



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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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 (19-Mar-2018) (Shift 2)

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, 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)

Turning left under (1)/ the crossroads will (2)/ save you some time. (3)/ No error (4)

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

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

Implicit in the Satyagraha was Gandhi's assumption that (1)/ all rulers are dependent on their position and power (2)/ upon the obedience and cooperation of the ruled (3)/ No error (4)

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

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

_____European was seen eating Kadi Chawal in New Delhi.

- a. An
- b. A
- c. The
- d. All

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

People must make continuous efforts to achieve _____ in all spheres.

- a. acceleration
- b. perfection
- c. imbalance
- d. conclusions

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

Lackadaisical

- a. Active
- b. Energetic
- c. Careless
- d. Enthusiastic

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

Eclectic

- a. Particular
- b. Electric
- c. Selective
- d. Diverse

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

Procrastinate

- a. Delay
- b. Defer
- c. Drag
- d. Do

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

Baroque

- a. Decorative
- b. Bizarre
- c. Plain

d. Rich

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

(+2, -0.5)

The maximum

P: condition is called its infiltration capacity

Q: rate at which water enters

R: into the soil in a given

a. PQR

b. QPR

c. QRP

d. RQP

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

(+2, -0.5)

The chef did not cook a dish.

a. A dish was not cooked by the chef.

b. A dish wasn't cook by the chef.

c. A dish isn't cooked by the chef.

d. A dish didn't prepare by the chef.

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

(+2, -0.5)

The princess said, "Whom do you consider the happiest person living?"

- a. The princess asked me whom I considered the happiest person living.
- b. The princess asked about the happiest person living.
- c. The princess asked who is the happiest person living now.
- d. The princess enquired about the happiest person living.

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

- a. Apparant
- b. Apparent
- c. Aparent
- d. Appareint

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)

Some writers have claimed that the _____ of persons are incapable of even fairly correct reasoning, pointing to the absurd ideas entertained by the masses of people as a proof _____ the statement. These writers are probably a little radical _____ their views and statements, but one is often struck _____ wonder at the evidences of incapacity for interpreting _____ and impressions on the part of the general public.

claimed that the _____ of persons

- a. major
- b. majority

c. majorly

d. majors

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

Some writers have claimed that the _____ of persons are incapable of even fairly correct reasoning, pointing to the absurd ideas entertained by the masses of people as a proof _____ the statement. These writers are probably a little radical _____ their views and statements, but one is often struck _____ wonder at the evidences of incapacity for interpreting _____ and impressions on the part of the general public.

as a proof _____ the statement.

a. from

b. of

c. form

d. off

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

Some writers have claimed that the _____ of persons are incapable of even fairly correct reasoning, pointing to the absurd ideas entertained by the masses of people as a proof _____ the statement. These writers are probably a little radical _____ their views and statements, but one is often struck _____ wonder at the evidences of incapacity for interpreting _____ and impressions on the part of the general public.

little radical _____ their views

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

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

Some writers have claimed that the _____ of persons are incapable of even fairly correct reasoning, pointing to the absurd ideas entertained by the masses of people as a proof _____ the statement. These writers are probably a little radical _____ their views and statements, but one is often struck _____ wonder at the evidences of incapacity for interpreting _____ and impressions on the part of the general public.

often struck _____ wonder at

- a. with
- b. against
- c. around
- d. above

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

Some writers have claimed that the _____ of persons are incapable of even fairly correct reasoning, pointing to the absurd ideas entertained by the masses of people as a proof _____ the statement. These writers are probably a little radical _____ their views and statements, but one is

often struck _____ wonder at the evidences of incapacity for interpreting _____ and impressions on the part of the general public.

for interpreting _____ and impressions

- a. Fact
- b. Facts
- c. Factual
- d. Factually

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

Burn the midnight oil

- a. To live a life of hardship.
- b. To waste away resources that could have helped in difficult times.
- c. Procrastinate and then work at the last minute to finish the task.
- d. Read or work late into the night.

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

Throw the towel in

- a. To challenge someone.
- b. To stop a bad situation from getting worse.
- c. To quit in defeat.

d. To offer a signal of peace.

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

Criticize unfairly

- a. Complimentary
- b. Obeisance
- c. Denigrate
- d. Accolade

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

The occurrence and development of events by chance in a happy or beneficial way

- a. Debacle
- b. Affliction
- c. Infelicity
- d. Serendipity

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

As humans we (crossing) our line in disturbing the balance of nature.

- a. has crossed

- b. crossed
- c. have crossed
- d. No improvement

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

I wouldn't (has dared) to venture into such a scene.

- a. have dared
- b. have dare
- c. had dare
- d. no improvement

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

We need to ask ourselves

A- if personal isolation is a

B- natural concomitant of the

C- advancement of technology

- a. ABC
- b. CBA
- c. CAB

d. BCA

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

a. conjectural

b. conjecturel

c. conjactural

d. conjacturel

prepp

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General Intelligence

26. 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 'B' can be represented by 41, 32 etc and 'Z' can be represented by 57, 98 etc. Similarly, you have to identify the set for the word 'FARM'.

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

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

- a. 23, 69, 13, 87
- b. 21, 33, 89, 24
- c. 20, 97, 12, 65
- d. 14, 79, 32, 65

27. In the following question, select the related number from the given alternatives.

(+2, -0.5)

19 : 60 :: 21 : ?

- a. 66

- b. 61
- c. 72
- d. 83

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

SRM : IHC :: ZUQ : ?

- a. PKG
- b. RLH
- c. OJF
- d. OJG

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

- a. Area
- b. Cube
- c. Volume
- d. Perimeter

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. 14 – 196
 - b. 16 – 256
 - c. 18 – 324
 - d. 22 – 464
-

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

- a. BFJ
 - b. PTX
 - c. JNR
 - d. KOR
-

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

1. Perplex 2. Persistent 3. Periodic 4. Persist 5. People

- a. 51243
 - b. 45123
 - c. 53142
 - d. 12354
-

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

4, 16, ?, 256, 1024

- a. 64
- b. 60
- c. 32
- d. 48

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)

A, D, F, I, K, N, ?

- a. P
- b. O
- c. R
- d. S

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35. Present ages of R and P are in the ratio of 9 : 11 respectively. After 7 years, their ages will be in the ratio of 26 : 31 and sum of their ages will be 114 years. What is the present age (in years) of P? (+2, -0.5)

- a. 36
- b. 35
- c. 55
- d. 45

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

Revolution

- a. Into
- b. Vote
- c. Tone
- d. Right

37. In a certain code language, "FUNGI" is written as "HYPKK". How is "ALGAE" written in that code language? (+2, -0.5)

- a. CPIEG
- b. GHIQT
- c. QKTHP
- d. PHQLM

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

NET, OGW, PIZ, QKC, ?

- a. RNE
- b. RME
- c. RNF
- d. RMF

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

39, 40, 42, 43, 45, ?

- a. 47
- b. 46
- c. 48
- d. 49

40. 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. (16, 19, 22)
- b. (18, 21, 25)
- c. (17, 20, 23)
- d. (21, 24, 27)

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

$$17 - 20 + 5 \times 30 \div 4 = ?$$

- a. 34
- b. 42

c. 18

d. 47

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

$$16 \times 4 - 10 + 10 \div 6 = 54$$

a. $\div$ and $\times$

b. $\times$ and $-$

c. $\div$ and $-$

d. and $+$

43. If $9 \& 4 = 50$, $3 \& 7 = -40$ and $7 \& 5 = 20$, then find the value of $4 \& 5 = ?$ (+2, -0.5)

a. 80

b. -10

c. 20

d. -80

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

PQPQPQPQ, RQPQPQPQ, RSPQPQPQ, RSRQPQPQ, RSRSPQPQ, _____.

a. RSRSRSPQ

b. PQPQPQPQ

c. RQPQPQPQ

d. RSRSRQPQ

45. C and D start cycling from their fitness club. C rides 1 km West, then turns to his left and rides 5 km. In the mean while D rides 3 km South, then turns West and rides 7 km, then turns to his left and rides 2 km. Where is C with respect to D? (+2, -0.5)

a. 8 km East

b. 6 km West

c. 6 km East

d. 8 km West

46. 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 batteries are cells.

Statement II: All cells are chargers.

Conclusion I: Some cells are chargers.

Conclusion II: All chargers are cells.

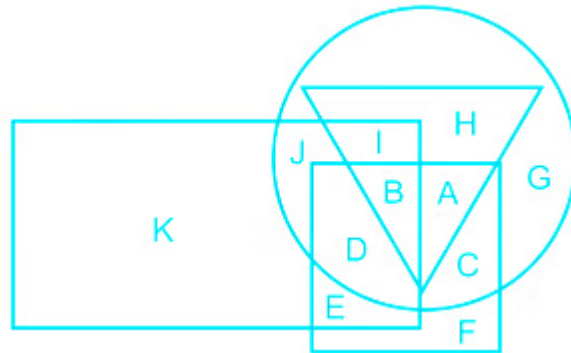
a. Only conclusion I follows

b. Only conclusion II follows

c. Both conclusions I and II follow

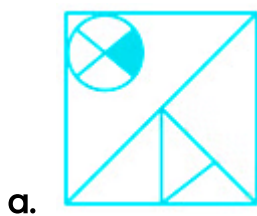
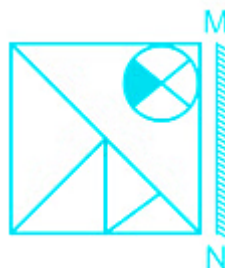
d. Neither conclusion I nor conclusion II follows

47. In the following figure, rectangle represents Animators, circle represents Dancers, triangle represents Potters and square represents Mothers. Which set of letters represents Potters who are not Mothers? (+2, -0.5)

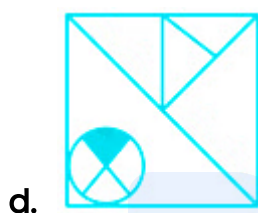
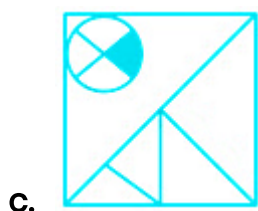
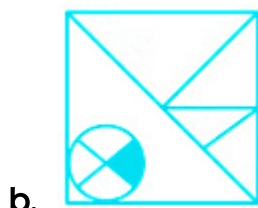


- a. BA
- b. DC
- c. IH
- d. EF

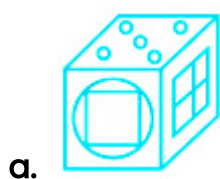
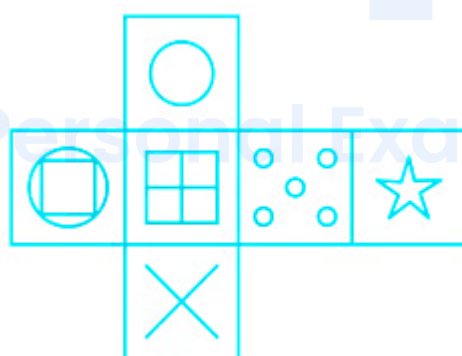
48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure? (+2, -0.5)

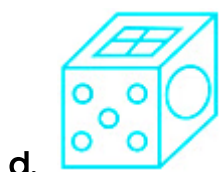
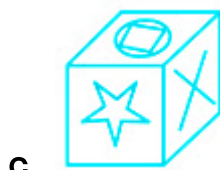


a.



