SSC CHSL Previous Paper 10 (Held On: 4 Jul 2019 Shift 3) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2019 • 100 questions • 60 minutes • Answer key and solutions

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ENGLISH LANGUAGE

Q1. Select the most appropriate antonym of the given word.

SPARSE

(a) Strong
(b) Weak
(c) Dense
(d) Thin

Q2. Identify the most appropriate option to substitute the underlined segment. If no substitution is required, select No substitution.

By next week I will have been made all the reservations for the trip to Europe.

(a) will have been making
(b) will have made
(c) will had make
(d) No substitution.

Q3. Select the most appropriate word for the group of words.

One who is in charge of a museum or art gallery

(a) curator
(b) instructor
(c) monitor
(d) collector

Q4. Select the wrongly spelt word.

(a) jewellery
(b) hereditary
(c) missionary
(d) elementery

Q5. Select the most appropriate meaning of the given idiom.

To bark up the wrong tree

(a) to be wrong about the reason for something
(b) to bury money under a tree and forget the place
(c) to eat an unpalatable fruit by mistake
(d) to be mistaken about the name of a tree

Q6. Select the most appropriate word for the group of words.

One whose hobby is stamp collection.

(a) philanthropist
(b) panegyrist

(c) phonologist
(d) philatelist

Directions

Directions: In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

"Tenzing and Hillary have done it! Mount Everest has been conquered!" This news evoked (1) ____ reactions. Somehow, there was a sense of disappointment (2) __ the fact that the great mountain had been (3) __. It would have been nice to (4) __ the Everest as an (5) ____ part of the Earth.

Q7. Select the most appropriate option to fill in blank number 1

(a) interesting
(b) inspired
(c) intruding
(d) intimate

Q8. Select the most appropriate option to fill in blank number 2

(a) on
(b) of
(c) at
(d) for

Q9. Select the most appropriate option to fill in blank number 3

(a) occupied
(b) conquered
(c) challenged
(d) invaded

Q10. Select the most appropriate option to fill in blank number 4

(a) have left
(b) had left
(c) be leaving
(d) left

Q11. Select the most appropriate option to fill in blank number 5

(a) unavailable
(b) unusual
(c) unruly
(d) unassailable

Q12. Select the most appropriate indirect form of the given sentence.

The lawyer said to the accused, "Where were you at the time of the burglary?"

(a) The lawyer asked the accused where were you at the time of burglary.
(b) The lawyer asked the accused if he was there at the time of burglary.
(c) The lawyer asked the accused where he had been at the time of the burglary.
(d) The lawyer asked the accused that where was he at the time of burglary.

Q13. Identify the segment which contains the grammatical error.

The Principal requested to the Chief Guest to inaugurate the sports meet.

(a) The Principal requested
(b) to inaugurate
(c) the sports meet
(d) to the Chief Guest

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Q14. Select the most appropriate synonym of the given word.

PATHETIC

(a) Powerful
(b) Pitiful
(c) Plentiful
(d) Purposeful

Q15. Select the most appropriate passive form of the given sentence.

Have you paid your outstanding bills?

(a) Are your outstanding bills being paid?
(b) Will your outstanding bills be paid?
(c) Have your outstanding bills been paid?
(d) Have your outstanding bills being paid?

Q16. Select the most appropriate synonym of the given word.

OPPORTUNE

(a) timely
(b) likely
(c) barely
(d) rarely

Q17. Identify the segment which contains the grammatical error.

The ambulance have arrived on time, the accident victim was taken to the hospital.

(a) have arrived on time
(b) the accident victim
(c) was taken to the hospital
(d) The ambulance

Q18. Fill in the blank with the most appropriate word.

The _____ appears to be rather rough today for the ships to sail.

(a) environment
(b) weather
(c) climate
(d) atmosphere

Q19. Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.

A. They had come from different parts of the city.
B. Men, tall and skinny, short and fat gathered in Dubai.
C. They were all named Mohammad!
D. But, all of them had one thing in common.

(a) ADCB
(b) BADC
(c) BDAC
(d) ABCD

Q20. Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.

A. Practicing hard, she hoped to win an Olympic medal some day.
B. As she sped down the slope she had a terrible accident.
C. But, she didn't know it would be her last run ever.
D. Ann Thompson was going to make her practice ski run before lunch.

(a) ACDB
(b) BCDA
(c) DCBA

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(d) DACB

Q21. Select the most appropriate antonym of the given word.

INFERIOR

(a) superior
(b) exterior
(c) ulterior
(d) interior

Q22. Fill in the blank with the most appropriate word.

The archaeologist made a _____ discovery.

(a) sensitive
(b) senile
(c) sensible
(d) sensational

Q23. Select the most appropriate meaning of the given idiom.

To grease the palm

(a) To give a massage
(b) To cheat someone
(c) To give support
(d) To bribe someone

Q24. Identify the most appropriate option to substitute the underlined segment. If no substitution is required, select No substitution.

Of Rama and Usha the later is the most responsible.

(a) the later is more
(b) the latter is more
(c) the latter is most
(d) No substitution.

Q25. Select the correctly spelt word.

(a) contruction
(b) distruction
(c) compitition
(d) repetition

GENERAL INTELLIGENCE

Q26. Which two signs should be interchanged in the following equation to make it correct?

5 × 15 ÷ 7 - 20 + 4 = 77

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

Q27. If R = 36 and BIN = 50, then how will you code 'TALE'?

(a) 19
(b) 110
(c) 54
(d) 76

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Q28. Mayank's father has a brother, Prakash, whose daughter, Ritu is Kavita's mother. Sonu is Ritu's only brother. How is Sonu related to Mayank?

(a) Nephew
(b) