



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 (14-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. Effuzively
- b. Effusively
- c. Efusively
- d. Efuzively

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)

Leaders usher

A-creates a natural tension

B-in organisational change, which

C-as the status quo fights back

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

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 (+2, -0.5)

improvement is needed, select "no improvement".

During the last decade the typewriters (had give) way to the computers.

- a. Have gave
- b. Is giving
- c. Have given
- 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)

People (have got so addict) to their virtual life that they forget there is more to life than just sitting in front of a plastic box.

- a. Have got so addicting
- b. Has got so addicted
- c. Have got so addicted
- 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)

The forming of a theory or conjecture without firm evidence

- a. Verification
- b. Substantiation

c. Speculation

d. Attestation

-
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)

The clandestine copying and distribution of literature banned by the state.

a. Wanton

b. Brazen

c. Flagrant

d. Samizdat

-
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)

A fool's paradise

a. An average person appears smart in company of fools.

b. A state of happiness based on a person's ignorance about potential trouble.

c. A paradise is ruined when fools enter it.

d. Pretending that everything is going fine when actually all is being lost.

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

Bite off more than you can chew

- a. A voracious person who eats with big morsels.
- b. It is not good manners to hog food when you are in a social setting.
- c. A commitment is a commitment irrespective of whether you can do it or not.
- d. Take on a commitment one cannot fulfill.

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)

Although it has been felt necessary to devote much space to _____ attempt to find principles that may be said to be on the basis _____ the art of all nations, the executive side of the question has not been neglected. And it is hoped that the _____ method for the study of drawing from the two opposite points of view of line and mass here advocated may be useful, and help students to avoid some of the _____ that results from attempting simultaneously the study of these _____ qualities of form expression.

study of these _____ qualities of form expression.

- a. Difference
- b. Different
- c. Differences
- d. Differently

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)

Although it has been felt necessary to devote much space to _____ attempt to find principles that may be said to be on the basis _____ the art of all nations, the executive side of the question has not been neglected. And it is hoped that the _____ method for the study of drawing from the two opposite points of view of line and mass here advocated may be useful, and help students to avoid some of the _____ that results from attempting simultaneously the study of these _____ qualities of form expression.

avoid some of the _____ that results

- a. Confuse
- b. Confusing
- c. Confused
- d. Confusion

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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)

Although it has been felt necessary to devote much space to _____ attempt to find principles that may be said to be on the basis _____ the art of all nations, the executive side of the question has not been neglected. And it is hoped that the _____ method for the study of drawing from the two opposite points of view of line and mass here advocated may be useful, and help students to avoid some of the _____ that results from attempting simultaneously the study of these _____ qualities of form expression.

And it is hoped that the _____ method for the study

- a. Logic
- b. Logics
- c. Logical
- d. Logically

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)

Although it has been felt necessary to devote much space to _____ attempt to find principles that may be said to be on the basis _____ the art of all nations, the executive side of the question has not been neglected. And it is hoped that the _____ method for the study of drawing from the two opposite points of view of line and mass here advocated may be useful, and help students to avoid some of the _____ that results from attempting simultaneously the study of these _____ qualities of form expression.

on the basis _____ the art of all nations

- a. Of
- b. Off
- c. For
- d. From

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 (+2, -0.5)

the four alternatives.

Although it has been felt necessary to devote much space to _____ attempt to find principles that may be said to be on the basis _____ the art of all nations, the executive side of the question has not been neglected. And it is hoped that the _____ method for the study of drawing from the two opposite points of view of line and mass here advocated may be useful, and help students to avoid some of the _____ that results from attempting simultaneously the study of these _____ qualities of form expression.

much space to _____ attempt to find principles

- a. An
- b. A
- c. It
- d. Once

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. Surgent
- b. Sergant
- c. Sergeant
- d. Sergent

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)

"Be silent", I said to them.

- a. I told them to be silent.
- b. I told them of being silent.
- c. I said them to be silent.
- d. Be silent, he said to them.

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)

Passive/Active Voice.

She threw me into a ditch.

- a. I was threw.
- b. I am threw by her into a ditch.
- c. I was thrown into a ditch by her.
- d. I was thrown into a ditch.

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

The ideology of

P : modern economics suggests that

Q : enhanced satisfaction and well-being

R : material progress has yielded

- a. PQR

b. RQP

c. PRQ

d. RPQ

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)

Melancholy

a. Destroyed

b. Moody

c. Low

d. Cheerful

19. 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)

Fritter

a. Blow

b. Dwindle

c. Dissipate

d. Save

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)

Declension

- a. Decay
- b. Decision
- c. Improvement
- d. Increase

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)

Enigmatic

- a. Obvious
- b. Mysterious
- c. Plain
- d. Known

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)

Faith is the only power that can inspire a human being who is in
-----.

- a. Flair
- b. Glair
- c. Stair

d. Despair

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 kept thinking, "How lucky Serena _ _ _ _ _!"

- a. Can
 - b. Could be
 - c. Is
 - d. Supposedly
-

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)

There is a general agreement that some behaviors that are common in birds (1)/ as well as in crocodiles, was also common among (2)/ extinct dinosaur groups. (3)/ No error (4)

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

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 (+2, -0.5)

option. If a sentence is free from error, select 'No Error'.

The noise startled (1)/ the dog (2)/ and made it to yell. (3)/ No error (4)

- a. 1
- b. 2
- c. 3
- 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)

Vehicle : Bus :: ? : ?

- a. Car : Tyre
- b. Vegetable : Spinach
- c. Road : Ship
- d. Vehicle : Run

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

63 : 105 :: 48 : ?

- a. 77
- b. 60
- c. 80
- d. 65

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

ADF : KNP :: ILN : ?

- a. SUW

- b. SVX**
 - c. TVW**
 - d. TUX**
-

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

- a. Court – Justice**
 - b. Education – School**
 - c. Product – Shop**
 - d. Treatment – Hospital**
-

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. 63 – 67**
 - b. 17 – 21**
 - c. 39 – 43**
 - d. 31 – 37**
-

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

- a. CHM**

- b.** GLQ
 - c.** KPV
 - d.** NSX
-

32. From the given alternatives, according to dictionary, which word will come at SECOND position? **(+2, -0.5)**

- 1. Budge
 - 2. Bulb
 - 3. Cannon
 - 4. Bumper
 - 5. Capable
 - a.** Bumper
 - b.** Bulb
 - c.** Budge
 - d.** Capable
-

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

13, 22, 66, ?, 225, 234, 702, 711

- a.** 65
- b.** 75
- c.** 80

d. 70

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)

NC, OE, PG, QI, ?

a. RL

b. RK

c. SJ

d. SL

35. In a row of boys, Rahul is 33rd from the left end. Rajat is 17 ranks to the right of Rahul. If Rajat is 35th from right end, then what will be the rank of Rahul from the right end? (+2, -0.5)

a. 49

b. 50

c. 51

d. 52

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

Superannuated

a. Neat

- b. After
- c. Sure
- d. Super

37. In a certain code language, "PRICE" is written as "1618935" and "VALUE" is written as "22112215". How is "MARK" written in that code language? (+2, -0.5)

- a. 1381211
- b. 1311811
- c. 1341817
- d. 1718192

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

$6 \div 10 - 30 + 4 \times 12 = ?$

- a. 6
- b. 2
- c. 42
- d. 41

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

$$90 \div 10 + 5 - 6 \times 4 = 28$$

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

40. If $3@7 = 20$, $8@1 = 18$ and $6@5 = 22$, then find the value of $4@4 = ?$ (+2, -0.5)

- a. 15
- b. 16
- c. 20
- d. 29

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

abaBABAB, AbabABAB, ABabaBAB, ABAbabAB, ABABabaB, _____.

- a. aBABABab
- b. ABABAbab
- c. abaBABAB
- d. AbabABAB

42. A flock of migrating geese flies 20 km East, then turns South and flies 50 km, then turns East and flies 40 km, and turns to its left and flies 50 km. (+2, -0.5)

Where is the flock now with reference to its starting position?

- a. 20 km East
- b. 60 km East
- c. 60 km West
- d. 20 km West

-
- 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: Some razors are blades

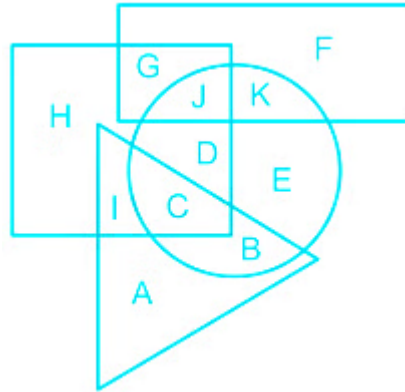
Statement II: All knives are razors

Conclusion I: Some razors are knives

Conclusion II: No knives are blades

- 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 accountants, circle represents Food stylish, triangle Tattooists and square represents Europeans. Which set of letters represents Accountants who are either Food stylish or Europeans? (+2, -0.5)



- a. J
- b. KE
- c. HG
- d. GJK

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)

PIG, TMK, XQO, ?, FYW

- a. CAR
- b. CVT
- c. BUS
- d. DWU

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

1, 2, 4, 7, 11, ?

- a. 16

b. 18

c. 20

d. 17

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, 25, 19)

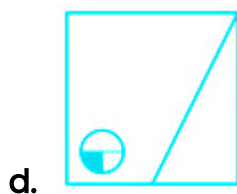
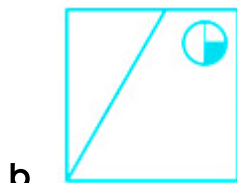
b. (9, 36, 28)

c. (7, 29, 22)

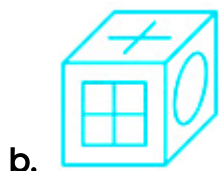
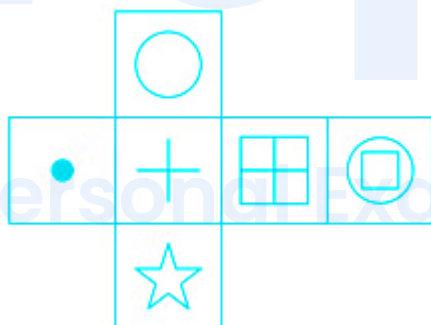
d. (5, 21, 16)

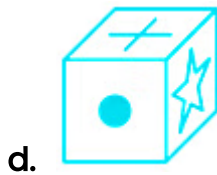
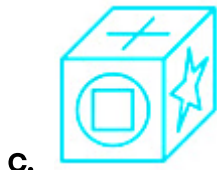
48. If mirror is placed on the line MN, then which of the answer figure is the right image of the given figure? (+2, -0.5)





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 represented by only one set of number 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 'G' can be represented by 32, 43 etc. and 'Q' can be represented by 76, 77 etc. Similarly, you have to identify the set for the word 'HEAP'. (+2, -0.5)

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

- a. 21, 23, 11, 96
- b. 23, 55, 30, 76
- c. 13, 69, 22, 99
- d. 41, 96, 30, 58

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Quantitative Aptitude

51. Find the average of first 30 multiples of 7. (+2, -0.5)

- a. 94.8
- b. 99.6
- c. 104.4
- d. 108.5

52. Calculate the value of $\frac{\sqrt{5}}{(5-\sqrt{5})}$, if $\sqrt{5} = 2.236$ (+2, -0.5)

- a. 0.809
- b. 0.89
- c. 0.089
- d. 0.807

53. If $x + \frac{1}{x} = -2$, then find the value of $x^{531} + \frac{1}{x^{532}}$ (+2, -0.5)

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

54. Find the area of triangle (in sq units) enclosed by $y = 0$, $x + 6 = 0$ and $2x - 3y = 6$. (+2, -0.5)
- 9
 - 16
 - 20
 - 27

55. Consider the following two triangles as shown in the figure below. (+2, -0.5)



Choose the correct statement for the above situation.

