SSC CHSL Previous Paper 54 (Held On: 26 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, 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'.

Industries should regularly check (1)/ if their machines are emitting (2)/ smoke within permission limits. (3)/ No error (4)

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

Q2. 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'.

“Our focus is to develop and nurture a democratic (1)/ and accommodative space/platform wherever we go, (2)/ so that all kind of arts can flourish."(3)/ No error (4)

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

Q3. 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.

The old man was _____ and poor.

(a) confirm
(b) infirm
(c) infer
(d) luxurious

Q4. 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 _____ all her money at one shop in the mall.

(a) ignored
(b) spent
(c) given
(d) lawned

Q5. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

Scurrility

(a) Godliness
(b) Reverence

(c) Atrocity
(d) Piety

Q6. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

Sanguine

(a) Pale
(b) Vocalise
(c) Buoyant
(d) Foolish

Q7. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.

Verdant

(a) Grassy
(b) Lush
(c) Dying
(d) Fresh

Q8. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.

Tyro

(a) Beginner
(b) Recruit
(c) Virgin
(d) Professional

Q9. Rearrange the parts of the sentence in the correct order.

"Make in India" is not a mere

P: accomplished by a single-minded

Q: slogan but a mission to be

R: commitment towards new processes

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

Q10. 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.

George Orwell wrote 1984.

(a) 1984 is wrote by George Orwell.
(b) 1984 was wrote by George Orwell.
(c) 1984 was written by George Orwell.
(d) 1984 written by George Orwell.

Q11. 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.

Gopal said to his friends, "Are you angry?"

(a) Were they angry, asked Gopal.
(b) Gopal asked why they are angry.
(c) Gopal asked them whether they are angry.
(d) Gopal asked his friends whether they were angry.

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Q12. 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) Interuption
(b) Interruption
(c) Intreuption
(d) Intteruption

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.

A brain and nervous system that are poorly developed or insufficiently nourished means low grade of _____ in our mental processes, just as a poorly constructed or wrongly adjusted motor means loss of power in applying the electric current to its work. We will, _____, look upon the mind and the brain as counterparts of _____ other, each performing activities which correspond to activities in the other, ____ inextricably bound together at least so far as this life is concerned, and each getting its _____ by its union with the other. This view will lend interest to a brief study of the brain and nervous system.

Q13. nourished means low grade of _____ in our mental processes

(a) efficiently
(b) efficiencies
(c) efficiency
(d) efficient

Q14. We will, _____, look upon the mind

(a) than
(b) so
(c) if
(d) then

Q15. as counterparts of _____ other, each performing

(a) once
(b) only
(c) every
(d) each

Q16. in the other, _____ inextricably bound together

(a) two
(b) them
(c) pair
(d) both

Q17. each getting its _____ by its union with

(a) significant
(b) significance
(c) significantly
(d) significances

Q18. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

Cross that bridge when you come to it

(a) It is always better to plan for an eventuality rather face it when you are unprepared.
(b) Deal with a problem when and if it arises.
(c) A bridge is a path to a different world.
(d) If you are brave then you can overcome all hurdles.

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Q19. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

A little bird told me

(a) Have a strong network of spies from where you get reliable information from which you can profit.
(b) Used to indicate that the speaker knows something but chooses to keep the identity of their informant secret.
(c) A secret which is known by everybody.
(d) A person unknowingly letting out a secret.

Q20. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

A person who is fanatical and uncompromising in pursuit of their religious, political, or other ideals

(a) Zealot
(b) Mezzo
(c) Medial
(d) Betwixt

Q21. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

Slow and careful movement or thought

(a) Vacuous
(b) Utter
(c) Deliberation
(d) Coherence

Q22. 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".

Husband (have retired) from service and the daughters had left home to pursue their dreams.

(a) had retired
(b) had retire
(c) had retiring
(d) no improvement

Q23. 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".

Certainly she (had been) under a lot of stress.

(a) was been
(b) have been
(c) had being
(d) no improvement

Q24. 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.

I am compelled to

A: being fully cognizant of the rich

B: effects of all languages on one another

C: call it an abomination despite

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

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Q25. In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

(a) neolethic
(b) neolithic
(c) neolithick
(d) neolethick

GENERAL INTELLIGENCE

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

Apple : Fruit : : ? : ?

(a) Orange : Vegetable
(b) Table : Chair
(c) Fruit : Guava
(d) Scooter : Vehicle

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

39 : 66 : : 57 : ?

(a) 76
(b) 84
(c) 78
(d) 82

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

MZU : CPK : : QSP : ?

(a) GIH
(b) GIF
(c) HJL
(d) HJG

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

(a) Sun
(b) Mercury
(c) Mars
(d) Venus

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 options.

(a) 57 – 53
(b) 47 – 41
(c) 67 – 63
(d) 71 – 67

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

(a) PLH
(b) MHD
(c) NJF
(d) KGC

Q32. Arrange the given words in the sequence in which they occur in the dictionary.

1. Earth 2. Each 3. Easily 4. Earnest 5. Early

(a) 2, 5, 4, 3, 1
(b) 5, 4, 2, 1, 3

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(c) 4, 5, 1, 2, 3
(d) 2, 5, 4, 1, 3

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

14, 21, 42, 105, ?

(a) 285
(b) 315
(c) 305
(d) 215

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

LT, MS, NR, OQ, ?

(a) LP
(b) QP
(c) PR
(d) PP

Q35. Six persons P, A, V, K, J and C are sitting in a row facing north. C is to the immediate left of V who is third to the right of P. J is to the immediate left of K and is at one of the end. Who is to the immediate left of A?

(a) C
(b) P
(c) K
(d) J

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

Relinquished

(a) Line
(b) Quite
(c) Relied
(d) Run

Q37. In a certain code language, “MOCKS” is written as “NNDJT”. How is “FLAME” written in that code language?

(a) KFBMA
(b) GKBLF
(c) LBHGK
(d) LBGHG

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

8 - 14 + 7 × 10 ÷ 9 = ?

(a) 15
(b) 28
(c) 20
(d) 13

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

16 × 8 - 4 ÷ 9 + 14 = 37

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

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Q40. If 30Ω6 = -5, 80Ω2 = -40 and 20Ω4 = -5, then find the value of 70Ω2 = ?

(a) 10
(b) -35
(c) 15
(d) -20

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

YXXXXXX, YYXXXXX, YYYXXXX, YYYYXXX, YYYYYXX, _____.

(a) XXXXXXX
(b) YXXXXXX
(c) YYYYYYX
(d) YYXXXXX

Q42. A cyclist cycles 3.5 km West, then turns North and cycles 2.5 km North, then turns to his right and cycles 3.5 km, then turns North and cycles 4.5 km. Where is he now with respect to his starting position?

(a) 2 km North
(b) 7 km South
(c) 7 km North
(d) 2 km South

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

Statement I: No lighters are fire.

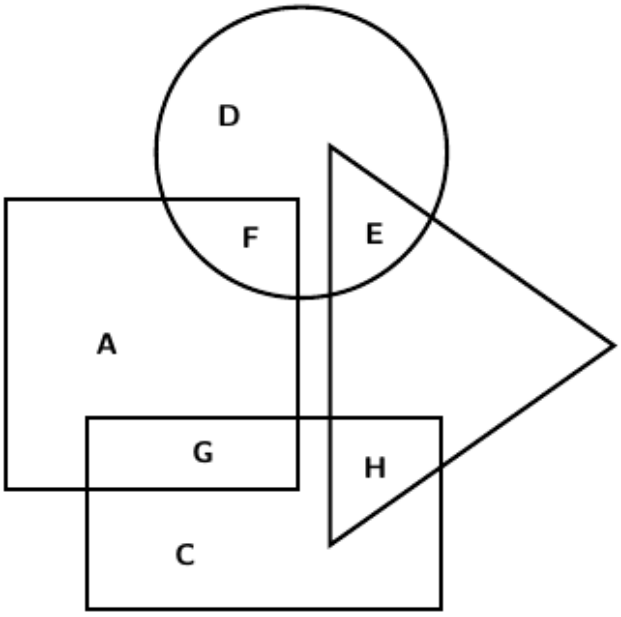
Statement II: All matchboxes are lighters.

Conclusion I: No fire are matchboxes.

Conclusion II: All matchboxes are fire.

(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 Paramedics, circle represents Equestrians, triangle represents Photographers and square represents Fathers. Which set of letters represents Paramedics who are Photographers?



(a) F
(b) E
(c) G

(d) H

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

RTM, QRJ, PPG, OND, ?

(a) NLZ
(b) MMZ
(c) MKB
(d) NLA

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

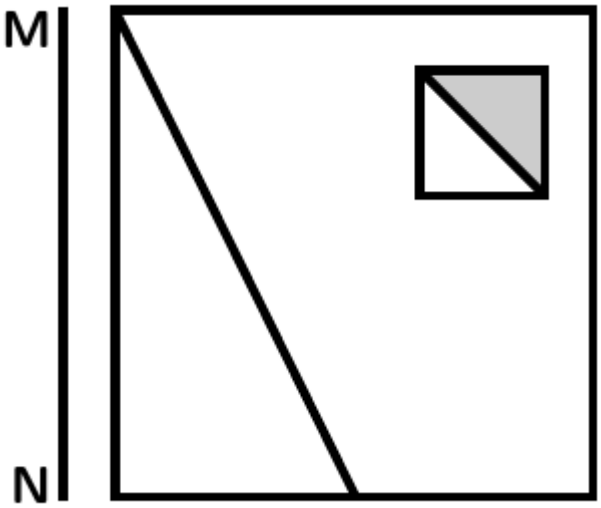
23, 19, 15, 11, ?

