SSC CHSL Previous Paper 51 (Held On: 25 March 2018 Shift 2) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2018 • 100 questions • 60 minutes • Answer key and solutions

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ENGLISH LANGUAGE

Q1. In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

(a) precariousely
(b) precarriously
(c) precarriousely
(d) precariously

Q2. 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.

English may be a foreign

A-countries, but not for

B-those from India

C-language for students from other

(a) BCA
(b) CAB
(c) BAC
(d) ACB

Q3. 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”.

A better example is a person who (has been assigned) the duty of planting trees and watering them along an expressway.

(a) have been assigned
(b) have been assign
(c) has been assign
(d) No improvement

Q4. 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”.

His friends claimed that he (been depressed) for a few months.

(a) had being depressed
(b) had been depressed
(c) had been depress
(d) no improvement

Q5. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

Formally put an end to a system, practice, or institution

(a) Embark
(b) Commence

(c) Initiate
(d) Abolish

Q6. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

An artistic work, especially one on a large scale

(a) Ballad
(b) Sonnet
(c) Opus
(d) Limerick

Q7. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

Shoot through

(a) Pass with flying colours.
(b) Practice a difficult task so many times that you can do it easily.
(c) Reach your target by breaking through an obstacle.
(d) Leave, typically to escape from or avoid someone or something.

Q8. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

Rags to riches

(a) It takes a lot of hard work to earn wealth.
(b) To con someone and become rich by taking away their wealth.
(c) Used to describe a person's rise from a state of extreme poverty to one of great wealth.
(d) Earn wealth or reputation by unfair means.

Directions

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.

The best things in an artist's work are so much a matter of intuition, that there is much to be said for the point _____ view that would altogether discourage ___ inquiry into artistic phenomena on the part of the artist. Intuitions are shy things and apt to disappear if looked into too closely. And there is undoubtedly a danger that __ much knowledge and training may supplant the natural ___ feeling of a student, leaving only a cold knowledge of the means of expression _____ its place.

Q9. means of expression _____ its place.

(a) onto
(b) on
(c) in
(d) into

Q10. the natural _____ feeling of a student,

(a) intuition
(b) intuitive
(c) intuitively
(d) intuitionally

Q11. danger that _____ much knowledge

(a) to
(b) too
(c) very
(d) super

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Q12. altogether discourage _____ inquiry into artistic phenomena

(a) intellect
(b) intellectual
(c) intellectually
(d) intellective

Q13. said for the point _____ view that would

(a) of
(b) for
(c) from
(d) off

Q14. 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.

(a) Orcheistra
(b) Orchestra
(c) Ourchestra
(d) Orkastra

Q15. 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.

He says, “Everybody is here.”

(a) He says everybody was here.
(b) He says that everybody is here.
(c) He says that everybody was here.
(d) He said everybody were here.

Q16. 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.

Somebody has stolen my mobile phone.

(a) My mobile phone had been stolen.
(b) My mobile phone has been stolen.
(c) My mobile phone was stolen.
(d) My mobile phone will be stolen.

Q17. Rearrange the parts of the sentence in correct order.

Warm-blooded

P: animals have an elaborate

Q: maintain constant body temperature

R: physiological control to

(a) QRP
(b) PRQ
(c) RPQ
(d) PQR

Q18. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.

Reprimand

(a) Forgiveness
(b) Punishment
(c) Lecture
(d) Blame

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Q19. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.

Calamity

(a) Happiness
(b) Failure
(c) Suffering
(d) Tragedy

Q20. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

Piquant

(a) Flat
(b) Pride
(c) Spicy
(d) Grumpy

Q21. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

Plaudit

(a) Criticism
(b) Jeering
(c) Praise
(d) Silence

Q22. 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.

She did not _____ any profits from the investment.

(a) gain
(b) detain
(c) gripe
(d) returned

Q23. 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.

Australia was discovered by Dutch _____ in 1606.

(a) explorers
(b) concocters
(c) inventors
(d) manufacturers

Q24. 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'.

We can make donations to NGOs (1)/that are engaged in planting trees, (2)/or in anyway work towards saving the environment. (3)/No error (4)

(a) 1
(b) 2
(c) 3
(d) 4

Q25. 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'.

More then the problem, (1)/it's my reaction to the problem (2)/that creates chaos in my life. (3)/No error (4)

(a) 1
(b) 2

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(c) 3
(d) 4

GENERAL INTELLIGENCE

Q26. In the following question, select the related word pair from the given alternatives.

Rose: Flower ? ? :?

(a) Six : Square
(b) Tiger: Den
(c) Lily : White
(d) White : Colour

Q27. In the following question, select the related number from the given alternatives.

7 : 341 ? 11 : ?

(a) 998
(b) 1331
(c) 1329
(d) 1726

Q28. In the following question, select the related letter/letters from the given alternatives.

DFI : IKN ? NPS : ?

(a) SUV
(b) TUV
(c) SUX
(d) TUX

Q29. In the following question, select the odd word pair from the given alternatives.

(a) Kharif - Maize
(b) Rabi - Mustard
(c) Millet - Rabi
(d) Kharif - Soybean

Q30. 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.

(a) 17 - 22
(b) 19 - 24
(c) 47 - 52
(d) 29 - 36

Q31. In the following question, select the odd letter/letters from the given alternatives.

(a) EIN
(b) JNS
(c) MQV
(d) OSY

Q32. From the given alternatives, according to dictionary, which word will come at FOURTH position?

1. Despair
2. Develop
3. Detect
4. Diagonal
5. Different

(a) Despair
(b) Detect

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(c) Develop
(d) Diagonal

Q33. In the following question, select the missing number from the given series.

4, 5, 12, 39, 160, ?

(a) 814
(b) 805
(c) 895
(d) 485

Q34. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

MP, SV, YB, EH, ?

(a) LM
(b) KN
(c) NL
(d) NQ

Q35. 'A 4 B' means 'A is mother of B', 'A 6 B' means 'A is wife of B', 'A 8 B' means 'A is son of B' and 'A 2 B' means 'A is father of B'. Which of the following represents F as the grandson of V?

(a) F 4 V 8 H 8 R
(b) H 4 F 8 A 8 V
(c) R 4 V 6 B 2 F
(d) F 4 A 8 R 2 V

Q36. From the given alternatives, select the word which CANNOT be formed using the letters of the given word.

Philosophy

(a) Local
(b) Loos
(c) Sophy
(d) So

Q37. In a certain code language, "FAINT" is written as "DYGLR". How is "METRO" written in that code language?

(a) RPJNO
(b) JKNPQ
(c) NPQRV
(d) KCRPM

Q38. In a certain code language, '-' represents '×', '÷' represents '+', '+' represents '÷' and '×' represents '-'. Find out the answer to the following question.

3 × 8 ÷ 4 - 60 + 12 = ?

(a) 10
(b) 15
(c) 26
(d) 1

Q39. The following equation is incorrect. Which two signs should be interchanged to correct the equation?

7 × 16 + 20 - 20 ÷ 10 = 31

(a) ÷ and -
(b) × and -
(c) • and ÷
(d) • and +

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Q40. If 18$2 = 10, 8$4 = 6 and 12$18 = 15, then find the value of 7$9 = ?

(a) 12
(b) 20
(c) 8
(d) 18

Q41. Which of the following terms follows the trend of the given list?

XYZXZXZ, XZYXZXZ, XZXYZXZ, XZXZYXZ, XZXZXYZ, _____.

(a) XZXZXZY
(b) YXZXZXZ
(c) XYZXZXZ
(d) XZYXZXZ

Q42. A contestant in a cycle race starts and cycles 3 km North, then turns East and cycles 5.5 km, then turns South and cycles 3 km, then turns to his left and cycles 7 km. Where is he now with respect to the starting position?

(a) 1.5 km East
(b) 12.5 km West
(c) 12.5 km East
(d) 1.5 km West

Q43. 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 beat variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement I: All threads are strings.

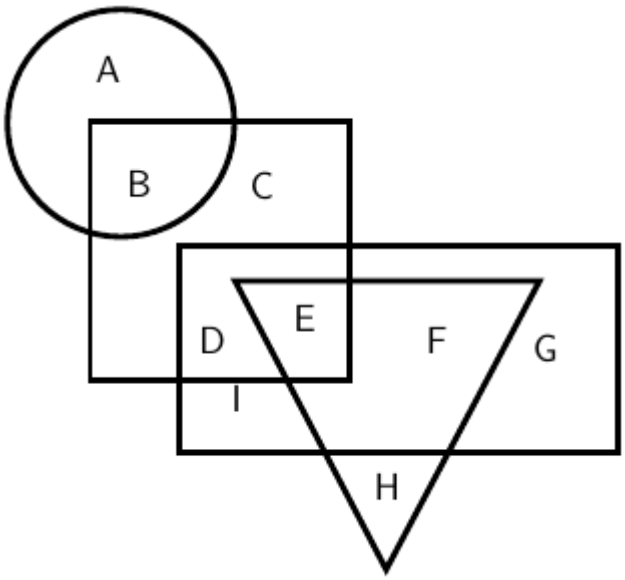
Statement II: All fibres are threads.

Conclusion I: All strings are fibres.

Conclusion II: All fibres are strings.

(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

Q44. In the following figure, rectangle represents actors, circle represents illustrator, triangle represents sculptors and square represents gymnasts. Which set of letters represents actors who are sculptors?



(a) EF
(b) DE
(c) FI

(d) FG

Q45. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

LKG, JHC, HEY, FBU, ?

(a) EZR
(b) HEX
(c) DYQ
(d) BWO

Q46. In the following question, select the missing number from the given series.

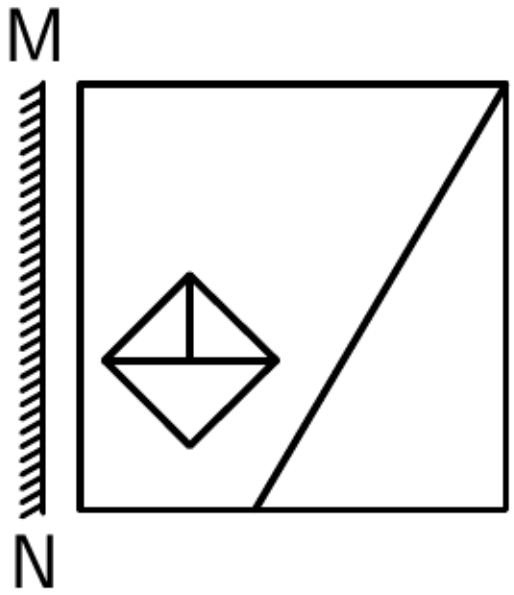
25, 33, 42, 52, 63, ?

