times \frac{1}{2}}}}} = \sqrt{5\sqrt{5\sqrt{5^{\frac{7}{4}}}}}$$

$$\Rightarrow \sqrt{5 \times 5^{\frac{7}{4} \times \frac{1}{2}}} = \sqrt{5^{\frac{15}{8}}}$$

$$\Rightarrow 5^{\frac{15}{8} \times \frac{1}{2}} = 5^{\frac{15}{16}}$$

53. Answer: b

Explanation:

$$\sqrt{y} = \sqrt{4} - \sqrt{6}$$

Square the eq.

$$\Rightarrow (\sqrt{y})^2 = (\sqrt{4} - \sqrt{6})^2$$

$$\Rightarrow y = (\sqrt{4})^2 + (\sqrt{6})^2 - 2 \times \sqrt{4} \times \sqrt{6} = 4 + 6 - 4\sqrt{6}$$

$$\Rightarrow y = 10 - 4\sqrt{6}$$

Square the eq. again.

$$\Rightarrow y^2 = (10 - 4\sqrt{6})^2 = (10)^2 + (4\sqrt{6})^2 - 2 \times 10 \times 4\sqrt{6} = 100 + 96 - 80\sqrt{6}$$

$$\Rightarrow y^2 = 196 - 80\sqrt{6}$$

We have to find value of $y^2 - 20y + 12$ so put the value of y and y^2 in this eq.

$$\Rightarrow 196 - 80\sqrt{6} - 20(10 - 4\sqrt{6}) + 12$$

$$\Rightarrow 196 - 80\sqrt{6} - 200 + 80\sqrt{6} + 12$$

$$\Rightarrow 208 - 200 = 8$$

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54. Answer: d

Explanation:

$$3x/y = 4 \text{ (given)}$$

$$3x = 4y$$

Minimum value of $3x + 4y$,

$\therefore 3x + 3x = 6x$, since x is a positive integer, so the minimum value of x can be 1, but this make the value of y 0.75

If x is 2, y will be 1.5

If x is 3, y will be 2.25

If x is 4, y will be 3, This satisfies the given condition

$\therefore$ Minimum value of $3x + 4y = 24$

55. Answer: d

Explanation:

Sum of radius of both circles = $4 + 5 = 9$ cm

Distance between the centres = 5 cm

If the Distance between the centres $<$ Sum of radius then no. of tangents = 2

If the Distance between the centres = Sum of radius then no. of tangents = 3

If the Distance between the centres $>$ Sum of radius then no. of tangents = 4

In this case we have the Distance between the centres $<$ Sum of radius

So, no. of tangents = 2

56. Answer: b

Explanation:

Given:

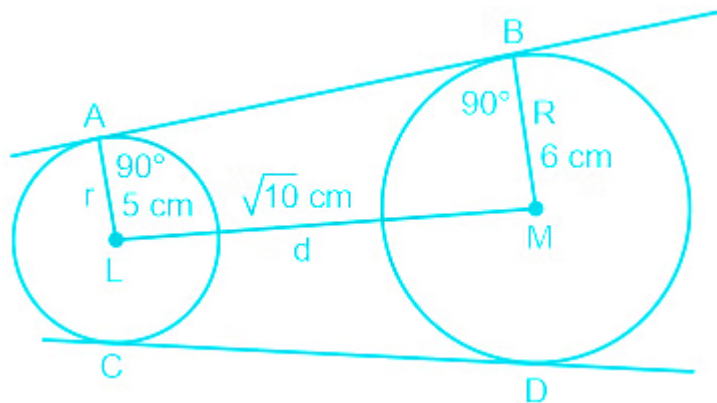
Distance between the centre of two circles = $\sqrt{10}$ cm

Radii of two circles is 5 cm and 6 cm

Formula used:

Length of direct common tangent = $\sqrt{((\text{Distance between the centers})^2 - (\text{Difference of radius})^2)}$

Calculation:



Length of direct common tangent = $\sqrt{((\text{Distance between the centers})^2 - (\text{Difference of radius})^2)}$

Length of tangent = $\sqrt{((\sqrt{10})^2 - (6 - 5)^2)} = \sqrt{(10 - 1)} = \sqrt{9} = 3 \text{ cm}$

$\therefore$ Length of direct common tangent is 3 cm

★ Additional Information

Direct Tangent/Transverse Tangent

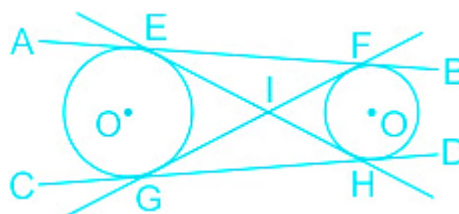
In a given pair of circles, there are two types of tangents.