(a) 3
(b) 9
(c) 5
(d) 7

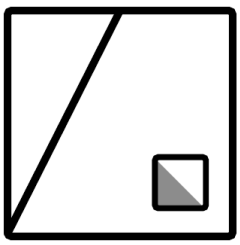
Q47. In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

(a) (9, 18, 25)
(b) (7, 16, 23)
(c) (26, 35, 42)
(d) (19, 27, 35)

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

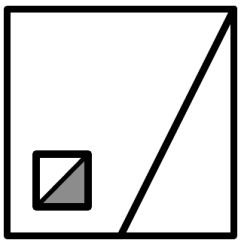


(a)

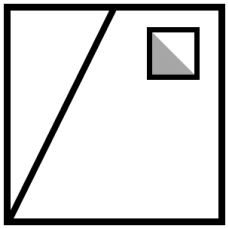


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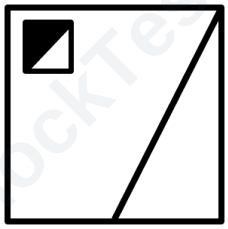
(b)



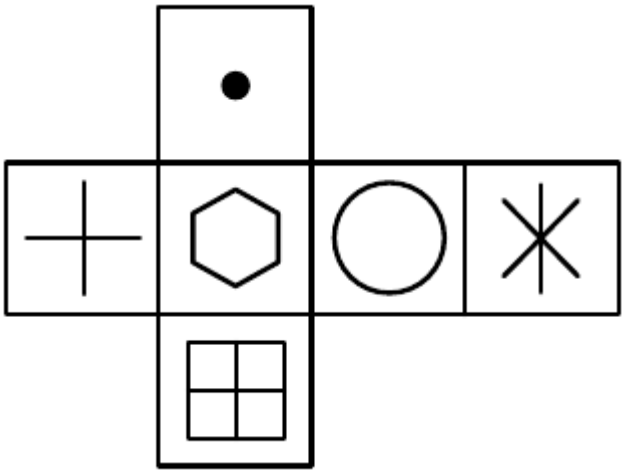
(c)



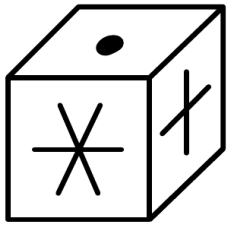
(d)



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

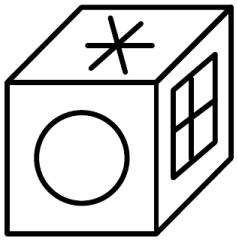


(a)

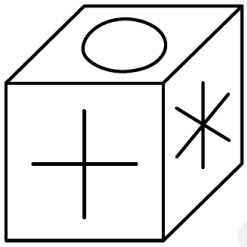


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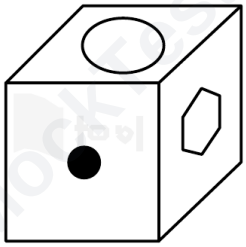
(b)



(c)



(d)



Q50. A word is represented by only 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 ‘E’ can be represented by 10, 42 etc and ‘T’ can be represented by 59, 99 etc. Similarly, you have to identify the set for the word ‘PEAK’.

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

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

(a) 43, 66, 33, 55
(b) 34, 76, 11, 87
(c) 41, 79, 31, 95

(d) 77, 42, 30, 41

QUANTITATIVE APTITUDE

Q51. The sum of squares of three consecutive natural numbers is 2702. What will be the middle number?

(a) 29
(b) 30
(c) 31
(d) 32

Q52. Anuj runs 12/3 laps of 7 laps race, find the remaining laps to be run.

(a) 16/3
(b) 14/3
(c) 11/3
(d) 10/3

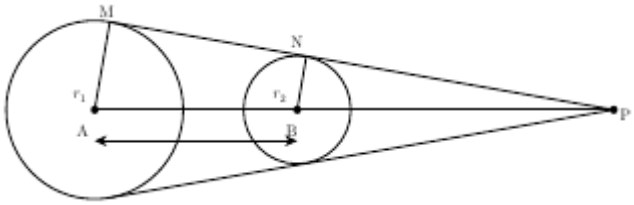
Q53. If u + v = 10 and uv = 16, then find the value of $(u^2 - v^2)/uv$.

(a) 0
(b) 15/8
(c) 15/4
(d) 15/2

Q54. If $x^2 + y^2 + z^2 - 8x + 6y - 4z + 29 = 0$, then find the value of z (x + y).

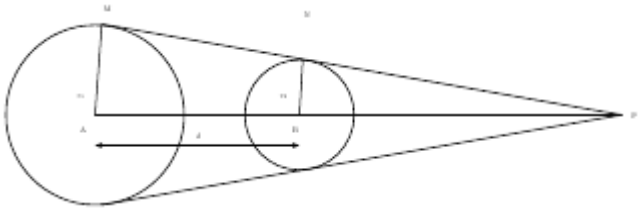
(a) 1
(b) 2
(c) 3
(d) 4

Q55. Consider the figure shown below and choose the CORRECT option for the length of MN.



(a) $\sqrt{(d^2 - (r1 - r2)^2)}$
(b) $\sqrt{(d^2 + (r1 - r2)^2)}$
(c) $d^2 - (r1 - r2)^2$
(d) $d^2 + (r1 - r2)^2$

Q56. Consider the figure shown below and choose the CORRECT option for the ratio PA : PB.



(a) r1:r2 (internal)
(b) r1:r2 (external)
(c) r2:r1 (internal)
(d) r2:r1 (external)

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Q57. If the side of the square is increased by 6%, then what will be the percentage increase in its area?

(a) 13.5
(b) 12.04
(c) 12.12
(d) 12.36

Q58. The ratio of incomes of P and Q is 5 : 3. Ratio of income of Q and R is 5 : 2. If one-fourth of P's income is Rs. 500 more than the R's income, then what is the income (in Rs) of Q?

(a) 7500
(b) 15000
(c) 30000
(d) 18000

Q59. In a mixture, ink and water are in the ratio of 8 : 5. If 24 litres of water is added to the mixture, then the new ratio becomes 8 : 11. What is the total quantity (in litres) of water in the new mixture?

(a) 40
(b) 42
(c) 44
(d) 48

Q60. Of the three numbers, the average of the first number and the second number is 37 more than the average of second number and third number. What is the difference between the first and the third number?

(a) 74
(b) 73
(c) 37
(d) Cannot be determined

Q61. A certain sum of money becomes 4 times of itself in 30 years at a rate of simple interest. In how many years it will become double of itself at the same rate of simple interest

(a) 20
(b) 15
(c) 10
(d) 12

Q62. A man sells an article at a profit of 35%. If he had bought it for 15% less price and sold it for Rs. 32 less, then he would have gained 40%. What is the initial cost price (in Rs) of the article?

(a) 250
(b) 200
(c) 300
(d) 400

Q63. The marked price of a door is Rs. 1400. It is sold at a discount of 28%. If the cost price of the door is Rs. 700, then what is the profit (in Rs.)?

(a) 340
(b) 428
(c) 308
(d) 368

Q64. If the value of $\sqrt{30}$ is approximately 5.477, then what is the approximate value of $\sqrt{(5/6)}$?

(a) 0.853
(b) 0.891
(c) 0.913
(d) 0.937

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Q65. Vijay can do a work in 8 hours. Vijay and Puneet together can do the same work in 6 hours. Puneet and Sachin together can do the same work in 4 hours. Sachin alone can complete the same work in how many hours?

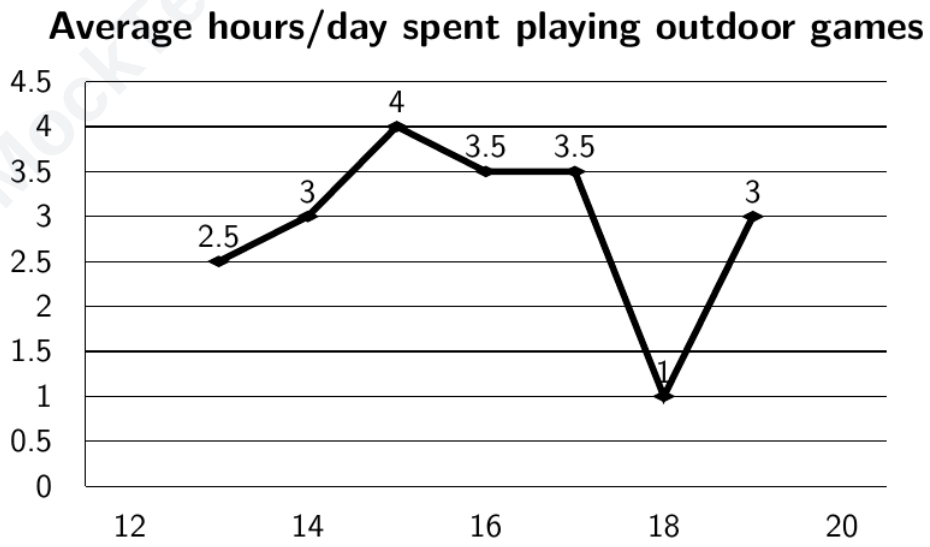
(a) 22/5
(b) 28/5
(c) 24/5
(d) 26/5

Q66. Two trains start moving from stations S and R. Both trains move towards each other at speeds of 35 km/hr and 42 km/hr respectively. When they meet each other, the second train has travelled 90 km more than the first. What is the distance (in km) between S and R?

(a) 450
(b) 990
(c) 540
(d) 1040

Directions

The line graph shows the average hours per day spent by teenagers in playing outdoors games. Study the diagram and answer the following questions.



Q67. In which age do teenagers spend most number of hours playing outdoor games

(a) 15
(b) 16
(c) 17
(d) 13

Q68. What is the ratio of hours per day spent in playing outdoor games by 13 year olds and 18 year olds?

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

Q69. The number of hours per day spent in playing outdoor games is _____ more by 17 year old as compared to 14 year old.