(a) 70
(b) 75
(c) 73
(d) 78

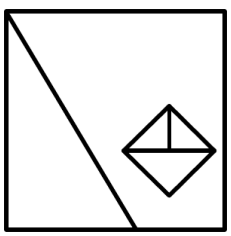
Q47. In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

(a) (22, 89, 45)
(b) (15, 61, 31)
(c) (12, 49, 25)
(d) (13, 52, 27)

Q48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?

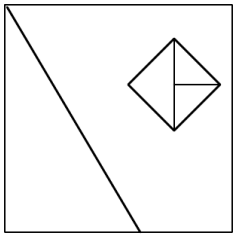


(a)

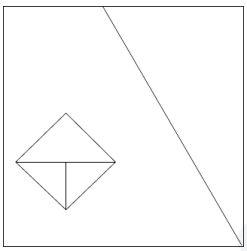


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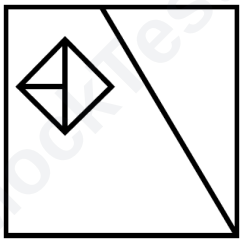
(b)



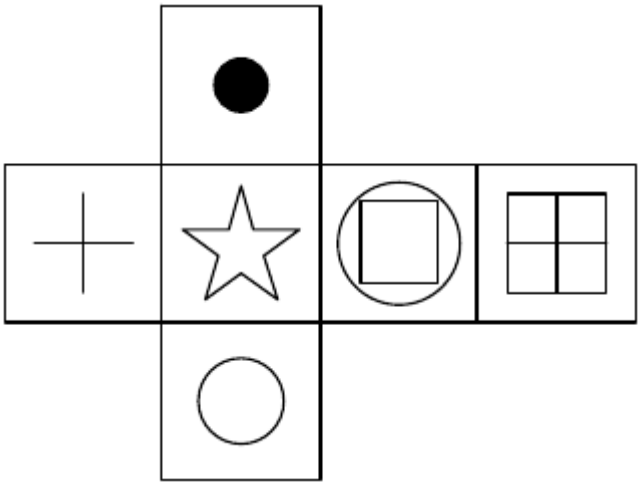
(c)



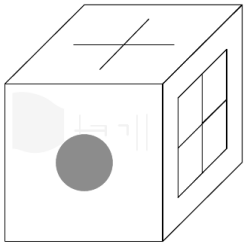
(d)



Q49. Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?

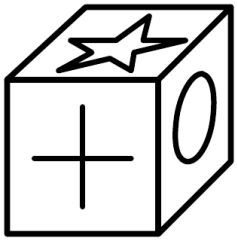


(a)

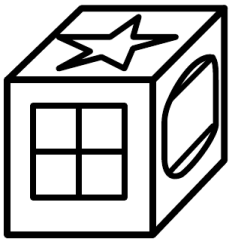


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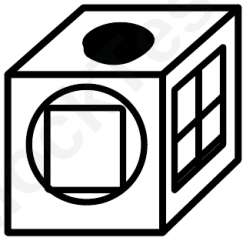
(b)



(c)



(d)



Q50. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are resented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix - I are numbered from 0 to 4 and that a Matrix - II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and row and next by its column, for example, ‘F’ can be represented by 14, 31 etc., and ‘U’ can be represented by 58, 96 etc. Similarly, you have to identify the set for the word “PAID”.

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

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

(a) 20, 68, 12, 78
(b) 30, 55, 34, 59
(c) 14, 89, 30, 85

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(d) 88, 21, 41, 43

QUANTITATIVE APTITUDE

Q51. A man engaged a servant on a condition that he would pay him Rs. 80 and a pair of jeans after service of one year. Servant served for only 9 months and receives a pair of jeans and an amount of Rs. 55. The price of the jeans is _____

(a) Rs. 80
(b) Rs. 60
(c) Rs. 40
(d) Rs. 20

Q52. Fraction that lies between 2/5 and 4/9 is _____.

(a) 3/7
(b) 2/4
(c) 4/5
(d) 1/2

Q53. If the arithmetic mean of two numbers is 7 and the geometric mean of the same two number is $2\sqrt{10}$. Then find the numbers x and y respectively, such that x > y.

(a) 4, 10
(b) 2, 5
(c) 5, 2
(d) 10, 4

Q54. If $y = 1^3 + 2^3 + 3^3 + 4^3 + 5^3 + 6^3$, then find the value of (y - 1).

(a) 429
(b) 439
(c) 440
(d) 441

Q55. Two circles of equal radii intersect each other such that one circle will pass through the centre of the other circle. The distance between the centres of circles is equal to 6 cm. Find the length (in cm) of common chord.

(a) $\sqrt{3}$
(b) $2\sqrt{3}$
(c) $3\sqrt{3}$
(d) $6\sqrt{3}$

Q56. The perimeter of two similar triangles is 36 units and 48 units. Find the ratio of their corresponding areas.

(a) 1 : 3
(b) 3 : 4
(c) 4 : 9
(d) 9 : 16

Q57. If side of a square is increased by 60%, then what will be the percentage increase in its area?

(a) 156
(b) 120
(c) 126
(d) 132

Q58. If (X/4) = (Y/5) = (Z/9), then what is X : Y : Z?

(a) 8 : 10 : 19
(b) 4 : 5 : 9
(c) 45 : 36 : 20
(d) 15 : 12 : 7

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Q59. Wheat costing Rs. 30/kg, Rs. 35/kg and a third variety of wheat are mixed in the ratio of 3 : 4 : 2. If the mixture costs Rs. 34/kg, then what will be the cost (in Rs./kg) of the third variety of wheat?

(a) 46
(b) 42
(c) 32
(d) 38

Q60. The average of ten numbers is 18. If one number is removed, then the average becomes 16, then what is the removed number?

(a) 36
(b) 40
(c) 48
(d) 52

Q61. A sum becomes 1.69 times of itself in 2 years when invested at compound interest. What is the per annum rate of interest (in percentage)?

(a) 38
(b) 34.5
(c) 13
(d) 30

Q62. Rohan sells two articles. The cost price of the first article is equal to the selling price of the second article. The first article is sold at a profit of 40% and the second article is sold at a loss of 40%. What is the ratio of the selling price of the first article to the cost price of the second article?

(a) 21 : 25
(b) 25 : 21
(c) 30 : 29
(d) 29 : 30

Q63. The marked price of an article is Rs. 2400. It is sold at two successive discounts of 10% and 15%. What is the selling price (in Rs.) of the article?

(a) 1836
(b) 1924
(c) 1848
(d) 1975

Q64. Q 1.Which of the following statement(s) is/are TRUE?

I. (√225 + √441)/√256 > 2.5~

II. (√289 + √529)/√169 > 3~

(a) Only I
(b) Only II
(c) Neither I nor II
(d) Both I and II

Q65. Shivam is 10% less efficient than Vivek. If Vivek can make a helmet in 9 days, then in how many days Shivam can complete the same work?

(a) 15
(b) 12
(c) 10
(d) 8

Q66. P and Q are at a distance of 240 km from each other at 9: 00 a.m. After 1 hour, P starts moving towards Q at a speed of 25 km/hr. At 11 a.m. Q starts moving towards P at the speed of 18 km/hr. At what time (in p.m.) will they meet?

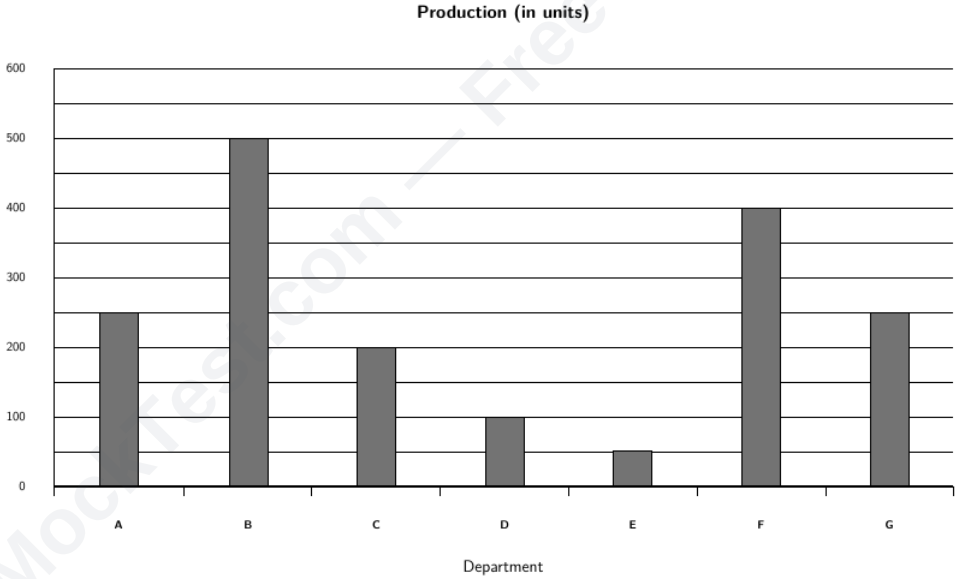
(a) 6

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(b) 5
(c) 3
(d) 4

Directions

Direction: The bar graph shows the production of the different departments of a company. Study the diagram and answer the following questions.



Q67. Which department has the second lowest production in units?

(a) C
(b) D
(c) E
(d) A

Q68. What is the ratio of production of department A to that of department F?

(a) 8 : 5
(b) 5 : 8
(c) 1 : 2
(d) 2 : 1

Q69. The production of department C is greater than that of department E by _____.

(a) 150%
(b) 400%
(c) 100%
(d) 300%

Q70. If the average cost a unit produced by department C is Rs. 250 then what is the cost of the production (in Rs.) of all units produced by department C?

(a) 50000
(b) 5000
(c) 250000
(d) 25000

Q71. The area of an equilateral triangle is $16\sqrt{3}$ cm². Find its side (in cm).