The direct tangents and the cross (or transverse) tangents.

In the figure,

AB and CD are the direct tangents and EH and GF are the transverse tangents.

When two circles of radii r_1 and r_2 have their centres at a distance d .



Length of direct common tangent is

Length of transverse tangent is

57. Answer: d

Explanation:

Let $y = 100$

$\Rightarrow x = 160\% \text{ of } y = 160/100 \times 100 = 160$

$\therefore \text{Required \%} = y/x \times 100 = 100/160 \times 100 = 62.5\%$

58. Answer: c

Explanation:

Income = Expenditure + savings

Income = $6 + 1 = 7$ units = 42000

1 unit = 6000

$\therefore \text{Expenditure} = 6 \text{ units} = 6 \times 6000 = \text{Rs. } 36000$

59. Answer: d

Explanation:

Let Aman, Kamal and Ratan invest their money for time t_1 , t_2 and t_3 respectively.

Ratio of their profit = Ratio of their investments $\times$ time

$\Rightarrow 3 : 16 : 9 = 12 \times t_1 : 4 \times t_2 : 3 \times t_3$

Now we take two ratios to simplify.

$$\Rightarrow 3/16 = (12 \times t_1)/(4 \times t_2)$$

$$\Rightarrow t_1/t_2 = 1/16$$

Now we take two other ratios to simplify.

$$\Rightarrow 16/9 = (4 \times t_2)/(3 \times t_3)$$

$$\Rightarrow t_2/t_3 = 4/3$$

$$t_1 : t_2 = 1 : 16 \quad \text{-----(1)}$$

$$t_2 : t_3 = 4 : 3 \quad \text{-----(2)}$$

To make t_2 equal, we multiply eq. 2 with 4

$$\Rightarrow t_2 : t_3 = (4 : 3) \times 4 = 16 : 12$$

$$\therefore t_1 : t_2 : t_3 = 1 : 16 : 12$$

60. Answer: b

Explanation:

Let the five subjects are a, b, c, d and e

Marks in third subject c = 65 given

Average marks in first three subjects = 81

$$\Rightarrow (a + b + c)/3 = 81$$

$$\Rightarrow a + b + c = 243$$

Average marks in last three subjects = 74

$$\Rightarrow (c + d + e)/3 = 74$$

$$\Rightarrow c + d + e = 222$$

$$\Rightarrow 65 + d + e = 222$$

$$\Rightarrow d + e = 222 - 65 = 157$$

$$\text{Average marks of suman in all sub.} = (a + b + c + d + e)/5 = (243 + 157)/5$$

$$\therefore \text{Average marks} = 400/5 = 80$$

61. Answer: b

Explanation:

A amount is doubled when it gets the same amount as interest.

So if we have to make money 16 times then its interest would be 15 times.

Time taken to 1 time interest = 5 years

$\therefore$ Time taken to get 15 times interest = $15 \times 5 = 75$ years

62. Answer: d

Explanation:

Let the C.P of the trouser = 100 units

According to the ques he sold it at 10 % loss, S.P of trouser = 90% of 100 = $90/100 \times 100 = 90$