(a) 14.28%
(b) 16.67%
(c) 12.65%
(d) 10.79%

Q70. How many hours does a 16 year old spend playing outdoor games in a week?

(a) 24.5
(b) 25.5
(c) 24
(d) 25

Q71. The length and breadth of a rectangle are 21 cm and 20 cm respectively. Find its area (in cm^2).

(a) 420
(b) 840
(c) 80
(d) 160

Q72. If the measure of the interior angle of a regular polygon is 100° greater than the measure of its exterior angle then how many sides does it have?

(a) 10
(b) 12
(c) 9
(d) 15

Q73. The total surface area of a hemisphere is 4158 cm^2. Find its diameter (in cm).

(a) 21
(b) 84
(c) 42
(d) 63

Q74. What is the value of (1/3 + cosec 30°)?

(a) (√6 + 1)/√3
(b) 7/3
(c) (4 + √3)/2
(d) (√3 + 1)/2

Q75. In ΔDEF measure of angle E is 90°. If sin D = 15/17, and DE = 4 cm, then what is the length (in cm) of side EF?

(a) 8.5
(b) 7.5
(c) 5
(d) 6

GENERAL AWARENESS

Q76. Which of the following is a function of money?

(a) medium of exchange
(b) store of value
(c) unit of accounting
(d) All options are correct.

Q77. The concept of ‘Navratnas’ was evolved in which of the following year's Union Budget?

(a) 1997-98
(b) 1999-2000
(c) 1990-91
(d) 1995-96

Q78. What is called the hot dry local winds blowing in the northern part of Alps mountain?

(a) Chinook
(b) Foehn
(c) Khamsin

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(d) Sirocco

Q79. Ujjain is situated on the banks of which river?

(a) Narmada
(b) Tawa
(c) Tapi
(d) Shipra

Q80. Buddhist texts have been mentioned in which of the following Ashoka's Inscriptions?

(a) Kalinga
(b) Dhauli
(c) Bhabru
(d) Jaugada

Q81. Which of the following was the first thing that encouraged the Europeans for Indian business?

(a) Indigo
(b) Spice
(c) Muslin
(d) cotton clothes

Q82. Bharhut is related to _____.

(a) Jainism
(b) Buddhism
(c) Hinduism
(d) Islam

Q83. Sri Lanka on 9 December, 2017 formally handed over the control of the southern deep sea port of Hambantota to which country for 99 year lease?

(a) India
(b) Pakistan
(c) China
(d) Japan

Q84. Which Indian origin actor was honoured with the 'Asian Game Changer Award-2017' by the Asia Society?

(a) Aziz Ansari
(b) Dev Patel
(c) John Browne
(d) Nemko Katyal

Q85. Who was the contemporary ruler of Emperor Asoka in Sri Lanka?

(a) Mahasen
(b) Kasyapa
(c) Tissa
(d) Vijayabahu I

Q86. Isobars are atoms of different chemical elements that have _____.

(a) Same atomic number but different mass number
(b) Same mass number but different atomic number
(c) Same mass number and same atomic number
(d) None of the above

Q87. Which of the following is based on the principle of nuclear fusion?

(a) Atomic bomb
(b) Hydrogen bomb
(c) Both Atomic and Hydrogen bomb

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(d) No option is correct.

Q88. Gram Panchayat is composed of which of the following?

I. The ward panchs

II. The sarpanch

III. The district collector

Codes:

(a) Only I
(b) Only II
(c) Only I and II
(d) All of the above

Q89. In Indian Parliamentary System, 'Member of Legislative Assembly (MLA)' are _____.

(a) Elected by the people
(b) Elected by members of parliament
(c) Nominated by Chief Minister of that state
(d) Nominated by President of India

Q90. The swollen bottom part of the carpel of a flower is called as _____.

(a) Ovary
(b) Style
(c) Stigma
(d) Anther

Q91. Which of the following is the correct decreasing order of intercellular space in various simple permanent tissues?

(a) Parenchyma > Sclerenchyma > Collenchyma
(b) Collenchyma > Parenchyma > Sclerenchyma
(c) Parenchyma > Collenchyma > Sclerenchyma
(d) Sclerenchyma > Parenchyma > Collenchyma

Q92. In December 2017, which Ministry launched a pilot project 'Blue Flag'?

(a) Ministry of Home Affairs
(b) Ministry of Health and Family Welfare
(c) Ministry of Environment, Forest and Climate change
(d) Ministry of Tourism

Q93. What was the shape of the galaxy named A1689 B11 that existed 11 billion years ago?

(a) Turbulent disc
(b) Spiral
(c) Thin disc
(d) No option is correct.

Q94. In November 2017, a report titled 'Credit Suisse Global Wealth Report' was

(a) $ 5 Trillion
(b) $ 1 Trillion
(c) $ 10 Trillion
(d) $ 15 Trillion

Q95. Who is the singer and composer of official Anthem for "Bharat ke Veer" initiative?

(a) Sukhwinder Singh
(b) Kailash Kher
(c) Sonu Nigam
(d) Jagjit Singh

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Q96. Find the work done (in J) when a charge of 24 C moves across a potential difference of 6 V.

(a) 4
(b) 72
(c) 8
(d) 144

Q97. When the vibrating object moves forward, it creates a region of high pressure in the medium called _____.

(a) dilation
(b) compression
(c) relaxation
(d) negation

Q98. The _____ keeps the average temperature of the Earth fairly steady.

(a) biosphere
(b) heliosphere
(c) atmosphere
(d) photosphere

Q99. Which of the statements given below are correct?

A) Netherlands won the 2017 Women's Cricket World Cup.
B) Australia won the 2016–17 Men's FIH Hockey World League Final.
C) Fan Zhendong won the Tennis 2017 US Open Men's Singles.
Codes:

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

Q100. In HTML, _____ attribute is used for merging of two or more adjacent rows.

(a) CELLPADDING
(b) CELLSPACING
(c) ROWSPAN
(d) COLSPAN

ANSWER KEY

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

SOLUTIONS

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Q1. Answer: (c) 3

The correct answer is 3

Key Points

Reading the above sentence we find that:

• In the given sentence the word permission which is used is a noun.

Important Points

• Here the noun permission is used to describe another noun limits.

• This is not grammatically correct, as only an adjective can modify a noun.

• Therefore to modify the noun limits we should use an adjective.

• Therefore we should replace the noun permission with the adjective permissible

• Thus the error lies in the 3rd part of the sentence.

Therefore the correct answer is 3

The correct sentence will be: Industries should regularly check if their machines are emitting smoke within permissible limits.

Q2. Answer: (c) 3

The correct answer is '3'.

Key Points

• There is an error in the 3rd part of the sentence.

• 'All' is in plural form hence 'kind' should also be in the plural form.

• 'kind' should be replaced by the word 'kinds'

• They have all kinds of good stuff.

• I love all kinds of music.

• Besides, I have been told that "sociables" cost more than other kinds of bicycles.

• Correct sentence- Our focus is to develop and nurture a democratic and accommodative space/platform wherever we go, so that all kinds of arts can flourish.

• Hence, the correct answer will be Option 3.

Q3. Answer: (b) infirm

The correct answer is Infirm.

Key Points

Reading the given sentence we find that it is talking about the old man.

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

• confirm: establish the truth or correctness.

• infirm: physically or mental weakness due to old age.

• infer: deduce or conclude from evidence and reasoning.

• luxurious: elegant, extremely comfortable, grand.

Thus from the given meaning, we find that the correct answer is infirm.

The correct sentence will be: The old man was infirm and poor.

Q4. Answer: (b) spent

The correct answer is spent.

Key Points

Reading the given sentence we find that:

• She did something with her money.

• From the context of the sentence, we understand that money can only be spent on things in a mall.

• All of the other options are grammatically and contextually incorrect.

Therefore the correct answer is spent.

Therefore the correct sentence will be: She spent all her money at one shop in the mall.

Q5. Answer: (c) Atrocity

The correct answer is Atrocity.

Key Points

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

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• Scurrility: abusing; insulting; offending.
• Example: The politician's speech was filled with scurrility, hurling insults and offensive remarks at his opponents.
• Atrocity: cruelty; offence.
• Example: The war crimes committed during the conflict were characterized by unspeakable acts of atrocity.
• Thus from the given meanings, we find that both the words express similar meaning.
• Therefore the correct answer is Atrocity.

Additional Information

Let's look at the meaning of the other given options.
• Godliness: The quality of being religious.
• Example: The priest admired the godliness of the devotees as they followed the teachings of their faith.
• Reverence: Deep respect for someone or something.
• Example: The students showed reverence towards their teacher by listening attentively and respectfully.
• Piety: Devotion to God or religious practices.
• Example: The old woman's piety was evident as she prayed daily and dedicated herself to charitable acts.

Q6. Answer: (c) Buoyant

The correct answer is Buoyant.

Key Points

Let's look at the meaning of the given word and the correct option.
• Sanguine: Optimistic or positive, especially in an apparently bad or difficult situation.
• Buoyant: Cheerful and optimistic.

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

Therefore the correct answer is Buoyant.

Additional Information

Let's look at the meanings of the other given option.
• Plae: Dull, colourless.
• Vocalise: Express in words.

Q7. Answer: (c) Dying

The correct answer is Dying.

Key Points

Let's look at the meaning of the given word and the correct option.
• Verdant: Green with grass; lively.
• Dying: Cease to live, approaching death; dull.

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

Therefore the correct answer is Dying.

Additional Information

Let's look at the meaning of the other given options.
• Grassy: Covered with grass.
• Lush: Full of vegetation.

Q8. Answer: (d) Professional

The correct answer is Tyro.

Key Points

Let's look at the meaning of the given word and the correct option.
• Tyro: a beginner; an amateur.
• Professional: relating or belonging to a profession.

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

Therefore the correct answer is Professional.