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





50. A word is represented by 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 'B' can be represented by 31, 43 etc and 'P' can be represented by 57, 95 etc. Similarly, you have to identify the set for the word 'GYRO'.

(+2, -0.5)

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

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

- a. 13,86,77,97
- b. 13,57,24,77
- c. 10,65,42,79
- d. 20,56,13,75

Quantitative Aptitude

51. Arrange the fractions $\frac{3}{4}$, $\frac{5}{12}$, $\frac{13}{16}$, $\frac{16}{29}$, $\frac{3}{8}$ in the descending order of their magnitude. (+2, -0.5)

a. $\frac{3}{4} > \frac{3}{8} > \frac{13}{16} > \frac{16}{29} > \frac{5}{12}$

b. $\frac{3}{8} > \frac{5}{12} > \frac{16}{29} > \frac{3}{4} > \frac{13}{16}$

c. $\frac{13}{16} > \frac{3}{4} > \frac{16}{29} > \frac{5}{12} > \frac{3}{8}$

d. $\frac{13}{16} > \frac{16}{29} > \frac{3}{4} > \frac{5}{12} > \frac{3}{8}$

52. Which of the following numbers is a prime number? (+2, -0.5)

a. 39

b. 87

c. 79

d. 93

53. If $x = \frac{4}{2\sqrt{3}+3\sqrt{2}}$ then find the value of $(x + \frac{1}{x})$ (+2, -0.5)

a. $\frac{(10\sqrt{3}+15\sqrt{2})}{12}$

b. $\frac{(10\sqrt{3}-15\sqrt{2})}{12}$

c. $\frac{-(10\sqrt{3}-33\sqrt{2})}{12}$

d. $\frac{(10\sqrt{3}+33\sqrt{2})}{12}$

54. The equation of a line is given by $4y - 6x + 9 = 0$. Find the slope of other line which is perpendicular to it. (+2, -0.5)

- a. $-2/3$
- b. $2/3$
- c. $3/2$
- d. $-3/2$

55. The two chords AB and CD of a circle intersect at point P, such that $BP = 4$ cm, $PD = 5$ cm, and $CP = 8$ cm. find the length of chord AB. (+2, -0.5)

- a. 8
- b. 10
- c. 12
- d. 14

56. AB is the chord of circle of length 6 cm. From the center of the circle a perpendicular is drawn which intersects the chord at D and distance between centre and chord is 4 cm. find the area (in cm^2) of the circle (+2, -0.5)

- a. 55
- b. 61.5
- c. 70
- d. 78.5

57. The income of Rahul is Rs 60000 and his expenditure is Rs 40000. If his income is increased by 20% and expenditure is increased by 15%, then what will be the percentage increase in his savings? (+2, -0.5)

- a. 30
- b. 5
- c. 15
- d. 25

58. If $u : v : w = 3 : 6 : 8$, then what will be the ratio of $(u/v) : (v/w) : (w/u)$? (+2, -0.5)

- a. 8 : 6 : 3
- b. 8 : 4 : 3
- c. 5 : 9 : 12
- d. 6 : 9 : 32

59. Puneet lent out Rs 30000 in two parts, one at 5% and the other at 9% interest. The yearly average interest comes out to be 6%. What are the amounts (in Rs) that are lent at 5% and 9% respectively? (+2, -0.5)

- a. 20000, 10000
- b. 22500, 7500
- c. 18000, 12000
- d. 21000, 9000

60. The average marks obtained by 19 boys of a college is 56. If the highest marks and lowest marks obtained are removed, then the average reduces by 2. What is the average of the highest and lowest marks obtained? (+2, -0.5)
- a. 77
 - b. 69
 - c. 73
 - d. 75
-
61. A sum of Rs. 5000 becomes Rs. 8000 in 3 years when invested in a scheme of simple interest. If the same sum is invested in a scheme of compound interest with the same yearly interest rate (compounding of interest is yearly), what will be the amount (in Rs.) after 3 years? (+2, -0.5)
- a. 8640
 - b. 8260
 - c. 8880
 - d. 9220
-
62. A shopkeeper sells wheat at a profit of 20% and for weighing uses a weight which is 10% less than the actual weight. What is his total profit percentage? (+2, -0.5)
- a. 31.24
 - b. 37.5

- c. 30
- d. 33.33

63. A table is sold at a discount of 45%. If the marked price of the table is Rs 10800, then what is the selling price (in Rs) of the table? (+2, -0.5)

- a. 4680
- b. 4860
- c. 5560
- d. 5940

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

- I. $(\sqrt{11} + \sqrt{2}) > (\sqrt{8} + \sqrt{5})$
- II. $(\sqrt{10} + \sqrt{3}) > (\sqrt{7} + \sqrt{6})$

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

65. Some girls can do a piece of work in 18 days. In how much time (in days) two times the number of such girls will complete thrice of the work? (+2, -0.5)

- a. 12

b. 27

c. 21

d. 24

66. Two trains are moving in the same direction at the speed of 24 km/hr and 50 km/hr. The time taken by faster train to cross a man sitting in the slower train is 72 seconds. What will be the length (in metres) of the faster train? (+2, -0.5)

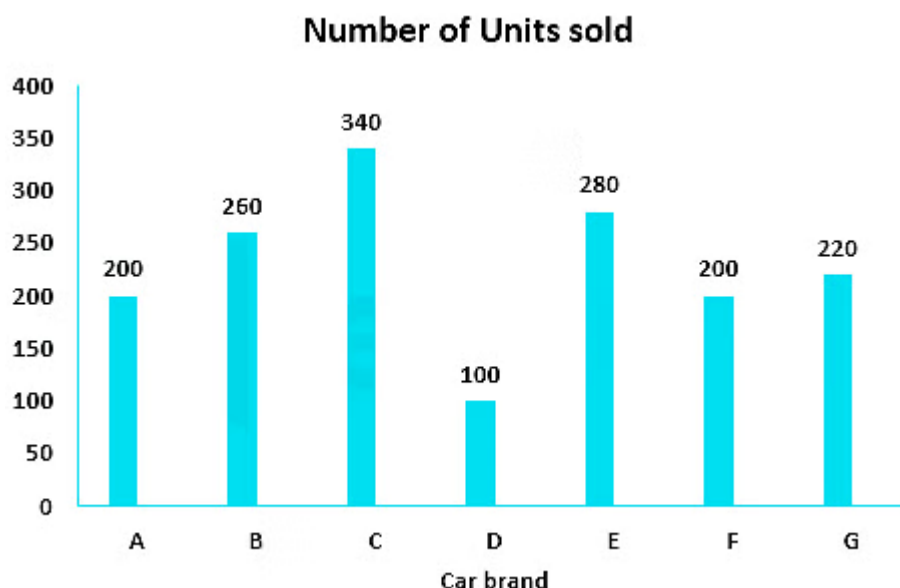
a. 560

b. 490

c. 520

d. 640

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

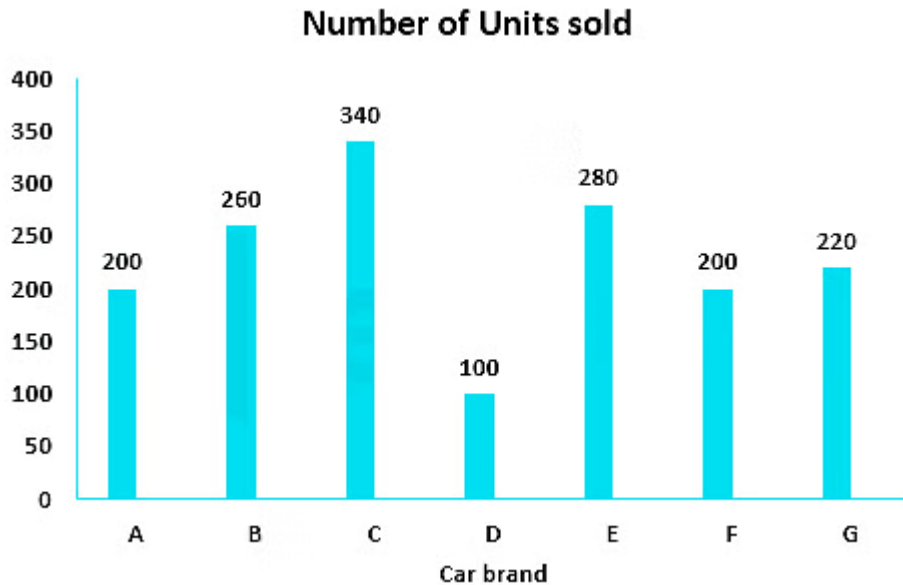


If the average price of a car sold by the dealer is Rs. 5 lakhs then what is the sales (in Rs. lakhs) of all the cars sold by the dealer in the month?

- a. 800
- b. 8000
- c. 7500
- d. 750

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

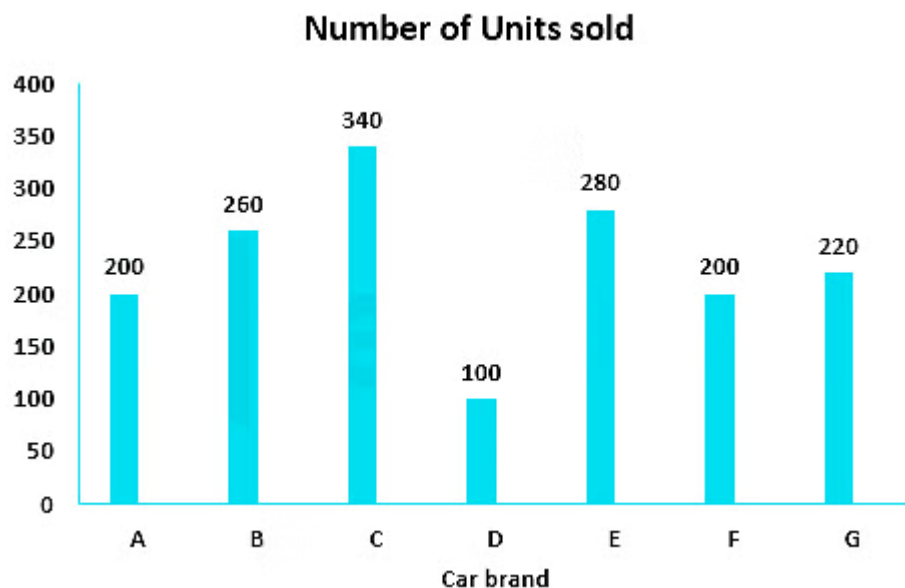


Units sold of brand D was lesser than that of brand F by_____.