(a) 8
(b) 4
(c) 16
(d) 24

Q72. Calculate the area (in cm^2) of a circle whose diameter is 14 cm.

(a) 154
(b) 308
(c) 224
(d) 448

Q73. Find the volume (in cm^3) of a hemisphere of diameter 28 cm.

(a) 4789.67
(b) 3675
(c) 2732
(d) 5749.33

Q74. ΔDEF is right angled at E. If mangle F = 60°, then find the value of (cotD - 2/√3).

(a) 1-√2
(b) 1/√3
(c) (2-√3)/2√3
(d) (2-2√3)/√3

Q75. ΔDEF is right angled at E. If Tan D = 12/5, then what is the value of sec F?

(a) 5/12
(b) 13/5
(c) 5/13
(d) 13/12

GENERAL AWARENESS

Q76. “Gilt-edged” means _____.

(a) bullion market
(b) market of government securities
(c) market of guns
(d) market of pure metals

Q77. “Eco Mark” is given to the Indian products that are _____.

(a) pure and unadulterated
(b) rich in proteins
(c) environment friendly
(d) economically viable

Q78. Loess Plateau is situated in _____.

(a) Malaya
(b) Thailand
(c) China
(d) Korea

Q79. Singar Chouri peak on the northern slopes of the Vindhyan escarpment situated near Indore is the source of which river?

(a) Tapi river
(b) Chambal river
(c) Mahi River
(d) Mahanadi

Q80. Which of the following was only the authority of the state in the period of Maurya?

(a) Land
(b) Mines
(c) Pasture

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(d) Commerce

Q81. In which conference of 1888, the constitution was created for Congress?

(a) Bombay
(b) Calcutta
(c) Madras
(d) Allahabad

Q82. Which of the following is correctly matched?

(a) Hariprasad Chaurasia - Flute
(b) Bismillah Khan - Sarod
(c) Amjad Ali Khan - Tabla
(d) Zakir Hussain - Shehnai

Q83. Which of the following gulf countries has imposed value added tax (VAT) from January 1, 2018?

(a) Bahrain and Kuwait
(b) Oman and Saudi Arabia
(c) Kawait and UAE
(d) UAE and Saudi Arabia

Q84. Who among the following has been awarded by the UNHCR Nansen Refugee Award-2017 for his crucial mediating role and efforts to help children affected by the insurgency in his country?

(a) Zannah Mustapha
(b) Francois Gabart
(c) Sarah Mullally
(d) Cyril Ramaphosa

Q85. What is the national flower of Bangladesh?

(a) Red Rose
(b) White Jasmine
(c) Shapla
(d) Shapla (Water Lily)

Q86. Which of the following has largest atomic radius?

(a) Li
(b) Be
(c) B
(d) O

Q87. Out of all known elements, the minimum number is of _____ in the periodic table.

(a) Metals
(b) Non-metals
(c) Metalloids
(d) No option is correct.

Q88. The concept of suspension of fundamental rights in the Indian Constitution has been taken from which country's constitution?

(a) France
(b) Germany
(c) Russia
(d) Australia

Q89. Which Part of Indian constitution contains Article 368 that gives power to the parliament to do constitutional amendments?

(a) Part XX
(b) Part VII

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(c) Part XXII
(d) Part IX

Q90. Match the following.

Connective tissue	Function
I. Ligament	1. Connect bone to bone
II. Tendons	2. Smoothens bone surfaces at joints
III. Cartilage	3. Connects muscles to bones

(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 - 1, III - 2

Q91. Plants of which group are predominantly aquatic?
(a) Thallophyta
(b) Bryophyta
(c) Pteridophyta
(d) No option is correct.

Q92. In January 2018, which Ministry launched 'SFOORTI' App to help plan the traffic flows?
(a) Ministry of Road Transport and Highways
(b) Ministry of Civil Aviation
(c) Ministry of Railways
(d) Ministry of Commerce and Industry

Q93. As per the scientists of Physics Research Laboratory, Ahmadabad which type of storm can flow towards the Earth and disturb the atmosphere?
(a) Meteorite Strom
(b) Comet Strom
(c) Solar Storm
(d) Asteroid Storm

Q94. On 26 October 2017, which company became the first ever Indian company to cross a market capitalization of Rs. 6 trillion?
(a) TCS
(b) Infosys
(c) Reliance Industries Limited
(d) HDFC Bank

Q95. According to the Global Gender Gap report 2017, India has closed how much percentage of its gender gap?
(a) 12%
(b) 47%
(c) 67%
(d) 88%

Q96. What is the effective resistance (in Ω) of two resistors 21 Ω and 28 Ω connected in parallel?
(a) 49
(b) 24
(c) 12
(d) 98

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Q97. If the velocity of a body is doubled its kinetic energy _____.

(a) is also doubled
(b) becomes half
(c) becomes 1/4^(th)
(d) become 4 times

Q98. Carbon dioxide is one of the gases that cause the _____.

(a) Greenhouse effect
(b) Ozonification
(c) Oven phenomenon
(d) Sunburn

Q99. Which of the statements given below are correct?

A) In 2017, Wes Morgan captained the Premier League team Leicester City.
B) In 2017, Suresh Raina captained the IPL team Gujarat Lions Squad.
C) In 2017, Sergio Agüero played for the Premier League team Liverpool.

(a) Only A
(b) Only B
(c) Both A and B
(d) Both A and C

Q100. In Microsoft Excel, down arrow key stroke leads to _____ cell movement on spreadsheet.

(a) One cell up
(b) One cell down
(c) One cell Left
(d) One cell right

ANSWER KEY

1	d	2	b	3	d	4	b	5	d	6	c	7	d	8	c	9	c	10	b
11	b	12	b	13	a	14	b	15	b	16	b	17	b	18	a	19	a	20	c
21	c	22	a	23	a	24	c	25	a	26	d	27	c	28	c	29	c	30	d
31	d	32	d	33	b	34	b	35	b	36	a	37	d	38	b	39	b	40	c
41	a	42	c	43	b	44	a	45	c	46	b	47	d	48	a	49	c	50	d
51	d	52	a	53	d	54	c	55	d	56	d	57	a	58	b	59	d	60	a
61	d	62	a	63	a	64	b	65	c	66	d	67	b	68	b	69	d	70	a
71	a	72	a	73	d	74	b	75	d	76	b	77	c	78	c	79	b	80	b
81	d	82	a	83	d	84	a	85	d	86	a	87	c	88	b	89	a	90	b
91	a	92	c	93	c	94	c	95	c	96	c	97	d	98	a	99	c	100	b

SOLUTIONS

Q1. Answer: (d) precariously

The correct answer is precariously.

Key Points

• The correctly spelt word is precariously. It means in a way that is uncertain, insecure, unstable or likely to be damaged.
• Example : Don’t get involved in situations where you are precariously close to death.

Therefore, the correct answer is option 4.

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Q2. Answer: (b) CAB

The correct answer is CAB.

Key Points

• The first part of the sequence should be C as ‘English may be a foreign language…’ makes logical sense.

• The next part that follows should be A. ‘from other countries…’ is grammatically correct.

• If we use part B after C, ‘from other those…’ makes no sense.

• Part B can end the sentence properly.

Complete sentence – English may be a foreign language for students from other countries, but not for those from India.

Thus, the correct sequence is CAB, making option 2 the correct answer.

Q3. Answer: (d) No improvement

The correct answer is 'No improvement'.

Key Points

• The correct structure is: has been + verb in the past participle. It indicates that the action began in the past and continues in the present.

• Example: She has been considering moving to another place.

• The given sentence discusses a person whose job was assigned in the past and he still continues to perform that duty. So, no improvement is required, making option 4 the correct answer.

• Moreover, according to the "Subject-Verb Agreement Rule", 'a person' is a singular subject that will take a singular verb 'has' with it

• The correct sentence- A better example is a person who has been assigned the duty of planting trees and watering them along an expressway.

Q4. Answer: (b) had been depressed

The correct answer is had been depressed.

Key Points

The correct structure to be used: had been + verb in the past participle. This is used to indicate that the action began in the past and continued up to a given time in the past.

Let us see an example to understand:

• I had been worried about you. Where were you all these days?

Important Points

In the given sentence, the depression began in the past and he continued to be depressed for a period of time. That explains the use of ‘had been + verb’ structure. Now, the verb should be in the past participle. So, depressed is the correct form.

His friends claimed that he had been depressed for a few months.

Therefore, the correct answer is option 2.

Q5. Answer: (d) Abolish

The correct answer is Abolish.

Key Points

Let us look into the meaning of the given words:

• Embark – to begin a course of action

• Commence – to begin something

• Initiate – to cause something to begin

• Abolish – to end an activity officially

Therefore, the word abolish expresses the desired meaning, making option 4 the correct answer.

Q6. Answer: (c) Opus

The correct answer is Opus.

Key Points

• Ballad - a song or poem that tells a story

• Sonnet – a poem of 14 lines that has a particular pattern of rhyme

• Opus – an artistic work (like a musical composition) done on a large scale

• Limerick – a funny poem of 5 lines

Therefore, the word opus expresses the desired meaning, making option 3 the correct answer.

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Q7. Answer: (d) Leave, typically to escape from or avoid someone or something.

The correct answer is Leave, typically to escape from or avoid someone or something.

Key Points

• The meaning of the phrase shoot through is to leave a place very quickly especially in order to avoid someone or something.

• Example: My wife shot through while I was left behind dealing with the police.

Therefore, the correct answer is option 4.

Q8. Answer: (c) Used to describe a person's rise from a state of extreme poverty to one of great wealth.

The correct answer is Used to describe a person's rise from a state of extreme poverty to one of great wealth.

Key Points

• The phrase rags to riches is used to describe a person's rise from being very poor to being very rich.

• Example: His rags-to-riches fantasy finally came true!

Therefore, the correct answer is option 3.

Q9. Answer: (c) in

The correct answer is in.

Key Points

The correct preposition to be used here is in.

• When we refer to a large or general place, we use in.

• When we refer to a specific smaller place/street (especially a surface), we use on.

• I found her in the city.

• I found her on Park Avenue Street in Chennai.

Confusion Points

Although the word place in the given passage does not refer to a physical area, the mention is in a general sense and does not refer to a surface-like feature.

…means of expression in its place…

Thus, the correct answer is option 3.

Q10. Answer: (b) intuitive

The correct answer is intuitive.