Additional Information

Let's look at the meanings of the other given options.
• Recruit: To get someone to join something.
• Virgin: A person with no experience in a particular activity.

Q9. Answer: (d) QPR

The correct answer is QPR.

Key Points

Reading the given sentences we find that:

• Mere means small and is an adjective. So the next part of the sentence should start with a noun.

• Out of the given segments, P starts with the word accomplished which is a verb and cannot follow the adjective mere.

• Segment P cannot be the last one either as it ends with single-minded which is again an adjective.

• If segment R is considered as the starting segment then it will yield a sentence that is not contextually or grammatically coherent.

• Therefore segment Q can be the only starting segment that is contextually and grammatically correct.

• The adjective in part P should be followed by yet another noun.

• The adjective single-minded will be followed by the noun commitment making segment R the last part.

Therefore the correct answer is QPR.

The correct sentence will be: Make in India is not a mere slogan but a mission to be accomplished by a single-minded commitment towards new processes.

Q10. Answer: (c) 1984 was written by George Orwell.

The sentence is in simple past tense (wrote). Thus, the sentence in passive voice will be of the form was/were + past participle of write = written. Option 2) 1984 was written by George Orwell is the correct answer.

Q11. Answer: (d) Gopal asked his friends whether they were angry.

Are => were when we change it to reported speech. Option 4) Gopal asked his friends whether they were angry is the correct answer.

Q12. Answer: (b) Interruption

The correct answer is Interruption.

Key Points

Reading the given question we find that:

• The correctly spelt word is Interruption.

• Interruption: The act of interrupting i.e stop the constant progress of something.

• Example: The constant interruptions made the professor very angry.

Therefore the correct answer is Interruption.

Q13. Answer: (c) efficiency

The correct answer is efficiency.

Key Points

Reading the given sentence we find that:

A noun is required to fill the gap.

From the given options we see that:

• efficiently is an adverb.

• efficiencies is a plural noun that is not required here.

• efficient which is an adjective.

Therefore the correct answer is efficiency which is a noun.

Efficiency: The state or quality of being efficient.

Q14. Answer: (d) then

The correct answer is then.

Key Points

Reading the given sentence we find that:

• Here we are trying to state we will look at the brain and its counterparts.

• This is done as a consequence of a previous statement.

• Therefore we should use an adverb that means: as a consequence; therefore

• Then is an adverb which means as a consequence; therefore.

• Thus the correct answer for the blank is then.

The correct sentence will be: We will, then, look upon the mind.

Q15. Answer: (d) each

The correct answer is each.

Key Points

Reading the given sentence we find that:

• Counterparts mean a person or thing that corresponds to or has the same function as another person or thing.

• When we are talking about members of a group and how they are related to each other we use each.

• Here in the given question, it is establishing that two or more things are related to each other as they are counterparts.

Therefore the correct answer is each.

Q16. Answer: (d) both

The correct answer is both.

Key Points

Reading the given sentence we find that:

• We are talking about two things that act together as a couple.

• In such scenarios, we use both.

• Both is used for emphasis to refer to two people or things.

• Thus we find that both fits contextually and grammatically in the given blank.

Hence, the correct answer is both.

Therefore the correct sentence will be: in the other, both inextricably bound together.

Q17. Answer: (b) significance

The correct answer is significance.

Key Points

Reading the given sentence we find that:

• A noun representing the quality should be used in the blank.

• Significant: Is an adjective, hence is not an appropriate fit.

• Significantly: Is again an adverb and cannot be used here.

• The noun significance can be both countable and uncountable.

• Therefore significanes is the again a wrong option.

• Hence, we can conclude that the correct option will be significance.

Thus the correct answer is significance.

Q18. Answer: (b) Deal with a problem when and if it arises.

The correct answer is Deal with a problem when and if it arises.

Key Points

Let's look at the meaning of the idiom

• Cross that bridge when you come to it: To deal with problems one by one as it arises.

• Example: We will start the project and cross the bridge when we come to it.

Thus from the given points, it is clear that the correct answer is Deal with a problem when and if it arises.

Q19. Answer: (b) Used to indicate that the speaker knows something but chooses to keep the identity of their informant secret.

The alternative that best expresses the meaning of the idiom/phrase "A little bird told me" is:

Used to indicate that the speaker knows something but chooses to keep the identity of their informant secret.

Key Points

• The idiom "A little bird told me" is commonly used to indicate that the speaker has obtained information or a secret from an undisclosed source, but they prefer not to reveal the identity of the person who informed them. It implies that the information came to them in a secretive or indirect manner.

• Option 2 captures the essence of this meaning by emphasizing the secrecy of the source while acknowledging that the speaker is aware of certain information without explicitly revealing how they came to know it.

• Therefore, option 2) Used to indicate that the speaker knows something but chooses to keep the identity of their informant secret is the best choice that expresses the meaning of the idiom/phrase.

Additional Information

• Have a strong network of spies from where you get reliable information from which you can profit.

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• This option suggests having a network of spies or informants to gather reliable information that can be used for personal gain or profit. While it touches on the aspect of obtaining information, it does not capture the idea of receiving information in a secretive or indirect manner, which is the main characteristic of the idiom.

• A secret which is known by everybody.

• This option suggests that the information is a widely known secret. However, the idiom "A little bird told me" implies the opposite, that the information is known only to a select few or in a secretive manner, rather than being widely known.

• A person unknowingly letting out a secret.

• This option suggests that the idiom refers to someone unintentionally revealing a secret. However, the idiom actually implies that the speaker intentionally received information but chooses to keep the identity of the informant secret. It does not convey the sense of accidental disclosure.

Q20. Answer: (a) Zealot

The correct answer is Zealot.

Key Points

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

• Zealot: A person who is fanatical and uncompromising in pursuit of their religious, political or other ideals.

• Mezzo: A female singer with a mezzo voice pitch.

• Medial: Situated in the middle.

• Betwixt: Between two people or things.

Thus from the given options it is clear that the correct answer is Zealot.

Q21. Answer: (c) Deliberation

The correct answer is Deliberation

Key Points

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

• Deliberation: Long and careful consideration or discussion.

• Example: After a long Delibration the US declared war on Japan.

Thus from the given points, it is clear that the correct answer is Deliberation.

Additional Information

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

• Vacuous: Having or showing a lack of thought or intelligence.

• Utter: Complete; absolute.

• Coherence: The quality or state of being logical.

Q22. Answer: (a) had retired

Husband have = grammatically incorrect. Rule out 4). Past tense => rule out 2) and 3). Option 1) Had retired is the correct answer.

Q23. Answer: (d) no improvement

Option 4) No improvement is the correct answer.

Was been and had being are grammatically incorrect phrases => ruled out.

She have = incorrect => ruled out.

Q24. Answer: (c) CAB

The correct answer is CAB

Key Points

Reading the above sentence we find that:

• Compelled to which means forced to should be followed by a verb.

• Out of the given sentences, only C starts with a verb i.e call it an abomination.

• Therefore the correct answer should start with C which leads us to the option CAB.

Thus the correct answer is CAB.

The correct sentence will be: I am compelled to call it an abomination despite being fully cognizant of the rich effects of all languages on one another.

Additional Information

Let's look at the meaning of difficult words.

• Abomination: a thing that causes disgust or loathing.

• Cognizant: having knowledge or awareness.

Q25. Answer: (b) neolithic

The correct answer is neolithic.

Key Points

Reading the above question we find that:

• The correctly spelt word is neolithic.

• Neolithic: Relating or denoting the later part of the Stone Age.

• Example: The historians discovered a set of bones belonging to the neolithic age.

Therefore the correct answer is neolithic.

Q26. Answer: (d) Scooter : Vehicle

The Logic followed here is:-

Second word defines the category and the first word defines the example of that category i.e.

Apple : Fruit → Apple is a type of or example of fruit.

Checking options one by one to identify the related word pair.

1) Orange : Vegetable → Orange is an example of fruit but not vegetable.

2) Table : Chair → Table and Chair both are examples of furniture.

3) Fruit : Guava → Here the second word is the example of the first word.

4) Scooter : Vehicle → Scooter is an example or a type of vehicle.

Hence, the correct answer is "Scooter : Vehicle".

Q27. Answer: (b) 84

The Logic followed here is:-

(First number + 27) = Second number

In 39 : 66

39 + 27 = 66

Similarly,

In 57 : ?

57 + 27 = 84

Hence, the correct answer is "84".

Q28. Answer: (b) GIF

The pattern here is as follows,

Hence, the correct answer is " GIF ".

Q29. Answer: (a) Sun

Here, Mercury, Mars and Venus are the planets of our solar system whereas Sun is the Star of our solar system.

Thus, Sun is the odd one.

Hence, the correct answer is " Sun ".

Q30. Answer: (b) 47 – 41

The logic followed here,

→ Second Number = (First Number - 4).

Let's check each option as per the logic,

1) 57 – 53

→ 53 = (57 - 4).

2) 47 – 41

→ 41 ≠ (47 - 4).

3) 67 – 63

→ 63 = (67 - 4).

4) 71 – 67

→ 67 = (71 - 4).

Here, we can see that Only option 2 doesn't satisfy the logic.

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Hence, the correct answer is " 47 – 41 ".

Q31. Answer: (b) MHD

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

Here, we can see that Only MHD doesn't follows the pattern.

Hence, the correct answer is " MHD ".

Q32. Answer: (d) 2, 5, 4, 1, 3

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

2. Each

5. Early

4. Earnest

1. Earth

3. Easily.

Hence, the correct answer is "2, 5, 4, 1, 3".

Q33. Answer: (b) 315

The pattern followed here is:-

Hence, the correct answer is "315".

Q34. Answer: (d) PP

The pattern followed here is:-

Hence, the correct answer is "PP".

Q35. Answer: (b) P

Given → Six persons P, A, V, K, J and C are sitting in a row facing north.