- $\triangle BAC \sim \triangle NMP$
 - $\triangle BAC \sim \triangle MNP$
 - $\triangle CAB \sim \triangle NMP$
 - $\triangle BAC \sim \triangle PMN$
56. In the triangle, ABC, the internal bisector of angle A meets the side BC at D. (+2, -0.5)
If $BD = 7.5$ cm and $BC = 9$ cm. Then, calculate the value of AB: AC.
- 2 : 1
 - 1 : 2

c. 5 : 1

d. 1 : 3

57. If 170% of a number added to 66, then the result becomes equal to twice of the number. What is the number? (+2, -0.5)

a. 200

b. 220

c. 210

d. 236

58. The ratio of Mohit's and Sunil's age at present is 7 : 9. Mohit is 4 years younger than Sunil. What will be the ratio of Mohit's age and Sunil's age after 6 years? (+2, -0.5)

a. 5 : 6

b. 4 : 5

c. 6 : 7

d. 5 : 7

59. In a mixture, unbroken and broken rice grains are in the ratio 3 : 2. How much fraction of the mixture must be drawn off and substituted with broken grains, so that the ratio of unbroken and broken grains becomes 1 : 1? (+2, -0.5)

a. $\frac{1}{3}$

b. $\frac{1}{6}$

c. $\frac{1}{4}$

d. $\frac{2}{5}$

60. The average of 10 numbers is X and one of the number is 38. If 38 is replaced with 19, then what will be the new average? (+2, -0.5)

a. $X - \left(\frac{1}{2}\right)$

b. $X - \left(\frac{1}{19}\right)$

c. $X - \left(\frac{19}{10}\right)$

d. $X - \left(\frac{19}{9}\right)$

61. Simple interest on a sum of Rs. 67400 for 14 months is Rs. 4718. What is the rate (in percentage) of interest per annum? (+2, -0.5)

a. 5.5

b. 6

c. 8

d. 7

62. On selling 25 shirts, a retailer earns profit equal to the cost price of 8 shirts. (+2, -0.5)
What is the profit percentage?

a. 47.05

b. 32

- c. 25
- d. 34.5

63. What will be the net discount (in percentage) for two successive discounts of 30% and 20%? (+2, -0.5)

- a. 50
- b. 56
- c. 44
- d. 54

64. If $x = 1.1$, then what is the value of $\sqrt{4x^2 - 4x + 1}$? (+2, -0.5)

- a. 1.21
- b. 1.331
- c. 2.21
- d. 1.2

65. Manish can complete a work in 21 days and Karan can complete the same work in 28 days. If both together work for 7 days, then what fraction of the total work is left? (+2, -0.5)

- a. $\frac{3}{5}$
- b. $\frac{2}{3}$
- c. $\frac{7}{12}$

d. 5/12

66. A train is moving with uniform speed crosses two tunnels of lengths 270 metres and 450 metres in 12 seconds and 15 seconds respectively. What is the speed (in km/hr) of the train? (+2, -0.5)

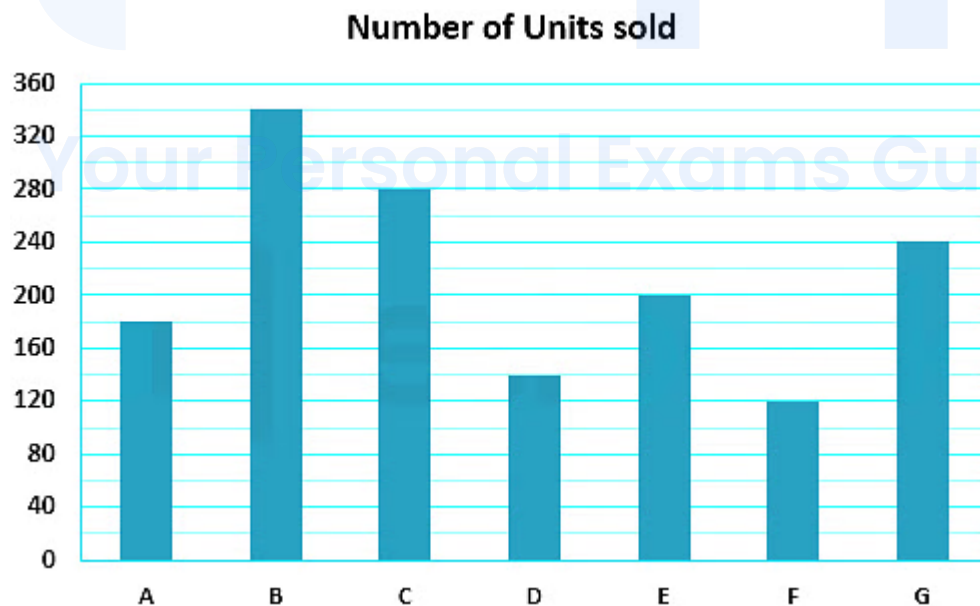
a. 144

b. 169

c. 196

d. 216

67. **Direction:** The bar graph shows the number of motorcycles of different brands sold by a dealer in a month. Study the diagram and answer the following questions. (+2, -0.5)



Units sold of which Motorcycle brand were the second highest?

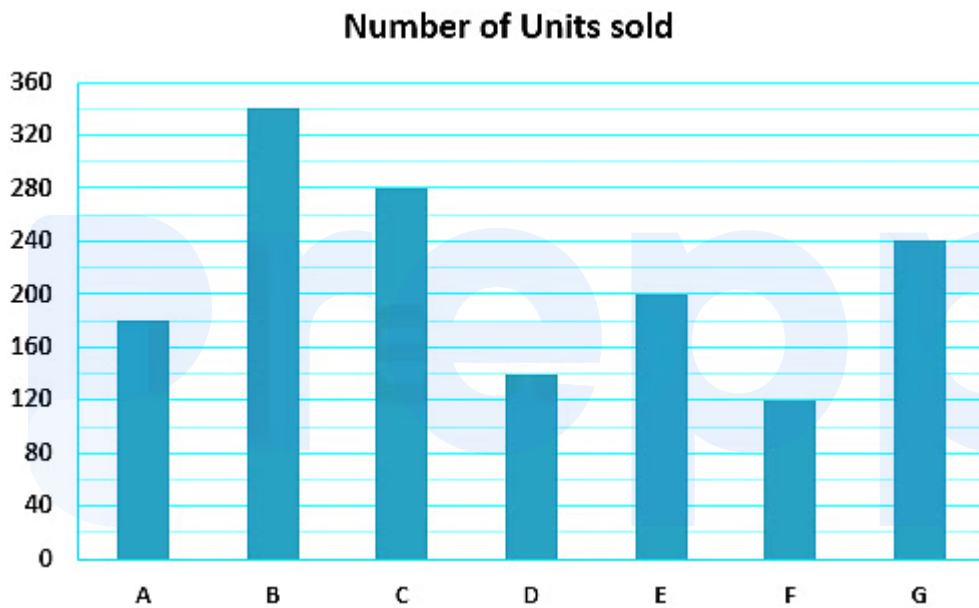
a. C

b. B

c. G

d. D

68. **Direction:** The bar graph shows the number of motorcycles of different brands sold by a dealer in a month. Study the diagram and answer the following questions. (+2, -0.5)



What is the ratio of units sold of brand A to that of brand C?

a. 9 : 14

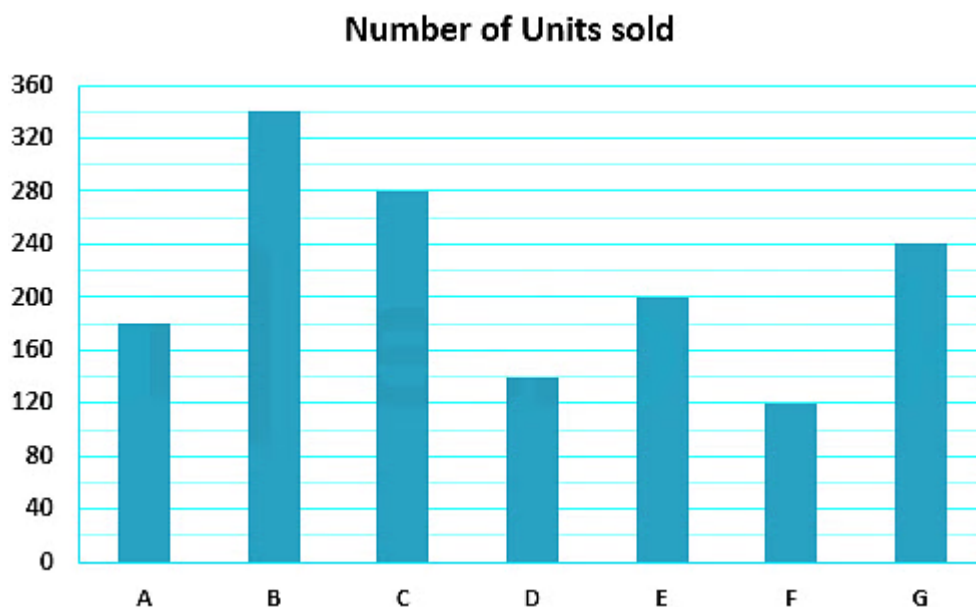
b. 14 : 9

c. 11 : 14

d. 14 : 11

69. **Direction:** The bar graph shows the number of motorcycles of different brands sold by a dealer in a month. Study the diagram and answer the (+2, -0.5)

following questions.

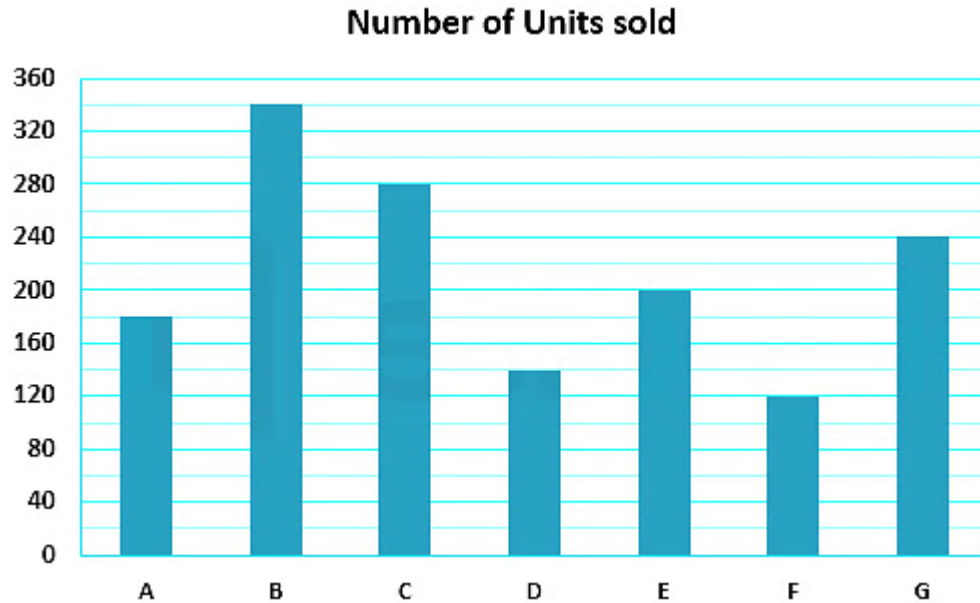


Units sold of brand D was lesser than that of brand E by _____.

- a. 37.20%
- b. 60%
- c. 42.80%
- d. 30%

70. Direction: The bar graph shows the number of motorcycles of different brands sold by a dealer in a month. Study the diagram and answer the following questions.

(+2, -0.5)



If the average price of a motorcycle sold by the dealer is Rs. 1 lakh then what is the sales (in Rs. lakhs) of all the motorcycles sold by the dealer in the month?