Key Points

Feeling is a noun here. So, the word that comes before it should be an adjective (describing the noun). Looking at the options, intuitive is the correct word.

Intuition is the ability to understand something based on feelings and not on evidence or reasoning.

Important Points

The following sentences help us to understand the meaning clearly:

• Let your intuition guide you in this moment of difficulty

• My mother knows intuitively how to calm me.

• My mother's intuitive understanding of my habits is surprising.

So, the correct answer is option 2.

…the natural intuitive feeling of a student…

Additional Information

• Intuition is a noun.

• Intuitively is an adverb.

Q11. Answer: (b) too

The correct answer is too.

Key Points

Too means excessively – it is used to stress the excessive degree of something.

Now, the question arises whether we should use too much or very much in the given sentence.

• Very much is used to mean to a great degree (but not excessive)

• Example: Your help is very much appreciated.

• Too much is often used to indicate more than what can be tolerated. (it often indicates unpleasantness)

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• Example : You are spending too much time on entertainment

Here, in the given context, we are talking about excessive knowledge (highlighting some unpleasant aspect). So, too much is a proper fit.

…danger that too much knowledge…

Therefore, the correct answer is option 2.

Q12. Answer: (b) intellectual

The correct answer is intellectual.

Key Points

The word inquiry is a noun. The most suitable word that comes before it should be an adjective (a word that describes the noun). Looking at the options, we are describing the inquiry as intellectual. (Intellectually is an adverb that will describe a verb - an action word).

…altogether discourage intellectual inquiry into artistic phenomena…

Therefore, the correct answer is option 2.

Additional Information

intellectual: relating to the intellect

Intellective is not a valid word in English.

Q13. Answer: (a) of

The correct answer is of.

Key Points

The correct preposition to be used here is of.

• Of: expressing the relationship between a part and a whole.

• Example: The sleeve of his coat is brown in colour.

Therefore, the correct answer is option 1. (…said for the point of view that would…)

Additional Information

• For(preposition/conjunction): intended to be given to; reason or purpose

• From(preposition): used to show the place where someone or something starts; used to indicate a starting time

• Off(preposition/adverb): down or away from a place, position, or time, especially the present place, position, or time; away from a place or position, especially the present place, position, or time:

Q14. Answer: (b) Orchestra

The correct answer is Orchestra.

Key Points

The correctly spelt word is Orchestra.

• Orchestra: It refers to the group of musicians and instrumentalists who play a variety of instruments together.

• Example: I shall have my own orchestra, but shouldn't we get the gipsy singers as well? ...

Important Points

The word is pronounced as Or-k-istra : -ch sounds like k and not like ch in machine or in munch)

Therefore, the correct answer is option 2.

Q15. Answer: (b) He says that everybody is here.

The correct answer is He says that everybody is here.

Key Points

• In Direct speech, the message is conveyed in the words of the speaker.

• In Indirect speech, the message is reported in our words.

• When we convert Direct speech to Indirect speech, we omit the quotation marks (“…”). Also, the conjunction that is added before introducing the words spoken between quotation marks. So, we can eliminate option 1.

• If the reporting verb is in the present tense, the verb in the reported speech does not undergo any change during transformation. The reported speech is conveyed as it had been originally in direct speech.

• Keeping these points in mind, the sentence in Indirect Speech becomes: He says that everybody is here

Therefore, the correct answer is option 2.

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Q16. Answer: (b) My mobile phone has been stolen.

The correct answer is My mobile phone has been stolen.

Key Points

• The subject is someone that works on the object.

• A sentence is said to be in Active Voice when the subject performs the action

• When the subject is being acted upon by the verb – it is Passive Voice.

• The sequence in Active voice – Subject + verb + object

• The sequence in Passive voice – Object + verb + Subject

• The meaning conveyed by the sentence in both voices will remain the same. Only the sequence of the subject and the object (or the action) changes.

• Let us understand this through an example

• Active Voice: 'She eats an apple every day'

• Passive Voice : 'An apple is eaten by her every day'

• Note that eats changes to is eaten. We always change the main verb form to the past participle form of the verb

• The given sentence is in Active Voice as somebody is the subject performing an action of stealing. The sentence when converted in Passive voice becomes: My mobile phone has been stolen (has changes to has been). 'Somebody' which is missing in the passive voice is an inferred object of the passive voice sentence.

Therefore, the correct answer is option 2.

Q17. Answer: (b) PRQ

The correct answer is PRQ.

Key Points

• The adjective warm-blooded has to be followed by a noun. So, the first part in the sequence will be P.

• The next part can be R as elaborate (meaning detailed) is an adjective suitably describing physiological control.

• Part Q ends the sentence reasonably.

• Warm-blooded animals have an elaborate physiological control to maintain constant body temperature

Therefore, the correct sequence is PRQ, making option 2 the right answer.

Q18. Answer: (a) Forgiveness

The correct answer is Forgive.

Key Points

• Reprimand: a formal expression of disapproval

• Forgiveness: the action or process of forgiving or being forgiven

Thus we can see that Reprimand and Forgiveness are antonyms.

Additional Information

• Punishment: the act of punishing someone; rough treatment

• Lecture: a formal talk on a serious subject given to a group of people, especially students

• Blame: the situation in which people say or think that someone or something did something wrong or is responsible for something bad happening

Q19. Answer: (a) Happiness

The correct answer is Happiness.

Key Points

• Calamity: an event that causes much suffering to many people

• Happiness: the feeling of being happy

Thus, we can see that Calamity and Happiness are near-antonyms

Additional Information

• Failure: the fact of someone or something not succeeding

• Suffering: physical or mental pain that a person or animal is feeling

• Tragedy: a very sad event or situation, especially one involving death or suffering

Q20. Answer: (c) Spicy

The correct answer is Spicy.

Key Points

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• Piquant: having a pleasant sharp or spicy taste
• Spicy: containing strong flavours from spices
Thus we can see that Piquant and Spicy are synonyms.
Additional Information
• Flat: level and smooth, with no curved, high, or hollow parts
• Pride: a feeling of pleasure and satisfaction that you get because you or people connected with you have done or got something good
• Grumpy: easily annoyed and complaining

Q21. Answer: (c) Praise

The correct answer is Praise.
Key Points
• Plaudit: praise
• Praise: to express admiration or approval of the achievements or characteristics of a person or thing
Thus we can see that Plaudit and Praise are synonyms.
Additional Information
• Criticism: the act of saying that something or someone is bad
• Jeering: the action of laughing or shouting insults at someone to show you have no respect for them
• Silence: a period without any sound; complete quiet

Q22. Answer: (a) gain

The correct answer is gain.
Key Points
Let us look into the meaning of the words:
• Gain – to get something desired especially as a result of one's efforts
• Detain – to hold someone back or stop them from moving
• Gripe – to complain about something in an irritating way
• Returned: given something back to someone
The most appropriate word is gain. (Profits are gained)
Complete sentence - She did not gain any profits from the investment.
Therefore, the correct answer is option 1.

Q23. Answer: (a) explorers

The correct answer is explorers.
Key Points
Let us understand the meaning of the given words:
• Explorer – a person who travels to places to learn more about them
• Concocter – the one who creates an idea/plan
• Inventor – the first person to manufacture or develop something
• Manufacturer – a person who makes goods using raw materials
The sentence here talks about the discovery of a place (Australia). So, the word explorers will be a proper fit for the blank.
Complete sentence - Australia was discovered by Dutch explorers in 1606.
Therefore, the correct answer is option 1.

Q24. Answer: (c) 3

The correct answer is 3- the error lies in only Part 3.
Key Points
• The error lies in part 3 of the sentence, making option 3 the correct answer.
• The word anyway means: in spite of something that has been mentioned before.
• Example: It was raining heavily, but we drove to the mall anyway.
• Any means one or some of a thing.
• Example: Do you have any food left?
• The speaker here refers to any work towards saving the environment.

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• There is no point to highlight in spite of in the given sentence. So, the use of any way is incorrect.

• Hence, the correct sentence is: We can make donations to NGOs that are engaged in planting trees or in any work towards saving the environment.

Q25. Answer: (a) 1

The correct answer is option 1.

Key Points

• The error lies in part 1 of the sentence.

• Then and than are homophones that sound alike but have different meanings.

• Let us understand the difference in the usage of then and than.

• | Than | Then |

Than is used to make comparisons.	**Then is used when we are talking about time (to mean at that time)**
Than can function as a conjunction or preposition (used to indicate comparison)	Then can function as an adjective, adverb, or noun.
Eg- She is more caring than I am.	Eg- I was at home then.

• In the given question, the sentence is making a comparison between the problem and the speaker's reaction to the problem. So, we need to use than and not then.

• Correct Sentence - More than the problem, it's my reaction to the problem that creates chaos in my life.

Additional Information

• Than is most often seen with comparatives and words like "more," "less," and "fewer."

• Eg- Russia is even more spacious than Canada. ("More spacious" is comparative.)

• Then can also be used to indicate the next action in order.

• Eg- We went to the mall and then out for dinner.

Important Points

• The best way to remember the difference between the two is to associate then with time and order and than with any form of comparison.

• It may also help to note that the word than doesn't really have a one-word substitute; it's one of a kind.

• Eg- Carlos is taller than his brother. (There is no other word that can fill the role of than).

• Eg- I drove to the bank and then went to the store. (Here, the word then can be substituted by subsequently).

Mistake Points

• Comparisons involving time tend to attract this error. Remember to use "than" for comparisons, including those involving time.

• Winter is later then autumn. (Wrong)

• Winter is later than autumn. (Right)

Q26. Answer: (d) White : Colour

The correct answer is White: Colour.

Solution

Rose: Flower → Rose is a type of flower

Similarly,

White: Colour → White is a type of colour.

Hence, White : Colour is the correct answer.

Q27. Answer: (c) 1329

The logic followed is,

$7 : 341 \rightarrow 7 : 7^3 - 2$

Similarly,

$11 : 1329 \rightarrow 11 : 11^3 - 2$

Hence, 1329 is the correct answer.

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Q28. Answer: (c) SUX

The logic followed is,

Similarly,

Hence, the correct answer is " SUX ".

Q29. Answer: (c) Millet - Rabi

All except 'Millet - Rabi' are correct pairs, Millet is a Kharif crop.