1) J is to the immediate left of K and is at one of the ends.

2) C is to the immediate left of V who is third to the right of P.

3) The only place left for A to sit is between P and C as shown in the diagram below.

Hence, the correct answer is "P".

Q36. Answer: (b) Quite

Given word → Relinquished

1) Line → RELINQUISHED (All the letter are present so, the word line can be formed)

2) Quite → cannot be formed because there is no ‘T’ in RELINQUISHED.

3) Relied → RELINQUISHED (All the letter are present so, the word Relied can be formed)

4) Run → RELINQUISHED (All the letter are present so, the word Run can be formed)

Hence, the correct answer is "Quite".

Q37. Answer: (b) GKBLF

The pattern followed here is:-

MOCKS is coded as NNDJ

Similarly,

FLAME is coded as GKBLF

Hence, the correct answer is "GKBLF".

Q38. Answer: (a) 15

Given equation → 8 – 14 + 7 × 10 ÷ 9 = ?

Symbol	÷	•	•	×
Meaning	•	×	÷	•

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

New equation → 8 × 14 ÷ 7 - 10 + 9

Now, after applying BODMAS Rule, we get:-

8 × 14 ÷ 7 - 10 + 9

8 × 2 - 10 + 9
16 - 10 + 9
25 - 10 = 15
Hence, the correct answer is "15".

Q39. Answer: (c) ÷ and –

Given equation:-
16 × 8 - 4 ÷ 9 + 14 = 37
Checking option one by one by interchanging signs
1) + and ×
After interchanging, new equation → 16 + 8 – 4 ÷ 9 × 14 = 37
By solving the equation using BODMAS rule, we get:-
16 + 8 – 4 ÷ 9 × 14 = 37
16 + 8 – 0.444 × 14 = 37
16 + 8 – 6.216 = 37
24 - 6.216 = 37
17.784 ≠ 37
L.H.S ≠ R.H.S
2) + and ÷
After interchanging, new equation → 16 x 8 – 4 + 9 ÷ 14 = 37
By solving the equation using BODMAS rule, we get:-
16 x 8 – 4 + 9 ÷ 14 = 37
16 x 8 – 4 + 0.642 = 37
128 – 4 + 0.642 = 37
128.642 - 4 = 37
124.642 ≠ 37
L.H.S ≠ R.H.S
3) ÷ and –
After interchanging, new equation → 16 × 8 ÷ 4 – 9 + 14 = 37
By solving the equation using BODMAS rule, we get:-
16 × 8 ÷ 4 – 9 + 14 = 37
16 × 2 – 9 + 14 = 37
32 – 9 + 14 = 37
46 - 9 = 37
37 = 37
L.H.S = R.H.S
4) - and +
After interchanging, new equation → 16 × 8 + 4 ÷ 9 – 14 = 37
By solving the equation using BODMAS rule, we get:-
16 × 8 + 4 ÷ 9 – 14 = 37
16 × 8 + 0.444 – 14 = 37
128 + 0.444 – 14 = 37
128.444 - 14 = 37
114.444 ≠ 37
L.H.S ≠ R.H.S
Hence, the correct answer is "÷ and –".

Q40. Answer: (b) -35

The Logic followed here is:-
-(First number ÷ Second number) = Result
In 30Ω6 = -5
-(30 ÷ 6) = -5

In 80Ω2 = -40

-(80 ÷ 2) = -40

In 20Ω4 = -5

-(20 ÷ 4) = -5

Similarly,

In 70 Ω 2

-(70 ÷ 2) = -35

Hence, the correct answer is "-35".

Q41. Answer: (c) YYYYYYX

The pattern followed here is:-

Letter 'X' which is to the immediate right of letter 'Y' is converted to 'Y' in every step and hence increasing the number of letter 'Y' in every step i.e.

YXXXXXX → YYXXXXX → YYYXXXX → YYYYXXX → YYYYYXX → YYYYYYX

As we can seen clearly from the above that the next term of the given list is YYYYYYX.

Hence, the correct answer is "YYYYYYX".

Q42. Answer: (c) 7 km North

Given → The diagram below shows the path followed by the cyclist,

1) A cyclist cycles 3.5 km West

2) Then turns North and cycles 2.5 km North

3) Then turns to his right and cycles 3.5 km

4) Then turns North and cycles 4.5 km.

As can be seen clearly from the above, the distance from the start to the end is 4.5 + 2.5 = 7 km and the end point is in the North direction with respect to the start point.

Hence, the correct answer is "7 km North".

Q43. Answer: (a) Only conclusion I follows

The least possible Venn diagram for the given statements is as shown below:-

Conclusions:

I. No fire are matchboxes → Follows (It is definitely true as no fire can be matchboxes).

II. All matchboxes are fire → Doesn't follow (As no direct relation is given between matchboxes and fire).

Hence, the correct answer is "Only conclusion I follows".

Q44. Answer: (d) H

Here, rectangle represents Paramedics, circle represents Equestrians, triangle represents Photographers and square represents Fathers.

Clearly, Paramedics who are Photographers is represented by the intersection of rectangle and triangle i.e., H.

Hence, the correct answer is " H ".

Q45. Answer: (d) NLA

The pattern is as follows,

Hence, the correct answer is " NLA ".

Q46. Answer: (d) 7

The pattern followed here is:-

Hence, the correct answer is "7".

Q47. Answer: (d) (19, 27, 35)

The logic followed here is:-

(First number + 9) = Second number

1) (9, 18, 25) → 9 + 9 = 18

2) (7, 16, 23) → 7 + 9 = 16

3) (26, 35, 42) → 26 + 9 = 35

4) (19, 27, 35) → 19 + 9 = 28 which is not equal to 27

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As can be seen clearly that (19, 27, 35) is the odd one out from the given alternatives.
Hence, the correct answer is "(19, 27, 35)".

Q48. Answer: (d) [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 4".

Q49. Answer: (c) [figure]

Here, the opposite faces of cube are:-
1)
<=>
(i.e. Dot is present on the face opposite to square)
2)
<=>
(i.e. Addition symbol is present on the face opposite to Circle)
3)
<=>
(i.e. Hexagon is present on the face opposite to Concurrent line)
Now, checking option one by one:-
1) Cube shown in Option 1 figure can be formed as no opposite faces are present together.
2) Cube shown in Option 2 figure can be formed as no opposite faces are present together.
3) Cube shown in Option 3 figure cannot be formed as the opposite faces
and
are shown adjacent to each other which is not possible.
4) Cube shown in Option 4 figure can be formed as no opposite faces are present together.
Hence, the correct answer is "Option 4".

Q50. Answer: (d) 77, 42, 30, 41

The pattern followed here is:-
The letter in the matrices is represented first by its row and then by its column.
Checking option one by one to identify the set for the word 'PEAK'
1) 43 → C ; 66 → P ; 33 → E ; 55 → X (so, the word formed CPEX)
2) 34 → H ; 76 → Q ; 11 → M ; 87 → U (so, the word formed HQMU)
3) 41 → K ; 79 → S ; 31 → A ; 95 → V (so, the word formed KSIV)
4) 77 → P ; 42 → E ; 30 → A ; 41 → K (so, the word formed PEAK)
Thus, the correct answer is "77, 42, 30, 41".

Q51. Answer: (b) 30

Let the three consecutive numbers be x, (x + 1), (x + 2)
Given $x^2 + (x + 1)^2 + (x + 2)^2 = 2702$
=> $x^2 + x^2 + 2x + 1 + x^2 + 4x + 4 = 2702$
=> $3x^2 + 6x + 5 - 2702 = 0$
=> $3x^2 + 6x - 2697 = 0$
=> $x^2 + 2x - 899 = 0$ (Dividing the above equation throughout with 3)
=> $x^2 + 31x - 29x - 899 = 0$
=> $x (x + 31) - 29 (x + 31) = 0$
=> $(x + 31) (x - 29) = 0$
=> $(x + 31) = 0$ or $(x - 29) = 0$
=> $x = -31$ or $x = 29$ (Considering only positive value for the number, $x = 29$)
The numbers are 29, 30, 31
Therefore The middle number is 30
Tip: We can find the answer quickly by putting the value of x in the following expression from given options.
Let the three consecutive numbers be (x - 1), x, (x + 1)

(x - 1)2 + x2 + (x + 1)2 = 2702

Q52. Answer: (a) 16/3

Total laps to run = 7

Laps run by Anuj = 12/3 = (5/3)

Remaining laps to run = 7 - (5/3) = [(7 × 3) - 5]/3 = (21 - 5)/3 = (16/3)

Therefore Required answer = (16/3)

Q53. Answer: (c) 15/4

Short trick:

Because u + v = 10 and uv = 16

=> u = 8 and v = 2 satisfy the given condition

Therefore (u2 - v2)/uv = (82 - 22)/16 = 15/4

Detailed solution:

We know that $(u - v)^2 = (u + v)^2 - 4uv$

Substituting the values, we get $(u - v)^2 = (10)^2 - (4 \times 16)$

=> $(u - v)^2 = 100 - 64 = 36$

=> $(u - v) = \sqrt{36} = 6$

Given expression can be written as $(u^2 - v^2)/uv = [(u + v)(u - v)]/uv$

Substituting the values, we get $(10 \times 6)/16 = 60/16 = 15/4$

Therefore Required Value = (15/4)

Q54. Answer: (b) 2

Calculation:

$x^2 + y^2 + z^2 - 8x + 6y - 4z + 29 = 0$

=> $x^2 - 8x + 16 + y^2 + 6y + 9 + z^2 - 4z + 4 = 0$

=> $(x - 4)^2 + (y + 3)^2 + (z - 2)^2 = 0$

So,

putting the values of x = 4, y = -3 and z = 2

satisfies the above equation

=> z(x + y) = 2 × (4 + (-3)) = 2

Therefore The answer is 2.