- a. 150
- b. 1600
- c. 160
- d. 1500

71. The length of the diagonal and the breadth of a rectangle is 13 cm and 5 cm respectively. Calculate its area (in cm^2). (+2, -0.5)

- a. 60
- b. 120
- c. 37
- d. 74

72. What is the sum of the measures of all the interior angles of a regular polygon of 5 sides? (+2, -0.5)

- a. 720
- b. 1080
- c. 1260
- d. 540

73. The volume of a sphere is 179.67 cm^3 . Find its diameter (in cm). (+2, -0.5)

- a. 3.5
- b. 14
- c. 7
- d. 10.5

74. What is the value of $(\cos 45^\circ - 1/3)$? (+2, -0.5)

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

75. ΔUVW is right angled at V. If $\sec U = 5/3$, then what is the value of $\tan W$? (+2, -0.5)

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

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General Awareness

76. Which one of the following countries is NOT a member of ASEAN? (+2, -0.5)

- a. Brunei Darussalam
 - b. Cambodia
 - c. Vietnam
 - d. India
-

77. Planning in India derives its objectives and social premises from which of the following? (+2, -0.5)

- a. Public Policy
 - b. Directive Principles of State Policy
 - c. Fundamental Rights
 - d. Fundamental Duties
-

78. The hills, namely Black, Blue and Green Hill, are located in which country? (+2, -0.5)

- a. Australia
 - b. Germany
 - c. USA
 - d. Russia
-

79. Where is the origin of Ganga and Brahmaputra rivers situated respectively? (+2, -0.5)

- a. In Nepal and Tibet
 - b. In Tibet and Sikkim
 - c. In Uttar Pradesh and Tibet
 - d. Uttarakhand and Tibet
-

80. Upanishad Books are: _____. (+2, -0.5)

- a. On religion
 - b. On yoga
 - c. On the law
 - d. On philosophy
-

81. In which year Swami Vivekananda established the Ramakrishna Mission at Belur? (+2, -0.5)

- a. 1885
 - b. 1890
 - c. 1897
 - d. 1901
-

82. Pannalal Ghosh is related to which musical instrument? (+2, -0.5)

- a. Mridangam
 - b. Flute
 - c. Shehnai
 - d. Sarod
-

83. The first ever disaster management exercise of BIMSTEC countries was held in _____ in October 2017. (+2, -0.5)

- a. Dhaka
 - b. Colombo
 - c. New Delhi
 - d. Karachi
-

84. Which country was, in October 2017, named the best country to visit in 2018, according to Lonely Planet 'Best in Travel 2018' list? (+2, -0.5)

- a. India
 - b. Chile
 - c. Thailand
 - d. South Korea
-

85. In which year Bhutan adopted its Constitution? (+2, -0.5)

- a. 2004

- b. 2006
 - c. 2008
 - d. 2010
-

86. Atomic number is always equal to _____. (+2, -0.5)

- a. Number of protons
 - b. Number of neutrons
 - c. Sum of protons and electron
 - d. Sum of protons and neutrons
-

87. Which of the following statement(s) is/are INCORRECT? (+2, -0.5)

- I. Alkenes are fairly unreactive.
- II. Alkenes burn with blue flame.
- III. Alkanes burn with yellow flame.

- a. Only I and II
 - b. Only I and III
 - c. Only II and III
 - d. All I, II and III
-

88. Which pillar of the Indian Constitution is its final interpreter? (+2, -0.5)

- a. The Executive

- b.** The Legislative
 - c.** The Judiciary
 - d.** No option is correct.
-

89. Which Constitutional Amendment Act gave constitutional recognition to the Panchayats? **(+2, -0.5)**

- a.** 72nd Constitutional Amendment Act
 - b.** 73rd Constitutional Amendment Act
 - c.** 74th Constitutional Amendment Act
 - d.** 75th Constitutional Amendment Act
-

90. Which of the following is NOT included in the excretory system of human being? **(+2, -0.5)**

- a.** A pair of kidney
 - b.** A pair of ureters
 - c.** Abdomen
 - d.** Urinary bladder
-

91. By which process substance like carbon dioxide or oxygen can move across the cell membrane? **(+2, -0.5)**

- a.** Plasmolysis
- b.** Sedimentation

- c. Diffusion
- d. Transpiration

92. In November 2017, Indian Government approved setting up of 'PradhanMantriMahila Shakti Kendras'. These will be set up in how many most backward districts of the country? (+2, -0.5)

- a. 100
- b. 150
- c. 115
- d. 200

93. Researchers from Columbia University Medical Centre in United States of America have converted which of the following into the world's smallest data recorder? (+2, -0.5)

- a. Natural bacterial immune system
- b. Magnetic tape
- c. Viral snippet copies
- d. No option is correct.

94. As per RBI in October 2017, Gross Non-Performing Assets (GNPA) ratio for NBFCs increased to what percentage till March 2017? (+2, -0.5)

- a. 2
- b. 5

c. 10

d. 20

95. On 5 January 2018, Lok Sabha passed High Court and Supreme Court Judges (Salaries and Conditions of Service) Amendment Bill, 2017. The Bill seeks to amend _____.

(+2, -0.5)

a. High Court Judges (Salaries and Conditions of Service) Act, 1954

b. High Court Judges (Salaries and Conditions of Service) Act, 1964

c. High Court Judges (Salaries and Conditions of Service) Act, 1975

d. High Court Judges (Salaries and Conditions of Service) Act, 1980

96. A Sonar of a ship sends sound waves of speed 1000 m/s. These waves are reflected back by the ocean floor in 2 seconds. Find the depth (in m) of the ocean floor.

(+2, -0.5)

a. 2000

b. 500

c. 1000

d. 100

97. If the acceleration due to gravity on the surface of the earth is g , then the acceleration due to gravity on the surface of a planet whose mass is same as that of earth and radius is half as that of the earth is _____.

(+2, -0.5)

a. $2g$

b. $\frac{g}{4}$

c. $\frac{g}{2}$

d. $4g$

98. The process of electric discharge between clouds and the earth or between different clouds causes _____. (+2, -0.5)

a. thunderstorm

b. cyclone

c. lightning

d. winds

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

A) Julio Granda won the 2017 World Senior Chess Championship.

B) Zhansaya Abdumalik won the Women's 2017 World Junior Chess Championship.

C) In 2017 Pro Kabaddi League, Suraj Desai played for Dabang Delhi.

a. Only C

b. Both A and C

c. A, B and C

d. None of these

100. The objective of _____ is to make India a global information technology superpower. (+2, -0.5)

- a. NIC
- b. NASSCOM
- c. The Department of Information Technology
- d. State Bank of India

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Answers

1. Answer: b

Explanation:

The correct answer is 'Effusively'

★ Key Points

- The correctly spelled word is- 'Effusively'
- The meaning of the given words is- *expressing gratitude, pleasure, or approval in an unrestrained manner.*

2. Answer: c

Explanation:

The correct answer is 'BAC'

★ Key Points

- In the fixed part of the sentence, 'usher' is a verb hence after this we need a noun that is going to be an object of the sentence. As the noun is not written in any of these sentences then go for the prepositional phrase i.e. written in part B of the sentence.
- The last word of part B is 'which' it is a relative pronoun and we know that after the relative pronoun we need to write a verb which is written in part A.
- So the correct sequence is- **BAC**.

So the correct sentence is -*Leaders usher in organisational change, which creates a natural tension as the status quo fights back.*

3. Answer: c

Explanation:

The correct answer is '**Have given**'

★ Key Points

- The given bracketed phrase is going to be replaced with '**have given**'
- **According to grammar**, whenever the subject of the sentence is 'singular' use a singular verb and for a plural noun use a plural verb.
- **In the given sentence**, the subject is 'typewriters' that is in the plural form hence use a plural verb 'have given' also with the perfect tense we need to use 'the third form of the verb.'

So the correct sentence is—*During the last decade, the typewriters **have given** way to the computers.*

4. Answer: c

Explanation:

The correct answer is '**have got so addicted**'

★ Key Points

- The given bracketed phrase is going to be replaced with '**have got so addicted**'
- **According to grammar**, we need to use a plural verb for the plural noun 'people' so 'have' here is correct after this the verb 'got' is also correct because it is the third form of the verb.
- '**So**' here is an adverb and we know that an adverb always qualifies an adjective or an adverb or a verb.
- '**Addict**' is a noun here that is incorrectly placed so the correct word should be 'addicted'

So the correct sentence is- *People **have got so addicted** to their virtual life that they forget there is more to life than just sitting in front of a plastic box.*

5. Answer: c

Explanation:

The correct answer is '**Speculation**'

★ Key Points

- Let's see the meaning of the given words-
 - **Verification** → the establishment by empirical means of the validity of a proposition.
 - **Substantiation** → the act of showing something to be true, or of supporting a claim with facts.
 - **Speculation** → the forming of a theory or conjecture without firm evidence.
 - **Attestation** → a formal statement that you make and officially say is true.
- So according to the meaning of the given words, the correct answer is '**speculation**'

6. Answer: d

Explanation:

The correct answer is '**Samizdat**'

★ Key Points

- The meanings of the words are:
 - **Wanton** → (of a cruel or violent action) deliberate and unprovoked.
 - **Brazen** → bold and without shame.
 - **Flagrant** → conspicuously or obviously offensive.

- **Samizdat** → the clandestine copying and distribution of literature banned by the state, especially formerly in the communist countries of eastern Europe.
 - So according to the meaning of the given words, the correct answer is '**Samizdat**'
-

7. Answer: b

Explanation:

The correct answer is '**A state of happiness based on a person's ignorance about potential trouble.**'

★ Key Points

- The meaning of the given idiom 'A fool's paradise' is 'a state of happiness based on a person's not knowing about or denying the existence of potential trouble.'
 - Let's see an example-
 - They were living in **a fool's paradise**, refusing to accept that they were in debt.
-

8. Answer: d

Explanation:

The correct answer is '**Take on a commitment one cannot fulfill.**'

★ Key Points

- The meaning of the given idiom '**Bite off more than you can chew**' is '**take on a commitment one cannot fulfill.**'
 - Let's see an example-
 - We **bit off more than we could chew** in our original reform proposals.
-

9. Answer: b

Explanation:

The correct answer is '**Different**'

★ Key Points

- In the given blank, we need an adjective for the noun 'qualities'.
- Let's see the options-
 - **Difference** is a noun.
 - **Different** is an adjective.
 - **Differences** is a plural noun.
 - **Differently** is an adverb.
- So the correct answer is '**Different**'

10. Answer: d

Explanation:

The correct answer is '**confusion**'

★ Key Points

- In the given blank, we need a noun because there is a definite article before the blank.
- Let's see the options-
 - **Confuse** is a verb.
 - **Confusing** is a present participle.
 - **Confused** is a past participle.
 - **Confusion** is a noun.
- So the correct sentence is- *Avoid some of the **confusion** that results*

11. Answer: c

Explanation:

The correct answer is 'Logical'

★ Key Points

- In the given blank, we need an adjective because there is a definite article before the blank and after the blank, there is a noun i.e. 'method'
- Hence, here the adjective is used in an attributive manner. The structure for this is 'A/An/The + Adjective + Noun'
- Let's see the options-
 - Logic is a noun, Logics is a plural noun, Logical is an adjective, Logically is an adverb.

So the correct sentence is '*And it hoped that the **logical** method for the study*'

12. Answer: a

Explanation:

The correct answer is 'of'

★ Key Points

- 'On the basis of' is an idiom that means 'according to or based on' Hence, the usage of the preposition 'of' is correct.
- Let's see an example-
 - Students were selected **on the basis of** their grades and test scores.

13. Answer: a

Explanation:

The correct answer is 'an'

★ Key Points

- 'Attempt' is a countable noun that means 'to do something, you try to do it, often without success.' Hence, with countable nouns we can use 'the indefinite articles' the indefinite articles are 'a/an'.
- In this sentence, we need to use 'an' because 'attempt' has a 'vowel' sound. With consonant sounding words, we have to use 'a'

So the correct sentence is- *much space to an attempt to find principles*

14. Answer: c

Explanation:

The correct answer is 'Sergeant'

★ Key Points

- The correct spelling is 'Sergeant'
- The meaning of the given word is- 'A police officer ranking below an inspector' or 'A rank of non-commissioned officer in the army or air force.'
- So the correct answer is 'Option 3'

15. Answer: a

Explanation:

The correct answer is 'I told them to be silent'

★ Key Points

- As imperative sentences have a command (an order), a request, advice, or a suggestion to change them into indirect speech some specific verbs are (i.e. requested, order, advised, forbade, suggested). Also, in the reported speech use the main verb as the verb of the infinitive in indirect speech.
- In the given sentence, 'be' is the main verb and 'silent' is an adjective.

So the correct Indirect speech is - I told them to be silent.