New C.P of trouser = 20% less price of old C.P = 80% of old 100 = 80 units

New S.P = 115% of new C.P. = $115/100 \times 80 = 92$ units

$\Rightarrow$ New S.P – Old S.P = Rs. 9

$\Rightarrow 92 - 90 = 2$ units = Rs. 9

$$\Rightarrow 1 \text{ unit} = \text{Rs. } 4.5$$

$$\therefore 100 \text{ units} = \text{Rs. } 4.5 \times 100 = \text{Rs. } 450$$

63. Answer: b

Explanation:

$$\text{Discount \%} = \frac{(\text{M.P} - \text{S.P})}{(\text{M.P})} \times 100$$

$$\Rightarrow \text{Discount \%} = \frac{(14 - 11)}{14} \times 100 = \frac{3}{14} \times 100$$

$$\therefore \text{Discount \%} = 21.42\%$$

64. Answer: a

Explanation:

$$(\sqrt{23} - \sqrt{21}), (\sqrt{19} - \sqrt{17}), (\sqrt{21} - \sqrt{19})$$

$$\Rightarrow (\sqrt{23} - \sqrt{21}) \times \frac{(\sqrt{23} + \sqrt{21})}{(\sqrt{23} + \sqrt{21})} = \frac{(\sqrt{23})^2 - (\sqrt{21})^2}{(\sqrt{23} + \sqrt{21})} = \frac{2}{(\sqrt{23} + \sqrt{21})}$$

$$\Rightarrow (\sqrt{19} - \sqrt{17}) \times \frac{(\sqrt{19} + \sqrt{17})}{(\sqrt{19} + \sqrt{17})} = \frac{(\sqrt{19})^2 - (\sqrt{17})^2}{(\sqrt{19} + \sqrt{17})} = \frac{2}{(\sqrt{19} + \sqrt{17})}$$

$$\Rightarrow (\sqrt{21} - \sqrt{19}) \times \frac{(\sqrt{21} + \sqrt{19})}{(\sqrt{21} + \sqrt{19})} = \frac{(\sqrt{21})^2 - (\sqrt{19})^2}{(\sqrt{21} + \sqrt{19})} = \frac{2}{(\sqrt{21} + \sqrt{19})}$$

If the numerator is same then the no. divided by smallest denominator is largest

So, the decreasing order is $(\sqrt{19} - \sqrt{17}) > (\sqrt{21} - \sqrt{19}) > (\sqrt{23} - \sqrt{21})$

65. Answer: c

Explanation:

Time taken by X + Y to complete a work = 5 days

Time taken by Y + Z to complete a work = 6 days

Time taken by Z + X to complete a work = $15/2$ days

Total work = LCM of (5, 6 and $15/2$) = 30 units

Efficiency of X + Y together = $30/5 = 6$ units/day

Efficiency of Y + Z together = $30/6 = 5$ units/day

Efficiency of Z + X together = $30/(15/2) = 4$ units/day

Efficiency of X + Y + Z together = $2(X + Y + Z) = 6 + 5 + 4 = 15$ units/day

$X + Y + Z = 15/2 = 7.5$ units/day

$\therefore$ Total time taken by X + Y + Z together to complete the work = $30/7.5 = 4$ days

66. Answer: d

Explanation:

Let the speed of slow train is S km/hr then speed of fast train is (S + 10) km/hr

(Speed of slow train + Speed of fast train) = Distance/Time

$$\Rightarrow S + S + 10 = 180/9$$

$$\Rightarrow 2S + 10 = 20$$

$$\Rightarrow 2S = 20 - 10 = 10$$

$$\therefore S = 10/2 = 5 \text{ km/hr}$$

67. Answer: a

Explanation:

As shown in the pie chart, the value of Prunes is 950 lakhs which is more than all other dry fruits. So answer = Prunes

68. Answer: d**Explanation:**

Total value = Value of (Raisins + Almonds + Cashews + Pistachios + Dates + Prunes + Walnuts)

Total value = $600 + 800 + 550 + 300 + 400 + 950 + 900$

So, Total value = 4500

69. Answer: b**Explanation:**

$\therefore$ The central angle of the sector representing the annual production of dates = $400/4500 \times 360 = 32^\circ$

70. Answer: d**Explanation:**

Given:

The average value of almonds = 800 Rs/kg

Number of Almonds = 800 lakh

Calculation:

The average value of almonds = 800 Rs/kg

$\therefore$ Total production of almonds = (Total value of almonds)/(Average value of almonds) = $(800 \times 100000)/800 = 100000$

