



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 (22-Mar-2018) (Shift 1)

Total Time: 1 Hour

Total Marks: 200

Instructions

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

- 1.) A total of 60 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

English Language

1. 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. expansion
- b. patronag
- c. conctituet
- d. presipitat

-
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)

In physically

A- fit people, calorie restriction

B- and periodic fasting slows

C- down the ageing process

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

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

Data of seizure of tiger body parts reveal that of the 14 cases, five (was reported) inside their serves.

- a. Was reports
- b. Were reported
- c. Is reported
- 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)

A simple glance at one's garden (uplifted) the mood.

- a. Uplift
- b. Uplifts
- c. Uplifting
- 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)

Exercising a compelling charm which inspires devotion in others

- a. Vile
- b. Charismatic
- c. Offensive

d. Odious

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)

A person who is intolerant towards those holding different opinions

- a. Clement
 - b. Magnanimous
 - c. Complaisant
 - d. Bigot
-

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)

Let bygones be bygones

- a. Even bad memories become memorable.
 - b. The past will return to haunt you unless you completely forget.
 - c. Forget past offences or causes of conflict and be reconciled.
 - d. Your past deeds will never leave you.
-

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

Come in handy

- a. Be that type of a person who loves to work with his hands.

- b. Turn out to be useful.
- c. Always be ready to help strangers in need.
- d. Be always prepared for any kind of hardship.

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)

Teachers _____ the country require proper training at the appropriate time in their careers. On account of the unique occupational dynamic, together _____ the constant pressure to address the growing expectations of society and the _____ of teaching pedagogy, teachers need to be engaged in continual re-examination of their role. This cannot be achieved unless they incorporate the subjects as varied _____ applied ethics, human psychology, spirituality, _____ values, peace studies, and organisational behaviour.

spirituality, _____ values, peace studies, and organisational behaviour.

- a. Democracy
- b. Democrat
- c. Democrats
- d. Democratic

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)

Teachers _____ the country require proper training at the appropriate time in their careers. On account of the unique occupational dynamic, together _____ the constant pressure to address the growing expectations of society and the _____ of teaching pedagogy, teachers need to be engaged in continual re- examination of their role. This cannot be achieved unless they incorporate the subjects as varied _____ applied ethics, human psychology, spirituality, _____ values, peace studies, and organisational behaviour.

subjects as varied _____ applied ethics,

- a. As
- b. Like
- c. Same
- d. Such

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)

Teachers _____ the country require proper training at the appropriate time in their careers. On account of the unique occupational dynamic, together _____ the constant pressure to address the growing expectations of society and the _____ of teaching pedagogy, teachers need to be engaged in continual re- examination of their role. This cannot be achieved unless they incorporate the subjects as varied _____ applied ethics, human psychology, spirituality, _____ values, peace studies, and organisational behaviour.

society and the _____ of teaching pedagogy,

- a. Effective

- b. Effectively
- c. Effectiveness
- d. Effectives

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)

Teachers _____ the country require proper training at the appropriate time in their careers. On account of the unique occupational dynamic, together _____ the constant pressure to address the growing expectations of society and the _____ of teaching pedagogy, teachers need to be engaged in continual re- examination of their role. This cannot be achieved unless they incorporate the subjects as varied _____ applied ethics, human psychology, spirituality, _____ values, peace studies, and organisational behaviour.

dynamic, together _____ the constant pressure

- a. At
- b. From
- c. Into
- d. With

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)

Teachers _____ the country require proper training at the appropriate time in their careers. On account of the unique occupational dynamic, together _____ the constant pressure to address the

growing expectations of society and the _____ of teaching pedagogy, teachers need to be engaged in continual re- examination of their role. This cannot be achieved unless they incorporate the subjects as varied _____ applied ethics, human psychology, spirituality, _____ values, peace studies, and organisational behaviour.

Teachers _____ the country require proper training

- a. Cross
- b. Over
- c. Beyond
- d. Across

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. Maineveer
- b. Maneuver
- c. Maneover
- d. Manever

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)

"Bring me a glass of water," said the saint to his followers.

- a. The saint asked his followers to bring him a glass of water.
- b. The saint asked for a glass of water.

- c. The saint wanted a glass of water from his followers.
 - d. The saint asked his followers to brought him a glass of water.
-

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)

Somebody hit the beggar with a stone.

- a. The beggar was hit with a stone.
 - b. The beggar was hurt by a stone.
 - c. The beggar is hit by a stone.
 - d. The beggar hit with a stone.
-

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

The debate

P : on allowing euthanasia to

Q : protect the dignity of patients in a

R : vegetative state has become a key question

- a. PRQ
 - b. RPQ
 - c. QRP
 - d. PQR
-

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

Anile

- a. Senile
 - b. Young
 - c. Foolish
 - d. Soft
-

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)

Thwart

- a. Stop
 - b. Hinder
 - c. Balk
 - d. Assist
-

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)

Insolent

- a. Shy
- b. Sorrowful

c. Happy

d. Rude

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)

Supercilious

a. Modest

b. Sociable

c. Arrogant

d. Rational

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)

The purpose of life is not to simply survive, but to discover _____ fulfillment.

a. Inner

b. Outer

c. Outmost

d. Top

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 (+2, -0.5)

indicate it by selecting the appropriate option.

I _____ successful, I just know it.

- a. Would be
- b. Will be
- c. May be
- d. Can be

-
24. In the following question, some parts of the sentence may have errors. (+2, -0.5)
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'.

Nivedita's love for everything Indian (1)/ was eloquently demonstrated in her serve of tea to Lady Minto, (2)/ who was on a visit to the Dakshineswar temple. (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 (+2, -0.5)
out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

The Taj Mahal can be (1)/ called jewel (2)/ of the nation. (3)/ No error

- 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)

Death : Birth :: ? : ?

- a. Up : Slow
- b. Win : Match
- c. Export : Import
- d. Huge : Wide

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

44 : 47 :: 58 : ?

- a. 61
- b. 63
- c. 65
- d. 59

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

NOS : PQU :: KLP : ?

- a. LNS

- b. MNO
 - c. KOR
 - d. MNR
-

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

- a. Rectangle - Perimeter
 - b. Circle - Circumference
 - c. Perimeter - Square
 - d. Triangle - 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. 4 - 16
 - b. 9 - 81
 - c. 6 - 36
 - d. 7 - 47
-

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

- a. BFJN

- b. GKOS
- c. LPQV
- d. MQUY

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

1. Terrible 2. Therefore 3. Theatre 4. Terminal 5. Thankful

- a. 41532
- b. 32415
- c. 12345
- d. 54123

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

7, 11, 15, 19, 23, ?

- a. 29
- b. 30
- c. 27
- d. 31

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)

NVX, LTV, JRT, ?, FNP

- a. GRS
- b. GRP
- c. IPR
- d. HPR

35. Weight of L is one –fourth of the weight of V. Weight of V is twice of the weight of B. Weight of B is half of the weight of C. Weight of C is thrice of the weight of H. The weight of V is greater than the weight of how many persons among L, B, H and C? (+2, -0.5)

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

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

Pseudonym

- a. Son
- b. Does
- c. Pose
- d. Pendulum

37. In a certain code language, " TOLDER " is written as " WSQGIW ". How is " SPIRAL " written in that code language? (+2, -0.5)

- a. NVTQEV
- b. ULQEWM
- c. VTNUEQ
- d. NOLQVW

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

$$10 \times 4 \div 5 - 80 + 16 = ?$$

- a. 3
- b. 31
- c. 16
- d. 12

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

$$16 \div 4 - 50 \times 4 + 18 = 26$$

- a. + and ÷
- b. + and ×
- c. and +

d. $\div$ and $\times$

40. If $38 = -50$, $35 = -20$ and $23 = -10$, then find the value of $91 = ?$ (+2, -0.5)

- a. 10
- b. -20
- c. 90
- d. 80

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

ABCABcaBC, ABCAbcABC, ABCabCABC, ABcaBCABC, AbcABCABC,

- a. ABCABCabC
- b. abCABCABC
- c. ABCABcaBC
- d. ABCAbcABC

42. The following is a map showing a route for a cycle race. The route starts (+2, -0.5)

and goes 12 km East, then there is a turn towards North where the route goes on for 5 km, then there is a turn towards East where the route goes on for 11 km, then there is a right turn from where the route goes on 5 km to reach the end. What is the position of the end with respect to that start?

- a. 1 km East
- b. 23 km East

c. 23 km West

d. 1 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: All icons are drawing.

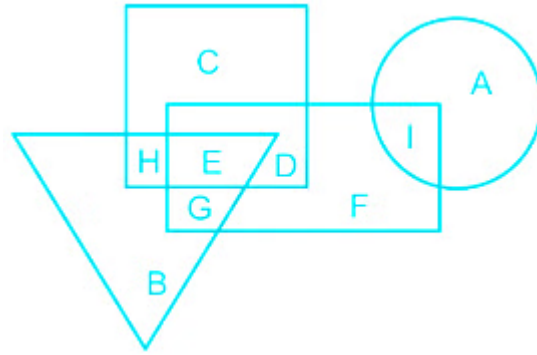
Statement II: No portraits are icons.

Conclusion I: Some drawings are portraits.

Conclusion II: All portraits are drawing.

- 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 Hairstylists, circle represents Food stylists, triangle represents Playwrights and square represents Indians. Which set of letters represents Indians who are not Hairstylists? (+2, -0.5)



- a. ED
- b. HC
- c. GD
- d. GFI

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)

HVJ, NBP, THV, ZNB, ?

- a. ESG
- b. GUI
- c. FTH
- d. HVI

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

13, 17, 26, 42, 67, ?