Hence, the correct answer is " Millet - Rabi ".

Q30. Answer: (d) 29 - 36

The logic followed here is:-

(First number + 5) = Second number

1) 17 - 22 → 17 + 5 = 22

2) 19 - 24 → 19 + 5 = 24

3) 47 - 52 → 47 + 5 = 52

4) 29 - 36 → 29 + 5 = 34 not 36

As can be established from above that 29 - 36 is the odd number pair.

Hence, the correct answer is "29 - 36".

Q31. Answer: (d) OSY

The pattern followed here is:-

As can be seen from the above that OSY are the odd letters among the given alternatives.

Hence, the correct answer is "OSY".

Q32. Answer: (d) Diagonal

The correct order of the given words as they would appear in an English dictionary is as shown:-

1) Despair

2) Detect

3) Develop

4) Diagonal

5) Different

As can be seen the word that comes at fourth position is Diagonal.

Hence, the correct answer is "Diagonal".

Q33. Answer: (b) 805

The logic followed here is:-

Hence, the correct answer is "805".

Q34. Answer: (b) KN

The pattern followed here is:-

Hence, the correct answer is "KN".

Q35. Answer: (b) H 4 F 8 A 8 V

Given →

‘A 4 B’ means ‘A is mother of B’,

‘A 6 B’ means ‘A is wife of B’,

‘A 8 B’ means ‘A is son of B’,

‘A 2 B’ means ‘A is father of B’

1) F 4 V 8 H 8 R → F is mother of V, V is son of H, H is son of R

F is the father of V.

2) H 4 F 8 A 8 V → H is mother of F, F is son of A, A is son of V

F is the grandson of V.

3) R 4 V 6 B 2 F → R is mother of V, V is wife of B, B is father of F

V is the mother of F.

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4) F 4 A 8 R 2 V → F is mother of A, A is son of R, R is father of V

F is the mother of V.

Hence, the correct answer is "H 4 F 8 A 8 V".

Q36. Answer: (a) Local

Given word → Philosophy

1) Local → Philosophy → Cannot be formed (Letter 'C' is not present in the given word 'Philosophy')

2) Loos → Philosophy → Can be formed (all the letters are present so, the word Loss can be formed)

3) Sophy → Philosophy → Can be formed (all the letters are present so, the word Sophy can be formed)

4) So → Philosophy → Can be formed (all the letters are present so, the word So can be formed)

Hence, the correct answer is "Local".

Q37. Answer: (d) KCRPM

The pattern followed here is:-

FAINT is coded as DYGLR

Similarly,

METRO is coded as KCRPM

Hence, the correct answer is "KCRPM".

Q38. Answer: (b) 15

Given → 3 × 8 ÷ 4 - 60 + 12 = ?

Symbol	•	÷	•	×
Meaning	×	•	÷	•

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

New equation → 3 - 8 + 4 × 60 ÷ 12

Now, after applying BODMAS Rule, we get:-

3 - 8 + 4 × 60 ÷ 12

3 - 8 + 4 × 5

3 - 8 + 20

23 - 8

15

Hence, the correct answer is "15".

Q39. Answer: (b) × and -

Given equation:-

7 × 16 + 20 - 20 ÷ 10 = 31

Checking options one by one by interchanging signs

1) ÷ and -

After interchanging, new equation → 7 × 16 + 20 ÷ 20 - 10 = 31

By solving the equation using BODMAS Rule, we get:-

7 × 16 + 20 ÷ 20 - 10 = 31

7 × 16 + 1 - 10 = 31

112 + 1 - 10 = 31

113 - 10 = 31

103 ≠ 31

Left hand side is not equal to right hand side

2) × and -

After interchanging, new equation → 7 - 16 + 20 × 20 ÷ 10 = 31

By solving the equation using BODMAS Rule, we get:-

7 - 16 + 20 × 20 ÷ 10 = 31

7 - 16 + 20 × 2 = 31

7 - 16 + 40 = 31

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47 - 16 = 31
31 = 31
Left hand side is equal to right hand side
3) + and ÷
After interchanging, new equation → 7 × 16 ÷ 20 - 20 + 10 = 31
By solving the equation using BODMAS Rule, we get:-
7 × 16 ÷ 20 - 20 + 10 = 31
7 × 0.8 - 20 + 10 = 31
5.6 - 20 + 10 = 31
15.6 - 20 = 31
• 4.4 ≠ 31
Left hand side is not equal to right hand side
4) - and +
After interchanging, new equation → 7 × 16 - 20 + 20 ÷ 10 = 31
By solving the equation using BODMAS Rule, we get:-
7 × 16 - 20 + 20 ÷ 10 = 31
7 × 16 - 20 + 2 = 31
112 - 20 + 2 = 31
114 - 20 = 31
94 ≠ 31
Left hand side is not equal to right hand side
Hence, the correct answer is "× and -".

Q40. Answer: (c) 8

The logic followed is:-
(First number + Second number)/2 → Result
Given:-
In 18$2 = 10
(18 + 2)/2 = 20/2 => 10
In 8$4 = 6
(8 + 4)/2 = 12/2 => 6
In 12$18 = 15
(12 + 18)/2 = 30/2 => 15
Similarly,
In 7$9
(7 + 9)/2 = 16/2 = 8
Hence, the correct answer is "8".

Q41. Answer: (a) XZXZXZY

The pattern followed here is:-
The second letter Y is shifted to right in each block.
XYZXZXZ → XZYXZXZ → XZXYZXZ → XZXZYXZ → XZXZXYZ → XZXZXZY
Hence, the correct answer is "XZXZXZY".

Q42. Answer: (c) 12.5 km East

As per the given information,
1) A contestant in a cycle race starts and cycles 3 km North.
2) Then turns East and cycles 5.5 km.
3) Then turns South and cycles 3 km.
4) Then turns to his left and cycles 7 km.
Here, we can see that the contestant in 12.5 km towards East from the starting position.
Hence, the correct answer is " 12.5 km East ".

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Q43. Answer: (b) Only conclusion II follows

The least possible Venn diagram is as follows:

Conclusion I: All strings are fibres → False (It is possible but not definite)

Conclusion II: All fibres are strings → True.

Hence, the correct answer is " Only Conclusion II follows ".

Q44. Answer: (a) EF

Rectangle represents actors,

Circle represents illustrator,

Triangle represents sculptors,

Square represents gymnasts.

→ Intersection of rectangle and triangle represents actors who are sculptors: EF.

Hence, the correct answer is " EF ".

Q45. Answer: (c) DYQ

The pattern followed here is:-

Hence, the correct answer is "DYQ".

Q46. Answer: (b) 75

The pattern followed here is:-

Hence, the correct answer is "75".

Q47. Answer: (d) (13, 52, 27)

The logic followed is here is:-

Second number = First number × 4 + 1

Third number = First number × 2 + 1

In (22, 89, 45)

(22 × 4 + 1) → 88 + 1 = 89

(22 × 2 + 1) → 44 + 1 = 45

In (15, 61, 31)

(15 × 4 + 1) → 60 + 1 = 61

(15 × 2 + 1) → 30 + 1 = 31

In (12, 49, 25)

(12 × 4 + 1) → 48 +1 = 49

(12 × 2 + 1) → 24 + 1 = 25

But,

In (13, 52, 27)

(13 × 4 + 1) → 53 ≠ 52

(13 × 2 + 1) → 27

As can be seen clearly that the odd pair is (13, 52, 27) as it does not follow the logic.

Hence, the correct answer is "(13, 52, 27)".

Q48. Answer: (a) [figure]

The correct mirror image of the given figure when a mirror is placed on the line MN is as shown below:-

Hence, the correct answer is "Option 1".

Q49. Answer: (c) [figure]

Here, the opposite faces of the cube are:-

Now, checking option one by one:-

1) Cube shown in option figure 1 can be formed as no opposite faces are present together.

2) Cube shown in option figure 2 can be formed as no opposite faces are present together.

3) Cube shown in option figure 3 cannot be formed as the opposite faces are adjacent to each other, which is not possible.

4) Cube shown in option figure 4 can be formed as no opposite faces are present together.

In option 3) the opposite faces are adjacent to each other, which is not possible.

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Hence, the correct answer is "Option 3".

Q50. Answer: (d) 88, 21, 41, 43

The pattern followed here is:-

A letter in the matrices is represented first by its row and then by its column.

Checking options one by one to identify the set for the word 'PAID'

1) 20 → I ; 68 → Z ; 12 → H ; 78 → Z (So, the word formed is IZHZ)

2) 30 → E ; 55 → X ; 34 → J ; 59 → X (So, the word formed is EXJX)

3) 14 → L ; 89 → U ; 30 → E ; 85 → Y (So, the word formed is LUEY)

4) 88 → P ; 21 → A ; 41 → I ; 43 → D (So, the word formed is PAID)

Hence, the correct answer is "88, 21, 41, 43".

Q51. Answer: (d) Rs. 20

Calculation:

Let the cost of jeans be Rs. x

Total amount paid after service of one year = 80 + x

Amount paid after service of one month = (80 + x)/12

Amount paid after service of 9 months = {(80 + x)/12} × 9

According to the question:

=> 55 + x = (240 + 3x)/4

=> 220 + 4x = 240 + 3x

=> x = 20

Therefore The price of the jeans is Rs.20

Q52. Answer: (a) 3/7

Calculation:

2/5 = 0.4

4/9 = 0.44

Now, from the option:

3/7 = 0.43

2/4 = 0.5

4/5 = 0.8

1/2 = 0.5

Hence, 0.4 < 0.43 < 0.44 < 0.5 < 0.8

=> 0.43 = 3/7 is lies between 2/5 and 4/9

Therefore The correct answer is 3/7.

Q53. Answer: (d) 10, 4

Shortcut Trick

The Sum of two numbers is 2 × Arithmetic Mean = 2 × 7 = 14.

The Product of two numbers is (Geometric Mean)² = $(2\sqrt{10})^2$ = 4 × 10 = 40.

Find two numbers whose sum is 14 and product is 40: 10 and 4 (since 10+4=14 and 10×4=40).

Given x > y, therefore x = 10 and y = 4.

Therefore The correct answer is 10, 4.

Alternate Method

Given: Arithmetic Mean (AM) = 7 and Geometric Mean (GM) = $2\sqrt{10}$.