$\therefore$ Total production of almonds = 100000kg

71. Answer: a

Explanation:

$L = 10$ cm, $D = 26$ cm and $B = ?$

$$\Rightarrow D^2 = L^2 + B^2$$

$$\Rightarrow 26^2 = 10^2 + B^2$$

$$\Rightarrow B^2 = 676 - 100 = 576$$

$$\Rightarrow B^2 = 576$$

$$\Rightarrow B = 24 \text{ cm}$$

72. Answer: b

Explanation:

Perimeter of semi-circle = $r(\pi + 2)$

$$\Rightarrow 144 = r(22/7 + 2)$$

$$\Rightarrow 144 = 36/7 \times r$$

$$\Rightarrow r = 4 \times 7 = 28 \text{ cm}$$

73. Answer: a

Explanation:

$$\text{Curved Surface area} = 2\pi rh = 2 \times \frac{22}{7} \times \frac{21}{2} \times 10$$

$$\therefore \text{Curved Surface area} = 22 \times 3 \times 10 = 660 \text{ cm}^2$$

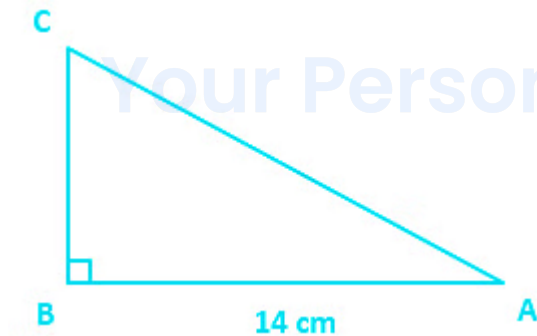
74. Answer: c

Explanation:

$$\frac{1}{2} - \sec 30^\circ = \frac{1}{2} - \frac{2}{\sqrt{3}} = \frac{(\sqrt{3} - 4)}{2\sqrt{3}}$$

75. Answer: c

Explanation:



$$\sec A = \frac{25}{7} = \frac{AC}{AB}$$

$$\Rightarrow \frac{25}{7} = \frac{AC}{14}$$

$$\Rightarrow AC = 50 \text{ Cm}$$

$$\Rightarrow BC^2 = AC^2 - AB^2$$

$$\Rightarrow BC^2 = 50^2 - 14^2 = 2500 - 196$$

$$\Rightarrow BC^2 = 2304$$

$$\therefore BC = 48$$

76. Answer: c

Explanation:

The Theory of Wages wrote by J R Hicks, is a classic microeconomics statement of wage determination in competitive markets.

Other books by Hicks are:

- A revision of demand theory
- A theory of economic history
- A market theory of Money

77. Answer: b

Explanation:

At present, there are 9 SEBI listed stock exchanges.

Name of all 9 Stock Exchanges listed with SEBI:

1. Calcutta Stock Exchange Ltd.
2. India International Exchange (India INX)
3. Indian Commodity Exchange Limited
4. Metropolitan Stock Exchange of India Ltd.
5. Multi Commodity Exchange of India Ltd.
6. National Commodity & Derivatives Exchange Ltd.
7. National Stock Exchange of India Ltd.
8. NSE IFSC Ltd.

9. BSE Ltd.

SEBI is the regulator for the security market in India. It was established in 1988 and was given statutory powers in 1992 through SEBI Act, 1992.

SEBI's present chairman is Ajay Tyagi.

78. Answer: a

Explanation:

Krishna III was the last great ruler of Rashtrakuta's.

- The battle between Chola state and Rashtrakutta was fought in 949 CE between Rajaditya (Chola king) and Krishna III (Rashtrakuta king).
 - The battle resulted in the defeat of the Cholas and death of Rajaditya.
-

79. Answer: b

Explanation:

The Battle of Buxar was fought on 22-23 October 1764

- It was fought between the forces under the command of the British East India Company led by Hector Munro and the combined armies of Mir Qasim, Nawab of Bengal, the Nawab of Awadh, and the Mughal Emperor Shah Alam.
 - The combined armies of Mughals, Awadh, and Mir Qasim were defeated by the British army.
 - The **Treaty of Allahabad** was signed after the **Battle of Buxar**.
-

80. Answer: a

Explanation:

Soo Canals the two ship canals linking Lakes Superior and Huron.