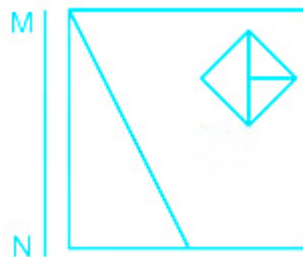
- a. 103

- b. 91
- c. 109
- d. 111

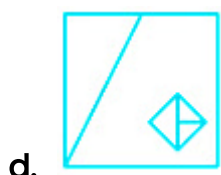
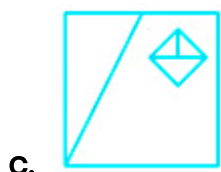
47. In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives (+2, -0.5)

- a. (8, 24, 16)
- b. (3, 9, 6)
- c. (14, 42, 28)
- d. (9, 36, 18)

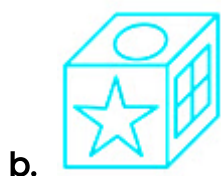
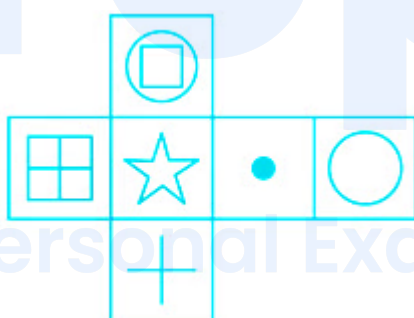
48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure? (+2, -0.5)



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 'C' can be represented by 41, 34 etc and 'Y' can be represented by 67, 78 etc. Similarly, you have to identify the set for the word 'SOWN'. (+2, -0.5)

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

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

a. 21, 55, 40, 86

b. 41, 58, 40, 88

c. 44, 66, 43, 89

d. 95, 68, 65, 97

Quantitative Aptitude

51. The difference between 44 % of a number and 33% of the same number is 286. What is the 54% of that number? (+2, -0.5)

- a. 1564
- b. 1404
- c. 1456
- d. 1304

52. Find the number of zeroes in $129!$ (+2, -0.5)

- a. 31
- b. 33
- c. 35
- d. 37

53. The two lines $3x - 8y = 16$ and $2x + 4y = 6$ intersect at (a, b) . Find the value of $a^2 - 4b^2$. (+2, -0.5)

- a. 5
- b. 10
- c. 15
- d. 20

54. If $a^3 + a - 1 = 0$ then find the value of $a^5 + a^4 + a - 2$. (+2, -0.5)

- a. $-3a^3$
- b. 0
- c. a^3
- d. $-2a^3$

55. Which of the following conditions is correct for a right angled triangle? (+2, -0.5)

- a. Sum of the two angles of a triangle is greater than the third angle
- b. Sum of the two angles of a triangle is less than the third angle
- c. Sum of the two angles of a triangle is equal to the third angle
- d. None of these

56. Which of the following combination of sides results in the formation of obtuse angled triangle? (+2, -0.5)

- a. 11, 7, 13
- b. 5, 6, 8
- c. 4, 5, 6
- d. None of these

57. In an exam, 87% students passed and 2093 failed. What is the total number of students appearing in the exam? (+2, -0.5)

- a. 16100
- b. 14007
- c. 15200
- d. 18200

58. The ratio of present ages of Sheetal and Divya is 6 : 5. After 8 years, their ages will be in the ratio of 22 : 19. What is the present age (in years) of Divya? (+2, -0.5)

- a. 22
- b. 38
- c. 34
- d. 30

59. In a bucket, paint and oil are in the ratio 7 : 5. 24 litres of mixture is drawn off and 24 litres of oil is added. If the ratio of paint and oil becomes 1 : 1, then how many litres of paint was contained in the bucket initially? (+2, -0.5)

- a. 49
- b. 63
- c. 84
- d. 98

60. The average age of Sita and Gita is 30 years. If Rita replaces Sita, then the average age will become 28 years and if Rita replaces Gita, then the (+2, -0.5)

average age will become 32 years. What are the respective ages (in years) of Sita, Gita and Rita?

- a. 40, 44, 36
- b. 44, 40, 36
- c. 34, 26, 30
- d. 30, 26, 34

61. A sum of Rs. 800 becomes Rs. 1000 in 2 years at simple interest. What is the per annum rate of interest (in percent)? (+2, -0.5)

- a. 12.5
- b. 25
- c. 8.5
- d. 17

62. D sells a table to E at a profit of 30% and E sells it to F at a loss of 30%. What is the ratio of cost prices of D and F? (+2, -0.5)

- a. 100 : 91
- b. 100 : 130
- c. 100 : 126
- d. 1 : 1

63. The marked price of a calculator is Rs. 750. It is sold at a discount of 22%. If the cost price of the calculator is Rs. 500, then what is the profit (in Rs.)? (+2, -0.5)

- a. 85
- b. 105
- c. 95
- d. 115

64. If $\sqrt{3} = 1.732$, then what is the value of $\left(\sqrt{3} - \frac{10}{\sqrt{3}} + \sqrt{27}\right)$? (+2, -0.5)

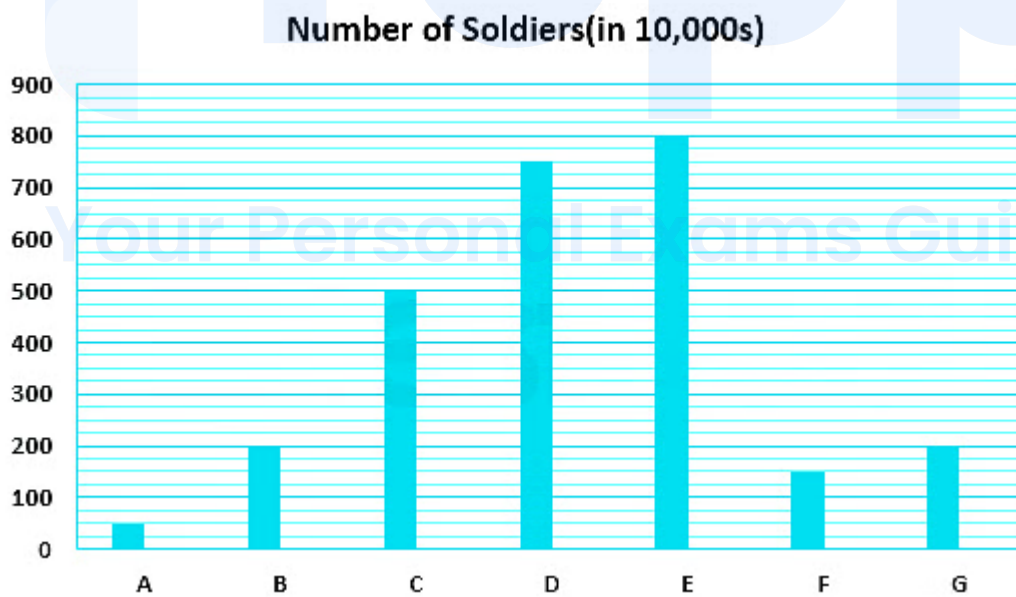
- a. 1.154
- b. 1.577
- c. 1.464
- d. 2.358

65. P, Q and R alone can complete a work in 12, 15 and 20 days respectively. In how many days will they together complete the same work? (+2, -0.5)

- a. 4
- b. 5
- c. 6
- d. 3.5

66. The distance between two cities X and Y is 270 km. First train starts from X at 7:00 a.m. and travels towards Y at 40 km/hr. Second train starts from Y at 8:30 a.m. and travels towards X at 30 km/hr. At what time (in a.m.) will both the trains meet? (+2, -0.5)
- a. 10:00
 - b. 11:00
 - c. 11:30
 - d. 12:30

67. **Direction:** The bar graph shows the number of soldiers in the armies of different countries. Study the diagram and answer the following questions. (+2, -0.5)



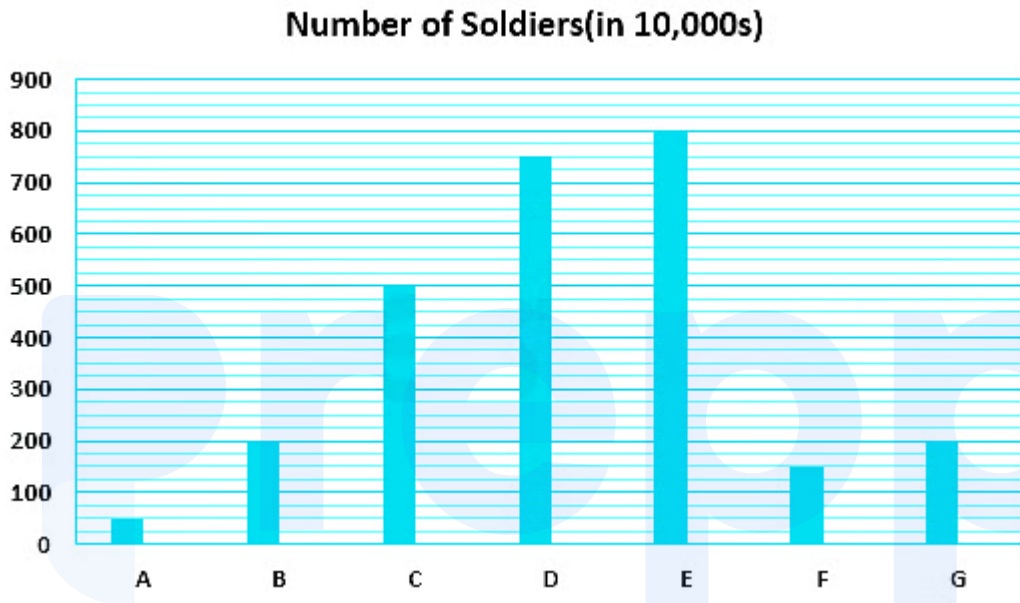
Which country has the least number of soldiers?

- a. A
- b. D

c. F

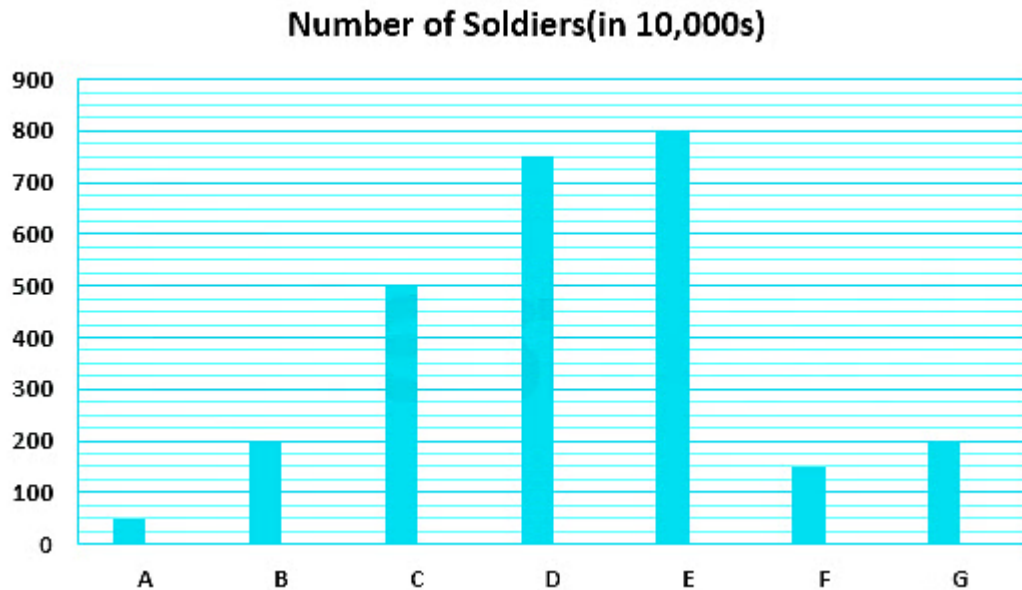
d. B

68. **Direction:** The bar graph shows the number of soldiers in the armies of different countries. Study the diagram and answer the following questions. (+2, -0.5)



What is the ratio of the number of soldiers of country B to those of country D?