Q55. Answer: (a) $\sqrt{(d^2 - (r1 - r2)^2)}$

From the formula, if there are two circles of radius r1 and r2 and distance between their centers is ‘d’, then the length of the common tangent MN = $\sqrt{(d^2 - (r1 - r2)^2)}$

Q56. Answer: (a) r1:r2 (internal)

Concept Used:

Concept of Similarity

Calculation:

In ΔPNB and in ΔPMA

ΔPNB ~ ΔPMA

So, PN/PM = NB/MA = PB/PA

=> PN/PM = r2/r1 = PB/PA

So, PA/PB = r1/r2

Therefore Option 1 is the correct answer.

Q57. Answer: (d) 12.36

Given:

Percentage increase: 6%

Concept used:

Use the formula for finding the new area of a square when the side length is increased.

Calculation:

Let the side of the square be 100 cm.
=> Area of the square = 100 × 100 = 10000 cm²
A side of the square is increased by 6%, and the new value of side
=> 100 + (6% of 100) = 100 + 6 = 106 cm
=> New area of the square = 106 × 106 = 11236 cm²
=> Percentage increase in area = [(Final Area - Actual Area)/Actual Area] × 100%
=> [(11236 - 10000)/10000] × 100% = (1236/100)% = 12.36%
Therefore Required Percentage = 12.36%

Q58. Answer: (c) 30000

Given ratio of income of P : Q = 5 : 3, Q : R = 5 : 2
=> In both the ratios, the common term is 'Q'. Make the value with respect to 'Q' same in both the ratio
=> Multiply both numerator and denominator on other side of the ratio (P: Q) with 5 and of ratio (Q: R) with 3, we get
=> P: Q = (5 × 5): (3 × 5), Q: R = (5 × 3): (2 × 3)
=> P: Q = 25 : 15, Q : R = 15 : 6
=> Combining both the ratios we get, P : Q : R = 25 : 15 : 6
=> Let the incomes be 25x, 15x, 6x
=> From the condition, ¼ (25x) = 500 + 6x
=> (25x/4) - 6x = 500
=> (25x - 24x)/4 = 500
=> (x/4) = 500
=> x = 500 × 4 = Rs. 2000
Therefore Q's income = 15 × 2000 = Rs. 30000

Q59. Answer: (c) 44

Let the initial quantity of ink and water in the mixture be 8a and 5a respectively
When 24 litres of water is added to the mixture, then the new ratio becomes 8 : 11
=> [8a/(5a + 24)] = 8/11
=> (8a × 11) = 8 × (5a + 24)
=> 88a = 40a + 192
=> 88a - 40a = 192
=> 48a = 192
=> a = (192/48) = 4
Therefore Quantity of water in the new mixture = (5 × 4) + 24 = 44

Q60. Answer: (a) 74

Let the three numbers be a, b, c
Given the average of the 'a and 'b' is 37 more than the average of 'b' and 'c'
=> [(a + b)/2] = 37 + [(b + c)/2]
=> [(a + b)/2] = [74 + b + c]/2
=> (a + b) = 74 + b + c
=> a - c = 74
Therefore Required Difference = 74

Q61. Answer: (c) 10

Given:
A certain sum of money becomes 4 times of itself in 30 years
Concept used:
Amount - Principal = Simple interest
Calculation:
SI for 30 years = 4P - P = 3P
Then, SI for 10 years = P
Then after 10 years, amount = P + P = 2P

Therefore After 10 years amount will double itself.

Q62. Answer: (b) 200

Case 1:
Let the cost price be ‘C’
Since the man sold the article at a profit of 35%
=> Selling Price (S) = Cost Price × (1 + Profit%) = C × (1 + 35%) = 1.35C
=> S = 1.35C ---- (Equation 1)
Case 2:
In case the cost price is 15% less = C - (15%C) = C - 0.15C = 0.85C
=> Selling Price = S - 32
=> Selling Price = Cost Price × (1 + Profit%)
=> S - 32 = 0.85C × (1 + 40%) ---- (Equation 2)
Substituting the value of ‘S’ from Equation 1 in Equation 2, we get
=> 1.35C - 32 = 0.85C (1.4)
=> 1.35C - 32 = 1.19C
=> 1.35C - 1.19C = 32
=> 0.16C = 32
=> C = 32/0.16 = 200
Therefore Initial Cost price = 200

Q63. Answer: (c) 308

We know that Selling Price = (1 - Discount %) × Marked Price
Given Discount = 28%
=> Selling Price = (1 - 28%) × 1400
=> Selling Price = (1 - 0.28) × 1400
=> Selling Price = 0.72 × 1400
=> Selling Price = 1008
Profit = (SP - CP) = (1008 - 700) = Rs. 308
Therefore Profit = Rs. 308

Q64. Answer: (c) 0.913

=> To find the value of √(5/6) (Multiply the numerator and denominator with 6 we get
√((5 × 6)/(6 × 6)) = (1/√306)
=> (1/6) × 5.477 = 0.913
Therefore Required value = 0.913

Q65. Answer: (c) 24/5

Let us denote Vijay, Puneet, and Sachin with ‘V’, ‘P’, ‘S’
Given Vijay can do work in 8 hours
=> V’s one-hour work = (1/8) ---- (Equation 1)
=> (V + P)’s one hours work together = (1/6) ---- (Equation 2)
=> (P + S)’s one hours work together = (1/4) ---- (Equation 3)
=> From Equation 1 and Equation 2, P’s one-hour work = (1/6) - (1/8) = (1/24)
=> Substituting P’s one-hour work in Equation 3 we get, (1/4) - (1/24) = (5/24)
=> Sachin would complete (5/24) of the work in 1 hours
=> To complete the entire work, Sachin would require (24/5) hours
Therefore Required number of hours = (24/5)
Alternate Method
Total Unit of Work = 48 units
Vijay efficiency in 1 Hour = 6 units
Vijay + Puneet efficiency in 1 Hour = 8 units
Puneet efficiency in 1 Hour = 8 - 6 = 2 units

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Sachin efficiency in 1 Hour = 12 - 2 = 10 units
Sachin can finish work in
=> 48/10
=> 24/5 hours
Therefore Sachin can finish work in 24/5 hours.

Q66. Answer: (b) 990

=> Let the total distance covered by the train 'S' be 'd', Then the distance covered by train 'R' be (90 + d)
=> When they meet for the first time, they both have travelled for the same time, so the Speed is directly proportional to Distance
=> S1/S2 = D1/D2
=> (35/42) = d/(d + 90)
=> (35/42) = d/(d + 90)
=>
=> 5× (d + 90) = 6d
=> 5d+ 450 =6d
=> d = 450
=> Distance between S and R = 450 + (450 + 90)
Therefore Required Distance = 990
Alternative:
Difference in speed between 2 trains = 42 - 35 = 7 km/hr
Since train 2 has covered 90 kms more before they meet.
So, total time taken to cover 90 km = 90/7 = 12.857 hours
Distance covered by train 1 before they meet = 12.857 × 35 = 450 km
Distance covered by train 2 before they meet = 450 + 90 = 540 km
So total distance between S and R = 450 + 540 = 990 km

Q67. Answer: (a) 15

From the graph the highest average hours per day spent is 4 which is corresponsing to the teenager whose age is 15 ('4' lies between the teenagers of age 14 and 16)

Q68. Answer: (b) 5 : 2

=> Hours per day spent by 13 year old in playing outdoor games = 2.5
=> Hours per day spent by 18 year old in playing outdoor games = 1
=> Ratio = 2.5 : 1 = 25 : 10 = 5 : 2
Therefore Required Ratio = 5 : 2

Q69. Answer: (b) 16.67%

=> Hours per day spent by 17 year old in playing outdoor games = 3.5
=> Hours per day spent by 14 year old in playing outdoor games = 3
=> Percentage change = [(3.5 - 3)/3] × 100% = (0.5/3) × 100% = (50/3) % = 16.67%
Therefore Required Percentage = 16.67%

Q70. Answer: (a) 24.5

=> Hours per day spent by 16 year old in playing outdoor games = 3.5
=> Hours spent in a week = 3.5 × 7 = 24.5
Therefore Number of hours spent in the week = 24.5

Q71. Answer: (a) 420

Given Length and Breadth of the rectangle are 21 cm and 20 cm respectively
=> Area of the Rectangle = Length × Breadth = 21 × 20 = 420 cm^2
Therefore Required Area = 420

Q72. Answer: (c) 9

Formula used:
Interior angle of a Regular Polygon = (n - 2) × 180/n [Where 'n' is the number of sides of polygon]

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Exterior angle of a Regular Polygon = 360/n [Where 'n' is the number of sides of polygon]

Calculation:

According to the question,

=> (n - 2) × 180/n = 100 + 360/n

=> (n - 2) × 180 = 100n + 360

=> 180n - 360 = 100n + 360

=> 180n - 100n = 360 + 360

=> 80n = 720

=> n = 720/80 = 9

Therefore Number of sides = 9.

Q73. Answer: (c) 42

Formula for Total surface area of a hemisphere = $3\pi R^2$ (where R is the radius)

=> $3 \times (22/7) \times R^2 = 4158$

=> $R^2 = 4158 \times (7/22) \times (1/3)$

=> $R^2 = 4158 \times (7/22) \times (1/3)$

=> $R^2 = 441$

=> $R = \sqrt{441} = 21$

Diameter = $2R = 2 \times 21 = 42$

Therefore Required Diameter = 42

Q74. Answer: (b) 7/3

We know that cosec 30°= 2

Value of (1/3 + cosec 30°) = (1/3) + 2 = (7/3)

Therefore Required Value = (7/3)

Q75. Answer: (b) 7.5

We know that sin D = Opposite/hypotenuse = DE/DF = 15/17

Let the sides EF and DF be 15x and 17x respectively

For the right-angled triangle, as per Pythagoras theorem, $EF^2 + ED^2 = DF^2$

=> $ED^2 + (15x)^2 = (17x)^2$

=> $ED^2 = 289x^2 - 225x^2 = 64x^2$

=> $ED = \sqrt{64x^2} = 8x$

Given ED = 8x = 4 cm

To find the value of EF = 15x = 15 × (4/8) = 7.5 cm

Therefore Required value = 7.5 cm

Q76. Answer: (d) All options are correct.