★ Additional Information

The following table will enable us to know how tense changes into Indirect speech:

Direct Speech	Indirect Speech
Present simple (Subject + V1st + Object)	Past simple (Subject + V2 + Object)
Present continuous (Subject + is/am/are + V1 + ing + Object)	Past Continuous (Subject + was/were + V1 + ing + Object)
Present perfect (Subject + has/have + V3 + Object)	Past perfect (Subject + had + V3 + Object)
Past simple (Subject + V2 + Object)	Past perfect (Subject + had + V3 + Object)
Past Continuous (Subject + was/were + V1 + ing + Object)	Past perfect continuous (Subject + had been + V1 + ing + Object)
Future simple (Subject + will/shall + V1 + object)	Present Conditional (Subject + would + V1 + object)
Future Continuous (Subject + will/shall + be + V1 + ing + Object)	Conditional Continuous (Subject + would + be + V1 + ing + Object)

16. Answer: c

Explanation:

The correct answer is 'I was thrown into a ditch by her.'

★ Key Points

- In Active Voice , a sentence emphasizes the subject, performing an action.
- In Passive Voice , a sentence emphasizes the action or the object of the sentence.
- In the given sentence, the subject is 'she' and the verb is 'threw' i.e. in the past tense, and the indirect object 'me'
- **So the correct passive voice is–***I was thrown into a ditch by her.*

★ Additional Information

Verbs of passive format have a different set of tenses (*V3 – Past participle or Third form of the Verb) as given below in the table:

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TENSE	ACTIVE	PASSIVE	PASSIVE CONVERSION
Present Simple	He plays football	am/is/are + V3	Football is played by him
Present Continuous	He is playing football	am/is/are + being + V3	Football is being played by him
Present Perfect	He has played football	Has/have + been + V3	Football has been played by him
Present Perfect Continuous	He has been playing football	Not used and unusual.	Not used and unusual
Past Simple	He played football	Was/were + V3	Football was played by him
Past Continuous	He was playing football	Was/were + being + V3	Football was being played by him
Past Perfect	He had played football	Had + been + V3	Football had been played by him
Past Perfect Continuous	He had been playing football	Not used and unusual	Not used and unusual
Future Simple	He will play football	Will + be + V3	Football will be played by him
Future Continuous	He will be playing football	Not used and unusual	Not used and unusual
Future Perfect	He will have played football	Will have been + V3	Football will have been played by him
Future Perfect Continuous	He will have been playing football	Not used and unusual	Not used and unusual

17. Answer: c

Explanation:

The correct answer is 'PRQ'

★ Key Points

- In the fixed sentence, the last word is 'of' hence for this we need a noun to make a prepositional object. The noun is written in part P is 'modern economics' is going to be the prepositional object for the preposition.
- The last word in 'P' is 'that' hence after this, we need a verb that is written in part Q i.e. 'enhanced'
- So the correct sequence is- PRQ

The ideology of modern economics suggests that material progress has yielded enhanced satisfaction and well-being .

18. Answer: d

Explanation:

The correct answer is '**Cheerful**'

★ Key Points

- Let's see the meaning of the given words-
 - **Melancholy** → means 'deep and long-lasting sadness'
 - **Moody** → means 'given to unpredictable changes of mood, especially sudden bouts of sullenness'
 - **Low** → means 'below average in amount'
 - **Cheerful** → means 'noticeably happy and optimistic.'
- So according to the meaning of the given words, the correct answer is '**Cheerful**'

19. Answer: d

Explanation:

The correct answer is '**save**'

★ Key Points

- Let's see the meaning of the given words-
 - **Fritter** → means 'waste time, money, or energy on trifling matters.'
 - **Dwindle** → means reduce
 - **Dissipate** → means with reference to a feeling or emotion disappear or cause to disappear.
- So according to the meaning of the given words, the correct answer is '**save**'

20. Answer: a

Explanation:

The correct answer is '**Decay**'

★ Key Points

- Let's see the meaning of the given words-
 - **Declension** → The condition of decline or moral deterioration.
 - **Decay** → Decline in quality or vigor; deteriorate.
 - **Decision** → conclusion or resolution.
 - **Improvement** → An instance of being improving or being improved.
 - **Increase** → means to make or become greater in size, amount, or degree.
- So according to the meaning of the given words, **the correct answer is 'Decay'**

21. Answer: b

Explanation:

The correct answer is '**Enigmatic**'

★ Key Points

- Let's see the meaning of the given words-
 - **Enigmatic** → means 'difficult to interpret or understand'
 - **Obvious** → means 'easily perceived or understood'
 - **Mysterious** → means 'difficult or possible to understand'
 - **Plain** → means 'not decorated or elaborate'
 - **Known** → means 'recognized or familiar'
 - So according to the meaning of the given words , **the correct answer is 'Mysterious'**
-

22. Answer: d

Explanation:

The correct answer is '**Despair**'

★ Key Points

- Let's see the meaning of the given words-
 - **Flair** → means 'a natural ability or talent' and it is a noun.
 - **Glair** → means 'Used as an adhesive for bookbinding' and it is a noun.
 - **Stair** → means 'each of a set of fixed steps' and it is a noun.
 - **Despair** → means 'complete loss or absence of hope'
- So according to the meaning of the given words, the correct answer is '**despair**'

So the correct sentence is- *Faith is the only power that can inspire a human being who is in **despair***

23. Answer: c

Explanation:

The correct answer is '**is**'

★ Key Points

- An exclamatory sentence conveys strong emotion and ends with an exclamation mark.
- Let's see the sentence structure–
 - 'How' is an adverb
 - 'Lucky' is an adjective.
 - 'Serena' is a noun that is the subject of the sentence.
- 'Lucky' adjective is used for 'Serena' hence this is the subject complement and we know that the subject complement and the subject of the sentence are connected with the linking verbs.
- In the given options, there is only one linking verb present i.e. 'is'

So the correct sentence is– She kept thinking, "how Lucky Serena is !"

24. Answer: b

Explanation:

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

★ Key Points

In part 2 of the sentence , the usage of 'was' is incorrect Instead, use 'were'

- According to grammar, whenever we have used the singular verb we need to use a singular verb and with a plural noun, we have to use a plural verb.
- In the given sentence, the noun 'behaviors' is a plural noun hence there should be a plural verb for it. 'Some' is a determiner i.e. used for 'behaviors'

So the correct sentence is– *There is a general agreement that some **behaviors** that are common in birds as well as in crocodiles, **were** also common among extinct dinosaur groups.*

25. Answer: c

Explanation:

The correct answer is '3'

★ Key Points

In **part 3 of the sentence** , the usage of '**to yell**' is incorrect. Instead, use '**yell**'

- **According to grammar**, the object of the sentence is 'it' hence for this object we have to use the object complement and it can be a noun/pronoun/adjective/adverb but it cannot be an infinitive phrase or a prepositional phrase.
- **Hence**, according to this rule we need to omit 'to' before the noun 'yell'

So the correct sentence is- *The noise startled the dog and made it **yell**.*

26. Answer: b

Explanation:

As 'Bus' is a 'Vehicle' similarly 'Spinach' is a 'Vegetable'.

Hence, the related word pair is 'Vegetable : Spinach'.

27. Answer: c

Explanation:

The pattern followed here is,

63 : 105

→ $21 \times 3 : 21 \times 5$

Similarly,

48 : ?

→ $16 \times 3 : 16 \times 5$

→ 48 : 80

Hence, the related number is '80'.

28. Answer: b

Explanation:

The pattern followed here is,

ADF : KNP

→ $A + 10 = K$, $D + 10 = N$, $F + 10 = P$

Similarly,

ILN : ?

→ $I + 10 = \underline{S}$, $L + 10 = \underline{V}$, $N + 10 = \underline{X}$

Hence, the related letters are 'SVX'.

29. Answer: a

Explanation:

Here pair of 'Purpose and Place' is given in all options except Court – Justice (option 1). It might be Justice – court

Hence, the odd word pair is 'Court – Justice'.

30. Answer: d

Explanation:

The logic followed here is,

1) $63 - 67 \rightarrow 63 + 4 = 67$

2) $17 - 21 \rightarrow 17 + 4 = 21$

3) $39 - 43 \rightarrow 39 + 4 = 43$

4) $31 - 37 \rightarrow 31 + 4 \neq 37$

Hence, the odd number pair is '31 - 37'.

31. Answer: c**Explanation:**

The pattern followed here is,

1) $CHM \rightarrow C + 5 \rightarrow H + 5 \rightarrow M$

2) $GLQ \rightarrow G + 5 \rightarrow L + 5 \rightarrow Q$

3) $KPV \rightarrow K + 5 \rightarrow P + 5 \rightarrow \underline{U}$ (given V)

4) $NSX \rightarrow N + 5 \rightarrow S + 5 \rightarrow X$

Hence, the odd letters are 'KPV'.

32. Answer: b**Explanation:**

Dictionary order:

1. Budge

2. Bulb

4. Bumper

3. Cannon

5. Capable

Clearly, the second word as per the dictionary order is 'Bulb'.

33. Answer: b

Explanation:

The pattern followed in the series is,

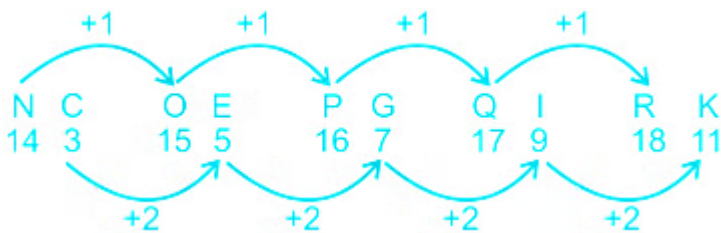
$$13 + 9 \rightarrow 22 \times 3 \rightarrow 66 + 9 \rightarrow \underline{75} \times 3 \rightarrow 225 + 9 \rightarrow 234 \times 3 \rightarrow 702 + 9 \rightarrow 711$$

So, the missing number in the series is '75'.

34. Answer: b

Explanation:

The pattern followed in the series is:



Hence, the next number in the series will be 'RK'.

35. Answer: d

Explanation:

Rahul's rank from the left = 33

Rajat's rank from the right = 35

Rajat's rank = 17 to the right of Rahul

So, Rajat's rank from the left = $33 + 17$

→ 50

Total students = Rajat's rank from left + Rajat's rank from the right – 1

→ $50 + 35 - 1$

→ 84

Rahul's rank from the right = Total students – Rahul's rank from the left – 1

→ $84 - 33 + 1 = 52$

Hence, Rahul's rank from the right is 52.

36. Answer: b

Explanation:

1) Neat → Superannuated → can be formed.

2) After → Superannuated → cannot be formed as there is no letter 'f'.

3) Sure → Superannuated → can be formed.

4) Super → Superannuated → can be formed.

Hence, 'After' cannot be formed.

37. Answer: b

Explanation:

Here, the place value of letters as per the alphabetical order is taken as code.

'PRICE' is coded as follows,

Letter	P	R	I	C	E
Place value	16	18	9	3	5

'VALUE' is coded as follows,

Letter	V	A	L	U	E
Place value	22	1	12	21	5

Similarly, 'MARK' will be coded,

Letter	M	A	R	K
Place value	13	1	18	11

Hence, 'MARK' will be coded as '1311811'.

38. Answer: a

Explanation:

Given equation: $6 \div 10 - 30 + 4 \times 12 = ?$

Symbol	-	+	$\times$	$\div$
Meaning	+	$\times$	$\div$	-

On changing symbols,

$$6 - 10 + 30 \times 4 \div 12$$

$$\rightarrow 6 - 10 + 10$$

$$\rightarrow 6$$

Hence, the correct answer is '6'.

39. Answer: a

Explanation:

Given equation: $90 \div 10 + 5 - 6 \times 4 = 28$

1) - and +

On interchanging symbols, we get,

$$90 \div 10 - 5 + 6 \times 4 = 28$$

$$\rightarrow 9 - 5 + 24$$

$$\rightarrow 28 = 28$$

2) $\div$ and $\times$

On interchanging symbols, we get,

$$90 \times 10 + 5 - 6 \div 4 = 28$$

$$\rightarrow 900 + 5 - 1.5$$

$$\rightarrow 905 - 1.5$$

$$\rightarrow 903.5 \neq 28$$

3) $\times$ and $-$

On interchanging symbols, we get,

$$90 \div 10 + 5 \times 6 - 4 = 28$$

$$\rightarrow 9 + 30 - 4$$

$$\rightarrow 35 \neq 28$$

4) $\div$ and $-$

On interchanging symbols, we get,

$$90 - 10 + 5 \div 6 \times 4 = 28$$

$$\rightarrow 90 - 10 + 3.33$$

$$\rightarrow 83.33 \neq 28$$

Hence, on interchanging ' $-$ ' and ' $+$ ', the equation will become correct.