- a. 15 : 4
 - b. 8 : 15
 - c. 15 : 8
 - d. 4 : 15
69. **Direction:** The bar graph shows the number of soldiers in the armies of different countries. Study the diagram and answer the following questions. (+2, -0.5)



Number of soldiers of country F is greater than those of country A by

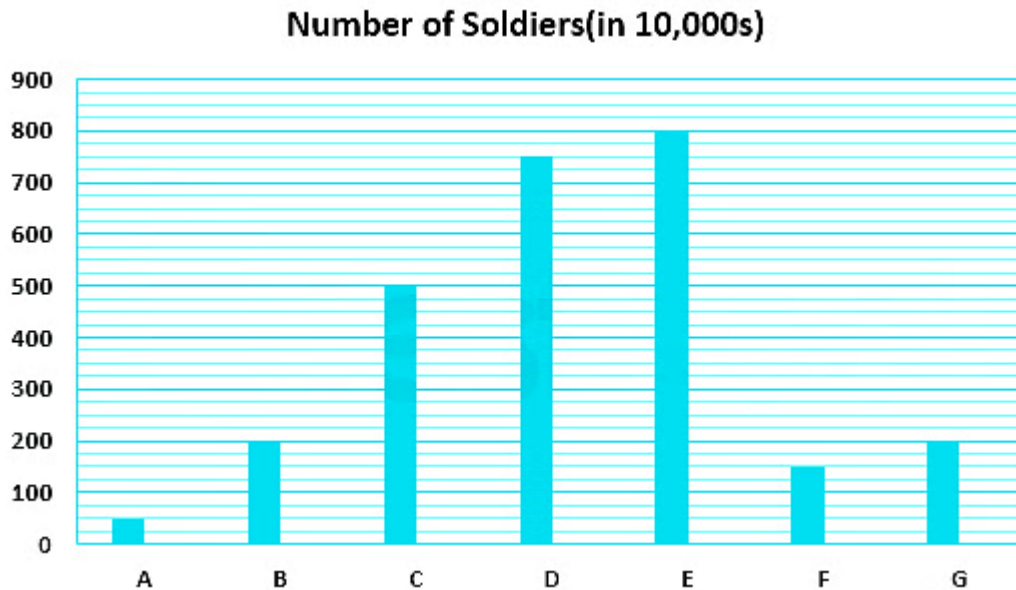
-----.

- a. 50%
- b. 66.7%
- c. 300%
- d. 200%

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70. Direction: The bar graph shows the number of soldiers in the armies of different countries. Study the diagram and answer the following questions.

(+2, -0.5)



If country D spends 20000persoldierannually, thenhowmuchdoesitspend(in millions) on all its soldiers annually?

- a. 12
- b. 13
- c. 15
- d. 17

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71. The perimeter and the breadth of a rectangle are 46 cm and 8 cm respectively. Calculate the length of its diagonal (in cm)

(+2, -0.5)

- a. 17
- b. 34
- c. 15
- d. 30

72. Calculate the area (in cm^2) of a circle whose diameter is 7 cm. (+2, -0.5)

- a. 38.5
- b. 77
- c. 32.5
- d. 65

73. Find the surface area (in cm^2) of a sphere of diameter 28 cm. (+2, -0.5)

- a. 3422
- b. 3852
- c. 2464
- d. 3550

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

- a. 3
- b. $2/\sqrt{3}$
- c. $4/\sqrt{3}$
- d. $2 + \sqrt{3}$

75. ΔXYZ is right angled at Y. If $\sin X = 12/13$, then what is the value of $\operatorname{cosec} Z$? (+2, -0.5)

- a. $5/12$

- b. $5/13$
- c. $13/5$
- d. $13/12$

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General Awareness

76. A worldwide financial messaging network which exchange messages between banks and financial institutions is known as _____. (+2, -0.5)
- a. CHAPS
 - b. SWIFT
 - c. NEFT
 - d. SFMS
-
77. 'Marketing Support and Services Scheme' (in the Eleventh Plan) supports artisans related to _____. (+2, -0.5)
- a. Handicrafts
 - b. Leather goods
 - c. Gems and Jewellery
 - d. Handlooms
-
78. Himalaya has emerged from which of the geosyncline? (+2, -0.5)
- a. Tethys
 - b. Shiwalik
 - c. Indo-brahma
 - d. Godavari
-

79. Trans-himalaya rivers are: _____. (+2, -0.5)

- a. Sutlej, Indus, Ganga
- b. Brahmaputra, Indus, Sutlej
- c. Brahmaputra, Indus, Ganga
- d. Brahmaputra, Sutlej, Ganga

80. Buddha was born in _____. (+2, -0.5)

- a. Vaishali
- b. Lumbini
- c. Kapilavastu
- d. Patliputra

81. The first important ruler to emerge from the Chola Dynasty was _____. (+2, -0.5)

- a. Vijayalaya
- b. Rajaraja Chola
- c. Rajendra Chola
- d. Rajadhiraj Chola

82. V.G. Jog is famous for which musical instrument? (+2, -0.5)

- a. Sitar
- b. Violin
- c. Tabla
- d. Santoor

83. Which company has signed an agreement with UNESCO to launch virtual reality content and 360 degree videos on Indian heritage sites? (+2, -0.5)

- a. Nokia
- b. Sunstar
- c. Samsung
- d. Amazon

84. In which of the following fields Yamuna Krishnan has been awarded with 9th Infosys award on January 10, 2018? (+2, -0.5)

- a. Biological Sciences
- b. Social Science
- c. Physical Sciences
- d. Mathematical Science

85. What is the official language of Nepal? (+2, -0.5)

- a. Bhojpuri

- b. Tharu
 - c. Hindi
 - d. Nepali
-

86. Isotopes of an element have _____. (+2, -0.5)

- a. Same physical properties
 - b. Different chemical properties
 - c. Different number of neutrons
 - d. Different atomic number
-

87. Which of the following statements are **CORRECT** ? (+2, -0.5)

- I. The soap molecules form structures called micelles.
- II. Soap micelles cannot scatter light.
- III. Oily dirt gets collected in the centre of the micelle.

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

88. Article 36 to Article 51 of Indian Constitution mainly deals with Directive Principles of State Policy, given in _____ of Indian Constitution. (+2, -0.5)

- a. Part II
 - b. Part III
 - c. Part IV
 - d. Part V
-

89. Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth comes under which category of Fundamental Rights in Indian Constitution? (+2, -0.5)

- a. Right to Freedom
 - b. Right to Constitutional Remedies
 - c. Right to Equality
 - d. Right to Freedom of Religion
-

90. Which type of epithelial tissue allows transportation of substances through a selective permeable surface in the lining of food vessels or lung alveoli? (+2, -0.5)

- a. Simple squamous epithelium
 - b. Stratified squamous epithelium
 - c. Ciliated columnar epithelium
 - d. Cuboidal epithelium
-

91. Bacteria, blue-green algae or cyanobacteria and mycoplasma are examples of organisms of which kingdom? (+2, -0.5)

- a. Plantae
- b. Monera
- c. Protista
- d. Animalia

92. In November 2017, who launched the 'Deen Dayal SPARSH Yojana' for school children? (+2, -0.5)

- a. Jayant Sinha
- b. Prakash Javadekar
- c. Manoj Sinha
- d. Arun Jaitley

93. Google and NASA have joined hands to identify which two new planets around Kepler 90? (+2, -0.5)

- a. Kepler 80i, Kepler 90g
- b. Kepler 90g, Kepler 80g
- c. Kepler 80g, Kepler 90i
- d. Kepler 82i, Kepler 90g

94. In April 2017, five associate banks and Bharatiya Mahila Bank were merged with the State Bank of India (SBI). What is the approximate Balance sheet size of SBI following the merger? (+2, -0.5)

- a. Rs. 41 lakh crore
- b. Rs. 55 lakh crore
- c. Rs. 65 lakh crore
- d. Rs 75 lakh crore

95. India was ranked at which place among emerging economies on Inclusive Development Index (IDI-2018) released by World Economic Forum (WEF)? (+2, -0.5)

- a. 26th
- b. 47th
- c. 62nd
- d. 81st

96. Find the resistance (in mega Ω) of a wire of length 10 m, cross sectional area 1 cm² and made of a material of resistivity 100 Ω m. (+2, -0.5)

- a. 1000
- b. 20
- c. 500
- d. 10

97. Anything kept in a fluid experiences an upward force called ----- (+2, -0.5)

- a. Torque
 - b. Moment
 - c. Pressure
 - d. Upthrust
-

98. By volume, 21% of air is _____. (+2, -0.5)

- a. hydrogen
 - b. oxygen
 - c. nitrogen
 - d. carbon dioxide
-

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

- A) Rafael Nadal won the Tennis 2017 Wimbledon Championships Men's Singles.
- B) Aryan Tari won the 2017 World Junior Chess Championship.
- C) Viktor Axelsen won the Men's Singles Badminton 2017 BWF World Championships.

- a. Only A
 - b. Only B
 - c. Both B and C
 - d. None of these
-

100. In Microsoft Word, _____ provides options to switch between Normal, Web Layout, Print Layout, Outline and Reading Views. (+2, -0.5)

- a. Standard tool bar
- b. View Buttons
- c. Formatting tool bar
- d. Tab stop

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Answers

1. Answer: a

Explanation:

The correct answer is 'expansion'

★ Key Points

- The correct spelling is 'expansion'
- The meaning of the given word is- it is a noun that means *the action or an instance of expanding.*
- Let's see an example-
 - The company has abandoned plans for further **expansion**.