Formula Used: AM = (x + y) / 2 and GM = $\sqrt{(xy)}$.

=> (x + y) / 2 = 7 => x + y = 14

=> $\sqrt{(xy)} = 2\sqrt{10}$ => xy = $(2\sqrt{10})^2$ = 40

=> Using the Quadratic Equation form: t^2 − (Sum)t + (Product) = 0

=> $t^2 - 14t + 40 = 0$

=> $t^2 - 10t - 4t + 40 = 0$

=> $t(t - 10) - 4(t - 10) = 0$ => $(t - 10)(t - 4) = 0$

=> The roots are 10 and 4. Since x > y, x = 10 and y = 4.

Therefore The correct answer is 10, 4.

Additional Information

Relationship between AM and GM

For any two positive numbers, the Arithmetic Mean is always greater than or equal to the Geometric Mean (AM ≥ GM).

Quadratic Equation from Roots

If the sum of roots is S and the product of roots is P, the equation is given by $x^2 - Sx + P = 0$.

Harmonic Mean (HM)

The Harmonic Mean of x and y is given by 2xy / (x + y). The relation between means is $GM^2 = AM \times HM$.

Q54. Answer: (c) 440

Given:

$y = 1^3 + 2^3 + 3^3 + 4^3 + 5^3 + 6^3$

Calculation:

y = 13 + 23 + 33 + 43 + 53 + 63

=> y = 1 + 8 + 27 + 64 + 125 + 216

=> y = 441

So, (y - 1) = 441 - 1 = 440

Therefore The correct answer is 440.

Q55. Answer: (d) 6√3

Given:

The distance between the center of circles is equal to 6 cm.

Calculation:

Let the common chord AB perpendicular bisect the distance between the center XY at O

=> XO = XY/2 = 6/2 = 3cm

=> AX = radius = 6 (The circles pass through each other's center)

Now, in triangle XAO right angled at O

$=> AX^2 = AO^2 + XO^2$

$=> 6^2 = AO^2 + 3^2$

$=> AO^2 = 36 - 9$

=> AO = 3√3

=> AB = 2 × AO = 6√3 cm

Therefore The correct answer is 6√3 cm.

Q56. Answer: (d) 9 : 16

Given:

The perimeter of the first triangle = 36 units

The perimeter of the second triangle = 48 units

Formula used:

(Perimeter of the first triangle)/(perimeter of the second triangle) = (Side of the first triangle)/(side of the second triangle).

Calculation:

(Side of the first triangle)/(side of the second triangle) = (perimeter of the first triangle)/(perimeter of the second triangle)

Side of the first triangle/side of second triangle = 36/48 = 3/4

Area of the first triangle/Area of the second triangle = (side of first triangle/side of second triangle)²

Area of the first triangle/Area of the second triangle = $(3/4)^2 = 9/16$

Therefore The correct answer is 9/16.

Q57. Answer: (a) 156

Calculation:

Let a be the side of a square.

So, the area of the square = a^2

New side = a + {(60/100) × a} = (160/100) × a = 1.6a

So, area of new square = $(1.6a)^2 = 2.56a^2$

Percentage increase in its area = $(2.56a^2 - a^2)/a^2 \times 100 = 156\%$

Therefore The correct answer is 156%.

Shortcut TrickCalculation:

Side(+ 60%)	5	8
Side (+ 60%)	5	8
Area	25	64

So the percentage change in area = {(64 - 25)/25} × 100

=> 39 × 4 = 156%

Therefore The correct answer is 156%.

Q58. Answer: (b) 4 : 5 : 9

Given:

(X/4) = (Y/5) = (Z/9)

Calculation:

(X/4) = (Y/5) = (Z/9)

=> X : Y : Z = 4 : 5 : 9

Therefore The correct answer is 4 : 5 : 9.

Q59. Answer: (d) 38

Given:

Wheat costing Rs. 30/kg, Rs. 35/kg and a third variety of wheat are mixed in the ratio of 3 : 4 : 2.

The mixture costs Rs. 34/kg.

Concept :

If N is divided into two part in the ratio a : b, then

First part = N × a/(a + b)

Second part = N × b/(a + b)

Calculation:

Let the quantity of three varieties of wheat be 3x, 4x and 2x and cost of third variety of wheat be Rs. a/kg

According to the question,

=> (3x × 30) + (4x × 35) + (2x × a) = 34 × (3x + 4x + 2x)

=> 90x + 140x + 2xa = 306x

=> 2xa = 76x

=> a = 38

Therefore The cost of the third variety of wheat is Rs. 38/kg

Q60. Answer: (a) 36

Given:

The average of 10 members = 18

The average of 9 members = 16

Formula used:

Average = sum of the given data/number of data

Calculation:

According to the question:

Average of 10 numbers = 18

=> sum of 10 numbers/10= 18

=> Sum of 10 numbers = 180

One number is removed, then total 9 numbers are left.

.Average of 9 numbers = 16

=> sum of 9 numbers/9 = 16

=> Sum of 9 numbers = 144

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Required number = 180 - 144 = 36

Therefore The correct answer is 36

Q61. Answer: (d) 30

Given:

Amount = 1.68 × Principal

Time = 2 years

Formula used:

Amount = $P \times \{1 + (r/100)\}^n$

Calculation:

Let the principal be Rs. P

Amount = 1.69 × Principal

=> $P\{1 + (rate/100)\}^2 = 1.69 \times P$

=> $\{1 + (rate/100)\}^2 = 1.69$

=> $1 + (rate/100) = 1.3$

=> $(rate/100) = 1.3 - 1$

=> rate = 0.3 × 100

=> rate = 30%

Therefore The correct answer is 30%.

Q62. Answer: (a) 21 : 25

Given:

The cost price of the first article is equal to the selling price of the second article.

Calculation:

Let the C.P of the first article be Rs. X

Profit % = 40%

So, Selling price = X + 40% of X

= x + 0.4x = 1.4x = 7x/5

And, the selling price of the second article = Rs. X

Loss % = 40%

Cost price = Selling price + loss % of cost price

=> (1 - loss%) cost price = selling price

=> (1 - 0.4)Cost price = X

=> 0.6 cost price = X

=> Cost price = x/0.6 = 5x/3

Required ratio = (7x/5) : (5x/3) = 21 : 25

Therefore The correct answer is 21 : 25.

Shortcut TrickCalculation:

The first article sold at 40% profit = C.P : S.P = 5 : 7

The second article sold at 40% loss = C.P : S.P = 5 : 3

According to the question:

C.P : S.P = (5 : 7) × 3 = 15 : 21

C.P : S.P = (5 : 3) × 5 = 25 : 15

So, S.P of the first article: C.P of the second article = 21 : 25

Therefore The correct answer is 21 : 25.

Q63. Answer: (a) 1836

Calculation:

Effective discount = {10 + 15 - (10 × 15)/100}% = 23.5%

Marked price = Rs.2400

Selling price = 2400 - 23.5% of 2400

=> 2400 - 564 = Rs.1836

Therefore The correct answer is Rs.1836.

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Q64. Answer: (b) Only II

Calculation:

Statement I

(√225 + √441)/√256 = (15 + 21)/16 = 36/16 = 2.25 < 2.5

So, this statement is false

Statement II

(√289 + √529)/√169 = (17 + 23)/13 = 40/13 = 3.07 > 3

So, this statement is true

Therefore The correct option is 2.

Q65. Answer: (c) 10

GIVEN:

Shivam is 10% less efficient than Vivek

Vivek's efficiency = 1/9

CALCULATION:

Vivek's efficiency = 1/9

Shivam's efficiency = 1/9 - 10% of (1/9) = 9/90 = 1/10

Therefore Shivam can complete the work in 10 days

Alternate MethodCalculation:

	Shivam	Vivek
Efficiency	9	10
Time	10	9

According to the question:

9 unit = 9 days

1 unit = 1 day

10 units = 10 days

Therefore The correct answer is 10 days.

Q66. Answer: (d) 4

Given:

The distance between P and Q = 240 km

Speed of P = 25 km/h; Speed of Q = 18 km/h

Calculation:

Distance between P and Q at 10 : 00 am = 240 km

Distance covered by P in 1 hour = speed × time = 25 × 1 = 25 km

Distance between P and Q is at 11 am = 240 - 25 = 215 km

Relative speed = 25 + 18 = 43 km/hr

Time taken to meet = distance/ speed = 215/43 = 5 hr

Therefore They will meet at 11 am + 5 hours = 4 pm

Alternate Method

Calculation:

1 hour difference (Q will have to move 1 hour late)

Total distance = 240 + 18

=> 258 km/h

Time = Distance/Speed

Time = 258/(25 + 18)

=> 6 hours

=> 10:00 AM + 6 hours

=> 4 : 00 PM

Therefore The correct answer is 4 : 00 PM.

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Q67. Answer: (b) D

Calculation:

According to the graph, D has the second lowest production in units

Therefore The correct option is 2.

Q68. Answer: (b) 5 : 8

Calculation:

Production of department A = 250

Production of department F = 400

Required ratio = 250 : 400 = 5 : 8

Therefore The correct answer is 5 : 8.

Q69. Answer: (d) 300%

Calculation:

Production of department C = 200

Production of department E = 50

Required % = {(200 - 50)/50} × 100 = 300%

Therefore The correct answer is 300%.

Q70. Answer: (a) 50000

Calculation:

Production of department C = 200

Cost of Production of one unit = Rs. 250

Total Cost = 200 × 250 = Rs. 50000

Therefore The correct answer is Rs. 50000.

Q71. Answer: (a) 8

Given:

The side of an equilateral triangle is 16√3 cm

Formula used:

Area of an equilateral triangle = (√3/4) × side2

Calculation:

Area of an equilateral triangle = (√3/4) × side2

=> (√3/4) × side2 = 16√3 cm2

=> side2 = 64

=> side = 8 cm

Therefore Side of an equilateral triangle = 8 cm

Q72. Answer: (a) 154

Given:

Diameter of circle = 14 cm

Formula used:

Area of circle = $\pi \times r^2$

Calculation:

Diameter of circle = 14 cm

Radius = diameter/2 = 14/2 = 7 cm

Area = $\pi \times \text{radius}^2 = (22/7) \times 7^2 = 154\ \text{cm}^2$

Therefore The correct answer is 154 cm2.