40. Answer: b

Explanation:

The pattern followed here is,

$$3@7 = 20$$

$$\rightarrow (3 + 7) \times 2 = 20$$

$$8@1 = 18$$

$$\rightarrow (8 + 1) \times 2 = 18$$

$$6@5 = 22$$

$$\rightarrow (6 + 5) \times 2 = 22$$

Similarly,

$$4@4 = ?$$

$$\rightarrow (4 + 4) \times 2$$

$$\rightarrow 16$$

Hence, the answer is 16.

41. Answer: b

Explanation:

Here, the position of 'aba' and 'bab' is moving one position forward (i.e. towards right) as shown below,

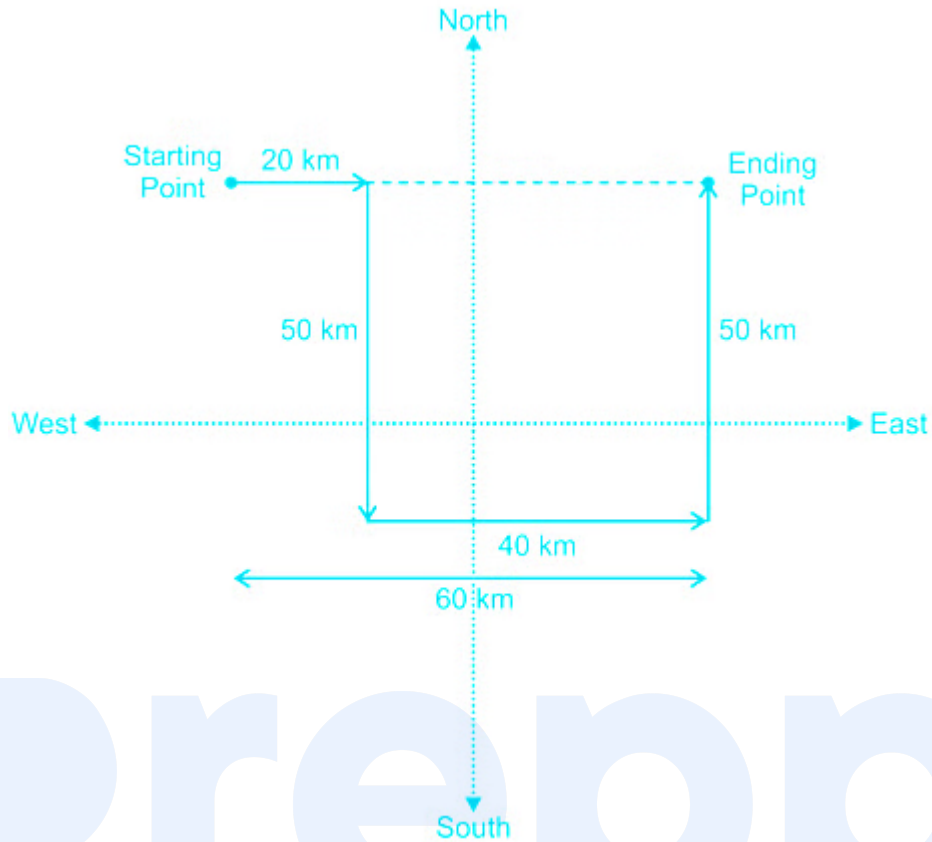


Hence, the next term in the series is 'ABABAbab'.

42. Answer: b

Explanation:

The following diagram shows the path covered by the flies,



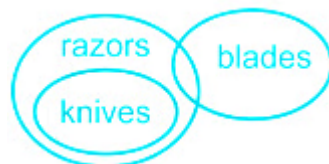
Distance from the starting point = $20 + 40$
 $\rightarrow 60 \text{ km}$

Clearly, the flies are 60 km away towards east with respect to the starting point.

43. Answer: a

Explanation:

The least possible Venn Diagram for the given statements is as follows,



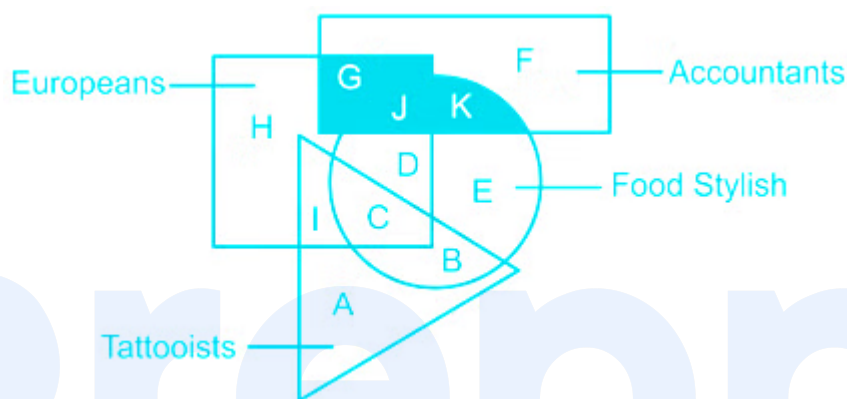
Conclusion I: Some razors are knives $\rightarrow$ follows.

Conclusion II: No knives are blades → not follows.

Hence, only conclusion I follows.

44. Answer: d

Explanation:



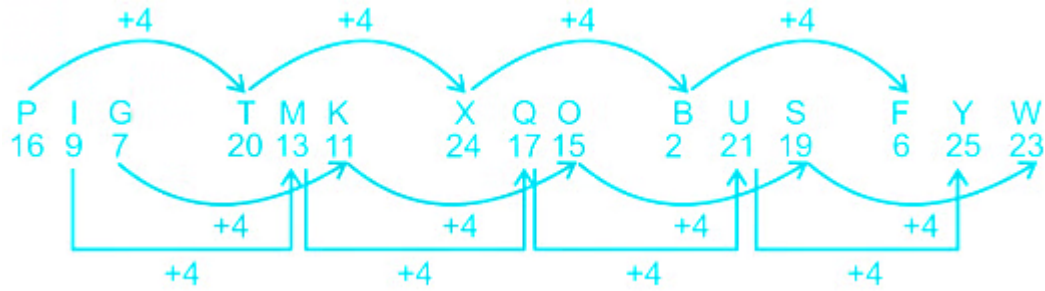
Clearly, 'G, J, K' represents Accountants who are either Food stylish or Europeans.

45. Answer: c

Explanation:

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

The pattern followed here is,



Hence, the missing letters in the series is 'BUS'.

46. Answer: a

Explanation:

The pattern followed here is,

$$1 + 1 \rightarrow 2 + 2 \rightarrow 4 + 3 \rightarrow 7 + 4 \rightarrow 11 + 5 \rightarrow \underline{16}$$

Hence, the next term in the series is '16'.

47. Answer: b

Explanation:

$$(6, 25, 19): 19 + 6 = 25$$

$$(9, 36, 28): 28 + 9 = 37 \neq 36$$

$$(7, 29, 22): 22 + 7 = 29$$

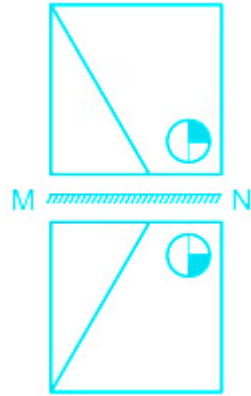
$$(5, 21, 16): 16 + 5 = 21$$

Hence, (9, 36, 28) is the correct answer.

48. Answer: b

Explanation:

The mirror image of the given question figure is as follows,

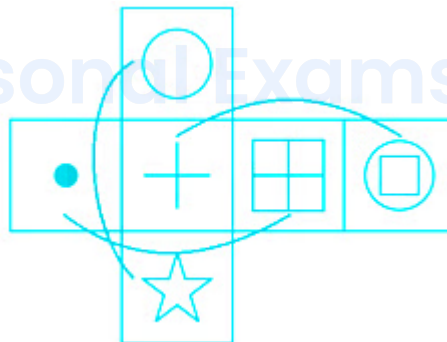


Hence, the answer is option 2.

49. Answer: c

Explanation:

The opposite faces are:



Here, dice (option) 3 cannot be formed as the 'two crossed line face' and the 'square within the circle face' are opposite to each other.

Hence, the answer is option 3.

50. Answer: a

Explanation:

1) 21, 23, 11, 96 $\rightarrow$ H, E, A, P

2) 23, 55, 30, 76 $\rightarrow$ E, Y, I, Q

3) 13, 69, 22, 99 $\rightarrow$ A, N, L, W

4) 41, 96, 30, 58 $\rightarrow$ J, P, I, N

Hence, 'HEAP' will be represented by '21, 23, 11, 96'.

51. Answer: d

Explanation:

Calculation:

The first multiple of 7 is = 7

Second multiple of 7 is = $7 \times 2 = 14$

Similarly 30th multiple of 7 is = $7 \times 30 = 210$

So,

AP is $7 + 14 + \dots + 210$

Average of AP = $(\text{First term} + \text{Last term})/2$

$$\Rightarrow (7 + 210)/2$$

$$\Rightarrow 217/2$$

$$\Rightarrow 108.5$$

$\therefore$ The correct answer is 108.5 .

52. Answer: a

Explanation:

Given:

$$\sqrt{5} = 2.236$$

Calculation:

According to the question:

$$\Rightarrow \frac{\sqrt{5}}{5-\sqrt{5}}$$

Taking $\sqrt{5}$ commons from the denominator

$$\Rightarrow \frac{1}{\sqrt{5}-1}$$

$$\Rightarrow \frac{1}{(\sqrt{5}-1)} \times \frac{\sqrt{5}+1}{\sqrt{5}+1}$$

$$\Rightarrow (\sqrt{5} + 1)/(5 - 1)$$

$$\Rightarrow (2.236 + 1)/4$$

$$\Rightarrow 3.236/4 = 0.809$$

$\therefore$ The correct answer is 0.809 .

53. Answer: c

Explanation:

Given:

$$x + 1/x = -2$$

Calculation:

If we put $x = -1$

$$\Rightarrow x + 1/x = -2$$

$$\Rightarrow -1 - 1 = -2$$

$$\Rightarrow -2 = -2$$

Equation satisfied with $x = -1$

So,

$$\Rightarrow x^{531} + 1/x^{532}$$

$$\Rightarrow (-1)^{531} + 1/((-1)^{532})$$

$$\Rightarrow -1 + 1$$

$$\Rightarrow 0$$

$\therefore$ The correct answer is 0.