2. Answer: a

Explanation:

The correct answer is 'ABC'

★ Key Points

- In the fixed part, 'in' is a preposition, and 'physically' is an adverb hence we need an adjective and a noun to complete this phrase and it is given in part A i.e. 'fit people.'
- the last part of part A is 'calorie restriction' hence we need the same type of noun and it is given in part b so this is going to be the second part.
- So the correct sequence is- **ABC**

So the correct sentence- *In physically fit people, calorie restriction and periodic fasting slows down the ageing process.*

3. Answer: b

Explanation:

The correct answer is '**were reported**'

★ Key Points

- In the given sentence, the subject is 'Data' and the verb for this is 'reveal' and it is a plural verb because the subject is plural.
- After the comma there is one more subject that is 'five' hence it is a plural noun so we need a plural verb for this also, it is written in the passive voice because the doer of the verb 'reported' is somebody else.

So the correct sentence is–*Data of seizure of tiger body parts reveal that of the 14 cases, **five were reported** inside their serves.*

4. Answer: b

Explanation:

The correct answer is '**uplifts**'

★ Key Points

- In the given sentence, the subject is 'glance' that is a singular noun hence use the singular verb for this.
- So 'uplifts' is the correct answer.
- **The correct sentence is**–*A simple glance at one's garden **uplifts** the mood.*

5. Answer: b

Explanation:

The correct answer is '**Charismatic**'

★ Key Points

- Let's find out the meaning of given words:-
 - **Vile** – extremely unpleasant.
 - **Charismatic** – exercising a compelling charm that inspires devotion in others.
 - **Offensive** – causing someone to feel resentful, upset, or annoyed.
 - **Odious** – extremely unpleasant; repulsive.
 - Clearly, **option 2** is the correct answer.
-

6. Answer: d

Explanation:

The correct answer is '**Bigot**'

★ Key Points

- Let's find out the meaning of the following words:-
 - **Clement** – weather that is mild.
 - **Magnanimous** – generous or forgiving, especially towards a rival or less powerful person.
 - **Complaisant** – willing to please others or to accept what they do or say without protest.
 - **Bigot** – a person who is intolerant towards those holding different opinions; dogmatist.
 - Thus, *option 4 is the correct answer.*
-

7. Answer: c

Explanation:

The correct answer is '3'

★ Key Points

- The meaning of the given idiom is- *'forget past offenses or causes of conflict and be reconciled.'*
- Let's see an example-
 - He had to be charming to this very important customer, but he also wanted to like him, as a man, to **let bygones be bygones**.

8. Answer: b

Explanation:

The correct answer is '2'

★ Key Points

- The meaning of the given idiom 'come in handy' is **'turn out to be useful.'**
- Let's see an example-
 - the sort of the junk that might **come in handy** one day

9. Answer: d

Explanation:

The correct answer is '**Democratic**'

★ Key Points

- Here, blank is directly followed by noun **values**. So, an adjective should be used in order to modify the noun.
- Thus, **option 4 i.e. democratic** is the correct answer.

10. Answer: a

Explanation:

The correct answer is 'as'

★ Key Points

- Here, the concept of conjunction is brought under consideration. Since, "as" is already given, so paired conjunction **as.....as** to be used.
- Hence, **option 1** is the correct answer.

11. Answer: c

Explanation:

The correct answer is 'Effectiveness'

★ Key Points

- Since, the blank is followed by a preposition and a preposition is used to define noun or pronoun. So, noun **effectiveness** is to be filled in the blank.
- Hence, option 3 is the correct answer.

12. Answer: d

Explanation:

The correct answer is 'with'

★ Key Points

- Here, context explains that teachers have unique dynamics in their occupation, and with that, they have constant pressure to address society. So, the

preposition '**with**' best fits the blank here.

- Hence, option 4 is the correct answer.

13. Answer: d

Explanation:

The correct answer is '**Across**'

★ Key Points

- On looking at the above-given passage, we observe that it is based on evaluation of teaching method in the country involving ethics, human psychology, etc. in their practices. The given blank would be filled by a preposition. It shows that teaching method done in each part of the country.
- Clearly, option 1 is not the answer.
- Now, find the uses of the following prepositions:-
 - overextending directly upwards from; above on the top.
 - beyond – at or to the further side of.
 - across – from one side to the other of (a place, area, etc.).
- Thus, option 4 i.e. **across** gives the most meaningful sense to the context. So, option 4 is the correct answer.

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14. Answer: b

Explanation:

The correct answer is '**2**'

★ Key Points

- The correct spelling is '**Maneuver**'
- The meaning of the given word is– *A physical movement or series of moves requiring skill and care.*

- Let's see an example-
 - snowboarders performed daring **maneuvers** on precipitous slopes

★ Additional Information

- There is an alternate spelling of the word- '**Manoeuvre**'

15. **Answer: a**

Explanation:

The correct answer is 'I'

★ Key Points

- Let's see the rules of changing direct speech into indirect speech-
 - The tense of the sentence will change.
 - In the imperative sentence, the verb will become the infinitive verb.
 - Also, the verb 'said to' will change into 'asked'
 - In the given sentence, the subject is 'the saint' and the object of the verb 'asked' is going to be 'his followers'. Also, this is an imperative sentence so the verb 'bring' becomes the infinitive verb i.e. 'to bring'
- **So the correct indirect speech is-** *The saint asked his followers to bring him a glass of water.*

16. **Answer: a**

Explanation:

The correct answer is 'I'

★ Key Points

- Let's see the following steps while changing the Active sentence into the passive sentence-

- The tense of the sentence will not change.
 - The subject of the sentence will become the object and the object of the sentence will change into the subject.
 - We have to use the 'be + v₃' form in the sentence.
 - **So the correct passive is-** *The beggar was hit with a stone.*
-

17. Answer: d

Explanation:

The correct answer is '4'

★ Key Points

- In the fixed part, the noun is given that is a subject of the sentence hence after this we need a verb for this subject and it has been given in part R but it cannot be the first part because this makes the sentence contextually incorrect.
 - Hence, according to the context, the correct part is 'P'
 - In part P, the preposition 'to' is used after this we need to write a verb that is given in part Q.
 - Hence, the correct sequence is 'PQR' i.e. *The debate on allowing euthanasia to protect the dignity of patients in a vegetative state has become a key question.*
-

18. Answer: b

Explanation:

The correct answer is 'Young'

★ Key Points

- Let's see the meaning of the given words-
 - **Anile** → of or resembling a doddering old woman especially

- **Young**→ relating to or characteristic of young people.
- **Foolish**→ lacking good sense or judgment; silly or unwise.
- **Soft**→ easy to mold, cut, compress, or fold.
- So according to the meaning of the given words, the correct answer is '**Young**'

19. Answer: d

Explanation:

The correct answer is '**Assist**'

★ Key Points

- Let's see the meaning of the given words-
 - **Thwart**→ prevent from succeeding in or accomplishing something.
 - **Stop**→ Come or cause to come to an end.
 - **Hinder** → make it difficult for (someone)
 - **Balk** → hesitate to accept.
 - **Assist**→ help by doing a share of work or by providing money or information.
- So according to the meaning of the given words, the correct answer is '**Assist**'

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20. Answer: d

Explanation:

The correct answer is '**Rude**'

★ Key Points

- Let's see the meaning of the given words-
 - **Insolent** → rude and disrespectful.
 - **Shy**→ nervous or timid in the company of other people.
 - **Happy**→ feeling or showing pleasure or contentment.

- **Sorrowful**→ A feeling of deep distress caused by loss or disappointment.
- **Rude**→ offensively impolite or ill-mannered.
- So according to the meaning of the given words , **the correct answer is 'Rude'**

21. Answer: c

Explanation:

The correct answer is '**Arrogant**'

★ Key Points

- Let's see the meaning of the given words-
 - **Supercilious** → having an air of contemptuous superiority.
 - **Modest**→ Unassuming in the estimation of one's abilities.
 - **Arrogant** → having an exaggerated sense of one's own importance or abilities.
 - **Rational**→ based on or accordance with reason or logic.
- So according to the meaning of the given words, **the correct answer is 'Arrogant'**

22. Answer: a

Explanation:

The correct answer is '**Inner**'

★ Key Points

- In the given blank, we need an adjective that will describe 'fulfillment'
- Inner is the most appropriate adjective in the options.
- Let's see an example-
 - She got up and went into **an inner office**.

So the correct sentence is- *The purpose of life is not to simply survive but to discover inner fulfillment.*

23. Answer: b

Explanation:

The correct answer is '**Will be**'

★ Key Points

- In the given sentence, the time reference is given that is 'I just know it' this phrase can tell us that this action is going to complete in the future. Hence, from this, we can conclude that the other sentence should be in the future tense.

So the correct sentence is- *I **will be** successful, I just know it.*

24. Answer: b

Explanation:

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

★ Key Points

In part 2 of the sentence, the usage of '**serve**' is incorrect. Instead, use '**serving**'

- In the given sentence, in part 2, 'in' is a preposition and 'her' is a prepositional object demonstrated as an action verb and generally we use gerund with the action verbs.
- Gerunds are generally used with the action that is currently happening and that has already performed. Hence, this action of 'demonstrated' is happened hence we need to use gerund with it.

So the correct sentence is- *Nivedita's love for everything Indian was eloquently demonstrated in her **serving** of tea to Lady Minto, who was on a visit to the Dakshineswar temple.*

25. Answer: b

Explanation:

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

★ Key Points

In part 2 of the sentence, the usage of 'a' before 'jewel' is missing. Hence, we need to use 'a jewel'

- According to grammar, Use 'a' and 'an' article with such proper nouns that are referred to as 'common nouns'
- Let's see an example-
 - Ram is a Hitler. (Hitler here acts as a common noun.)
- In the given sentence, 'jewel of the nation' acts as a common noun hence use the indefinite article.

So the correct sentence is- *The Taj Mahal can be called **a jewel** of the nation.*

26. Answer: c

Explanation:

As Death is exactly opposite to Birth,

Similarly,

Export is exactly opposite to Import.

Thus, the related pair is Export : Import

27. Answer: a

Explanation:

The pattern followed here is,

$$44 + 3 = 47$$

Similarly,

$$58 + 3 = 61$$

Hence, 61 is the correct answer.

28. 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

The pattern followed here is,



Similarly,



Hence, the correct answer is " **MNR** ".

29. Answer: c

Explanation:

- 1) Rectangle - Perimeter, here 2nd one is the measurement of 1st one.
 - 2) Circle - Circumference, here 2nd one is the measurement of 1st one.
 - 3) Perimeter - Square, here 1st one is the measurement of 2nd one.
 - 4) Triangle - Perimeter, here 2nd one is the measurement of 1st one
- Hence, Perimeter - Square is different from all other options.