- a. 75%
- b. 200%
- c. 100%
- d. 50%

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

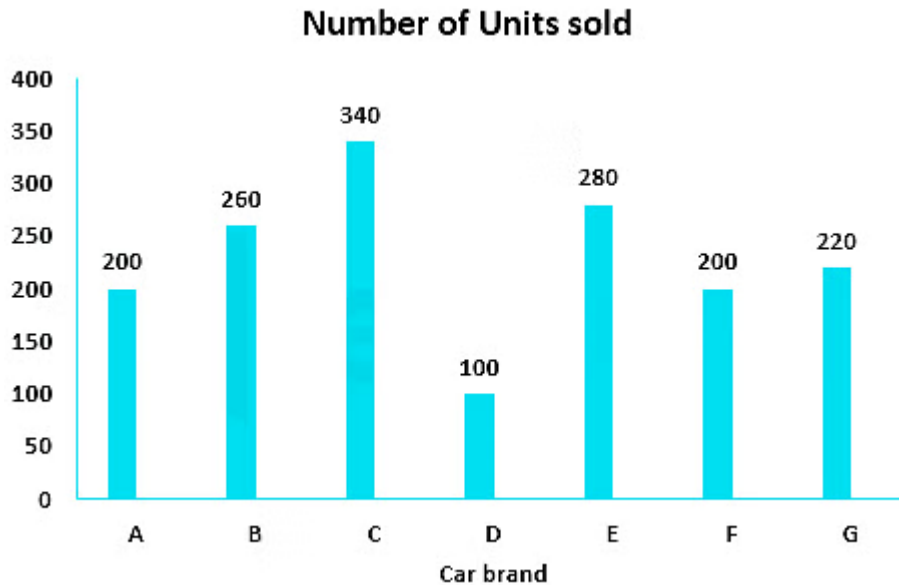


What is the ratio of units sold of brand G to that of brand E?

- a. 14 : 11
- b. 4 : 9
- c. 9 : 4
- d. 11 : 14

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70. Direction: The bar graph shows the number of cars 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 car brand were the second highest?

- a. E
- b. C
- c. A
- d. G

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71. The length of one side and the diagonal of a rectangle are 20 cm and 29 cm respectively. Find the length of its other side (in cm). (+2, -0.5)

- a. 42
- b. 30
- c. 21
- d. 60

72. If the sum of the interior angles of a regular polygon is 720° then how many sides does it have? (+2, -0.5)

- a. 8
- b. 9
- c. 6
- d. 10

73. Find the volume (in cm^3) of a cube of side 4.5 cm. (+2, -0.5)

- a. 55.467
- b. 14.445
- c. 91.125
- d. 26.465

74. What is the value of $(2 - \tan 60^\circ)$? (+2, -0.5)

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

75. ΔUVW is right angled at V. If $\sin U = 24/25$, then what is the value of $\cos W$? (+2, -0.5)

- a. $25/7$
- b. $24/7$
- c. $7/24$
- d. $24/25$

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General Awareness

76. Expanded form of the term LIBOR is: _____. (+2, -0.5)

- a. London Inter-Bank Offered Rate
- b. London Inter-Bank Operational Rate
- c. London Inter-Bank Offsite Rate
- d. London Inter-Bank Onsite Rate

77. Who holds the post of Deputy Chairman of the Planning Commission? (+2, -0.5)

- a. Prime Minister
- b. Planning Minister
- c. an official who holds the rank of a Cabinet Minister
- d. an economist of repute

78. Which of the following tax was initiated by the Alauddin Khilji? (+2, -0.5)

- a. Kharaj
- b. Kankut
- c. Ghari
- d. Zakat

79. Which of the following organizations was established outside India? (+2, -0.5)

- a. Indian Association
 - b. East India Association
 - c. Bengal-British India Society
 - d. India league
-

80. Which of the following is NOT an example of the volcanic mountain? (+2, -0.5)

- a. Mount Etna
 - b. Mount Fujiyama
 - c. Mount Black
 - d. Mount Kilimanjaro
-

81. Which of the following hills is situated in the southernmost part of India? (+2, -0.5)

- a. Nilgiri Hills
 - b. Cardamom Hills
 - c. Palani Hills
 - d. Annamalai Hills
-

82. Which of the following is a war-related dance? (+2, -0.5)

- a. Kathakali of Kerala
- b. Bamboo dance of Meghalaya

- c. Chhau of Mayurbhanj
 - d. Bhangra of Panjab
-

83. Where is located the world's longest glass bridge that was opened for the public on December 24, 2017? (+2, -0.5)

- a. Hebei, China
 - b. Tokyo, Japan
 - c. Virginia, USA
 - d. Berlin, Germany
-

84. Who among the following is a recipient of first World Sanskrit Award? (+2, -0.5)

- a. Pandit Shivashankar Tripathi
 - b. John Merkel
 - c. Maha Chakri Sirindhorn
 - d. Hassan Abbas
-

85. Which of the following areas has the largest production of coal in China? (+2, -0.5)

- a. Shaanxi
- b. Xinjiang
- c. Inner Mongolia
- d. Hebei

86. According to Rutherford the radius of the nucleus is about _____ than the radius of the atom. (+2, -0.5)

- a. 10^5 times greater
- b. 10^5 times lesser
- c. 10^9 times greater
- d. 10^7 times greater

87. Ionic compounds _____. (+2, -0.5)

- I. have high boiling point
- II. have high melting point
- III. conduct electricity in solution

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

88. Who is the principal spokesman of the Lok Sabha? (+2, -0.5)

- a. Prime Minister of India
- b. Finance Minister of India
- c. Speaker of Lok Sabha

d. Nominated Member of Lok Sabha

89. In India, the first hour of every Parliamentary sitting is allotted for ----- (+2, -0.5)

- a. Question hour
- b. Half an hour
- c. Zero hour
- d. No option is correct.

90. Match the following. (+2, -0.5)

<u>Digestive Input</u>	<u>Output</u>
I. Proteins	1. Glycerol
II. Carbohydrates	2. Amino acids
III. Fats	3. Glucose

- a. I – 2, II – 3, III – 1
- b. I – 1, II – 3, III – 2
- c. I – 2, II – 1, III – 3
- d. I – 3, II – 2, III – 1

91. Who coined the term 'protoplasm' for the fluid substance of the cell? (+2, -0.5)

- a. Robert Hooke
- b. Robert Brown
- c. J.E Purkinje
- d. M. Schleiden

92. Under Aajeevika Grameen Express Yojana (AGEY) launched in Aug 2017, the beneficiary will be provided an interest-free loan up to _____ for the purchase of the vehicle. (+2, -0.5)

- a. Rs. 6.50 lakh
- b. Rs. 8.50 lakh
- c. Rs. 7.50 lakh
- d. Rs. 9.50 lakh

93. Scientists of which institute have found a way to induce plants to give off dim light to plants by embedding luciferase enzyme? (+2, -0.5)

- a. The University of Cambridge
 - b. National University of Singapore
 - c. University of California
 - d. Massachusetts Institute of Technology
-

94. In September 2017, RBI has capped bank investments in private equity fund at _____ percent of paid-up capital. (+2, -0.5)
- a. 5
 - b. 10
 - c. 15
 - d. 18
-

95. On 2 January 2018, Parliament passed NABARD (Amendment) Bill, 2017 which seeks to amend (+2, -0.5)
- a. NABARD Act, 1975
 - b. NABARD Act, 1961
 - c. NABARD Act, 1981
 - d. NABARD Act, 1991
-

96. Due to an acceleration of 1 m/s^2 the velocity of a body increases from 15 m/s to 20 m/s in a certain period. Find the displacement (in m) of the body in that period. (+2, -0.5)
- a. 175
 - b. 625
 - c. 87.5
 - d. 312.5
-

97. The gravitational force of attraction between two bodies is _____ the product of their masses. (+2, -0.5)

- a. Directly proportional to the square of
- b. Inversely proportional to
- c. Inversely proportional to the square of
- d. Directly proportional to

98. The boundaries of the plates of the earth's crust are the weak zones known as _____ zones. (+2, -0.5)

- a. cosmic
- b. seismic
- c. formic
- d. anemic

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

- A) Grigor Dimitrov won the Tennis 2017 ATP World Tour Finals Men's Singles.
 - B) In 2017, Sergio Aguero played for the Premier League team, Liverpool.
 - C) In 2017, Rohit Sharma captained the IPL team Mumbai Indians.
- a. Both A and C
 - b. Both A and B
 - c. A, B and C

d. None of these

100. _____ networks are connected by telephones, underwater cables and satellites. (+2, -0.5)

- a. Typewriter
- b. DVD
- c. Computer
- d. Washing Machine

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Answers

1. Answer: a

Explanation:

The correct answer is 1

★ Key Points

Reading the sentence we find that:

The error is in part 1 of the sentence.

One cannot go under the crossroads, as it is not a bridge. Instead, it is a point where one reaches.

★ Important Points

When we are referring to locations or points we should use the preposition **at**

Therefore the correct form will be: **At the crossroads** .

★ Additional Information

At a crossroads

At a point when a choice must be made; at a point of change.

- *After earning my degree, I'm at a crossroads. I need to figure out which direction my life should take.*
- *As a company, we're at a crossroads. We can continue business as usual, or we can take a risk and try to grow.*

2. Answer: b

Explanation:

The correct answer is 2

★ Key Points

Reading the above sentence we find that:

- In the second part of the sentence, 'on' is incorrect. Instead use 'for'.
- 'For' is a preposition and one of the meanings of it is 'having as a purpose or function'.
- Hence, this meaning is correct in the sentence.

So the correct sentence is:

*Implicit in the Satyagraha was Gandhi's assumption that all rulers are **dependent for** their position and power upon the obedience and cooperation of the ruled.*

3. Answer: b

Explanation:

The correct answer is A

★ Key Points

Reading the sentence we find that:

- Article A should be filled in the blank.
- Thus the sentence will be "A European...."

★ Important Points

- Article A is used before words beginning with a **consonant** or with a **consonant sound**.
- In the given question the word European starts with a consonant sound i.e. a 'Y' sound.
- Therefore we should use A instead of An.

★ Mistake Points

- Seeing that the word European starts with a vowel one might think that 'an' should be used.
- But even though the word starts with a vowel the starting sound is that of a consonant.

Therefore the correct answer is ' **A European** . '

4. Answer: b

Explanation:

The correct answer is **perfection**

★ Key Points

Reading the above sentence we find that:

- A word that means **quality** or **excellence** should be used here.

Let's look at the meaning of the correct option.

- **perfection** : the **state or quality of being perfect; excellence**

Therefore the correct answer is **perfection** as it suits the sentence meaningfully and contextually.

5. Answer: c

Explanation:

The correct answer is **Careless**

★ Key Points

Let's look at the meaning of the given word and the correct option.

- **Lackadaisical** : careless; lazy; unenthusiastic.
- **Careless** : Not having sufficient attention; unenthusiastic.

Thus from the above meanings, we find that both words express the **same meaning**.

★ Additional Information

Let's look at the meaning of the other given words.

- **Active** : Engaging or ready to engage in physically energetic pursuits.
- **Energetic** : Showing or involving great activity or vitality.
- **Enthusiastic** : Having or showing intense and eager enjoyment.