54. Answer: d

Explanation:

Given:

$$y = 0, x + 6 = 0 \text{ and } 2x - 3y = 6$$

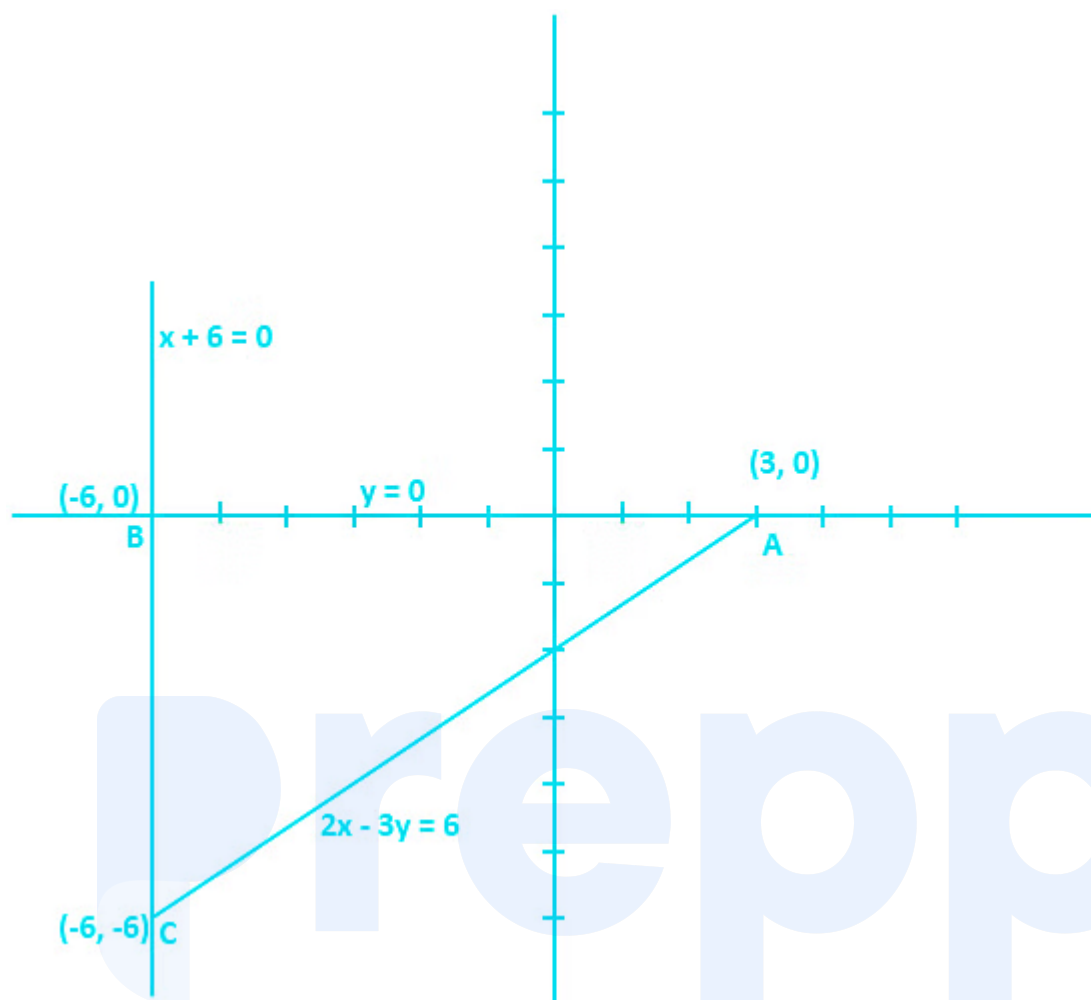
Concept used:

Plot the graph of the equations on the x-axis and y-axis.

Formula used:

$$\text{Area of triangle} = 1/2 \times \text{Base} \times \text{Height}$$

Calculation:



These points we represent on Graph

Area of right $\triangle ABC = \frac{1}{2} \times BC \times AB$

$$\Rightarrow BC = (0 - (-6)) = 6$$

$$\Rightarrow AB = (3 - (-6)) = 3 + 6$$

$$\Rightarrow AB = 9$$

$$\Rightarrow \frac{1}{2} \times 6 \times 9 = 27$$

$\therefore$ The area of the triangle is 27 sq. units.

55. Answer: b

Explanation:

Calculation:

$$\angle B = \angle M = 50$$

$$\angle A = \angle N = 80$$

Hence

$$\angle C = \angle P \text{ (Angle-Angle Similarity)}$$

$$\triangle BAC \sim \triangle MNP$$

$\therefore$ The correct option is 2.

56. Answer: c

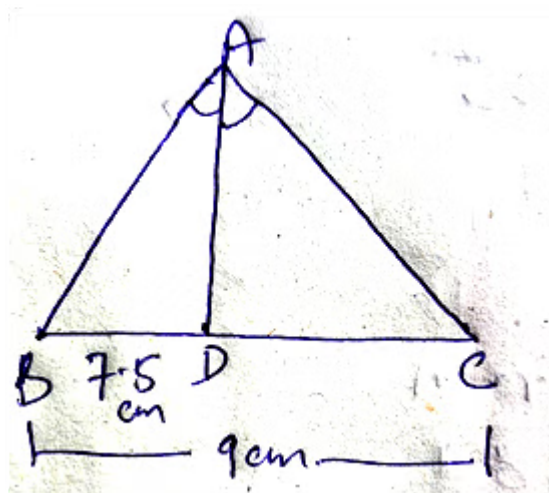
Explanation:

Given:

$$BD = 7.5 \text{ cm}$$

$$\text{And, } BC = 9 \text{ cm}$$

Calculation:



$$\Rightarrow DC = BC - BD$$

$$\Rightarrow 9 - 7.5 = 1.5 \text{ cm}$$

$$\Rightarrow AB/AC = BD/DC \text{ (Interior-Angle-Bisector Theorem)}$$

$$\Rightarrow AB/AC = 7.5/1.5$$

$$\Rightarrow AB : AC = 5 : 1$$

$\therefore$ The correct answer is 5 : 1.

57. Answer: b

Explanation:

Given:

170% of a number added to 66,
the result becomes equal twice

Calculation:

Let the number be = x

According to the question

$$\Rightarrow x \times 170/100 + 66 = 2x$$

$$\Rightarrow 17x/10 + 66 = 2x$$

$$\Rightarrow 2x - 17x/10 = 66$$

$$\Rightarrow 3x/10 = 66$$

$$\Rightarrow x = 220$$

$\therefore$ The correct answer is 220.

58. Answer: a

Explanation:

Given:

The ratio of Mohit and Sunil's present age = 7 : 9

Calculation:

Let Mohit's present age is $7x$ and Sunil's present age is $9x$

According to the question,

$$\Rightarrow 9x - 7x$$

$$\Rightarrow 2x = 4$$

$$\Rightarrow x = 2$$

So,

The present age of Mohit

$$\Rightarrow 7 \times 2$$

$$\Rightarrow 14$$

And,

The present age of Sunil

$$\Rightarrow 9 \times 2$$

$$\Rightarrow 18$$

After 6 years, the ratio of their age will be

$$\Rightarrow 14 + 6 : 18 + 6$$

$$\Rightarrow 20 : 24$$

$$\Rightarrow 5 : 6$$

$\therefore$ The correct answer is 5 : 6 .

59. Answer: b

Explanation:

Given:

Unbroken rice : Broken rice = 3 : 2

Calculation:

Let the quantity of unbroken and broken rice grains be 3 and 2 units respectively

Let x units of the mixture be taken out

So,

Unbroken rice grains in $(5 - x)$ units of a mixture

$$\Rightarrow \frac{3}{5} \times (5 - x).$$

Similarly,

after adding broken rice grains,

Broken rice grains in the mixture

$$\Rightarrow \frac{2}{5} \times (5 - x) + x$$

According to the question,

$$\Rightarrow \frac{\frac{3}{5}(5-x)}{\frac{2}{5}(5-x)+x} = \frac{1}{1}$$

$$\Rightarrow 3 - \frac{3x}{5} = 2 - \frac{2x}{5} + x$$

$$\Rightarrow 1 = \frac{6x}{5}$$

$$\Rightarrow x = \frac{5}{6}$$

Required fraction

$$\Rightarrow \frac{(5/6)}{5}$$

$$\Rightarrow \frac{1}{6}$$

$\therefore$ The correct answer is $\frac{1}{6}$.

★ Shortcut Trick

Concept used:

After the mixture is drawn off the ratio must be constant

Calculation:

Let the quantity to be drawn from the mixture = 'x'

So,

Unbroken rice	Broken rice
3	2
(1	1) $\times$ 3
3	3

Now,

Broken rice added = $(3 - 2) = 1 \text{ unit} = x$

So,

mixture drawn off = $x = 1$

So,

total previous mixture

$\Rightarrow (3 + 2) + 1 = 6$

Required fraction = $1/6$

$\therefore$ The correct answer is $1/6$.

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60. Answer: c

Explanation:

Given:

Average of 10 numbers = X

Calculation:

If, 38 replaced with 19

then,

The new average will be

$$\Rightarrow X - (38 - 19)/10$$

$$\Rightarrow X - 19/10$$

$\therefore$ The correct answer is $X - 19/10$.

61. Answer: b

Explanation:

Given:

Principal (P) = Rs. 67400

Time (T) = 14/12 years

Simple interest (SI) = Rs. 4718

Concept used:

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

Calculation:

$$\Rightarrow 4718 = (67400 \times R \times (14/12))/100$$

$$\Rightarrow R = 4718 \times 100 \times 12 / (67400 \times 14)$$

$$\Rightarrow R = 6\%$$

$\therefore$ The rate of interest is 6%.

62. Answer: b

Explanation:

Given:

Selling 25 shirts retailer gain = Cost price of 8 shirts

Calculation:

Let,

CP of 1 shirt = Rs. 1

So,

CP of 8 shirts = Rs. 8

And,

CP of 25 shirts = Rs. 25

Selling 25 shirts earn profit = CP of 8 shirt

⇒ Rs. 8

Profit % = $\frac{8}{25} \times 100$

⇒ 32%

∴ The correct answer is 32% .

★ Alternate Method

According to the question:

⇒ $25SP = 25CP + 8CP$

⇒ $25SP = 33CP$

⇒ $SP/CP = 33/25$

Let,

SP = 33 and CP = 25

Profit = $33 - 25 = 8$

$$\text{Profit\%} = (8/25) \times 100 = 32\%$$

∴ The correct answer is 32% .

63. Answer: c

Explanation:

Given:

The successive discounts is 30% and 20%.

Formula used:

$$\text{Successive discount} = X + Y - (XY)/100$$

Where,

X = First discount

Y = Second discount

Calculation:

$$\text{Successive discount} = X + Y - (XY)/100$$

$$\Rightarrow X = 30\%, Y = 20\%$$

$$\Rightarrow 30 + 20 - 600/100$$

$$\Rightarrow 44\%$$

∴ The single equivalent discount is 36%.

★ Alternate Method

Calculation:

$$SP = MP - (\text{Discount \%}/100) \times MP$$

Let the marked price be Rs. x

New price after discount = $x - (30/100) \times x$

$\Rightarrow$ Rs. $0.7x$

Price after successive discount = $0.7x - (20/100) \times 0.7x$

$\Rightarrow$ Rs. $0.56x$

Total discount = $x - 0.56x$

$\Rightarrow 0.44x$

Discount% = $(\text{Discount})/\text{MP} \times 100$

Discount % = $(0.44x)/x \times 100$

$\Rightarrow 44\%$

$\therefore$ The correct answer is 44% .

64. Answer: d

Explanation:

Given:

$x = 1.1$

Calculation:

$\Rightarrow \sqrt{(4x^2 - 4x - 1)}$

$\Rightarrow \sqrt{(2x - 2 \times 2x \times 1 + 1^2)}$

$\Rightarrow \sqrt{(2x - 1)^2}$

$\Rightarrow 2x - 1$

By putting the value $x = 1.1$ we get,

$$\Rightarrow (2 \times 1.1) - 1$$

$$\Rightarrow 2.2 - 1$$

$$\Rightarrow 1.2$$

$\therefore$ The correct answer is 1.2.

65. Answer: d

Explanation:

Given:

Work done in 1 day by Manish = $1/21$

Work done in 1 day by Karan = $1/28$

Calculation:

Work done in 1 day by both

$$\Rightarrow 1/21 + 1/28$$

$$\Rightarrow 1/12$$

Work done in 7 days by both = $7/12$

Remaining work

$$\Rightarrow 1 - 7/12$$

$$\Rightarrow 5/12$$

$\therefore$ The correct answer is $5/12$.

★ Alternate Method

Given:

Manish can complete a work in 21 days

Karan can complete the same work in 28 days

Concept used:

Work = time $\times$ efficiency

Calculation:

Work	Time	Efficiency	Total work
Manish	21 days	$84/21 = 4$ units	84
Karan	28 days	$84/28 = 3$ units	

Work done by both together in one day

$$\Rightarrow 4 + 3$$

$$\Rightarrow 7 \text{ units}$$

Work done by both in 7 days

$$\Rightarrow 7 \times 7$$

$$\Rightarrow 49 \text{ units}$$

Amount of work left

$$\Rightarrow 84 - 49$$

$$\Rightarrow 35 \text{ units}$$

Fraction of work left

$$\Rightarrow 35/84$$

$$\Rightarrow 5/12$$

∴ The fraction of work left is $\frac{5}{12}$.