- There is a canal on the Canadian and on the US side of the rapids of the St Mary's River
- Soo Canal or Soo Locks connects Lake Superior to LakeHuron.

81. Answer: a

Explanation:

The correct answer is Kerala.

★ Key Points

- The **Idukki Dam** is a double curvature arch dam constructed across the Periyar River in a narrow gorge between two granite hills locally known as Kuravan and Kurathi in Kerala, India.
 - It is one of the highest arch dams in Asia.
 - It is constructed and owned by the Kerala State Electricity Board.
 - It supports a 780 MW hydroelectric power station in Moolamattom, which started generating power on 4 October 1975 .
 - The dam type is concrete, double curvature parabolic, thin arc dam.

★ Additional Information

Important HEPs	State	River
Srisaillam Hydro Electric Power plant	Andhra Pradesh	Krishna
Tehri HEP	Uttarakhand	Bhagirathi
Nathpa Jhakri HEP	Himachal Pradesh	Sutlej
Hirakud HEP	Odisha	Mahanadi
Bhakra Nangal HEP	Himachal Pradesh	Sutlej
Idukki HEP	Kerala	Periyar
Rihand HEP	Uttar Pradesh	Rihand
Uri HEP	Jammu	Jhelum
Sardar Sarovar HEP	Gujarat	Narmada

82. Answer: c

Explanation:

- There are six schools of Hindu philosophy namely
 - Sankhya, Yoga, Nyaya, Vaisheshika, Mimamsa and Vedanta.

Sage	Indian Philosophy
Sage Kapila	Samkhya
Maharishi Patanjali	Yog
Sage Gautum	Nyaya
Sage Kanada Rishi	Vaisheshika

83. Answer: b

Explanation:

Bangladesh signed a deal with India in the presence of Finance Minister Arun Jaitley and his counterpart A.M.A. Muhith.

- 17 development projects had been identified under the deal. Setting up new economic zones for Indians and other investors.
- Bangladesh will use the funds for 17 priority infrastructure projects including electricity, railways, road, shipping, ports, education, health etc.

84. Answer: c

Explanation:

The story of a Brief Marriage written by Anuk Arudpragasam , got the DSC Prize for South Asian Literature for 2017 held in Dhaka, Bangladesh.

- DSC Prize for South Asian Literature is an international literary prize awarded annually to writers of any ethnicity or nationality writing about South Asia, themes such as culture, politics, history or people.
-

85. Answer: d

Explanation:

Devastating earthquake of 7.8 magnitudes came in Nepal in April 2015.

- It was the deadliest earthquake in the seismically active region in 81 years.
 - About 100 international search and rescue and medical teams had arrived within 24 hours.
 - The Mt. Everest climbing season was cancelled.
-

86. Answer: b

Explanation:

German silver is a white alloy of nickel, zinc and copper.

- Composition of various elements is:
 - Copper – 60%
 - Zinc – 20%
 - Nickel – 20%
-

87. Answer: c

Explanation:

The correct answer is Graphite.

- Heavy water and Graphite both can be used as a moderator in a nuclear reactor.
- The role of the moderator is to slow down the neutrons emitted in fission in a small number of collisions.

Extra Facts:

- **Uranium** : It is the fuel most widely used by nuclear plants for nuclear fission.

88. Answer: b

Explanation:

Media: no role of election or nomination by people.

Legislature: People directly or indirectly elect legislature members.

Judiciary: The Judiciary is nominated, hence no role of people.

89. Answer: d

Explanation:

The correct answer is Montesquieu.

★ Key Points

- The concept of separation of powers was given by Montesquieu.
- Montesquieu described the separation of political power among a legislature, an executive, and a judiciary.
- He wrote that the government is morally obligated to serve people, namely by protecting their natural rights of life, liberty, and property

★ Additional Information

Aristotle

- Aristotle was a philosopher as well as the pioneer of human knowledge.
- He was famous for his statement that "man is by nature a political animal."
- Aristotle conceived of politics as being like an organism rather than like a machine, and as a collection of parts none of which can exist without the others.
- He was also the propounder of Realism and was entirely opposed to the world of ideas.
- He believed in inculcating the habit of reasoning and critical thinking in students rather than just cramming bookish knowledge.