6. Answer: d

Explanation:

The correct answer is **Diverse** .

★ Key Points

Let's look at the meaning of the given word and the correct option.

- **Eclectic** : Deriving ideas, style or taste from a broad and diverse range of sources.
- **Diverse** : Showing a great deal of variety.

Thus from the given meanings, we find that both words express the same meaning.

Thus the correct answer is **Diverse** .

★ Additional Information

Let's look at the meanings of the other given words.

- **Particular** : Used to single out and individual member.
- **Electric** : Of worked by, charged with or producing electricity.
- **Selective** : Relative or involving the selection of the most suitable.

7. Answer: d

Explanation:

The correct answer is **Do** .

★ Key Points

Let's look at the meaning of the given word and the correct option.

- **Procrastinate** : Delay or postpone actions; put off doing something.
- **Do** : To perform an action; to achieve or complete.

Thus from the given points, we find that both the words have the opposite meaning.

★ Additional Information

Let's look at the meaning of the other given words.

- **Delay** : Make someone or something late or slow.
- **Defer** : Postpone; suspend or delay.
- **Drag** : Pass slowly and tediously; to pull someone.

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8. Answer: c

Explanation:

The correct answer is **Plain** .

★ Key Points

Let's look at the meaning of the given word and the correct answer.

- **Baroque** : A style used to create exuberance, grandeur and detail.
- **Plain** : Not decorated or elaborate; simple or basic.

Thus from the given points, we find that both the words express the opposite meaning.

Therefore, the correct answer is **Plain**.

★ Additional Information

Let's look at the meanings of the other given words.

- **Decorative** : Serving to make something look more attractive.
- **Bizarre** : Very strange or unusual.
- **Rich** : Having a great deal of money or assets; wealth

9. Answer: c

Explanation:

The correct answer is **QRP**.

★ Key Points

Reading the first part of the sentence we find that:

- **Maximum** is an adjective and it should be followed by a noun.
- Out of the given parts, **R** does not start with a noun and hence it can be ruled out.
- Part R also ends with the phrase '**in a given**' and the word given is an **adjective** and it should be followed by a **noun**.
- For this reason, **R** cannot be the final part of the sentence.
- This leaves us with only one option i.e **QRP** which perfectly rearranges the given sentence.

Thus from the given points, we can conclude that the correct answer is **QRP**.

The correct sentence will be: *The maximum rate at which water enters into the soil in a given condition is called its infiltration capacity.*

10. Answer: a

Explanation:

The correct answer is **A dish was not cooked by the chef**.

★ Key Points

While changing a sentence to the passive voice:

- The subject of the sentence becomes the object.
- The object of the sentence becomes the subject.
- Therefore **dish** in the given sentence becomes the subject of the passive voice.
- The **chef** becomes the object of the passive voice.
- **Did not cook** changes to **was not cooked**.
- Thus we get the sentence: A dish was not cooked by the chef.

Thus from the given points, we can conclude that the correct answer is **A dish was not cooked by the chef**.

★ Mistake Points

The other given options are incorrect for the following reasons.

- In option 2 **wasn't cook** is wrong as the verb **cook** should be in the past tense i.e **cooked**.
- In option 3 **isn't cooked** is wrong as 'is' is used in the present tense and the passive voice is in the past tense.

11. Answer: a

Explanation:

The correct answer is **The princess asked me whom I considered the happiest person living**.

★ Key Points

Reading the given sentence we find that it's in the direct speech.

To change it to an indirect speech we should:

- Change the verb **said** to **asked**, as a question is being asked in the sentence.
- The tense changes from **simple present tense** to **simple past tense**.
- Thus **do you 'consider'** changes to **'considered'**.
- **'You'** changes to **'I'** as it is an indirect speech.
- When the **direct speech** begins with a **question** there is no need to put conjunction in the indirect speech.

Thus we get the final sentence: 'The princess asked me whom I considered the happiest person living.'

12. Answer: b

Explanation:

The correct answer is **Apparent**.

★ Key Points

Looking at the given options we find that:

- **Apparent** is the correct spelling of the word.
- **Apparent** : Clearly visible, understood or obvious.
- **Example** : *She laughed for no **apparent** reason.*

Therefore the correct answer is **Apparent**.

13. Answer: b

Explanation:

The correct answer is **Majority**

★ Key Points

Reading the given sentence we find that:

- The given part of the sentence is talking about a large group of people.
- So a word with a meaning similar to this should fill the blank.

Let's look at the meaning of the correct option.

- **Majority** : a greater number; a large number.
- **Example** : *The candidate had the overwhelming support of the **majority** of the people.*

Thus from the given points, we can conclude that the correct answer is **majority**.

★ Additional Information

Let's look at the meanings of the other given words.

- **Major** : Important, serious or significant; a rank given to an officer in the military.
- **Majorly** : very, extremely.
- **Majors** : Studies that one specialises in college.

14. Answer: b

Explanation:

The correct answer is **of**.

★ Key Points

Reading the above sentence we find that:

- A proposition that expresses the relationship between **proof** and the **statement** is needed here.

Let's look at the meaning of the preposition ' **of** .'

- **Of** : a preposition that expresses the relationship between a part and the whole.
- Here the proposition is establishing the relationship that is **proof of the statement** .

Thus from the above points, we can conclude that the correct answer is **of** .

★ Additional Information

Let's look at the other options.

- **From** : A preposition that indicates a point in space and time.
- **Form** : The visible shape of something; bring together parts to combine.
- **Off** : Away from the place in question.

15. Answer: c

Explanation:

The correct answer is **in** .

★ Key Points

Reading the above sentence we find that:

- Views are something that each person has in his mind.
- Since a **view** is inside our mind we should preposition that conveys that the views are inside the person's mind.
- **In** : A preposition expressing the situation of something.
- In the given context we are talking about the **views** of the writers.

Thus from the given points, we can conclude that the correct answer is **in** .

★ Additional Information

- **Into** : A preposition expressing movement or action.
- **To** : Expressing movement in a particular direction; approaching or reaching a particular position.
- **On** : Physically in contact with and supported by (something).

16. Answer: a

Explanation:

The correct answer is **with** .

★ Key Points

Looking at the above sentence we find that:

- A preposition with the meaning of ' **having or possessing** ' should fill the blank.
- Thus the correct preposition to be used here is **with** .
- **With** : Having or possessing something.

Thus from the above points, we can conclude that the correct answer is **with** .

★ Additional Information

Let's look at the meanings of the other given options.

- **Against** : In opposition to.
- **Around** : On every side of; located or situated on every side.
- **Above** : At a higher level or layer than.

17. Answer: b

Explanation:

The correct answer is **Facts** .

★ Key Points

Looking at the given blank we find that:

- The word ' **impressions** ' is used in the **plural** .
- Therefore a plural noun should be used in the blank.
- **Facts** : Something that truly exists; truth, reality. Plural of the noun **fact** .

Thus from the above points, we can conclude that the correct answer is **facts** .

★ Additional Information

Let's look at the meanings of the other given options.

- **Factual** : An adjective that means concerned with what is actually the case.
- **Factually** : An adverb which means with regard to what is actually the case.

18. Answer: d

Explanation:

The correct answer is **Read or work late into the night** .

★ Key Points

Let's look at the meaning of the given idiom.

- **Burn the midnight oil** : To stay up late working or studying.
- **Example** : We are all **burning the midnight oil** before the exams.

Thus from the given meaning and example we can conclude that the correct answer is **Read or work late into the night** .

19. Answer: c

Explanation:

The correct answer is **To quit in defeat** .

★ Key Points

Let's look at the meaning of the given idiom.

- **Throw the towel in** : To quit in defeat.
- **Example** : *Rocky was told by his trainer that he was going to **throw in the towel in** if he did not start throwing punches.*

Thus from the given meaning, we can conclude that the correct answer is 'To quit in defeat'

★ Additional Information

The idiom '**throw the towel in**' comes from boxing, where a fighter **indicates surrender** by **throwing a towel** into the ring.

20. Answer: c

Explanation:

The correct answer is **Denigrate** .

★ Key Points

Let's look at the meaning of the correct option.

- **Denigrate** : Criticize unfairly; disparage.
- **Example** : *It was unfair to **denigrate** her achievement.*

From the above-given points, we can conclude that the correct answer is **Denigrate** .

★ Additional Information

Let's look at the meanings of the other given options.

- **Complimentary** : Expressing a compliment or approval.
- **Obeisance** : The movement of the body made in token of respect; to bow.

- **Accolade** : A mark of acknowledgement.
-

21. Answer: d

Explanation:

The correct answer is Serendipity .

★ Key Points

Let's look at the meaning of the correct option.

- Serendipity : Unexpected good luck; the fact of finding interesting or valuable things by chance.
- Example : *There is a real element of serendipity in archaeology.*

Thus from the given meaning, we can conclude that the correct answer is serendipity .

★ Additional Information

Let's look at the meanings of the other given words.

- Debacle : A great disaster or a complete failure.
 - Affliction : A cause of pain or harm.
 - Infelicity : A thing that is inappropriate.
-

22. Answer: c

Explanation:

As we are talking about present time so we will use present perfect tense not past.

We = plural. Thus, rule out 1). *We crossing* = grammatically incorrect. Rule out 4). use *have* . Option 3) *have crossed* is the correct answer.

23. Answer: a

Explanation:

The correct answer is **have dared** .

★ Key Points

Reading the above sentence we find that:

- The sentence starts with **I** and therefore it should be followed by **have**.
- The tone of the given sentence indicates that it is in the past tense.
- Therefore we should use **dared** instead of **dare** .
- Using dare makes the sentence grammatically incorrect. As it is not the correct verb to fit the tense.
- Thus from the given points, we can conclude that the correct answer is **have dared** .

Correct Sentence: I wouldn't have dared to venture into such a scene.

24. Answer: a

Explanation:

The correct answer is **ABC**

★ Key Points

Reading the given points we find that:

- Sentence A and B end with an article i.e **a** and **then** .
- As per the rule of grammar, a sentence cannot end with an article.
- Thus we can conclude that **C** is the only sentence that can be the ending statement.
- And the only option where C is the ending statement is **ABC** .

- Thus from the above points, we can conclude that the correct answer is **ABC**.

Correct Sentence: *We need to ask ourselves if personal isolation is a natural concomitant of the advancement of technology.*

25. Answer: a

Explanation:

The correct option is **conjectural**

★ Key Points

Out of the given options only **conjectural** is correctly spelt.

- **Conjectural** : based on or involving **conjecture**.
- **Example** : *The evidence was deemed too **conjectural**.*

Thus from the given points, we find that the correct answer is **conjectural**.

★ Additional Information

Conjectural is an adjective form of the noun **conjecture**.

- **Conjecture** : an opinion or conclusion formed on the basis of incomplete information
-

26. Answer: b

Explanation:

- 1) 23,69,13,87 → G V C P
- 2) 21,33,89,24 → F A R M
- 3) 20,97,12,65 → H X G Y

4) 14,79,32,65 → M X B Y

Hence, "21,33,89,24" is the correct answer.