30. Answer: d

Explanation:

The pattern followed here is

2nd number is the square of 1st number.

$$(4)^2 = 16$$

$$(9)^2 = 81$$

$$(6)^2 = 36$$

$$(7)^2 = 49$$

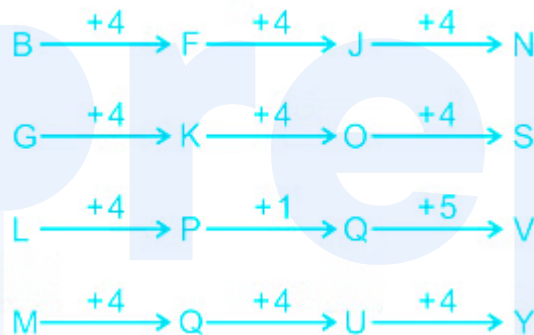
Hence the odd one in this question is 7 – 47.

31. 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,



Here, LPQV follows the different pattern from other options.

Hence, the correct answer is "LPQV".

32. Answer: a

Explanation:

Given:

1. Terrible 2. Therefore 3. Theatre 4. Terminal 5. Thankful

According to the sequence in the English dictionary:

The correct order of the given words is:

4. Term inal

1. Terr ible

5. Tha nkful

3. Thea tre

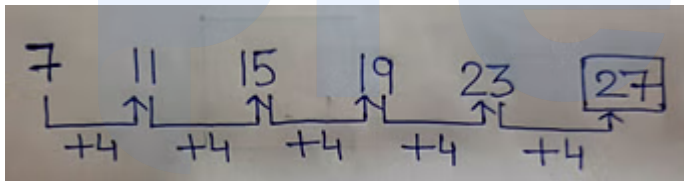
2. Ther efore

Hence, the correct answer is " 41532 " .

33. Answer: c

Explanation:

The pattern followed here is:-

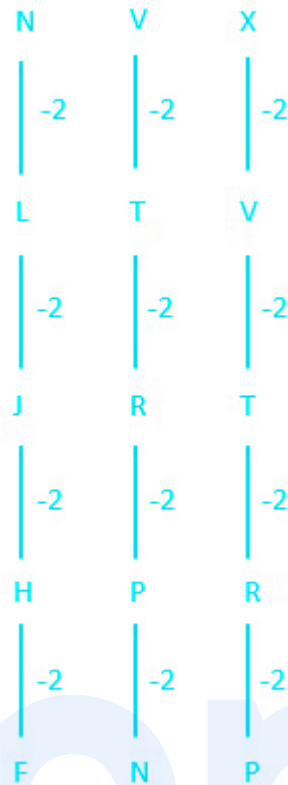


Hence, the correct answer is "27".

34. Answer: d

Explanation:

The pattern followed here is:-



As can be seen clearly from the above that the missing term in the series is HPR.

Hence, the correct answer is "HPR".

35. Answer: a

Explanation:

Let the weight of H be x .

Then, Weight of C = $3x$

Weight of B = $3x/2$

Weight of V = $3x$

Weight of L = $3x/4$

Hence, Weight of V is greater than the weight of B, L and H.

36. Answer: d

Explanation:

- 1) Son → P **seu** **on** ym, hence word can be formed.
- 2) Does → P **se** **udo** nym, hence word can be formed.
- 3) Pose → **Pse** ud **on**ym, hence word can be formed.
- 4) Pendulum → **Ps** **eud** **on** ym, in word Pseudonym, alphabet l and one u are missing. Hence, word cannot be formed.

Hence, Pendulum cannot be formed using the given word.

37. Answer: c

Explanation:

The pattern followed here is,

T	O	L	D	E	R
+3	+4	+5	+3	+4	+5
W	S	Q	G	I	W

Similarly,

S	P	I	R	A	L
+3	+4	+5	+3	+4	+5
V	T	N	U	E	Q

Hence, VTNUEQ is the correct answer.

38. Answer: b

Explanation:

Changing operators as given format:

Symbol	Meaning
-	×
÷	+
+	÷
×	-

Given Expression: $10 \times 4 \div 5 - 80 + 16$

After changing the symbols: $10 - 4 + 5 \times 80 \div 16$

$$= 10 - 4 + 5 \times 5$$

$$= 10 - 4 + 25$$

$$= 35 - 4$$

$$= 31$$

Thus 31 is the correct answer.

39. Answer: b

Explanation:

Given Equation: $16 \div 4 - 50 \times 4 + 18 = 26$

Let's check each option,

1) Interchanging $+$ and $\div$

Equation becomes $16 + 4 - 50 \times 4 \div 18 = 80/9 \neq 26$

2) Interchanging $+$ and $\times$

Equation becomes $16 \div 4 - 50 + 4 \times 18 = 26$

3) Interchanging $-$ and $+$

Equation becomes $16 \div 4 + 50 \times 4 - 18 = 186 \neq 26$

4) Interchanging $\div$ and $\times$

Equation becomes $16 \times 4 - 50 \div 4 + 18 = 139/2 \neq 26$

Thus, interchanging $+$ and $\times$, we get correct answer.

40. Answer: d

Explanation:

The pattern is as follows.

$(3 - 8) \times 10 = -50$, $(3 - 5) \times 10 = -20$ and $(2 - 3) \times 10 = -10$

$9\$1 = (9 - 1) \times 10 = 80$

Hence, 80 will be the correct answer.

41. Answer: b

Explanation:

The pattern is as follows.

ABC/ABC/aBC → ABC/Abc/ABC → ABC/abc/ABC → ABc/aBC/ABC → Abc/ABC/ABC
→ abCABCABC

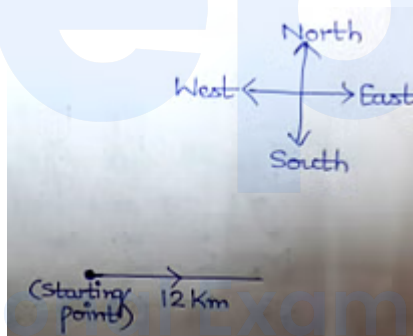
Hence, abCABCABC is the correct answer.

42. Answer: b

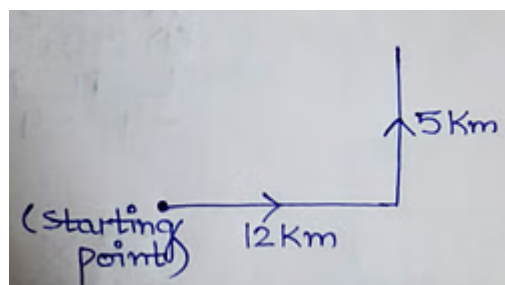
Explanation:

Given → The following is a map showing a route for a cycle race.

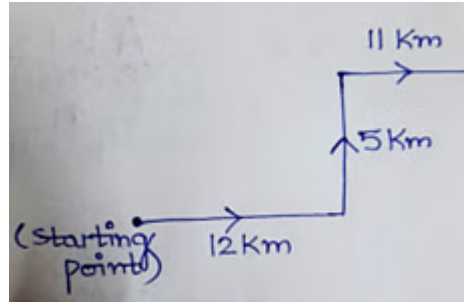
1) The route starts and goes 12 km East.



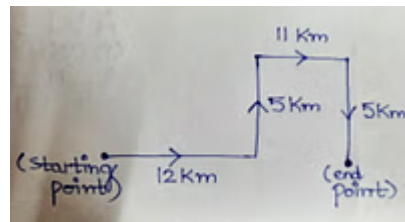
2) Then, there is a turn towards North where the route goes on for 5 km



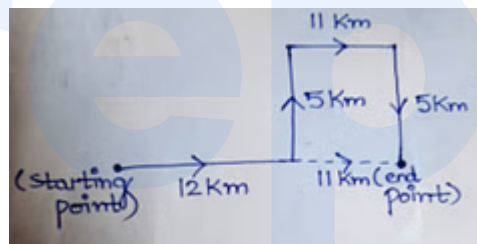
3) Then, there is a turn towards East where the route goes on for 11 km.



4) Then, there is a right turn from where the route goes on 5 km to reach the end.



5) The position of the end with respect to that start is

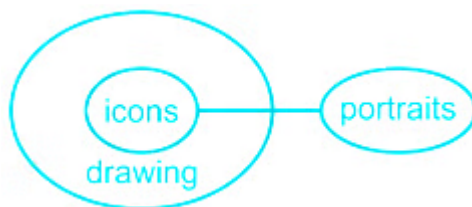


As can be seen clearly from the above that the distance from the start to the end is $12 + 11 = 23$ km and the end point is in east direction with respect to the start point.

Hence, the correct answer is **"23 km East"**.

43. Answer: d

Explanation:

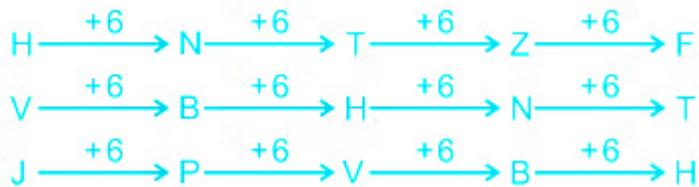


Hence, the correct answer is "HC".

45. Answer: c

Explanation:

The pattern followed here is,



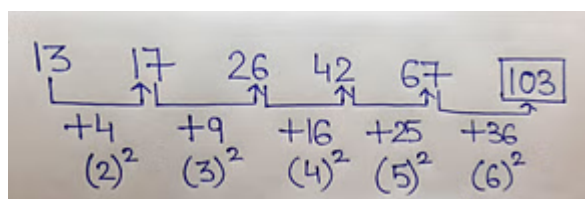
From the above series, the next term in series is FTH

Hence, option 3) is the correct answer.

46. Answer: a

Explanation:

The pattern followed here is:-



Hence, the correct answer is "103".

47. Answer: d

Explanation:

Here the pattern is as follows:

$$1) (8, 24, 16) = (8 \times 1, 8 \times 3, 8 \times 2)$$

$$2) (3, 9, 6) = (3 \times 1, 3 \times 3, 3 \times 2)$$

$$3) (14, 42, 28) = (14 \times 1, 14 \times 3, 14 \times 2)$$

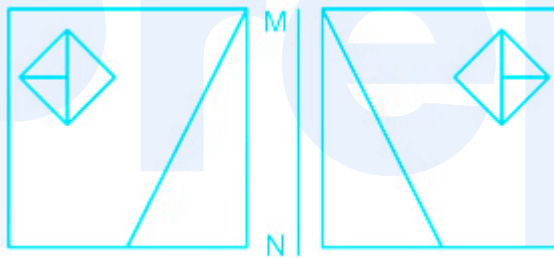
$$4) (9, 36, 18) = (9 \times 1, 9 \times 4, 9 \times 2)$$

Hence, (9, 36, 18) is odd one from all other given option.