Plato (429–347 BCE)

- He is one of the most dazzling thinkers in the Western philosophical tradition and one of the most penetrating, wide-ranging, and influential authors in the history of philosophy.
- After the death of Socrates, Plato, the most famous of his pupils, carried on much of his former teacher's work and eventually founded his own school, the Academy, in 385 BCE.
- He wrote dialogues between Socrates and others that would explore philosophical issues. These dialogues would be used in his school as starting points for discussion.
- The Platonic dialogues consist of Socrates asking questions of another and proving, through these questions, that the other person has the wrong idea on the subject.

Hobbes

- Thomas Hobbes was an English philosopher, considered to be one of the founders of modern political philosophy.
- He is best known for his 1651 book Leviathan, in which he expounds on an influential formulation of social contract theory.

90. **Answer: b**

Explanation:

Testicles in human produce sperms and urine are formed in the kidney through filtration of blood.

- The sperm arrives first at the ampulla, where secretions from the seminal vesicle are added.
- From the ampulla, seminal fluid is propelled forward through the ejaculatory ducts toward the urethra.

The urinary tract is a pathway that includes the:

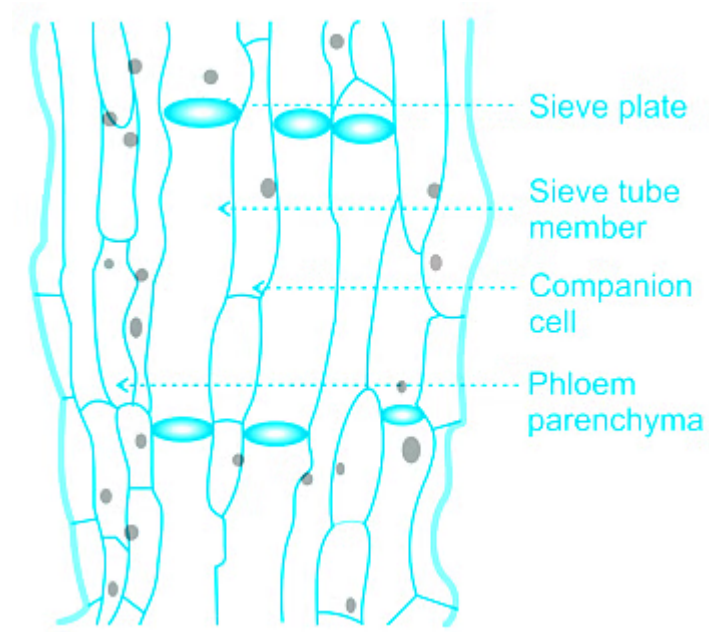
- Kidneys: two bean-shaped organs that filter waste from the blood and produce urine
- Ureters: two thin tubes that take pee from the kidney to the bladder
- Bladder: a sac that holds pee until it's time to go to the bathroom
- Urethra: the tube that carries urine from the bladder out of the body when you pee

91. **Answer: d**

Explanation:

Tracheids is not a constituent of phloem.

Phloem:-



Difference between Phloem and Xylem:-

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Characteristic	Xylem	Phloem
Conduction	Water and minerals from the root to body parts	Prepared Food from leaves to body parts
Strength	Provides mechanical strength	Do not provide mechanical strength
Elements live	Xylem parenchyma only	Sieve tubes, companion cells and phloem parenchyma
Conduction direction	Unidirectional	Bidirectional
Conducting channel	Tracheids	Sieve tubes

92. Answer: b

Explanation:

Under the Pradhan Mantri Awas Yojana - Urban, these changes were made:

- Under the MIG-I category, the carpet area of the houses has been enhanced from 90 square metre to 120 sq.mts, while under the MIG-II segment; it has been increased to 150 square metre from the current 110 sq.mtr.
- For the MIG-I category, a four-percent interest subsidy is provided to the beneficiaries with an annual income of Rs 6-12 lakh on a loan of up to Rs 9 lakh.