Q73. Answer: (d) 5749.33

Given:

Diameter of hemisphere = 28 cm

Formula used:

Volume of hemisphere = (2/3) × π × radius3

Calculation:

Diameter of hemisphere = 28 cm

Radius = diameter/2 = 28/2 = 14 cm

Volume = (2/3) × π × radius³

Volume = (2/3) × (22/7) × 14³ = 5749.33

Therefore The correct answer is 5749.33 cm³.

Q74. Answer: (b) 1/√3

Given:

ΔDEF is right angled at E.

angle DFE = 60°; angle DEF = 90°

Formula used:

Cot 30° = √3

Calculation:

By angle sum property,

angle D + angle E + angle F = 180°

=> angle D = 180°- (angle E + angle F)

=> 180°- (90° + 60°) = 30°

Cot D - (2/√3)

=> cot30° - (2/√3)

=> √3 - (2/√3)

=> (3 - 2)/√3 = 1/√3

Therefore The correct answer is 1/√3.

Q75. Answer: (d) 13/12

Given:

ΔDEF is right angled at E.

Tan D = 12/5

Calculation:

=> EF/DE = 12/5

=> EF = 12k and DE = 5k

Now, by Pythagoras theorem,

=> DF = √(EF² + DE²) = √(144k² + 25k²) = 13k

Now,

Sec F = DF/EF = 13k/12k = 13/12

Therefore The correct answer is 13/12.

Q76. Answer: (b) market of government securities

The correct answer is market of government securities

Key Points

• Gilt-edged are high graded low-risk investment instruments issued by the government.

• Gilt-edged term is used mostly in markets where government securities and bonds are traded.

• A gilt-edged denotes a high-quality item whose value remains fairly constant over time.

• The risk in gilt-edged securities/bonds is fairly low because they are mostly issued by governments. They only fail when government undergoes a financial breakdown.

Q77. Answer: (c) environment friendly

The correct answer is environment-friendly.

Key Points

• Eco Mark is a certification mark given to ecologically safe products.

• It is issued by the Bureau of Indian Standards (BIS) to those products which conform to the standard prescribed.

• It was first started in 1991. Ministry of Forest and Climate Change handles it.

• It is given to over 16 categories including food, medicines, chemicals etc.

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Q78. Answer: (c) China

The correct answer is China.

Key Points

• The Loess Plateau is located in Central China.

• It is located around the Wei River Valley of the Yellow River in central China.

• It is believed to be the cradle of Chinese Civilization and has enormous importance in Chinese history.

• It has notably the most erodible soil in the world and the eroded silt is responsible for the fertility of Northern China.

Q79. Answer: (b) Chambal river

The correct answer is Chambal river.

Key Points

The 960 kilometres (600 mi) long Chambal River originates from the Singar Chouri peak on the northern slopes of the Vindhyan escarpment, 15 kilometres (9.3 mi) West-South-West of Mhow in Indore District, Madhya Pradesh state.

Additional Information

• Chambal River is a tributary of the Yamuna River.

• It flows through Madhya Pradesh, Rajasthan and Uttar Pradesh.

• Chambal and its tributaries drain the Malwa region of Madhya Pradesh.

• Right Bank Tributaries - Parbati, Kali Sindh, Shipra.

• Left Bank Tributaries- Gandhi Sagar, Rana Pratap Sagar, Jawahar Sagar, Kota Barrage.

Q80. Answer: (b) Mines

The correct answer is Mines.

Key Points

• Mines were the only authority of the state in the period of Maurya.

• Mines and materials extracted from it like gold, silver, copper, iron and tin were the sole authority of the state.

• It was used to manufacture weapons and armour for the king's military campaign.

• It also provided the needed metal to maintain currency.

• It was imperative to control the mining to stabilize the flow of currency.

Additional InformationMauryan Empire

• The Maurya dynasty (321–185 BC) was a powerful dynasty in ancient India.

• The Maurya dynasty ruled India for 137 years.

• The credit for its establishment is given to Chandragupta Maurya and his minister Chanakya (Kautilya).

• This empire started from the plains of the Ganges river (today's Bihar and Bengal) in the state of Magadha in the east.

• Its capital was Pataliputra (near present-day Patna city).

• Chandragupta Maurya established this empire in 321 BC and rapidly expanded his kingdom towards the west.

• The Mauryan Empire grew and thrived during the Iron Age.

• He took advantage of the differences between several small regional kingdoms that had arisen after Alexander's invasion.

• By 316 BC, the Maurya dynasty had occupied the whole of North Western India.

• The Maurya dynasty expanded on a large scale during the reign of the Chakravarti emperor Ashoka.

• Due to Emperor Ashoka, the Maurya Empire became the most significant and powerful.

Q81. Answer: (d) Allahabad

The correct answer is Allahabad.

Key Points

• Fourth INC in 1888

• George Yule was the first Non-Indian president of the Indian National Congress session.

• George Yule was a Scottish merchant in England and India who served as the fourth President of the Indian National Congress in 1888 at Allahabad.

• He was the first non-Indian to hold that office.

• He was the founder of George Yule & Co. of London and headed Andrew Yule & Co., of Calcutta.

• He served as Sheriff of Calcutta and as President of the Indian Chamber of Commerce.

Additional Information

• Important sessions:

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Sessions of INC Held at	Year	President
Bombay	1885	Womesh Chandra Banerjee
Calcutta	1896	Rahimtullah Sayani
Lucknow	1899	Romesh Chandra Dutt
Benaras	1905	Gopal Krishna Gokhale
Calcutta	1906	Dadabhai Naoroji
Surat	1907	Rash Bihari Ghosh
Lucknow	1916	A. C. Majumdar
Calcutta (Special Session)	1920	Lala Lajpat Rai
Nagpur	1920	C. Vijayaraghavachariar
Madras	1927	Dr. M. A. Ansari
Bombay	1934	Rajendra Prasad
Tripuri	1939	S.C Bose

Q82. Answer: (a) Hariprasad Chaurasia - Flute

The correct answer is Hariprasad Chaurasia - Flute.

Key Points

• Pandit Hari Prasad Chaurasiya is a flautist born in Allahabad (now Prayagraj) India.

• He plays the Indian Bamboo flute.

• He belongs to the Hindustani Classical Music genre.

• In 2017 a documentary film Bansuri Guru was made on his life by the Ministry of Information and Broadcasting.

Additional Information

• Bismillah Khan

• Ustad Bismillah Khan was a distinguished Shehnai player.

• Ustad Bismillah Khan was born on 21st March 1916, in Dumraon, Bihar.

• He got the biggest break in 1938 when he got the chance to work in Lucknow when he got a chance to work for All India Radio.

• He was awarded by:

• Padam Shri(1961), Padma Bhushan(1968), Padma Vibhushan(1980), Tahar Mausique from Republic of Iran(1992), Sangeet Natak Academi(1994), Bharat Ratna(2001).

• Amjad Ali Khan

• Amjad Ali Khan Bangash (born 9 October 1945) is an Indian classical sarod player, best known for his clear and fast ekhara taans.

• He was awarded India's second-highest civilian honour Padma Vibhushan in 2001.

• He learned from his father Haafiz Ali Khan, who was a court musician in Gwalior up until Independence in 1947.

• The name sarod comes from the Persian ‘sarod’ meaning ‘melody’, alluding to its more melodic tone.

• Zakir Hussain

• Zakir Hussain is a famous Indian tabla maestro, composer, and music producer and is the eldest son of Ustad Allah Rakha.

• He was awarded Padma Shri in 1988 and Padma Bhushan in 2002.

• He along with his father is responsible for popularizing tabla on international platforms.

• In 2016, he was among the many musicians who were invited by President Obama to the international Jazz festival 2016 which was a global concert at the White House.

Q83. Answer: (d) UAE and Saudi Arabia

The correct answer is UAE and Saudi Arabia.

Key Points

• UAE and Saudi Arabia became the first countries of the Gulf to impose Value Added Tax (VAT) from 1 Jan 2018.

• It was introduced to earn more revenues apart from oil reserves.

• The other member countries of the Gulf Cooperation Council are also committed to imposing VAT till the end of 2018.

• The rate of tax is set at 5%.

• A VAT is the type of consumption tax that is placed on a product whenever value is added at the stage of production and at the point of retail sale.

Q84. Answer: (a) Zannah Mustapha

The correct answer is Zannah Mustapha.

Key Points

• Zannah Mustapha was awarded UNHCR Nansen Refugee Award in 2017 for meditating.

• Zannah helped secure the release of more than 100 schoolgirls kidnapped by Boko Haram in Nigeria.

• The Nansen Refugee award was established in 1954 by United Nations High Commissioner for Refugees.

• The award recognizes extraordinary humanitarian work and service of an individual, group or organization towards refugees, internally displaced or stateless people.

Q85. Answer: (d) Shapla (Water Lily)

Shalpa (Water Lily) is the national flower of Bangladesh.

• It is indigenous to southern and eastern parts of Asia and is the national flower of Sri Lanka as well.

• It is used as an ornamental plant because of its spectacular flowers, and is most commonly used for the traditional and cultural festivals in Bangladesh as well as Sri Lanka.

• It is also used as a food item and included in many dishes of Bangladeshi cuisine.

Q86. Answer: (a) Li

The correct answer is Li.

Key Points

• Lithium has the largest atomic radius i.e. 167pm.

• Whereas, Beryllium – 112 pm, Boron – 87 pm, and Oxygen – 48 pm are smaller than Lithium.

• Atomic radius is the measure of the size of the atom of a particular chemical element.

• The measurement from the center of the nucleus to the boundary of the surrounded electron.

Important Points

• Atomic radius -

• It is the distance between the nucleus of an atom to its outermost electron that is called the 'Atomic Radius'.

• The exact value of the atomic radius of an atom cannot be known.

• Because the atom is not found in a free state nor can the exact position of the electron be known.

• In general, the atomic radius decreases across a period and increases down a group.

Q87. Answer: (c) Metalloids

The correct answer is Metalloids.

Key Points

Concept

• Metalloids are elements that exhibit properties of both metals and non-metals.

• They are placed at the zigzag borderline separating metals and non-metals in the periodic table.

Explanation

• Silicon(Si), Germanium (Ge), Antimony(Sb), Tellurium(Te), Polonium(Po) are metalloids.

Additional InformationNon-metals-

• Non Metals are generally found in solid or gaseous form.