48. Answer: b

Explanation:

The mirror image of the question figure is as follows.



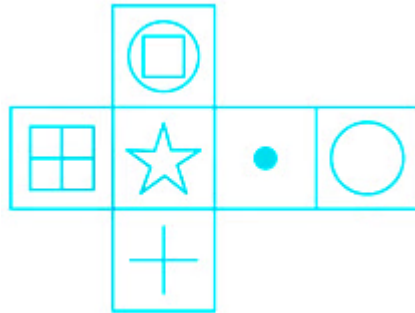
Hence, the figure given above will be the correct answer.

49. Answer: b

Explanation:

Given:-

Unfolded cube



The opposite sides of the cube when the unfolded cube will be folded are:-

1)



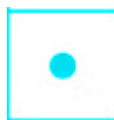
will be opposite to



2)



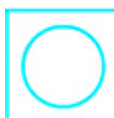
will be opposite to



3)



will be opposite to



Checking each option one by one:-

- 1) Cube in option figure (1) one can be formed as no two opposite faces of the cube are present adjacent to each other.
- 2) Cube in option figure (2) CANNOT be formed as two opposite faces of the cube i.e. Circle and Star are present adjacent to each other.
- 3) Cube in option figure (3) one can be formed as no two opposite faces of the cube are present adjacent to each other.
- 4) Cube in option figure (4) one can be formed as no two opposite faces of the cube are present adjacent to each other.

Hence, the correct answer is "Option 2".

50. Answer: d

Explanation:

- 1) 21, 55, 40, 86 → L, R, I, N
- 2) 41, 58, 40, 88 → C, Q, I, T
- 3) 44, 66, 43, 89 → H, V, H, T
- 4) 95, 68, 65, 97 → S, O, W, N

Hence, the correct option is 4) 95, 68, 65, 97

51. Answer: b

Explanation:

Calculation:

Let the number be x

According to question,

$$\Rightarrow 44\% \text{ of } x - 33\% \text{ of } x = 286$$

$$\Rightarrow 0.44x - 0.33x = 286$$

$$\Rightarrow 0.11x = 286$$

$$\Rightarrow 11x/100 = 286$$

$$\Rightarrow x = (286 \times 100)/11$$

$$\Rightarrow x = 2600$$

Now,

$$\therefore 54\% \text{ of } x$$

$$\Rightarrow 54\% \text{ of } 2600$$

$$\Rightarrow (54/100) \times 2600 = 1404$$

$\therefore$ The number is 1404.

★ Shortcut Trick

According to the question,

$$\Rightarrow (44 - 33) = 11 \text{ unit} \rightarrow 286 \text{ then,}$$

$$\Rightarrow 1 \text{ unit} \rightarrow 286/11 = 26,$$

$$\text{Now, } 54 \text{ unit} \rightarrow 26 \times 54 = 1404$$

52. Answer: a

Explanation:

Given:

129!

Concept Used:

No. of zero es = Sum of all quotient

Calculation:

As, 5×2 will give a zero and nearest multiple of 5 below 129 is 125

Number of multiples of 5 in 129! = $125/5$

$\Rightarrow 25$

Number of multiples of 5^2 ie 25 in 129! = $125/25$

$\Rightarrow 5$

Number of multiple of 5^3 ie 125 in 129! = $125/125$

$\Rightarrow 1$

Total zero = $25 + 5 + 1$

$\Rightarrow 31$

$\therefore$ Total number of zero is 31.

53. Answer: c

Explanation:

We have,

$$\Rightarrow 3x - 8y = 16 \text{ -----(1)}$$

$$\Rightarrow 2x + 4y = 6$$

$$\Rightarrow 4x + 8y = 12 \text{ -----(2)}$$

Adding equation (1) and (2) we get,

$$\Rightarrow 7x = 28$$

$$\Rightarrow x = 4$$

Now,

$$\Rightarrow 3(4) - 8y = 16$$

$$\Rightarrow 12 - 16 = 8y$$

$$\Rightarrow y = -1/2$$

$$\Rightarrow (a, b) = (4, -1/2)$$

Now,

$$\therefore a^2 - 4b^2 = (4)^2 - 4(-1/2)^2 = 16 - 1 = 15$$

54. Answer: a

Explanation:

Given, **Your Personal Exams Guide**

$$a^3 + a - 1 = 0$$

$$\Rightarrow a^3 = 1 - a$$

$$\text{Now, } a^5 + a^4 + a - 2$$

$$\Rightarrow a^3 \times a^2 + a^3 \times a + a - 2$$

$$\Rightarrow (1 - a)a^2 + (1 - a)a + a - 2$$

$$\Rightarrow a^2 - a^3 + a - a^2 + a - 2$$

$$\Rightarrow -a^3 - 2(1 - a)$$

$$\Rightarrow -a^3 - 2a^3$$

$$\Rightarrow -3a^3$$

55. Answer: c

Explanation:

As, one angle of right angle triangle is 90° so by angle sum property sum of other two angles will be 90°

$\therefore$ Sum of two angles of a triangle is equal to the third angle

56. Answer: b

Explanation:

Considering sides of length 5, 6 and 8 will give us,

$$\Rightarrow 8^2/2 < 5^2 + 6^2 < 8^2$$

$\therefore$ This is a property of sides of obtuse angled triangle

57. Answer: a

Explanation:

Let total number of students be x

$$\Rightarrow \text{Student who pass the exam} = 87\% \text{ of } x = 0.87x$$

$$\Rightarrow \text{Students who failed the exam} = x - 0.87x$$

$$\Rightarrow 2093 = 0.13x$$

$$\therefore x = 16100$$

58. Answer: d

Explanation:

Let present age of sheetal and Divya be $6x$ and $5x$ respectively

After 8 years,

$$\Rightarrow \text{Sheetal's age} = 6x + 8$$

$$\Rightarrow \text{Divya's age} = 5x + 8$$

According to question,

$$\Rightarrow (6x + 8) / (5x + 8) = 22/19$$

$$\Rightarrow 114x + 152 = 110x + 176$$

$$\Rightarrow 4x = 24$$

$$\Rightarrow x = 6$$

$$\therefore \text{present age of Divya} = 5x = 5 \times 6 = 30$$

59. Answer: d

Explanation:

Let initial quantity of paint and oil be $7x$ and $5x$

$$\Rightarrow \text{Total quantity} = 7x + 5x = 12x$$

Now 24 litres is removed and 24 litres oil is added

$$\Rightarrow \text{Quantity of paint left} = 7x - \{24 \times (7x/12x)\} = 7x - 14$$

$$\Rightarrow \text{Quantity of oil} = 5x - \{24 \times (5x/12x)\} + 24 = 5x - 10 + 24 = 5x + 14$$

According to question,

$$\Rightarrow (7x - 14) / (5x + 14) = 1/1$$

$$\Rightarrow 7x - 14 = 5x + 14$$

$$\Rightarrow 2x = 28$$

$$\Rightarrow x = 14$$

$$\therefore \text{initial quantity of paint} = 7x = 7 \times 14 = 98 \text{ litres}$$

60. Answer: c

Explanation:

$$\Rightarrow \text{Sum of age of Sita and Geeta} = \text{average} \times 2 = 30 \times 2$$

$$\Rightarrow S + G = 60 \quad \text{-----(1)}$$

$$\Rightarrow \text{Sum of age of Geeta and Rita} = \text{average} \times 2 = 28 \times 2$$

$$\Rightarrow G + R = 56 \quad \text{-----(2)}$$

$$\Rightarrow \text{Sum of age of Sita and Rita} = \text{average} \times 2 = 32 \times 2$$

$$\Rightarrow S + R = 64 \quad \text{-----(3)}$$

Now, subtracting (2) from (1) we get

$$\Rightarrow S - R = 4 \quad \text{-----(4)}$$

Now, adding (3) and (4) we get,

$$\Rightarrow 2S = 68$$

$$\Rightarrow S = 34$$

Now,

$$\Rightarrow R = 64 - S = 64 - 34 = 30$$

$$\Rightarrow G = 56 - R = 56 - 30 = 26$$

$\therefore$ age of Sita, Gita and Rita is 34, 26 and 30 respectively

61. Answer: a

Explanation:

Concept used:

- Simple interest = $(\text{principal} \times \text{time} \times \text{rate})/100$
- Amount = sum + simple interest

Calculation:

Let rate be $r\%$

$$\text{Simple interest} = (800 \times 2 \times r)/100 = 16r$$

We know, amount = sum + simple interest

According to the question,

$$\Rightarrow 1000 = 800 + 16r$$

$$\Rightarrow 16r = 200$$

$$\therefore r = 12.5\%$$

62. Answer: a

Explanation:

Let Cost price of D be Rs. 100

⇒ Cost price of E = selling price of D = $100 + 30\% \text{ of } 100 = \text{Rs. } 130$

⇒ Cost price of F = selling price of E = $130 - 30\% \text{ of } 130 = \text{Rs. } 91$

∴ Required ratio = 100 : 91

63. Answer: a

Explanation:

⇒ Marked price = Rs. 750

⇒ Selling price = marked price – discount% on marked price = $750 - 22\% \text{ of } 750 = \text{Rs. } 585$

⇒ Cost price = Rs. 500

∴ Profit = Selling price – cost price = $585 - 500 = \text{Rs. } 85$

64. Answer: a

Explanation:

$$\therefore \left(\sqrt{3} - \frac{10}{\sqrt{3}} + \sqrt{27} \right) = \frac{3-10}{\sqrt{3}} + 3\sqrt{3} = \frac{-7+9}{\sqrt{3}} = \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3} = 2 \times \frac{1.732}{3} = 1.154$$

65. Answer: b

Explanation:

⇒ Efficiency of P = $1/12$

⇒ Efficiency of Q = $1/15$

⇒ Efficiency of R = $1/20$

⇒ Efficiency of P, Q and R together = $(1/12) + (1/15) + (1/20) = (5 + 4 + 3)/60 = 12/60 = 1/5$

∴ They will take 5 days to complete the work

66. Answer: c

Explanation:

⇒ Total distance travelled by first train in 1 and half hour (from 7:00 am to 8:30 am)
= speed × time = $40 \times \{1 + (1/2)\} = 40 \times (3/2) = 60 \text{ km}$