The correct answer is All options are correct.

Key Points

• The function of Money is :

• Medium of exchange

• Unit of account

• Store of value

• Medium of Exchange: When money is used to intermediate the exchange of goods and services, it performs a function of a medium of exchange.

• Unit of Account: It is a standard unit of measurement of the market value of goods, services, and other transactions.

• It is a standard of relative worth and deferred payment and is a necessary prerequisite for the formulation of commercial agreements that involve debt.

• Store of Value: When the money is reliably saved, stored, and retrieved it acts as a store of value.

Q77. Answer: (a) 1997-98

The correct answer is 1997-98.

Key Points

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In 1997, government gave the status of Navaratna to 9 Public Sector enterprises(PSEs) giving them greater autonomy to compete in the global market.

Additional Information

Conditions to get Navaratna status:

• The company must score at least 60 out of 100 on various parameters like net profit, net worth, total men power, cost of production etc.

• The company must have the status of mini-ratna

• The company should have at least four independent directors on its board.

• Currently, there are total of 17 companies having status of Navratna.

Q78. Answer: (b) Foehn

The correct answer is Foehn.

Key Points

• Foehn is a strong, dusty, dry and warm local wind which develops on the leeward side of the Alps mountain ranges.

• Regional pressure gradient forces the air to ascend and cross the barrier.

• Ascending air sometimes causes precipitation on the windward side of the mountains.

• After crossing the mountain crest, the Foehn winds start descending on the leeward side or northern slopes of the mountain as warm and dry winds.

• The temperature of the winds varies from 15°C to 20°C which helps in melting snow, thus making the pasture land ready for animal grazing and helps the grapes ripe early.

Additional Information

Major local winds in the world:

Local winds	Place
Chinook	The Rockies mountain
Foehn	The Alps
Khamsin	Egypt
Sirocco	Sahara to Mediterrean sea
Bora	Hungary to North Italy
Mistral	The Alps and France
Blizzard	Tundra region

Q79. Answer: (d) Shipra

The correct answer is Shipra.

Key Points

• Ujjain is located on the banks of River Shipra.

• Ujjain in Madhya Pradesh is one of the holiest cities in India.

• River Shipra is a tributary of the Chambal River.

Additional InformationMajor rivers and cities on their bank:-

River	Cities
Yamuna	Agra
Ganga	Haridwar, bhagalpur, kanpur, patna, varanasi
Chambal	Kota, Gwalior
Tapi	Surat
Shipra	Ujjain
Narmada	Jabalpur, vadodara, bharuch
Jhelum	Srinagar
Krishna	Vijayawada, Sangli

Q80. Answer: (c) Bhabru

The correct answer is Bhabru.

Key Points

• In 1837 AD, Captain Burt discovered the Bhabru inscription of Ashoka from the Bijak hill.

• In this, allegiance to Buddhism, Sangha, and Dhamma has been expressed by Ashoka the Bhabru inscription of Ashoka is currently kept in the museum in Calcutta.

• In the Bhabru inscription, Ashoka is referred to as 'Priyadarshi.'

• Bhabru Edicts is classified as Minor Rock Edict.

Additional Information

Major rock edict	Content
I	Prohibits animal slaughter. Bans festive gatherings and killings of animals.
II	Provides for care for man and animals, describes Chola, Pandyas, Satyapura, and Keralputra kingdoms of South India.
III	It says that the Yuktas (subordinate officers and Pradesikas (district Heads) along with Rajukas (Rural officers) shall go to all areas of the kingdom every five years and spread the Dhamma Policy of Asoka.
IV	Dhammaghosa is ideal to mankind and not the Bherighosa. Impact of Dhamma on society.
V	Concerns about the policy towards slaves.
VI	Describes King’s desire to get informed about the conditions of the people constantly.
VII	Requests tolerance for all religions.
VIII	Describes Asoka’s first Dhamma Yatra to Bodhgaya & Bodhi Tree.
IX	Condemns popular ceremonies. Stress in ceremonies of Dhamma.
X	Condemns the desire for fame and glory. Stresses the popularity of Dhamma.
XI	Elaborates Dhamma
XII	Directed and determined requests for tolerance among different religious sects.
XIII	Asoka’s victory over Kalinga.
XIV	Describes engraving of inscriptions in different parts of the country.

Q81. Answer: (b) Spice

The correct answer is Spice.

Key Points

• In the 13^(th) and 14^(th) centuries, Europeans became fond of spices which were imported from the middle east and Arabian countries.

• In mid 15^(th) century after the fall of Constantinople to the Turks, the land route to India was permanently closed, which led Europeans to find a sea route to India.

• At that time demand for Indian spices was at its peak and the Portuguese were the first Europeans to find a sea route to India.

• Spices were the first things that the Portuguese started to import from India. Later on indigo, saltpetre, raw silk etc.

Q82. Answer: (b) Buddhism

The correct answer is Buddhism.

Key Points

• Bharhut is related to its Bharhut sculpture of the shunga period (mid-2nd century B.C.E.).

• The Bharhut stupa was initially built by Ashoka and was later improvised by Sungas.

• The bharhut stupa represents the aniconic phase of Buddhist art. Buddha has been represented in the form of symbols.

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Additional Information

• Jainism: Jainism is one of the three oldest religions in India, which has its roots in at least the middle of the first century BC. Even today it is an integral part of Indian culture. Jainism teaches that the path of enlightenment causes non-violence and as much harm to living things (including plants and animals) as possible.

• Hinduism: Hinduism is the major world religion originating in the Indian subcontinent and incorporating many and different systems of philosophy, belief, and ritual.

• Islam: Islam in the 7th century AD, was the major world religion promulgated by the Prophet Muhammad in Arabia. Allah is seen as the only God - the creator of the world, the constant, and the connective.

Q83. Answer: (c) China

The correct answer is China

Key Points

• Sri Lankan P.M. Ranil Wickremesinghe attended a special event to mark the handover, formally described as a Concession agreement.

• Hambantota International Port Group and Hambantota international port service, two new companies set up by china merchants port holdings company and Sri Lanka port authority will own the port.

• China as part of its Belt and Road initiative, is interested in expanding its footprint in the Indian Ocean.

Q84. Answer: (b) Dev Patel

The correct answer is Dev Patel

Key Points

• Slumdog Millionaire actor Dev Patel was honoured with the Asian Game Changer Award 2017 by the Asian Society for making a transformative and positive difference for the future of Asia and the world.

• The other Asian Game Changer awardees of 2017 are Tadashi Yanai, the founder of clothing retailing chain UNIQLO; Mongolian Eagle huntress Aisholpan Nurgaiv and Afghan rapper Sonita Alizadeh.

Q85. Answer: (c) Tissa

The correct answer is Tissa.

Key Points

• Tissa (Devanampiya Tissa) was the contemporary ruler of Ashoka in Sri Lanka.

• After adopting Buddhism, Ashoka spread Buddhism in nine other countries along with Sri Lanka.

Additional Information Ashoka:

• He was the son of the Mauryan emperor Bindusara and the grandson of Chandragupta Maurya.

• His other names were Devanampiya (Sanskrit Devanampriya meaning Beloved of the Gods) and Piyadasi.

• He is considered one of India’s greatest emperors.

• He was born in 304 BC.

• His reign lasted from 268 BC to 232 BC when he died.

• At its zenith, Ashoka’s empire stretched from Afghanistan in the west to Bangladesh in the east.

• It covered almost the whole Indian subcontinent except present Kerala and Tamil Nadu, and modern-day Sri Lanka.

• His capital was at Pataliputra (Patna) and had provincial capitals at Taxila and Ujjain.

Q86. Answer: (b) Same mass number but different atomic number

The correct answer is Same mass number but different atomic number.

Key Points

• Isobars: The nuclei which have the same mass number (A) but a different atomic number (Z) are called isobars.

• Examples of Isobars are 14 C 6, 14 N 7

• From above it is clear that the nuclei which have the same mass number (A) but a different atomic number (Z) are called isobars.

• Isobars occupy different positions in the periodic table so all isobars have different chemical properties, but the same physical properties.

Additional Information

• 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.

• 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.

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Q87. Answer: (b) Hydrogen bomb

Nuclear fusion is a reaction in which two or more atomic nuclei come closer enough to form one or more different atomic nuclie and sub atomic particles(neutrons or protons).

• Hydrogen bomb is an immensely powerful bomb whose destructive power comes from the rapid release of energy during the nuclear fusion of isotopes of hydrogen (deuterium and tritium), using an atom bomb as a trigger.

Q88. Answer: (c) Only I and II

The correct answer is Only I and II.

Key Points

• Gram panchayat is the grassroots level of panchayat raj formalized local self-governance system in India.

• Gram Panchayat consists of a village or a group of villages divided into smaller units called “Wards”.

• Each ward selects or elects a representative who is known as the Panch or ward member.

• The members of the Gram Sabha elect the ward members through a direct election.

• The Sarpanch or the president of the Gram Panchayat is elected by the ward members as per the State Act.

• The Sarpanch and the Panch are elected for a period of five years.

• Gram Panchayat is governed by the elected body and administration.

• The secretary is normally in charge of the administrative duties of the Gram Panchayat.

Thus, we can conclude that Gram Panchayat is composed of Ward Panch and Sarpanch.

Q89. Answer: (a) Elected by the people

The correct answer is Elected by the people.