27. Answer: a

Explanation:

The logic followed is:

$$19: 60 \rightarrow (19 + 1) \times 3 = 60$$

Similarly,

$$21: ? \rightarrow (21 + 1) \times 3 = 66$$

Hence, 66 is the correct answer.

28. Answer: a

Explanation:

The positional value of the letters, according to the English alphabet series are,

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:

SRM : IHC →

$$\begin{array}{ccc} \text{S} & \text{R} & \text{M} \\ | & | & | \\ -10 & -10 & -10 \\ | & | & | \\ \text{I} & \text{H} & \text{C} \end{array}$$

Similarly,

ZUQ : PKG →

$$\begin{array}{ccc} \text{Z} & \text{U} & \text{Q} \\ | & | & | \\ -10 & -10 & -10 \\ | & | & | \\ \text{P} & \text{K} & \text{G} \end{array}$$

Hence, the correct answer is "PKG".

29. Answer: b

Explanation:

Area, Volume and perimeter are dimensions of a geometrical figure whereas cube is a geometrical figure.

Hence, cube is the odd one out.

30. Answer: d

Explanation:

1) $14 - 196 \rightarrow 14 - 14^2$

2) $16 - 256 \rightarrow 16 - 16^2$

3) $18 - 324 \rightarrow 18 - 18^2$

4) $22 - 464 \rightarrow 22 - 464$

Hence, $22 - 464$ is the odd one out.

31. Answer: d

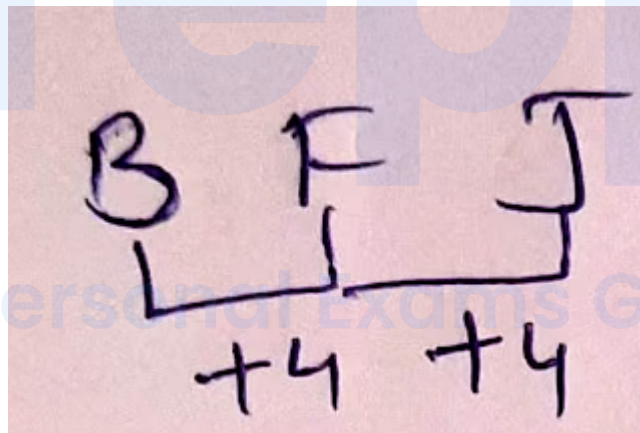
Explanation:

The position value of alphabet is,

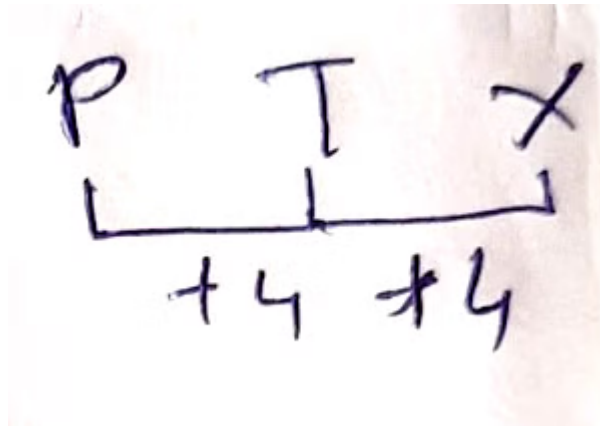
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern follows here is:

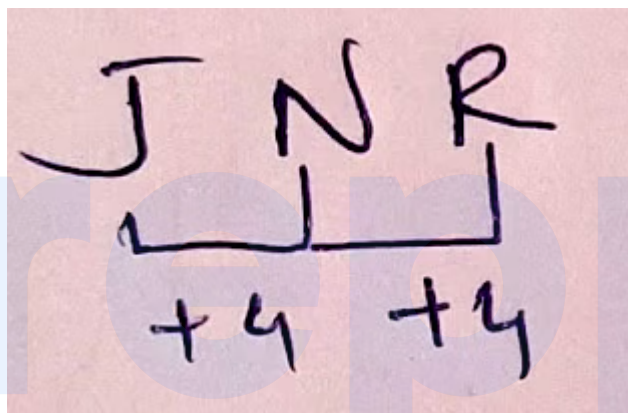
1) BFJ



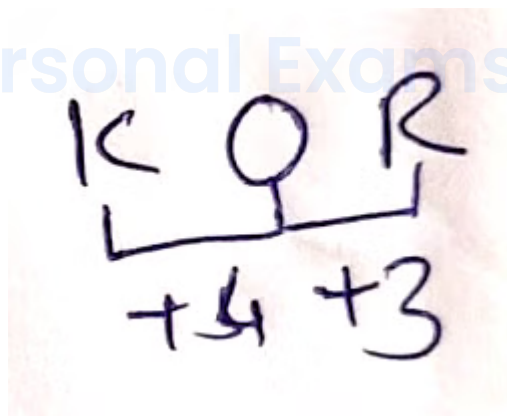
2) PTX



3) JNR



4) KOR



Hence, the correct answer is "KOR".

32. Answer: c

Explanation:

5. People

3. Periodic

1. Perplex

4. Persist

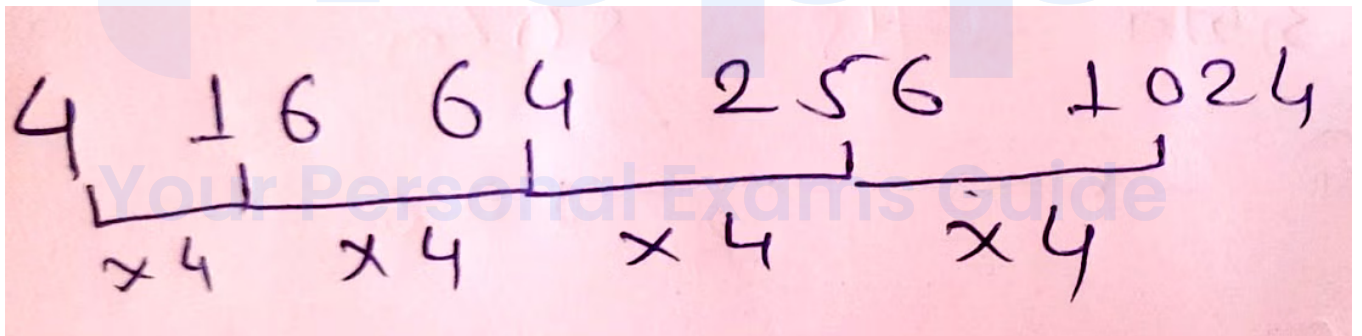
2. Persistent

Hence, the correct answer is 53142.

33. Answer: a

Explanation:

The logic followed is:



Hence, the correct answer is "64".

34. Answer: a

Explanation:

The pattern followed here is:

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

According to the alphabetical positions of the letters,

The logic followed is:

$$A \xrightarrow{+3} D \xrightarrow{+2} F \xrightarrow{+3} I \xrightarrow{+2} K \xrightarrow{+3} N \xrightarrow{+2} P$$

Hence, the correct answer is "P".

35. Answer: c

Explanation:

Let us consider the age of R and P to be $9x : 11x$, after 7 years there age will be $(9x + 5)$ and $(11x + 5)$ which is equal to ratio $26 : 31$.

So by comparing that we will get,

$$(9x + 7) : (11x + 7) = 26 : 31$$

$$31(9x + 7) = 26(11x + 7)$$

$$279x + 217 = 286x + 182$$

$$217 - 182 = 286x - 279x$$

$$X = 5$$

Therefore $x = 5$, then the present age of P will be $11x = 11 \times 5 = 55$.

Hence 55 is the correct answer.

36. Answer: d

Explanation:

Into → Revolu **tion** → can be formed

Vote → R **evo** lu **tion** → can be formed

Tone → R **evolu ti on** → can be formed

Right → Revolution → cannot be formed as G is not present in the given word

Hence, the correct answer is Right.

37. Answer: a

Explanation:

F	U	N	G	I
+2	+4	+2	+4	+2
H	Y	P	K	K

Similarly,

A	L	G	A	E
+2	+4	+2	+4	+2
C	P	I	E	G

Hence, the correct answer is CPIEG.

38. Answer: d

Explanation:

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

N E T
 | +1 | +2 | +3
 O G W
 | +1 | +2 | +3
 P I Z
 | +1 | +2 | +3
 Q K C
 | +1 | +2 | +3
 R M F

Hence, the correct answer is RMF.

39. Answer: b

Explanation:

The logic followed is:

$$39 + 1 \rightarrow 40$$

$$40 + 2 \rightarrow 42$$

$$42 + 1 \rightarrow 43$$

$$43 + 2 \rightarrow 45$$

$$45 + 2 \rightarrow 46$$

Hence, the correct answer is 46.

40. Answer: b

Explanation:

The logic followed is:

Second number = First number + 3

Third number = First number + 6

(16, 19, 22) → (16, 16 + 3, 16 + 6)

(18, 21, 25) → (18, 18 + 3, 18 + 7)

(17, 20, 23) → (17, 17 + 3, 17 + 6)

(21, 24, 27) → (21, 21 + 3, 21 + 6)

Hence, (18, 21, 25) is the odd one out.

41. Answer: b

Explanation:

Given equation: $17 - 20 + 5 \times 30 \div 4 = ?$

Sign	÷	-	+	×
Code	+	×	÷	-

After replacing the symbols with their meaning, we get:-

New equation → $17 \times 20 \div 5 - 30 + 4$

Now, after applying BODMAS Rule, we get:-

$$17 \times \underline{20} \div \underline{5} - 30 + 4$$

$$\underline{17} \times \underline{4} - 30 + 4$$

$$\underline{68} - 30 + \underline{4}$$

$$72 - 30 = 42$$

Hence, the correct answer is "42".

42. Answer: a

Explanation:

Given equation: $16 \times 4 - 10 + 10 \div 6 = 54$

After interchanging the signs:

1) $\div$ and $\times \rightarrow 16 \div 4 - 10 + 10 \times 6 = 54$

2) $\times$ and $- \rightarrow 16 - 4 \times 10 + 10 \div 6 = -22.33 \neq 54$

3) $\div$ and $- \rightarrow 16 \times 4 \div 10 + 10 - 6 = 10.4 \neq 54$

4) $-$ and $+$ $\rightarrow 16 \times 4 + 10 - 10 \div 6 = 72.33 \neq 54$

Hence, ' $\div$ and $\times$ ' is the correct answer.

43. Answer: b

Explanation:

The logic followed is:

$$9 \& 4 = (9 - 4) \times 10 = 50$$

$$3 \& 7 = (3 - 7) \times 10 = -40$$

$$7 \& 5 = (7 - 5) \times 10 = 20$$

$$4 \& 5 = (4 - 5) \times 10 = -10$$

Hence, the correct answer is -10.

44. Answer: d

Explanation:

The logic followed is:

The letters are increased by 2 as in alphabetical series, starting from the first letter.