66. Answer: d

Explanation:

Given:

1st tunnel length = 270 m

2nd tunnel length = 450 m

Calculation:

Let the length of the train be L meters and the speed of the train be x km/h

According to the question,

$$\Rightarrow (L + 270)/12 = (L + 450)/15$$

$$\Rightarrow (L + 270)/4 = (L + 450)/5$$

$$\Rightarrow 5L + 1350 = 4L + 1800$$

$$\Rightarrow L = 450$$

Thus,

$$\text{speed of the train} = (450 + 270)/12$$

$$\Rightarrow 720/12$$

$$\Rightarrow 60 \text{ m/s}$$

$$\Rightarrow 60 \times 18/5$$

$$\Rightarrow 216 \text{ km/h}$$

∴ The correct answer is 216 km/h .

67. Answer: a

Explanation:

Calculation:

Motorcycle brand C were the second highest in the unit sold = 280

∴ The correct answer is 280.

68. Answer: a

Explanation:

Calculation:

Unit sold of brand A = 180

And Unit sold of brand C = 280

⇒ A : B = 180 : 280 = 9 : 14

∴ The correct answer is 9 : 14 .

69. Answer: d

Explanation:

Calculation:

Unit sold of brand D = 140

Unit sold of brand E = 200

Brand D lesser than that of brand E by $= (200 - 140)/200 \times 100 = 60/200 \times 100 = 30\%$

$\therefore$ The correct answer is 30% .

70. Answer: d

Explanation:

Calculation:

Total sales = $A + B + C + D + E + F + G = 180 + 340 + 280 + 140 + 200 + 120 + 240 = 1500$

$\therefore$ The correct answer is 1500.

71. Answer: a

Explanation:

Given:

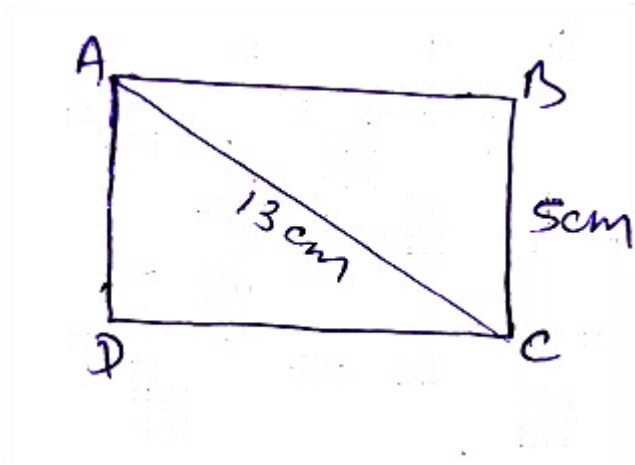
Diagonal of rectangle = 13 cm

Breadth of rectangle = 5 cm

Formula used:

Area of rectangle = length $\times$ breadth

Calculation:



Diagonal of the rectangle $AC = 13$

And, the breadth of a rectangle is $BC = 5$

Using Pythagoras theorem,

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

$$\Rightarrow AB^2 = 13^2 - 5^2$$

$$\Rightarrow AB^2 = 169 - 25$$

$$\Rightarrow AB^2 = 144$$

$$\Rightarrow AB = 12 \text{ cm}$$

$$\text{Area of rectangle} = l \times b = AB \times BC = 12 \times 5 = 60 \text{ cm}^2$$

$\therefore$ The correct answer is 60 cm^2 .

72. Answer: d

Explanation:

Formula used:

Sum of the Interior angle of a regular polygon whose side is $n = (n - 2) \times 180$

Calculation:

Sum of the measures of all the interior angles = $(5 - 2) \times 180^\circ = 3 \times 180^\circ = 540^\circ$

$\therefore$ The correct answer is 540°

73. Answer: c

Explanation:

Given:

Volume of a sphere = 179.67 cm^3

Formula used:

Volume of sphere = $\frac{4}{3} \times \pi r^3$

Calculation:

Volume of sphere = $\frac{4}{3} \times \pi r^3$

$\Rightarrow 179.67 = \frac{4}{3} \times \left(\frac{22}{7}\right) \times r^3$

$\Rightarrow r^3 = 179.67 \times \frac{21}{88}$

$\Rightarrow r = 3.5 \text{ cm}$

So, diameter (d) = $3.5 \times 2 = 7 \text{ cm}$

$\therefore$ The correct answer is 7 cm .

74. Answer: c

Explanation:

Calculation:

$$\Rightarrow (\cos 45^\circ - 1/3) = 1/\sqrt{2} - 1/3 = (3 - \sqrt{2})/3\sqrt{2}$$

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

75. Answer: a

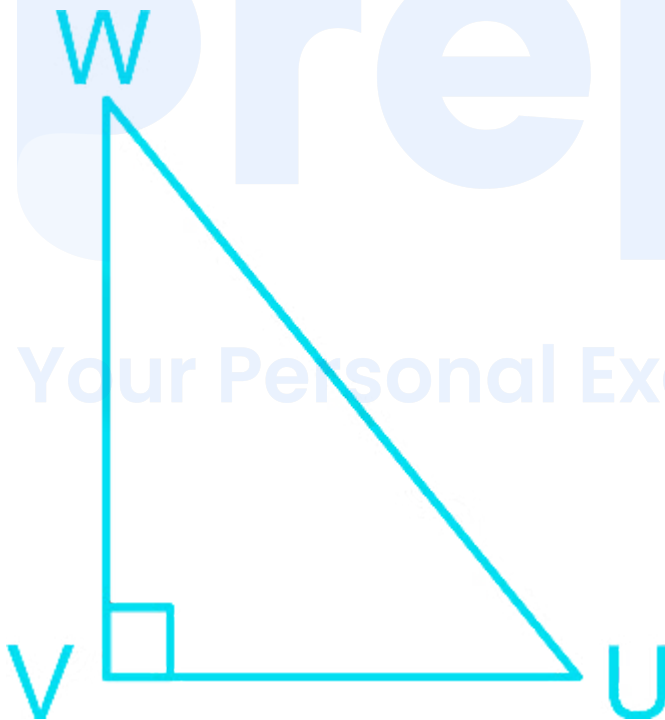
Explanation:

Given

ΔUVW is right angled at V.

$$\sec U = 5/3$$

Calculation:



$$\sec U = 5/3,$$

$$\Rightarrow \text{Hypotenuse/Base} = 5/3$$

$$\Rightarrow UW/VU = 5/3$$

Let $UW = 5k$ and $UV = 3k$

In ΔVUW

$$\Rightarrow (UW)^2 = (VW)^2 + (VU)^2$$

$$\Rightarrow (5k)^2 = (VW)^2 + (3k)^2$$

$$\Rightarrow VW = 4k$$

$$\tan W = \text{Perpendicular/base} = UV/VW = 3k/4k = 3/4$$

$\therefore$ The correct answer is $3/4$.

76. Answer: d

Explanation:

- ASEAN or the Association of Southeast Asian Nations is a regional intergovernmental organization which comprises 10 Southeast Asian nations—Singapore, Thailand, Indonesia, Malaysia, Vietnam, Cambodia, Myanmar, Laos, Philippines, and Brunei.
- The organization promotes intergovernmental cooperation and facilitates sociocultural, educational, military, security, political, and economic integration among the members.

77. Answer: b

Explanation:

- In India, **Planning** derives its objectives and social premises from the **Directive Principles of State Policy**.
- The **Planning Commission** was first set up in India in **March 1950** and **Jawaharlal Nehru** was its first Chairman.

- The **objective** behind setting it up was to promote a **rapid rise in the standard of living of the people in the country** by efficiently exploiting the resources of the country.

78. Answer: c

Explanation:

The hills, namely Black, Blue, and Green Hill, are located in the USA.

Name of the Hill	Location
Green Hills	Massachusetts
Black Hills	North America, South Dakota
Blue Hill	Washington

79. Answer: d

Explanation:

The correct answer is Uttarakhand and Tibet.

★ Key Points

- The river Ganga originates from Devprayag in Uttarakhand at the confluence of the rivers Alaknanda and Bhagirathi.
- The river Brahmaputra originates from the Angsi Glacier in Burang County, Tibet .

★ Important Points

- Ganga River:
 - The Ganges rises in the southern Great Himalayas on the Indian side of the border with the Tibet Autonomous Region of China.
 - Its five major streams—the Bhagirathi, the Alaknanda, the Mandakini, the Dhauliganga, and the Pindar—all rise in the mountainous region of northern Uttarakhand state.
 - Among them, the two main streams are the Alaknanda (the longer of the two), which rises about 30 miles (50 km) north of the Himalayan peak of Nanda Devi, and the Bhagirathi, which rises about 10,000 feet (3,000 m) above sea level in a subglacial meltwater cave at the base of a Himalayan glacier known as Gangotri.
 - Gangotri itself is a holy place for Hindu pilgrimage. However, the original source of the Ganges is believed to be Gaumukh, about 13 miles (21 km) southeast of Gangotri.
- Brahmaputra River:
 - The source of the Brahmaputra is the Chemayungdung Glacier, which covers the Himalayan slopes about 60 miles (100 km) southeast of Mapam Lake in southwestern Tibet.
 - The Kubi, Angasi, and Chemayungdung are the three major streams that originate there.
 - From its source, the river runs in a generally easterly direction for about 700 miles (1,100 km) between the Great Himalayan Range in the south and the Kailas Range in the north.
 - Throughout its upper course, the river is generally referred to as the Tsangpo ("purifier").
 - It is also known by its Chinese name (Yarlung Zangbo) and other local Tibetan names.

80. Answer: d

Explanation:

The correct answer is On philosophy.

★ Key Points

- The Upanishads are late Vedic Sanskrit texts of religious teachings and ideas still revered in Hinduism .
 - The Upanishads played an important role in the development of spiritual ideas in ancient India, marking a transition from Vedic ritualism to new ideas and institutions.
 - Upanishad literally means ' approaching and sitting near ' and the texts contain conversations between teachers and students.
 - Often, ideas were presented through simple dialogues .
 - The Upanishads were written over a time period ranging from **700 to 400 B.C.E**
 - Upanishads focused on Spiritual enlightenment.
 - Upanishad is derived from the words *upa (near) and shad (to sit)*. It is derived from the concept of sitting near the feet of the teacher.
 - More than 200 Upanishads have been discovered.
 - Each Upanishad is associated with a certain Veda.
 - There are 14 Upanishads which are most well known or most important – Katha, Kena, Isa, Mundaka, Prasna, Taittiriya, Chhandogya, Brihadaranyaka, Mandukya, Aitareya, Kaushitaki, Svetasvatara and Maitrayani.
 - Upanishads are in the last section of any Vedas. Upanishads are a subcategory of a Veda.
 - Upanishads is one of the 4 major text types of Vedas.
 - Upanishads are texts on spiritual knowledge and philosophy.
 - Upanishads originated from each branch of Vedas.
 - Upanishads deals with the philosophical aspects of life.

81. Answer: c

Explanation:

- **Ramakrishna Mission** is a Hindu spiritual and religious organisation which was founded by **Swami Vivekananda on 1 May 1897** and is inspired by the Indian saint Ramakrishna Paramahansa .

- The organization propagates the 4 yogic ideals– **Raja, karma, bhakti, and jnana** and **Hindu philosophy of Vedanta** .
-

82. Answer: b

Explanation:

The correct answer is Flute.

★ Key Points

- Pannalal Ghosh was a popular flute player and composer who died in 1960.
- He was also known as the 'Pioneer of Indian Classical Flute'.
- The original name of Pannalal Ghosh was Amal Jyoti Ghosh.

prepp

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★ Additional Information

- Ramnad Raghavan was a well-known instrument player of Mridangam .
- Ali Akbar Khan was a Bengali Hindustani classical musician of Maihar Gharana , known for playing the instrument Sarod .
- **Ustad Bismillah Khan** (Real name is Qamaruddin Khan), was an Indian musician credited with popularizing the **Shehnai** .

83. Answer: c

Explanation:

- The first ever disaster management exercise of BIMSTEC countries was held in **New Delhi** in October 2017.
- The exercise served as a platform for strengthening regional coordination and response for disaster management among the member countries of BIMSTEC and also for sharing best practices on all the aspects of DRR (Disaster Risk Reduction).

84. Answer: b

Explanation:

Chile was named the best country to visit in 2018, according to the Lonely Planet 'Best in Travel 2018' list in October 2017, followed by *South Korea, Portugal, Djibouti, New Zealand, Malta, Georgia, Mauritius, China*, and *South Africa* as the top 10.