Key Points

• The Legislative Assembly

• The Legislative Assembly is also known as a lower house and it is also a temporary house.

• The total strength is a Maximum of 500 members and a minimum of 60 members.

• The tenure of the Vidhan Sabha/ Legislative Assembly is 5 years and can be dissolved by Governor before the expiration of 5 years.

• The legislative Assembly can legislate on matters included in the State list and Concurrent list.

• The security deposit for candidates of the Legislative Assembly is rs 10,000. For Scheduled Castes and Scheduled Tribes, the security deposit is rs. 5,000. if the candidate is unable to secure more than one-sixth of the valid votes polled then his security deposit amount will be forfeited.

• The following conditions must be fulfilled by the candidate to become a member of the Legislative Assembly:

• He/she must be a citizen of India.

• He/she must have completed the age of twenty-five years.

• He/she must be registered as a voter in any Parliamentary Constituency.

• Others as prescribed by Parliament from time to tim

Q90. Answer: (a) Ovary

Concept:

About Plant Reproduction:

• Sexual Reproduction is defined as the production of a (New organism) from Two-parents by making use of their (Gametes or Sex cells). Plants also have Male and Female sex organs are carried within the (Flower and the Seeds which are inside a Fruit).

• These plants are called (Angiosperms or Flowering plants) as they reproduce by the Sexual reproduction method.

• Most of the plants contain Reproductive organs of both (Males and Females) in the flowers.

Parts of a flower and their functions:

• Sepals: Protect the unopened flower

• Petals: Maybe brightly colored to attract insects

• Stamens: The male parts of the flower (each consists of an anther held up on a filament)

• Anthers: Produce male sex cells (pollen grains)

• Carpel: Female reproductive part of the flower which consists of ovules (inside which the egg cells ultimately form), ovary, style, and stigma.

• Stigma: The top of the female part of the flower which collects pollen grains

• Ovary: Produces the female sex cells (contained in the ovules)

• Nectary: Produce a sugary solution called nectar, which attracts insect

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Explanation:

The swollen bottom part of flower is Carpel.

• The (Male organ part) of a flower is called the (Stamen) and the (Female organ part) of a flower is called (Carpel). It helps in making the (Male Gametes) of the plant and that is present in Pollen grains.

• These Pollen Grains helps in making (Female Gametes or Egg cells) of the plant and are present in Ovules. The (Male Gametes) fertilize the (Female Gametes).

• The fertilized (Egg cells) grow in Ovules and become Seeds.

• When germinated, these Seeds started growing as (new Plants).

Q91. Answer: (c) Parenchyma > Collenchyma > Sclerenchyma

The correct answer is Parenchyma > Collenchyma > Sclerenchyma.

Key Points

• Simple Permanent Tissue is also known as homogenous tissues.

• They are made up of a single cell type, usually with the same origin, structure, and function.

• Simple permanent tissue is further classified into three types:

• Parenchyma -

• It is composed of living cells that are thin-walled, unspecialized in structure, and therefore adaptable, with differentiation, to various functions.

• The cells are found in many places throughout plant bodies and, given that they are alive, are actively involved in photosynthesis, secretion, food storage, and other activities of plant life.

• Collenchyma -

• It supports the tissue of living elongated cells with irregular cell walls.

• It has thick deposits of cellulose in its cell walls and appears polygonal in cross-sections.

• The strength of the tissue results from these thickened cell walls and the longitudinal interlocking of the cells.

• It may form cylinders or occur as discrete strands and is one of the three ground, or fundamental, tissues in plants, together with parenchyma (living thin-walled tissue) and sclerenchyma (dead support tissue with thick cell walls).

• Sclerenchyma

• It supports tissue composed of any of various kinds of hard woody cells.

• Mature sclerenchyma cells are usually dead cells that have heavily thickened secondary walls containing lignin.

• The cells are rigid and nonstretchable and are usually found in nongrowing regions of plant bodies, such as the bark or mature stems.

• It is one of the three types of ground, or fundamental, tissue in plants; the other two types are parenchyma (living thin-walled tissue) and collenchyma (living support tissue with irregular walls).

• Its occur in many different shapes and sizes, but two main types occur fibers and sclereids.

Q92. Answer: (c) Ministry of Environment, Forest and Climate change

The correct answer is Ministry of Environment, Forest and Climate change.

Key Points

• Project Blue Flag was launched by the Ministry of Environment, Forest and Climate change to develop and enhance standards of cleanliness on beaches.

• Under the pilot programme, each of the coasts of the state/UT was requested to identify/nominate a beach, which is to be funded through the ongoing Integrated Coastal Management Programme (ICMP).

• To date, all the coastal states have nominated pilot beaches in their receptive territories including Goa. However, formal nominations are awaited from coastal UTs.

• The Blue Flag is certified by Foundation for Environmental Education that a beach, marina, or sustainable boating tourism operator, meets its stringent standards.

• The 'Blue Flag' is a certification by the Foundation for Environmental Education (FEE) that a beach, Marina, or sustainable boating tourism operator, meets its stringent standards.

Q93. Answer: (b) Spiral

The correct answer is Spiral

Key Points

• One of the most ancient spiral galaxies ever revealed has been discovered by astronomers in Australia.

• At 11 billion years old, the A1689B11 galaxy was formed only 2.6 billion years after the Big Bang, making it nearly as old as the universe itself.

Q94. Answer: (a) $ 5 Trillion

The correct answer is $5 Trillion

Key Points

• Credit Suisse Global Wealth Report is released by Credit Suisse Research Institute.

• Credit Suisse's latest annual Global Wealth Report says India is home to 245,000 dollar millionaires. The country has a share of 0.7% of the global top 1% by wealth, who collectively owns half the world's total wealth. In India, 340,000 adults are part of this elite group. There are 1,820 adult Indians who have wealth over $50 million, and, at the very apex, 760 have more than $100 million.

• The chart shows India's wealth pyramid. At the bottom, 92.3% of adults have wealth of less than $10,000. Above that, in the $10,000 to $100,000 bracket, we have 7.2% of Indian adults. And 0.5% of us have wealth over $100,000.

• Incidentally, the upper limit of the bottom bracket, or $10,000 is very high by Indian standards because the median wealth in India is a mere $1,295 per adult.

Q95. Answer: (b) Kailash Kher

The correct answer is Kailash Kher

Key Points

• The singer and composer of the official anthem for Bharat ke veer is Kailash Kher.

• Home Minister Rajnath Singh launched an official anthem for "Bharat Ke Veer", an initiative with a corpus fund to help the families of paramilitary troopers killed in the line of duty.

• During the event, an amount of 12.93 crores was raised with contributions from participants, including celebrities and people from the corporate world. The event was also attended by heads of all the Central Armed Police Forces.

Q96. Answer: (d) 144

The correct answer is 144.

Key Points

Work(W) = potential difference (V) × charge(Q)

W = 6 x 24

W = 144 joule

Q97. Answer: (b) compression

The correct answer is compression.

Explanation:

• When a vibrating object moves forward, it pushes and compresses the air in front of it creating a region of high pressure. This region is called Compression and this starts to move away from the vibrating object.

• When a vibrating object moves backwards, it creates a region of low pressure. This region is called Rarefaction.

• As the object moves back and forth creates a series of compression and rarefaction in the air and this makes the sound wave propagates through the medium.

Q98. Answer: (c) atmosphere

The correct answer is atmosphere.

Key Points

• The atmosphere helps in keeping the temperature of the earth at steady levels.

• During day time atmosphere prevents the temperature from getting too high and during night time it does not allow heat to escape the earth, in this way a fairly steady temperature is maintained throughout the year on earth.

• The air is a poor conductor of heat. During the day, it prevents a sudden increase in the temperature of the earth and prevents the heat from escaping to outer space during the night. It keeps the average temperature of the earth steady. Moon has no atmosphere and the temperature ranges from 121°C during the day to -157°C at night.

Additional InformationBiosphere-

• Biosphere refers to the narrow zone between the lithosphere, atmosphere, and hydrosphere where life exists.

• The biosphere consists of living organisms both plants and animals. Here, the physical environment (lithosphere, atmosphere, and hydrosphere) interacts with each other and supports life. It is also known as the ecosphere.

Heliosphere-

• The heliosphere is the region surrounding the Sun and the solar system is filled with the solar magnetic field and the protons and electrons of the solar wind.

• The heliosphere shields the solar system from galactic cosmic radiation.

Photosphere-

• The photosphere is the lowest layer of the sun's atmosphere. the innermost layer we can observe directly.
• The term photosphere means "sphere of light" and is the layer where most of the sun's energy is emitted.
• It takes about eight minutes for sunlight from the photosphere to reach Earth.

Q99. Answer: (a) Only B

The correct answer is Only B.

Key Points

• The 2017 Women's Cricket World Cup was won by England against India at Lord's on 23 July by 9 runs. Hence Statement A is not correct.
• Australia won the 2016–17 Men's FIH Hockey World League Final, defeating Argentina. Hence Statement B is correct.
• The Tennis 2017 US Open Men's Singles won by Rafael Nadal (16^(th) grand slam), defeated South African Kevin Anderson at Arthur Ashe stadium. Hence Statement C is also not correct.

Q100. Answer: (c) ROWSPAN

The correct answer is ROWSPAN.

Key Points

• Colspan allows a single table cell to span the width of more than one cell or column.
• Rowspan allows a single table cell to span the height of more than one cell or row.
• Cellpadding is used in conjunction with the table element, it specifies the amount of space between the border of a table cell and its contents.
• Cell spacing attribute specifies the space, in pixels, between cells.

Important PointsHTML

• HTML is short for "HyperText Markup Language".
• It simply means it is a language for describing web pages using ordinary text.
• HTML is not a complex programming language.
• Tim Berners-Lee developed this in 1990.

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