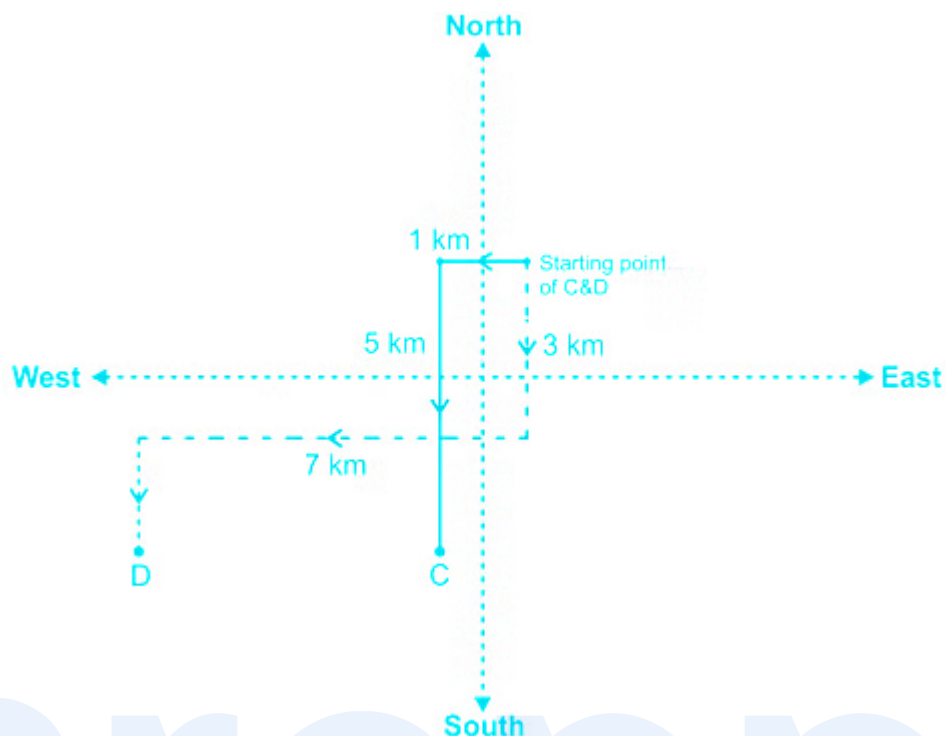
PQPQPQPQ, RQPQPQPQ, RSPQPQPQ, RSRQPQPQ, RSRSPQPQ, RSRSRQPQ.

Hence, the correct answer is RSRSRQPQ.

45. Answer: c

Explanation:

The route taken by C is shown in definite lines and route taken by D is shown in dashed lines.



Hence, C is 6 east of D.

46. Answer: a

Explanation:

The least possible venn diagram is as follows,



Conclusion I: Some cells are chargers → True.

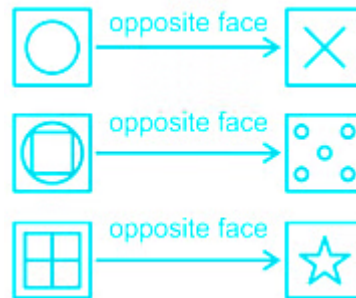
Conclusion II: All chargers are cells → False (It is possible but not definite)

Hence, only conclusion I follows.

47. Answer: c

49. Answer: a

Explanation:



In option 1 the opposite faces are adjacent to each other which is not possible.

Hence, option 1) is the correct answer.

50. Answer: a

Explanation:

1) 13,86,77,97 → G,Y,R,O

2) 13,57,24,77 → G,P,A,R

3) 10,65,42,79 → M,S,K,Q

4) 20,56,13,75 → H,X,G,S

Hence, 13,86,77,97 represent GYRO.

51. Answer: c

Explanation:

$$3/4 = 0.75$$

$$5/12 = 0.41$$

$$13/16 = 0.8125$$

$$16/29 = 0.55$$

$$3/8 = 0.375$$

So, the decreasing order is $13/16 > 3/4 > 16/29 > 5/12 > 3/8$

52. Answer: c

Explanation:

$$\text{Factors of } 39 = 3 \times 13$$

$$\text{Factors of } 87 = 3 \times 29$$

$$\text{Factors of } 79 = 1 \times 79$$

$$\text{Factors of } 93 = 3 \times 31$$

$$\text{So, the prime no.} = 79$$

53. Answer: c

Explanation:

$$\Rightarrow x = \frac{4}{2\sqrt{3}+3\sqrt{2}} \times \frac{2\sqrt{3}-3\sqrt{2}}{2\sqrt{3}-3\sqrt{2}}$$

$$\Rightarrow x = \frac{8\sqrt{3}-12\sqrt{2}}{12-18}$$

$$\Rightarrow x = \frac{8\sqrt{3}-12\sqrt{2}}{-6}$$

$$\Rightarrow \frac{1}{x} = \frac{2\sqrt{3}+3\sqrt{2}}{4}$$

$$\Rightarrow x + \frac{1}{x} = \frac{8\sqrt{3}-12\sqrt{2}}{-6} + \frac{2\sqrt{3}+3\sqrt{2}}{4}$$

$$\Rightarrow x + \frac{1}{x} = \frac{2\sqrt{3}+3\sqrt{2}}{4} - \frac{(8\sqrt{3}-12\sqrt{2})}{6}$$

$$\Rightarrow x + \frac{1}{x} = \frac{6\sqrt{3}+9\sqrt{2}-(16\sqrt{3}-24\sqrt{2})}{12}$$

$$\Rightarrow x + \frac{1}{x} = \frac{6\sqrt{3}+9\sqrt{2}-16\sqrt{3}+24\sqrt{2}}{12}$$

$$\Rightarrow x + \frac{1}{x} = \frac{-10\sqrt{3}+33\sqrt{2}}{12}$$

$$\Rightarrow x + \frac{1}{x} = \frac{-(10\sqrt{3}-33\sqrt{2})}{12}$$

54. Answer: a

Explanation:

$$4y - 6x + 9 = 0 \quad \text{-----(1)}$$

$$\text{Equation of perpendicular line } x \cos a + y \sin a = P \quad \text{-----(2)}$$

Comparing eq. (1) and (2)

$$\cos a = -6 \text{ and } \sin a = 4 \text{ and } P = -9$$

$$\text{Slope, } m = \tan a = \sin a / \cos a = -4/6 = -2/3$$

Alternate method:

$$4y - 6x + 9 = 0$$

$$\Rightarrow y = 3x/2 + 9/4$$

Comparing it with $y = mx + c$

$$m = 3/2$$

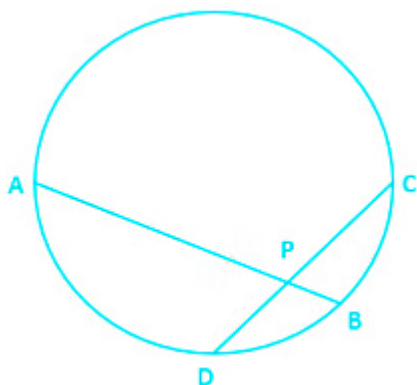
Slope of perpendicular lines

$$m_1 m_2 = -1 \quad \text{where } m_1 = 3/2$$

$$\Rightarrow m_2 = -2/3$$

55. Answer: d

Explanation:



According to the theorem,

$$AP \times BP = CP \times PD$$

$$\Rightarrow AP \times 4 = 8 \times 5$$

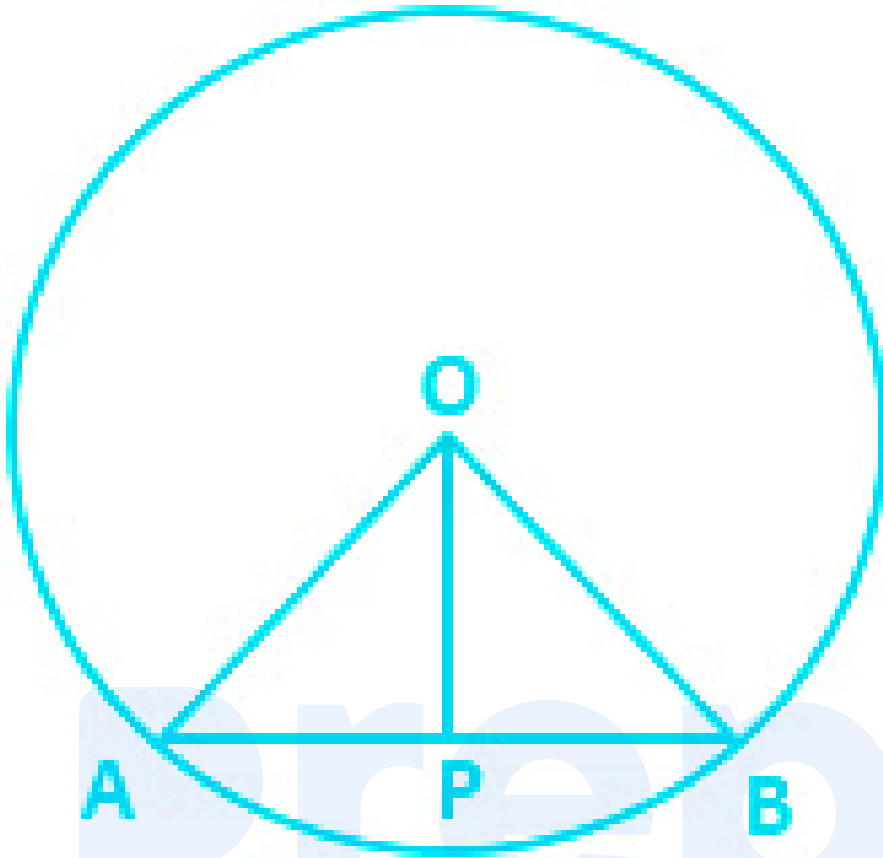
$$\Rightarrow AP = 10$$

$$\therefore \text{Chord AB} = AP + BP = 10 + 4 = 14 \text{ cm}$$

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56. Answer: d

Explanation:



In triangle AOP,

$$(AO)^2 = (AP)^2 + (OP)^2$$

$$\Rightarrow (AO)^2 = (3)^2 + (4)^2 = 9 + 16 = 25$$

$$\Rightarrow AO = 5 \text{ cm} = \text{radius}$$

$$\therefore \text{Area of the circle} = \pi r^2 = \frac{22}{7} \times 5 \times 5 = \frac{550}{7} = 78.5 \text{ cm}^2$$

57. Answer: a

Explanation:

Concept used:

$$\text{Savings} = \text{Income} - \text{Expenditure}$$

Calculation:

$$\text{Savings} = 60000 - 40000 = 20000$$

$$\text{New income} = 120\% \text{ of } 60000 = 72000$$

$$\text{New Expenditure} = 115\% \text{ of } 40000 = 46000$$

$$\text{New savings} = 72000 - 46000 = 26000$$

$$\% \text{ increment in savings} = (26000 - 20000)/20000 \times 100$$

$$\therefore \% \text{ increment in savings} = 6000/20000 \times 100 = 30\%$$

58. Answer: d

Explanation:

$$u : v : w = 3 : 6 : 8$$

$$\text{Ratio of } (u/v) : (v/w) : (w/u) = (3/6) : (6/8) : (8/3) = (1/2) : (3/4) : (8/3)$$

$$\Rightarrow (1/2) \times 12 : (3/4) \times 12 : (8/3) \times 12 = 6 : 9 : 32$$

59. Answer: b

Explanation:

Let Puneet lent Rs. a at 5% and Rs. $(30000 - a)$ at 9% interest

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

$$\Rightarrow (30000 \times 6 \times 1)/100 = (a \times 5 \times 1)/100 + ((30000 - a) \times 9 \times 1)/100$$

$$\Rightarrow 30000 \times 6 \times 1 = a \times 5 \times 1 + (30000 - a) \times 9 \times 1$$

$$\Rightarrow 180000 = 5a + 270000 - 9a$$

$$\Rightarrow 4a = 270000 - 180000$$

$$\Rightarrow 4a = 90000$$

$$\Rightarrow a = 22500$$

$$\therefore 30000 - a = 30000 - 22500 = 7500$$

60. Answer: c

Explanation:

Short Trick:

Average of 19 boys is 56.