⇒ Total distance to be covered now = $270 - 60 = 210 \text{ km}$

⇒ Relative speed = $40 + 30 = 70 \text{ km/hr}$

⇒ Time taken = distance/speed = $210/70 = 3 \text{ hr}$

∴ They will meet at 11:30 am ie. (8:30 am + 3 hrs)

67. Answer: a

Explanation:

∴ According to graph, Country A has 50 soldiers which the least

68. Answer: d

Explanation:

⇒ Number of soldiers of country B = 200

⇒ Number of soldiers of country D = 750

$\therefore$ Required ratio = $200 : 750 = 4 : 15$

69. Answer: d

Explanation:

$\Rightarrow$ Number of soldiers of country F = 150

$\Rightarrow$ Number of soldiers of country A = 50

$\therefore$ Required % = $\{(150 - 50)/50\} \times 100 = 200\%$

70. Answer: c

Explanation:

$\Rightarrow$ Number of soldiers = 750

$\therefore$ Total expenditure = $20000 \times 750 = 15000000 = 15\text{million}$

71. Answer: a

Explanation:

As,

$\Rightarrow$ Perimeter = $2(\text{length} + \text{breadth})$

$\Rightarrow 46 = 2(\text{length} + 8)$

$\Rightarrow \text{Length} = 23 - 8 = 15 \text{ cm}$

Also, every angle of rectangle is 90°

$\therefore$ Diagonal = $\sqrt{(\text{length})^2 + (\text{breadth})^2} = \sqrt{(15)^2 + (8)^2} = \sqrt{289} = 17 \text{ cm}$

72. Answer: a

Explanation:

$$\Rightarrow \text{Radius} = \text{diameter}/2 = 7/2 \text{ cm}$$

$$\therefore \text{Area} = \pi \times \text{radius}^2 = (22/7) \times (7/2)^2 = 38.5 \text{ cm}^2$$

73. Answer: c

Explanation:

$$\Rightarrow \text{Radius} = \text{diameter}/2 = 28/2 = 14 \text{ cm}$$

Now,

$$\therefore \text{Surface area} = 4 \times \pi \times \text{radius}^2 = 4 \times (22/7) \times 14^2 = 2464 \text{ cm}^2$$

74. Answer: d

Explanation:

Calculation:

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

★ Additional Information

Important trigonometric values

	0°	30°	45°	60°	90°
sin	0	1/2	1/√2	√3/2	1
cos	1	√3/2	1/√2	1/2	0
tan	0	1/√3	1	√3	∞
cosec	∞	2	√2	2/√3	1
sec	1	2/√3	√2	2	∞
cot	∞	√3	1	1/√3	0

75. Answer: c

Explanation:

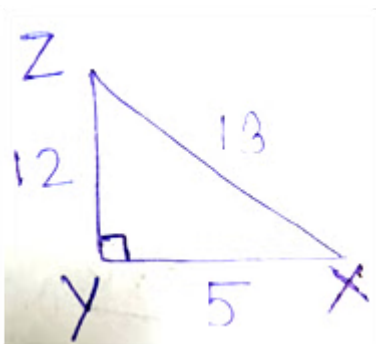
Given:

ΔXYZ is right-angled at Y and $\sin X = 12/13$

Concept used:

- $\text{Hypotenuse}^2 = \text{Perpendicular}^2 + \text{Base}^2$
- $\sin \theta = \text{Perpendicular} / \text{Hypotenuse} = 1 / \text{cosec } \theta$

Calculation:



$$\sin X = 12/13$$

$$\Rightarrow YZ/XZ = 12/13$$

Let $YZ = 12k$ and $XZ = 13k$

By Pythagoras theorem,

$$\Rightarrow XY = \sqrt{(XZ^2 - YZ^2)} = \sqrt{\{(13k)^2 - (12k)^2\}} = \sqrt{(25k^2)} = 5k$$

Now,

$$\therefore \operatorname{cosec} Z = XZ/XY = 13k/5k = 13/5$$

76. Answer: b

Explanation:

SWIFT:- Society for Worldwide Interbank Financial Telecommunication.

It provides a network which enables financial institutions in the world to send or receive information about financial transaction in a secure, standardized and reliable environment.

Majority of international bank messages use the SWIFT network.

77. Answer: a

Explanation:

- 'Marketing Support and Services Scheme' (in the Eleventh Plan) supports artisans related to **Handicrafts** .
- This scheme was implemented in the 11th five-year plan with the aim to provide direct marketing outlets to the craft persons for participation in various marketing events/melas for augmenting their sales.
- The scheme has three broad components i.e. Domestic Marketing, International Marketing and Publicity.

78. Answer: a

Explanation:

Himalaya has emerged from Tethys.

The Tethys Ocean was an ocean during Mesozoic Era.

It was located between continents of Gondwana and Laurasia, before the opening of Indian and Atlantic oceans during Cretaceous period.

79. Answer: b

Explanation:

The correct answer is Brahmaputra, Indus, Sutlej.

★ Key Points

Trans-Himalayan Rivers:

- The Trans-Himalayan Rivers originate beyond the Great Himalayas.
- These are the Indus(Sindhu), the Satluj and the Brahmaputra rivers.
- The Trans Himalayas Mountain Region, also known as the Tibet Himalayan Region, is located to the north of the Great Himalayas.
- Himalayan rivers are those which originate in the Himalayas and flow through the Northern Plains.
- The Ganga, the Yamuna and their tributaries are part of the Himalayan Rivers.

★ Additional Information

Brahmaputra River:

- The Brahmaputra (meaning the son of Brahma) is 2,900 km in length.
- Source: Chemayungdung glacier (Kailas Range).
- Its source is very close to the sources of the Indus and Satluj.

- It enters India through Arunachal Pradesh and continues its journey through the Assam Valley and Bangladesh, where it is known as Jamuna.
- Finally, it flows into the Bay of Bengal.
- Tributaries :
 - Dibang, Lohit, Siang, Burhi Dihing, Tista, and Dhansari.

Sutlej River:

- It is the longest of the five tributaries of the Indus River.
- The Satluj rises from the Manasarovar-Rakas Lakes in western Tibet at a height of 4,570 m within 80 km of the source of the Indus.
- It takes a north-westerly course up to the Shipki La on the Tibet-Himachal Pradesh boundary.
- After entering the plain at Rupnagar (Ropar), it turns westwards and is joined by the Beas at Harike.
- During its onward journey, it receives the collective drainage of the Ravi, Chenab and Jhelum rivers.
- It joins the Indus a few kilometres above Mithankot.

Indus/Sindhu River:

- It flows in the northwest direction from its source (Glaciers of Kailas Range – Kailash range in Tibet near Lake Manasarovar) till the Nanga Parbat Range.
- Its length is about 2,900 km.
- After entering J&K it flows between the Ladakh and the Zaskar Ranges.
- It flows through the regions of Ladakh, Baltistan and Gilgit.
- The river empties into the Arabian Sea south of Karachi after forming a huge delta.

80. Answer: b

Explanation:

- Buddha was born in Lumbini near Kapilavastu in Nepal.
- Siddhartha got enlightenment at Gaya under Bodhi tree.
- First sermon was at Sarnath.

81. Answer: b

Explanation:

- The first important ruler to emerge from the Chola Dynasty was Rajaraja Chola.
 - His reign was between 985-1014 CE.
 - Raja Rajachola also launched many navel campaigns that resulted in the capture of Malabar coast as well as Maldives and Sri Lanka.
-

82. Answer: b

Explanation:

V. G. Jog was an Indian violinist.

He was foremost exponent of violin in Hindustani music in 20th century.

83. Answer: c

Explanation:

Samsung India has entered into a partnership with UNESCO MGIEP (Mahatma Gandhi Institute of Education for Peace and Sustainable Development) to launch 360 degree videos and Virtual Reality (VR) content of two magnificent Indian heritage sites, the **Sun Temple in Konark, Odisha** and **Taj Mahal in Agra, Uttar Pradesh**.

84. Answer: c

Explanation:

Yamuna Krishnan has been awarded with 9th Infosys award in Physical Sciences.

Krishnan's team has created DNA nanosensors and nano-scale drug-delivery systems.

The Infosys Prize is awarded annually to researchers and scientists across six categories:

Engineering and Computer Sciences
Humanities
Life Sciences
Mathematical Sciences
Physical Sciences
Social Sciences

As part of the prize, each awardee will receive a citation, a gold medal, and a monetary award of Rupees 65 lakh.

85. Answer: d

Explanation:

Nepali is official language of Nepal.

President – Bidhya Devi Bhandari

Capital – Kathmandu

Currency – Nepalese Rupee

86. Answer: c

Explanation:

The correct answer is Different number of neutrons.

★ Key Points

- **Isotopes**
 - The nuclei have been classified based on the number of protons (**atomic number**) or the total number of nucleons (**mass number**) as follows –
- **Isotopes :**
 - The atoms of an element having the same atomic number but a different mass number are called isotopes . All isotopes have the same chemical properties .
- **Isobars :**
 - The nuclei which have the same mass number (A) but a different atomic number (Z) are called isobars .
- **Isotones :**
 - The nuclei having an equal number of neutrons are called isotones . For them both the atomic number (Z) and mass number (A) are different , but the value of (A – Z) is the same .

EXPLANATION :

- From above it is clear that the atoms of an element having the same atomic number but a different mass number are called isotopes . Therefore option 1 is correct.
 - All isotopes have the same chemical properties .
-

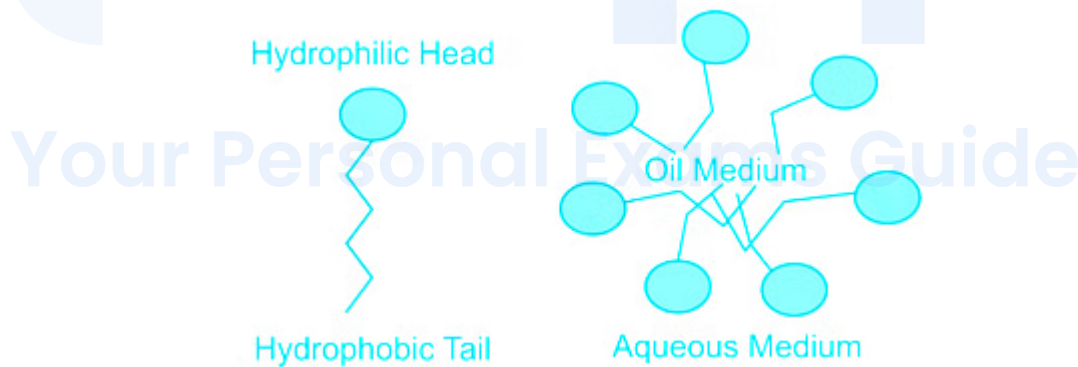
87. Answer: b

Explanation:

The correct answer is Both I and III.