- Under the MIG-II category, the beneficiaries with an annual income of Rs 12–18 lakh get a three-per cent interest subsidy on a loan of up to Rs 12 lakh.
-

93. Answer: d

Explanation:

ETH researchers (Zurich) succeeded in shortening the pulse duration of an X-ray laser to only 43 attoseconds.

- With a time resolution in the range of a few quintillionths of a second, they are now able for the first time to observe the movement of electrons during chemical reactions in slow motion.
-

94. Answer: d

Explanation:

In August 2017, the 12th Five Year Plan was reviewed by NITI Aayog. The centre has now adopted a 15- year vision document.

- Drawn up by the National Institution for Transforming India (Niti Aayog), the central government's main planning body, the plan includes inputs from both state and central ministries.
 - The new plan will be accompanied by shorter sub-plans – a seven-year strategy for 2017–24, and a three-year 'Action Agenda' from 2017–18 to 2019–20. Almost 300 specific action points covering a wide range of sectors have been drawn up as part of the 15-year vision.
-

95. Answer: d

Explanation:

To celebrate the idea of unity in diversity, the Ministry of Culture organized the 7th edition of the RashtriyaSanskritiMahotsav under the Ek Bharat Shreshtha Bharat matrix in Karnataka beginning January 14, 2018.

- The Ek Bharat Shreshtha Bharat programme was launched by the Prime Minister on 31st October 2016 to promote engagement amongst the people of different states/UTs so as to enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India.

96. Answer: b

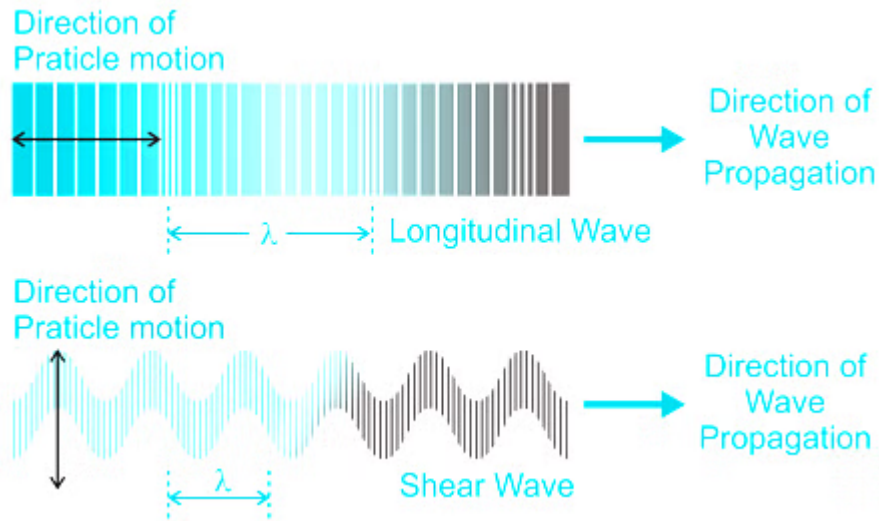
Explanation:

- **Force (f)** = mass (m) × acceleration (a)
- $6 = 3 \times a$
- $a = 2 \text{ m/s}^2$

97. Answer: c

Explanation:

In a longitudinal wave, particles of the medium vibrate in a direction parallel to the direction of wave propagation.



98. Answer: c

Explanation:

Groundwater makes up about twenty percent of the world's fresh water supply, which is about 0.61% of the entire world's water, including oceans and permanent ice caps.

99. Answer: d

Explanation:

England won the 2017 Women's Cricket World Cup defeating India.

- 2017 AIBA World boxing championship was held at Hamburg.
- Rohit Sharma captained the IPL team Mumbai Indians.

100. Answer: b

Explanation:

The correct answer is <OPTION>.

★ **Key Points**

- <SELECT>element is used to create a drop-down list
- The <OPTION> tags inside the <SELECT> element define the available options in the list.
- <TEXTAREA>A text area can hold an unlimited number of characters, and the text renders in a fixed-width font
- <INPUT> define an input control.

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