$\therefore$ Highest and lowest marks is 56.

$$\Rightarrow \text{Sum of highest and lowest marks} = 56 + 56 = 112$$

Since average is decreased by 2 when highest and lowest marks are removed.

$$\Rightarrow \text{Number of boys after removing highest and lowest marks} = 19 - 2 = 17$$

$$\Rightarrow \text{Actual sum of highest and lowest marks} = 112 + 2 \times 17 = 112 + 34 = 146$$

$$\Rightarrow \text{Average of highest and lowest marks} = 146/2 = 73$$

Detailed Solution:

$$\text{Total marks obtained by 19 students} = 19 \times 56 = 1064$$

$$\text{Total marks of 17 students after removing highest and lowest marks} = 17 \times (56 - 2) = 918$$

$$\text{Sum of highest and lowest marks} = 1064 - 918 = 146$$

$$\therefore \text{Average of highest and lowest marks} = 146 \div 2 = 73$$

61. Answer: a

Explanation:

$$\text{S.I} = \text{Amount} - \text{Principal} = 8000 - 5000 = 3000$$

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

$$\Rightarrow 3000 = (5000 \times R \times 3)/100$$

$$\Rightarrow R = 1000/50 = 20\% = 1/5$$

$$\therefore \text{Amount after 3 years (at C.I.)} = 5000 \times 6/5 \times 6/5 \times 6/5 = 8640$$

62. Answer: d

Explanation:

Let the shopkeeper sells 1000 gm of wheat at Rs. 1000.

$$\text{S.P of wheat} = 120\% \text{ of C.P} = 1000 \times 120/100 = 1200$$

Shopkeeper weight is 10% less, so C.P of 900gm wheat = Rs. 900

$$\text{Profit of shopkeeper} = 1200 - 900 = \text{Rs. } 300$$

$$\therefore \text{Profit\%} = 300/900 \times 100 = 33.33\%$$

63. Answer: d

Explanation:

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

$$\Rightarrow 10800 \times (100 - 45)/100 = \text{S.P.}$$

$$\Rightarrow 10800 \times 55/100 = \text{S.P.}$$

$$\therefore \text{S.P.} = 108 \times 55 = 5940$$

64. Answer: c

Explanation:

Checking 1st Statement $(\sqrt{11} + \sqrt{2}) > (\sqrt{8} + \sqrt{5})$

If a no. is greater than another no. then its square is also greater than another no.
On squaring the given statements

$$\Rightarrow (\sqrt{11} + \sqrt{2})^2 > (\sqrt{8} + \sqrt{5})^2 = (\sqrt{11})^2 + (\sqrt{2})^2 + 2 \times \sqrt{11} \times \sqrt{2} > (\sqrt{8})^2 + (\sqrt{5})^2 + 2 \times \sqrt{8} \times \sqrt{5}$$

$$\Rightarrow 11 + 2 + 2 \times \sqrt{11} \times \sqrt{2} > 8 + 5 + 2 \times \sqrt{8} \times \sqrt{5} = 13 + 2\sqrt{22} > 13 + 2\sqrt{40}$$

Condition of 1st Statement is false.

Checking 2nd Statement $(\sqrt{10} + \sqrt{3}) > (\sqrt{7} + \sqrt{6})$

On squaring the given statements

$$(\sqrt{10} + \sqrt{3})^2 > (\sqrt{7} + \sqrt{6})^2 = (\sqrt{10})^2 + (\sqrt{3})^2 + 2 \times \sqrt{10} \times \sqrt{3} > (\sqrt{7})^2 + (\sqrt{6})^2 + 2 \times \sqrt{7} \times \sqrt{6}$$

$$\Rightarrow 10 + 3 + 2 \times \sqrt{30} > 7 + 6 + 2 \times \sqrt{42} = 13 + 2\sqrt{30} > 13 + 2\sqrt{42}$$

Condition of 2nd Statement is false.

So the answer is Neither I nor II.

65. Answer: b

Explanation:

Let No. of girls are G and total work is W.

$$(M_1 \times D_1)/W_1 = (M_2 \times D_2)/W_2$$

$$\Rightarrow (G \times 18)/W = (2G \times D_2)/3W$$

$$\Rightarrow (1 \times 18)/1 = (2 \times D_2)/3$$

$$\therefore D_2 = 18 \times 3/2 = 27 \text{ days}$$

66. Answer: c

Explanation:

Let the speed of fast train is S_f and speed of slow train is S_s .

$$\Rightarrow S_f - S_s = (\text{Length of fast train})/\text{Time}$$

$$\Rightarrow 5/18 \times (50 - 24) = (\text{Length of fast train})/72$$

$$\Rightarrow 5/18 \times 26 \times 72 = \text{Length of fast train}$$

$$\therefore \text{Length of fast train} = 520 \text{ m}$$

67. Answer: b

Explanation:

Average price of a car = 5 lakhs

Total car sold in a month = Car sold of brand (A + B + C + D + E + F + G)

$$\Rightarrow \text{Total car sold in a month} = 200 + 260 + 340 + 100 + 280 + 200 + 220 = 1600$$

$$\therefore \text{Total car sales in a month} = 1600 \times 5 = 8000$$

68. Answer: d

Explanation:

$\therefore$ Units sold of brand D was lesser than that of brand F by $= (200 - 100)/200 \times 100 = 50\%$

69. Answer: d

Explanation:

$\therefore$ Ratio of units sold of brand G to that of brand E $= 220 : 280 = 11 : 14$

70. Answer: a

Explanation:

340 is the highest units sold of Car C

So 280 is the second highest units sold of Car E.

71. Answer: c

Explanation:

$L = 20$ cm, $D = 29$ cm and $B = ?$

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

$$\Rightarrow 29^2 = 20^2 + B^2$$

$$\Rightarrow B^2 = 841 - 400$$

$$\Rightarrow B^2 = 441$$

$$\Rightarrow B = 21$$

72. Answer: c

Explanation:

Detailed solution:-

Number of sides = N

Sum of interior angles = $(N - 2) \times 180$

$$\Rightarrow 720 = 180N - 360$$

$$\Rightarrow 720 + 360 = 180N$$

$$\Rightarrow 180N = 1080$$

$$\Rightarrow N = 6$$

$\therefore$ The required answer is 6.

73. Answer: c

Explanation:

Given:-

A cube of side 4.5 cm.

Formula used:-

Volume of cube = $(\text{side})^3$

Calculation:-

$$\text{Volume of cube} = (\text{side})^3 = 4.5^3$$

$$\therefore \text{Volume of cube} = 91.125 \text{ cm}^3$$

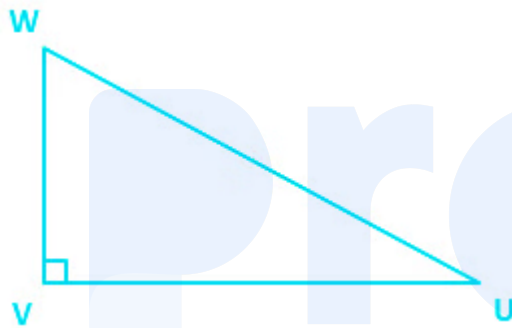
74. Answer: d

Explanation:

$$\Rightarrow 2 - \tan 60^\circ = 2 - \sqrt{3}$$

75. Answer: d

Explanation:



$$\sin U = 24/25 = VW/UW$$

$$\therefore \cos W = VW/UW = 24/25$$

76. Answer: a

Explanation:

The expanded form of the term LIBOR is: London Inter-Bank Offered Rate.

- The average interest rate roughly calculated by leading banks in London which they would pay if they borrow from other banks is called as LIBOR.
- It was earlier known as BBA Libor whose full form was British Bankers' Association Libor.
- These rates are calculated for five currencies and published every day by Thomson Reuters.

77. Answer: c

Explanation:

An official who holds the rank of a Cabinet Minister holds the post of Deputy Chairman of the Planning Commission.

- The Planning commission was set up in March 1950 by a Resolution of Government of India.
- It makes an assessment and balanced utilization of all resources of the country.
- The Prime Minister is the ex- officio Chairman of the Planning Commission.
- Montek Singh Ahluwalia, was the last deputy chairman of the commission, resigned on May 26, 2014.

78. Answer: c

Explanation:

- Ghari was initiated by the Alauddin Khilji. Ghari was a house tax which was imposed by him on the people of his reign.
- Kharaj was a tax imposed by Firozshah Tughlaq on total production of lands which belonged to Non - Muslims.
- Zakat was a religious tax which was imposed on Muslims.
- In Kankut, the entire land was measured by pacing it and the crops were roughly calculated by inspection.

79. Answer: b

Explanation:

The correct answer is option 2 i.e East India Association.

- **East India Association** was established outside India.
 - It was formed by some Indian students in London in 1866.
 - It was initiated by Dadabhai Naoroji.
 - It was among the former organizations of the Indian National Congress.
- **The Indian Association:**
 - It was the first avowed nationalist organization founded in British India by Surendranath Banerjee and Ananda Mohan Bose in 1876
- **Bengal-British India Society:**
 - It was founded in Calcutta in 1843.
- **India League :**
 - The India League originally was a Britain-based organisation whose aim was to campaign for the full independence and self-governance of India.
 - It was formally established in 1928 by Krishna Menon.

80. Answer: c

Explanation:

- Mount Black is NOT an example of a volcanic mountain.
- Mount Black is a well-known mountain in Antarctica.
- It is 3,005 meters high.

81. Answer: b

Explanation:

Cardamom Hills situated in the southernmost part of India.

- The Cardamom Hills, also known as Yela Mala, are mountain range located in western ghats.
- They draw a border between Kerala and Tamil Nadu.

82. Answer: c

Explanation:

- Chhau of Mayurbhanj is a war-related dance.
 - It originated from the forests of Mayurbhanj (a district in Odisha) in the 18th century.
 - The status of a martial art form was given to it in the 19th century.
-

83. Answer: a

Explanation:

World's longest glass bridge that was opened for the public on December 24, 2017, is located in Hebei, China.

- It is 488-meter long glass footpath.
 - The bridge is designed to hold 3,000 people.
-

84. Answer: c

Explanation:

Maha Chakri Sirindhorn is a recipient of first World Sanskrit Award.