★ Key Points

- micelle
 - A micelle is a spherical aggregation of soap molecules in water in which hydrocarbon ends are directed towards the centre and ionic ends are directed outwards.
- Head, the hydrophilic part:
 - Head of the micelle is formed of ionic part
 - This part is hydrophilic and is attracted to water
- Tail, the hydrophobic part:
 - The tail of the micelle is formed by a long chain of hydrocarbon
 - This part is hydrophobic and is attracted to dirt/oil/grease



88. Answer: c

Explanation:

Article	Content	Part
Article 36 to Article 51	Directive Principles of State Policy	Part IV
Article 5 to 11	Citizenship	Part II
Article 12 to 35	Fundamental Rights	Part III
Article 52 to 151	The Union	Part V

89. Answer: c

Explanation:

Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth comes under Right to Equality category of Fundamental Rights in Indian Constitution and article 15(1) deal with it.

90. Answer: a

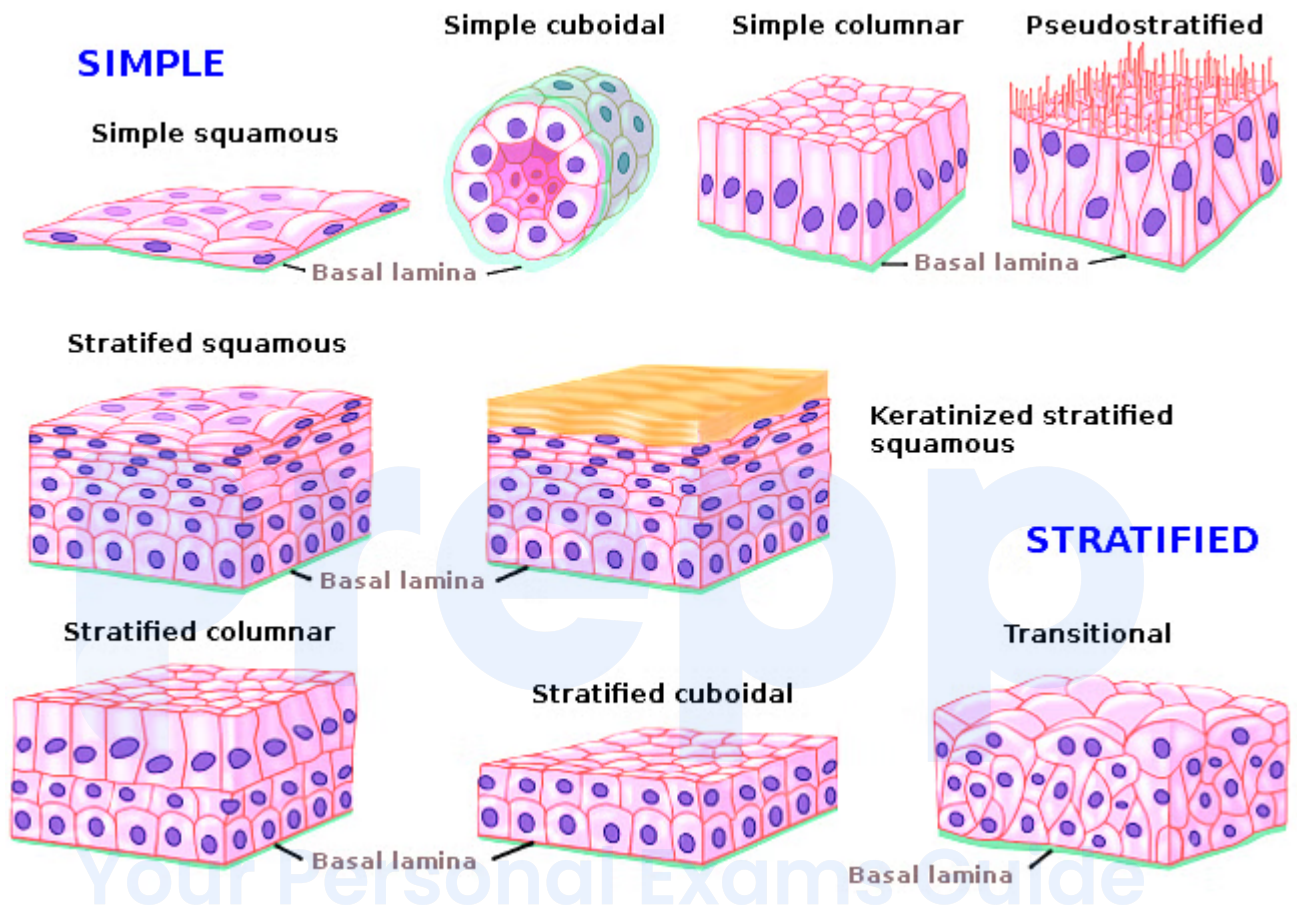
Explanation:

The correct answer is Simple squamous epithelium.

★ Key Points

- Simple squamous epithelium:
 - It is a single layer of flat-scale-shaped cells.

- This tissue makes up the inner lining of the mouth and blood vessels.
- It also makes the mesothelial lining of the body cavities.
- It allows the transportation of substances through a selective permeable surface in the lining of food vessels or lung alveoli.



★ Additional Information

- Ciliated columnar epithelium tissues are found in the fallopian tube and parts of the respiratory system.
- Stratified squamous epithelium tissues are found in the organ system where the body comes into close contact with the outside environment
- Columnar epithelium tissues are found in the stomach and intestines.

91. Answer: b

Explanation:

Monera includes bacteria, mycoplasmas, cyanobacteria, blue green algae, actinomycetes.

Plantae kingdom includes all types of eukaryotic, multicellular, photosynthetic plants.

Animalia kingdom includes vertebrates, insects, reptiles, amphibians, etc

Protista are eukaryotic organisms that cannot be classified as a plant, animal or fungus. Kelp or seaweed is an example of Protista.

92. Answer: c

Explanation:

Manoj Sinha launched the 'DeenDayal SPARSH Yojana' for school children.

Under the scheme of SPARSH (Scholarship for Promotion of Aptitude & Research in Stamps as a Hobby), it is proposed to **award annual scholarships** to children of Standard VI to IX having good academic record and also pursuing **Philately** as a hobby through a competitive selection process in all postal circles.

93. Answer: c

Explanation:

Google and NASA have joined hands to identify Kepler 80g, Kepler 90i, two new planets around Kepler 90.

The *Kepler - 90* planets have a similar configuration to our solar system with small planets found orbiting close to their star, and the larger planets found farther away.

94. Answer: a

Explanation:

Approximate Balance sheet size of SBI following the merger was rupee 41 Lakh crores.

With this merger SBI became 45th largest bank in the world with this wealth.

95. Answer: c**Explanation:**

India was ranked at 62nd place among emerging economies on Inclusive Development Index (IDI-2018) released by World Economic Forum (WEF).

The Inclusive Development Index (IDI) is an annual assessment of 103 countries' economic performance that measures how countries perform on eleven dimensions of economic progress in addition to GDP.

96. Answer: d**Explanation:**

R – Resistance

p – Resistivity

l – length

A = area

$$R = \frac{\rho l}{A}$$

$$A = 1\text{cm}^2 = 0.0001\text{m}^2$$

$$R = 100 \times 10 / 0.0001 = 100 \times 10 \times 10000 = 10^7$$

$$1 \text{ mega } \Omega = 10^6 \Omega$$

$$R = 10 \times 10^6 \Omega \text{ or } 10 \text{ mega } \Omega$$

97. Answer: d

Explanation:

- Anything kept in a fluid experiences an upward force called upthrust.
 - Moment of force (often just moment) is a measure of its tendency to cause a body to rotate about a specific point or axis.
 - Pressure is a continuous physical force exerted on or against an object by something in contact with it.
 - Torque is a measure of the force that can cause an object to rotate about an axis.
-

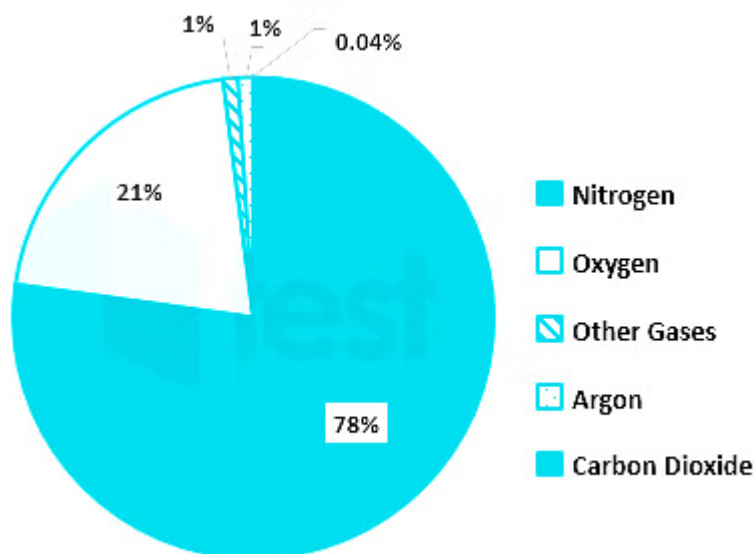
98. Answer: b

Explanation:

The correct answer is oxygen.

★ Key Points

- Air is a mixture of gases that surrounds the earth.
- It consists of different gases.



EXPLANATION:

- About 21% of atmospheric air contains Oxygen.
- It is the second abundant gas in the atmosphere.
- Nitrogen is the most abundant gas.
- Carbon dioxide, argon, methane are found in minute quantities.

★ Additional Information

- Permanent Gases of the Atmosphere

Nitrogen (N ₂)	78.084
Oxygen (O ₂)	20.946
Argon (Ar)	0.934
Carbon dioxide (CO ₂)	0.036
Neon (Ne)	0.00182
Helium (He)	0.000524
Krypton (Kr)	0.000114
Hydrogen (H ₂)	0.00005

99. Answer: c

Explanation:

Roger Federer won the Tennis 2017 Wimbledon Championships Men's Singles.

Aryan Tari won the 2017 World Junior Chess Championship.

Viktor Axelsen won the Men's Singles Badminton 2017 BWF World Championships.

100. Answer: b

Explanation:

In Microsoft Word, View Buttons provides options to switch between Normal, Web Layout, Print Layout, Outline and Reading Views.

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