85. Answer: c

Explanation:

the correct answer is 2008.



Key Points

- Constitution of Bhutan
 - The Constitution of Bhutan was enacted on 18 July 2008 by the Royal Government of Bhutan.
 - Bhutan's political system has changed from an absolutemonarchy to a constitutional monarchy .
 - Bhutan is the Sovereign Kingdom and the Sovereign power belongs to the people of Bhutan .
 - This Constitution is the Supreme Law of the State.
 - The current Constitution is based on Buddhist philosophy, international Conventions on Human Rights, comparative analysis of 20 other modern

constitutions, public opinion, and existing laws, authorities, and precedents.

- The Constitution defines the Kingdom of Bhutan as a democratic constitutional monarchy belonging to the people of the Kingdom.

★ Additional Information

- Princess Ashi Sonam Dechen Wangchuck is a princess of Bhutan .
 - She is the daughter of the fourth King of Bhutan Jigme Singye Wangchuck and his wife, Queen Mother Ashi Dorji Wangmo Wangchuck.
- Lotay Tshering is the current PM of Bhutan.

86. Answer: a

Explanation:

- **Atomic number** is always equal to the **number of protons** present in the nucleus.
- However, if the atom has **no electrical charge** present in it, then the atomic number is **also** equal to the **number of electrons** present since the number of protons and electrons will be the same.

Electrons:

- Discovered by Sir J.J Thomson in the year 1897 .
- Previously named as cathode rays as they were supposed to be emitted from the cathode .
- They are deflected towards the positive side.
- They have high kinetic energy.
- They are deflected by an electric and magnetic field.
- It has a negative charge of
- $charge = 1.602 \times 10^{-19} \text{ coulombs}$
- $mass = \frac{1}{1837} \times 9.107 \times 10^{-28} \text{ g}$ Protons:
- Discovered by Goldstein.
- Depicted first as positive rays because it seemed to emerge from the anode.
- Mass of a proton is

$$1.670 \times 10^{-24}g$$

$$\text{Charge} = 1.602 \times 10^{-19} \text{coulombs}$$

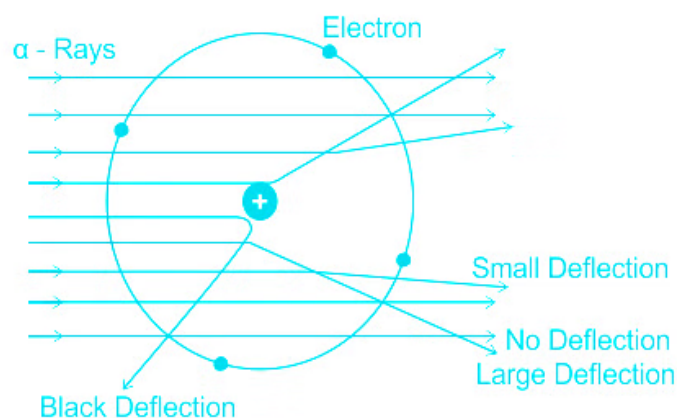
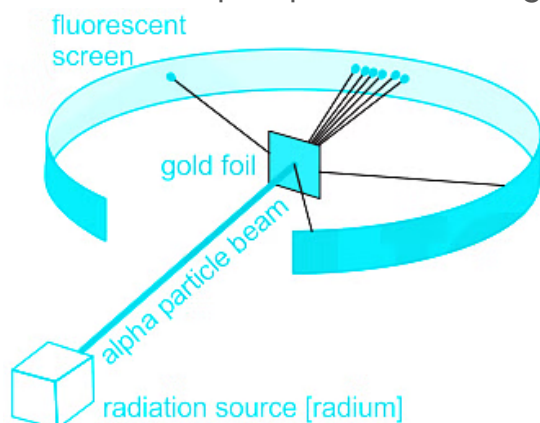
Explanation:

- Rutherford's discovery led to the discovery of nucleus .
- He found out that most of the mass of the nucleus is situated in its centre and contains the positively charged particles protons.
- The atom is otherwise empty and as electrons have negligible mass , the mass of an atom should be equal to the sum of mass of protons present in it.
- However, it was seen that in Helium , there are only two protons , so its mass should be twice the mass of each proton = $2 \times 1.008 \text{a.m.u}$.
- Experimental results revealed that it has a mass of 4.003a.m.u .
- Hence, it was concluded that the nucleus has particles containing no charge but mass almost equal to that of a proton .
- This was established by scientist James chadwick in 1932.

★ Additional Information

Rutherford's gold foil experiment:

- He discovered the atomic nucleus and gave us an atomic model.
- He directed alpha particles towards a metal sheet.
- He saw that most of the alpha particles, which are positively charged particles, are not getting deflected.
- Most of the alpha particles emerged undeflected.



- Therefore, he concluded that most of the mass of the nucleus is situated in its centre and contains the positively charged particles protons.
 - Electrons revolve around the nucleus in certain orbits.
-

87. Answer: d

Explanation:

- **Alkenes**, in organic chemistry, are the **unsaturated hydrocarbons** which at least contain one carbon-carbon double bond. They are **more reactive than alkanes**, burn with a **sooty and smoky flame which is yellow in color**. This indicates incomplete combustion due to the presence of carbon-carbon double bond.
 - **Alkanes** are the **saturated hydrocarbons** and burn with a **blue flame**.
-

88. Answer: c

Explanation:

The correct answer is Option 3 i.e. The judiciary.

- **The Judiciary** is empowered to administer justice and provide a mechanism for the resolution of legal disputes.
- **The supreme court** is the highest court in India

Legislature	• Lok Sabha and Rajya Sabha at the center. • Legislative assembly and legislative council at the state.
Executive	• President, prime minister and his council of ministers at the center level. • Governor, chief minister and his council of ministers at the state level.
Judiciary	• Supreme court • High courts • District courts

89. Answer: b

Explanation:

The correct answer is the 73rd Constitutional Amendment Act.

- The **73rd Constitutional Amendment Act of 1992** gave constitutional recognition to the Panchayats by adding a **new schedule 11** and **new part IX** to the Indian Constitution.
- The **74th Constitutional Amendment Act of 1992** gave constitutional recognition to the **Municipalities** by adding a **new schedule 12** and **new part IX-A** to the Indian Constitution.
- The **Constitution (75th Amendment) Act 1994** provides for setting up of State-level Rent Tribunals to exclude the jurisdiction of all courts, except that of the Supreme Court, under Article 136 of the Constitution.
- The **Constitution (72nd Amendment) Act, 1992** to make temporary provision for the determination of the number of seats reserved for the Scheduled Tribes in the State assembly of Tripura, until the re-adjustment of seats is made on

the basis of the first census after the year 2000 under article 170 of the Constitution.

90. Answer: c

Explanation:

- The **excretory system** in a human body is responsible for the removal of unnecessary and excess materials from the body fluids to prevent the body from any damage and to help maintain the internal chemical homeostasis.
 - It comprises of **ureters ,kidneys ,urinary bladder , and urethra .**
-

91. Answer: c

Explanation:

- **Diffusion** is the process by which substance like carbon dioxide or oxygen can move across the cell membrane.
 - **Plasmolysis** is the process during which the cells lose water in a hypertonic solution.
 - **Sedimentation** is the process of settling out of the particles from the suspension in water to form sediment.
 - **Transpiration** is a process through which water moves through a plant and evaporates from its aerial parts.
-

92. Answer: c

Explanation:

- In November 2017, Indian Government approved setting up of ' **Pradhan Mantri Mahila Shakti Kendras** ' in **115** most backward districts of the country.

- This would be done through a new scheme which will reach out to rural women and facilitate *nutrition, health, digital literacy, employment, and skill development*.
-

93. Answer: a

Explanation:

- Researchers from **Columbia University Medical Centre** in the United States of America have converted a **natural bacterial immune system** into the world's smallest microscopic data recorder.
 - They modified an ordinary laboratory strain of ubiquitous human gut microbe *Escherichiacoli* (E.Coli), a bacterium which enabled it to record the time-stamp events and their interactions with the environment.
-

94. Answer: b

Explanation:

- As per RBI in October 2017, Gross Non-Performing Assets (GNPA) ratio for NBFCs increased to **5 percent** till March 2017.
 - Due to the deterioration in the asset quality of **NBFCs**, the **GNPA ratio** increased from **4.5% in 2016 to 5.0% in 2017**.
 - Still, there asset quality remained better than that of the banks. The **GNPA ratio** for **scheduled commercial banks** increased from **8.4% to 9.6%**.
 - The Net NPA ratio for NBFCs declined from 2.5% to 2.3%.
-

95. Answer: a

Explanation:

- On 5 January 2018, Lok Sabha passed High Court and Supreme Court Judges (Salaries and Conditions of Service) Amendment Bill, 2017.
- The Bill seeks to amend **SC Judges (Salaries and Conditions of Service) Act, 1958** and **High Court Judges (Salaries and Conditions of Service) Act, 1954**.

96. Answer: c

Explanation:

Given:-

Speed of sound waves = 1000m/s

Total time (time to go + time to come back) of waves = 2sec (1sec each)

Thus, depth (distance) of the ocean floor = speed $\times$ time = $1000 \times 1 = 1000\text{m}$

97. Answer: d

Explanation:

- $g = \frac{GM}{R^2}$
- **g** = acceleration due to gravity; **G** = universal gravitational constant; **M** = mass; **R** = distance (radius)
- Since 'G' is constant, the '**acceleration due to gravity**' depends on '**mass**' and '**radius**'. Now it is given that 'mass' is same, therefore now the only factor on which the 'acceleration due to gravity' depends is 'radius'.

As we can see from the formula that, 'radius' is inversely proportional to 'g', thus if 'radius' is decreasing, 'g' will increase. Also, since there is a power of 2, therefore the 'g' will increase by 4 times.

98. Answer: c

Explanation:

- The process of electric discharge between clouds and the earth or between different clouds causes **lightning**.
- A **cyclone** is a large scale air mass which rotates around a strong center of low atmospheric pressure.
- A **thunderstorm** is a storm comprising or lightning and thunder and also hail or heavy rainfall.
- **Wind** is the flow of a huge amount of air from high to low-pressure area.

99. Answer: c

Explanation:

The correct answer is A, B and C.

★ Key Points

- **Julio Granda:**
 - **Four times Americas champion** Julio Granda is a grandmaster in chess from Peru.
 - Granda triumphed in the **50+ division in the Italian city of Acqui Terme's** World Senior Chess Championship in 2017.
- **Zhansaya Abdumalik:**
 - Grandmaster chess player Zhansaya Abdumalik hails from **Kazakhstan**.
 - She is the **39th woman** overall and the **first woman from Kazakhstan** to hold the GM title.
 - With a top **FIDE rating of 2505**, Abdumalik is now rated **No. 11** among female players worldwide.
 - She triumphed in the **2017 World Junior Chess Championship** for women.
- **Suraj Desai:**
 - Indian Kabaddi player Suraj Desai was born on **July 19, 1989**.
 - He debuted for **Jaipur Pink Panthers** during the second season.
 - Suraj Desai participated in the **2017 Pro Kabaddi League** for Dabang Delhi.

100. Answer: c

Explanation:

The correct answer is The Department of Information Technology.

★ Key Points

- The **Union Government of the Republic of India's Ministry of Electronics and Information Technology (MeitY)** is an executive body.
- On **July 19, 2016**, it was separated from the **Ministry of Communications and Information Technology**.
- It functions as a stand-alone ministerial organization in charge of **IT policy, strategy, and the growth of the electronics sector**.
- The Department of Information Technology was its previous name.
- In **2012**, its name was changed to "**Department of Electronics and Information Technology**."

★ Additional Information

- **NIC:**
 - Under the **Ministry of Electronics and Information Technology**, the **National Informatics Centre (NIC)** is a government agency in India (MeitY).
 - The NIC offers **infrastructure, IT Consultancy, and other IT Services**.
- **NASSCOM:**
 - An **Indian non-governmental trade organisation** and advocacy group is called the **National Association of Software and Service Companies**.
 - It mostly focuses on **India's technology sector**.
- **State Bank of India:**
 - State Bank of India is a **statutory body for financial services** and a **global public sector bank** in India.