- Born in 1955, she is the Princess of Thailand.
 - She was honoured with this award for her contribution towards the promotion of languages for the year 2015.
 - She is a well-known educator and scholar of Sanskrit and Pali.
 - World Sanskrit Award was instituted by the Indian Council for Cultural Relations (ICCR).
-

85. Answer: a

Explanation:

The correct answer is option a i.e Shaanxi.

- Shaanxi has the largest production of coal in China.
 - China ranks first among the biggest producer of coal in the world in 2018.
 - India ranks second among the biggest producer of coal in the world in 2018.

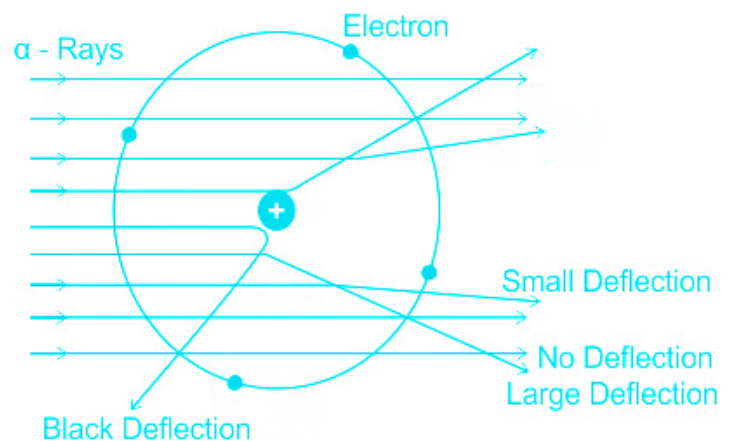
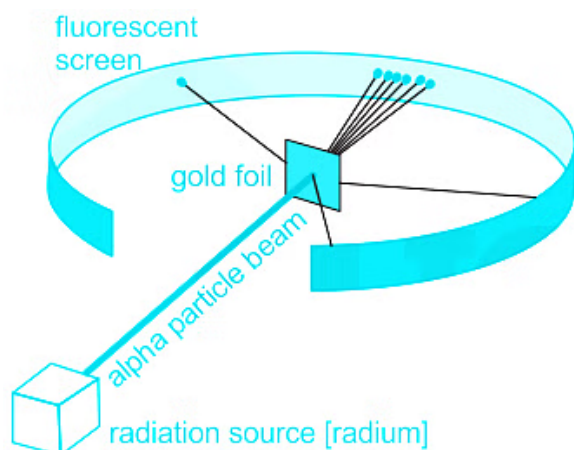
86. Answer: b

Explanation:

Concepts :

- The nucleus of an atom is positively charged.
- It comprises of neutrons and protons.
- Rutherford is known for his Alpha Scattering Experiment.
- So, cathode rays have both mass and charge.

According to Rutherford the radius of the nucleus is about 10^5 times lesser than the radius of the atom.



★ Additional Information

John Dalton

- raised the atomic theory that acted as an explanation of the following two laws .

Law of conservation of mass –

- According to the law, mass can neither be destroyed nor created in any chemical reaction.

Law of constant proportion/ definite proportion –

- The laws state that in a chemical substance, the elements are always present in certain proportions by mass .
- For example :
 - Oxygen & Hydrogen are present in water in a ratio of 8:1 .
 - So we will obtain 1g of hydrogen and 8g of oxygen if we decompose 9g of water .

Atom:

- An atom is the smallest invisible unit of matter that constitutes a chemical element.
- Every plasma, solid, gas & liquid, is composed of ionized or neutral atoms .
- Around 100 picometers across, atoms are extremely small.
- Atomic theory:
 - John Dalton discovered the atomic theory.
 - As per the theory, all matter whether it is a mixture, compound, or element, consists of invisible particles called 'atoms'.

87. Answer: d

Explanation:

Ionic compounds have a high boiling point, have a high melting point and conduct electricity in solution.

- The compounds which are made up of ions are called as ionic compounds.
- Atoms lose or gain electrons and develop a net positive or negative charge to form an ion.

88. Answer: c

Explanation:

Speaker of Lok Sabha is the principal spokesman of the Lok Sabha.

- He/she is the presiding officer of the Lok Sabha who serves for a period of five years.
- He/she is chosen from among the members of the Lok Sabha.
- Sumitra Mahajan of the Bharatiya Janata Party is the current Lok Sabha Speaker.

89. Answer: a

Explanation:

The correct answer is option i.e Question hour.

- In India, the first hour of every Parliamentary sitting is allotted for Question Hour.
 - In this hour, the Members of the Parliament raise questions related to the activity of the Administration.

Types Of Questions during Question Hour	Method of Answer
Starred	Oral reply
Non- starred	Written reply

- **Zero hour**

- Zero Hour is a 30 minute's session wherein a member gets three minutes to raise the issue.
- Moreover, a member is allowed to make only one Zero Hour request during a week.
- Unlike the Question Hour, it is not mentioned in the Rules of Procedure.

90. Answer: a

Explanation:

<u>Digestive Input</u>	<u>Output</u>
Proteins	Amino acids
Carbohydrates	Glucose
Fats	Glycerol

- The large biomolecules consisting of one or more long chains of amino acid residues is called as Protein.

- A biomolecule consisting of carbon, hydrogen and oxygen atoms with an atom ratio of the hydrogen-oxygen atom as 2 : 1, is called as Carbohydrate.
- Also known as triglycerides, Fats are esters of three fatty acid chains and the alcohol glycerol.

★ Additional Information

Proteins

- The Proteins is a Polypeptide bond which is a sequence of amino acid.
- The end product of protein digestion is amino acids.
- Proteins are digested and broken down into amino acids with the help of enzymes.
- Amino acids are very small, they are able to be absorbed through the small intestine lining and into your bloodstream.

Carbohydrates

- Carbohydrates are the small repeating units of Monosaccharides.
- The end product of the digestion of Carbohydrates is Monosaccharides.
- A monosaccharide is a simple sugar such as fructose or glucose .
- The monosaccharides are absorbed into the bloodstream and delivered to the liver.
- It is used for energy for cell functioning.

Nucleic acids

- A nucleic acid is an organic compound such as DNA or RNA that is built of small units called nucleotides.
- Many nucleotides bind together to form a chain called a polynucleotide.
- The nucleic acid DNA (deoxyribonucleic acid) consists of two polynucleotide chains .
- The nucleic acid RNA (ribonucleic acid) consists of just one polynucleotide chain .
- The products of digestion of nucleic acid are pentose sugars, nitrogenous bases and phosphate ions.

- These products are transported by carriers across the villus epithelium and then enter into bloodstreams.

Lipids

- A lipid is an organic compound such as fat or oil.
- Organisms use lipids to store energy.
- Lipids consist of repeating units called fatty acids.
- The products of digestion of Lipids are Fatty acid and glycerol.

91. Answer: c

Explanation:

- J.E Purkinje coined the term 'protoplasm' for the fluid substance of the cell.
- He coined the term 'protoplasm' in 1839.
- The living content of a cell that is surrounded by a plasma membrane is called the Protoplasm.
- It is composed of a mixture of small molecules such as ions, amino acids, monosaccharides and water, and macromolecules such as nucleic acids, proteins, lipids, and polysaccharides.

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92. Answer: a

Explanation:

- Under Aajeevika Grameen Express Yojana (AGEY) launched in Aug 2017, the beneficiary will be provided an interest-free loan up to Rs 6.50 lakh for purchase of the vehicle.
- The Government of India launched this scheme as a part of the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM).
- Safe, affordable and community supervised rural transport services like e-rickshaws, 3 and 4 wheeler transport vehicles to connect remote villages, is the objective of this scheme.

93. Answer: d

Explanation:

As of 2017, the Scientists of Massachusetts Institute of Technology (MIT) have found a way to induce plants to give off dim light to plants by embedding luciferase enzyme.

- The vision behind this invention was to make plants function as a desk lamp which is not powered by electricity but by the energy metabolism of the plant itself.

94. Answer: b

Explanation:

- In September 2017, RBI has capped bank investments in private equity fund at 10 percent of paid-up capital.
- Under the guidelines issued by RBI, now the banking subsidiaries which make investments in private equity above 10% of the capital would have to look for the approval from the banking regulator.

95. Answer: c

Explanation:

- On 2 January 2018, Parliament passed NABARD (Amendment) Bill, 2017 which seeks to amend NABARD Act, 1981.
- NABARD stands for National Bank for Agriculture and Rural Development.
- Under this Bill, NABARD will provide and regulate facilities like credit for industrial development and agricultural in the rural areas.

96. Answer: c

Explanation:

Due to an acceleration of 1 m/s^2 the velocity of a body increases from 15 m/s to 20 m/s in a certain period. The displacement of the body in that period is 87.5 m .

Formula for displacement

$$S = ut + \frac{1}{2}at^2 \quad (\text{Where } u = \text{initial velocity } 15 \text{ m/s}, a = \text{acceleration } 1 \text{ m/s}^2, \text{ time taken})$$

Formula for time

$$t = \frac{v-u}{a} \quad (\text{where } v = \text{final velocity } 20 \text{ m/s}).$$

For finding time:

$$t = \frac{(20-15)}{1} = 5 \text{ seconds}$$

For finding displacement

$$\begin{aligned} S &= 15 \times 5 + \frac{1}{2} \times 1 \times 5 \times 5 \\ &= 87.5 \text{ m} \end{aligned}$$

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97. Answer: d

Explanation:

The gravitational force of attraction between two bodies is directly proportional to the product of their masses.

It is also inversely proportional to the square of the distance between them.

$$F = G (m_1 m_2 / r^2)$$

Where F is the force between the masses;

- G is the gravitational constant ($6.674 \times 10^{-11} \text{ N} \cdot (\text{m}/\text{kg})^2$);
 - m_1 is the first mass;
 - m_2 is the second mass;
 - r is the distance between the centers of the masses.
-

98. Answer: b

Explanation:

The boundaries of the plates of the earth's crust are the weak zones known as seismic zones.

- The boundaries of the earth's plate are weak zones. Here earthquakes are more likely to occur.

These weak zones are called seismic or fault zones.

- Seismic or fault zones of India: In India, most of the threatened areas are:
 - Kashmir
 - Western and central Himalayas
 - The whole of North-East
 - Rann of Kutch
 - Indo-Gangetic Plain.
 - Some areas of south India.
-

99. Answer: a

Explanation:

- Grigor Dimitrov won the Tennis 2017 ATP World Tour Finals Men's Singles.
- In 2017, Rohit Sharma captained the IPL team Mumbai Indians.
- Grigor Dimitrov (a Bulgarian tennis player) won the title by defeating David Goffin (a Belgian tennis player) in the final.

- Rohit Sharma in 2017 captained the IPL team, Mumbai Indians, which was founded in 2008 and is owned by Reliance Industries.
-

100. **Answer: c**

Explanation:

- Computer networks are connected by telephones, underwater cables, and satellites.
- A set of computers connected together for the purpose of data sharing is called as Computer Network.

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