• They are not lustrous and are bad conductors of heat and electricity.

• They can not be converted into thin sheets.

• The most common example of non-metal is Carbon. Carbon belongs to Group 14 of the Modern periodic table. It has atomic number 6 and has four electrons in its outermost shell. It is tetravalent i.e. it can form four bonds by sharing its outermost electrons.

Metals-

• Metals are substances that form naturally below the surface of the Earth. Most metals are lustrous or shiny. Metals are inorganic, which means they are made of substances that were never alive.

• All metals are good conductors of heat and electricity. Cooking utensils and irons are made up of metals as they are good conductors of heat.

• Ductility is the ability of the material to be stretched into a wire.

Q88. Answer: (b) Germany

The correct answer is Germany.

Explanation:

The concept of suspension of fundamental rights during an emergency is taken from Germany.

There are three types of emergencies:

• National Emergency

• Failure of constitutional machinery in states

• Financial Emergency

National Emergency: Article 352 of the Indian Constitution talks about the national emergency. A national emergency is imposed whereby there is a grave threat to the security of India or any of its territories due to war, external aggression, or armed rebellion. Such emergency shall be imposed by the president on the basis of a written request by the council of ministers headed by the Prime Minister.

State Emergency: Article 356 talks about the failure of constitutional machinery in a state also known as the President's rule. If the president on Governor's report or otherwise is satisfied that the situation has arisen that the government can't be carried in accordance with the constitutional provisions then, he may issue a State emergency.

Financial Emergency: The president under Article 360 of the constitution has the power to declare a financial emergency if he is satisfied that the financial stability or the credit of India or any part of its territory is threatened. It has to be laid before both the Houses of Parliament and ceases to operate at the expiration of two months unless meanwhile approved by the resolution of Houses.

About other options:

Countries	Features Borrowed
France	Republic and the ideals of Liberty, Equality, and fraternity in the Preamble
Russia	Fundamental Duties, Idea of Social, Economic, and Political justice in the Preamble
Australia	Concurrent list and Joint sitting in the Parliament

Q89. Answer: (a) Part XX

The correct answer is Part XX.

Key Points

• Article 368 which gives the power of amendment is enshrined in Part XX of the Indian Constitution.

• Part XX has only one article i.e. Art 368 that deals with the amendment of the constitution.

• As per Art 368Parliament may add, amend, or repeal any provision of the constitution as per the procedure laid down for this purpose except the one that comes under the basic structure of the constitution

• .After duly passed by both the Houses of Parliament and ratified by the state legislatures, where necessary, the bill is presented to the President for assent.

• The President must give his assent to the bill. He can neither withhold his assent to the bill nor return the bill to the Parliament for reconsideration.

• After the President's assent, the bill becomes an Act (i.e., a Constitutional Amendment Act) and the Constitution stands amended in accordance with the terms of the Act.

Q90. Answer: (b) I - 1, II - 3, III - 2

The correct answer is I - 1, II - 3, III - 2.

Key Points

• Ligaments.

• Ligaments are the connective tissue that connects two bones to each other.

• Ligaments are a short band of tough flexible connective tissues that connects two bones.

• Ligaments connect bones to other bones.

• Tendons are made up of collagen.

• Tendons connect bones to muscles.

• There are 11 major organ systems in humans.

• Cartilage is an important structural component of the body. It is a firm tissue but is softer and much more flexible than bone.

• Tendons
• A tendon is a fibrous connective tissue that attaches muscle to bone.
• Tendons may also attach muscles to structures such as the eyeball.
• A tendon serves to move the bone or structure.
• Cartilage
• Cartilage is a specialized type of skeletal connective tissue. It provides support to the body.
• Cartilage is produced by a specialized type of cell called the Chondroblast.
• These are an immature types of cells that secrete a huge amount of extracellular matrix made up of elastin fibers, collagen fibers & proteoglycan

Q91. Answer: (a) Thallophyta

The correct answer is Thallophyta.

Explanation:

Thallophyta:

• Thallophytes are organisms that possess a thallus-like body.
• The body is not differentiated into stems, roots and leaves.
• They are tracheophytes (vascular tissues are absent).
• Lichens and algae fall under thallophyta.

Bryophyta:

• They are tracheophytes, archegoniate, and amphibious cryptogams.
• Various mosses and liverworts fall under the classification of Bryophyta.
• They are commonly found growing in moist and shaded areas in the hills.
• Bryophytes can live in the soil, but they depend on water for sexual reproduction.
• They have a thallus-like body and possess rootlike and leaf-like structures.
• Their main plant body is haploid.

Pteridophyta:

• They are archegoniate, embryophytes, tracheophytes cryptogams.
• Ferns and horsetails fall under the Pteridophyta.
• They are found growing in cool, damp, shady places. They also grow well in sandy soils.
• Evolutionarily they are the first plants to possess the vascular system- xylem and phloem.

Q92. Answer: (c) Ministry of Railways

The correct answer is the Ministry of Railways.

Key Points

• Ministry of Railways has launched Smart Freight Operation Optimisation & Real Time Information (SFOORTI) application to help plan traffic flows and optimize freight operations.
• It was launched in Jan 2018.
• It helps to track the movement of freight trains over Zones/Divisions/Sections on GIS View.
• Passenger trains can also be tracked using it.

Q93. Answer: (c) Solar Storm

The correct answer is Solar Strom.

Key Points

• Solar storms are a variety of eruptions of mass and energy from the solar surface.
• Solar storms can pose the highest change in the atmosphere due to their high energy.
• When the solar storm collides with the Earth's magnetic field and trapped radiation belts, it can dump particles into our upper atmosphere to cause the Aurora.

Q94. Answer: (c) Reliance Industries Limited

The correct answer is Reliance Industries Limited

Key Points

Reliance Industries (RIL) on 26 October 2017 became the first Indian company to cross Rs 6 trillion in market capitalization.

• Reliance owns businesses across India engaged in energy, petrochemicals, textiles, natural resources, retail, and telecommunications.

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Q95. Answer: (c) 67%

The correct answer is 67%

Key Points

• India closed 67% in Global Gender Gap Report 2017.

• Global Gender Gap report is published annually by World Economic Forum (WEF).

• It calculates in four key areas: Health, education, economy and politics to gauge the state of gender equality in a country.

• The report measures women's disadvantage compared to men, and is not strictly a measure of equality.

Q96. Answer: (c) 12

The correct answer is 12

Key PointsFor a huge and complicated circuit with many resistors, the effective resistance is the total resistance of the circuit.

• Effective resistance is usually measured between 2 points.

• In a series circuit, the effective resistance is equal to the sum of the individual resistances.

Parallel:

1/re = 1/r1+1/r2

• Where "re" is an effective resistance.

so,

1/re = 1/21+1/28

1/re = 49/588

1/re = .083

re =12.04

Which is approx 12.

Q97. Answer: (d) become 4 times

The correct answer becomes 4 times.

Key Points

• The kinetic energy of an object is defined as the energy that it possesses due to its motion.

• Thus, an object that has motion possesses kinetic energy.

• The amount of kinetic energy that an object has depends upon two variables i.e. the mass (m) of the object and the speed (v) of the object.12mv212??212??212??2

• If the velocity of the moving body is doubled, then the kinetic energy becomes 4 times.

• This is because the kinetic energy of a body is directly proportional to the square of its velocity when the mass of the body is kept constant.

Kinetic energy= $1/2Mv^2$

Given that: v = 2v

KE = $1/2\ M(2v)^2 = 4\ 1/2Mv^2$

Q98. Answer: (a) Greenhouse effect

The correct answer is a Greenhouse effect.

Key Points

• Solar energy is trapped by the earth's atmosphere and radiates slowly so as to cover our earth with a warm blanket.

• This is the natural process of the greenhouse effect on earth to maintain its temperature and makes the earth perfect for life.

• A greenhouse gas (GHG or GHG) is a gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect.

• The primary greenhouse gases in Earth's atmosphere are water vapour (H2O), carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and ozone (O3).

• Coal, oil, and natural gas are fossil fuel which is utilized for transportation and electricity generation among others.

• These gases form the insulation that keeps the planet warm enough to support life.

Explanation:

• Carbon dioxide is emitted whenever coal, oil, natural gas, and other carbon-rich fossil fuels are burned.

• It is the largest contributor to climate change.

• Methane is caused by the decomposition of plant matter and is released from landfills, swamps, and rice paddies.

• Nitrous oxide is released from bacteria in the soil.

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• Thus, CO2 is one of the major greenhouse gases. Methane, Nitrous Oxide are other gases that cause green house effect.

Q99. Answer: (c) Both A and B

The correct answer is Both A and B

Key Points

• Wes Morgan was the skipper of the Premier League team Leicester City.

• Suresh Raina captained the IPL team Gujarat Lions so, option B) is correct.

• Sergio Aguero played for Manchester City. So, option C) is incorrect

Q100. Answer: (b) One cell down

The Correct answer is One cell down.

Key Points

• In Microsoft Excel, the down arrow key leads to the One Cell down movement.

• Just like the down key, every arrow key performs the same function i.e. right arrow key when pressed leads to one cell's right movement, the left arrow key lead to one cell's left movement, etc.

Important Points

• MS Excel, a spreadsheet program, is widely used for varied functions, as a result, the info is simple to avoid wasting time, and data is accessible and removed with zero discomforts and less labour.

• Cells: MS Excel consists of rows and columns which form cells. The cells are formed by intersecting rows and columns. Each cell can hold text, numbers, special characters, and so on. The rows of MS Excel are named after numbers (e.g. 1,2,3,4...) and the columns are named with capital letters (e.g. A, B, C, D, ...). There are 16,384 columns and 10,48,576 rows in the MS Excel sheet. The very first cell of MS Excel is named A1.

• Grids: In MS Excel, the cells can be differentiated by the grid lines. The gridline of the cells can be modified as per the requirement. The size of the cells also can be adjusted by moving the gridlines.

• Worksheet: The worksheet is referred to as the working area of MS Excel. It is also named a spreadsheet. The worksheet in MS Excel is filled with cells. In the worksheet, the user can perform mathematical calculations, store data, and so on.

• Workbook: After storing the data in MS Excel, the user saves the file with a proper name. This file is referred to as a workbook. The workbook can hold at least one or many worksheets.

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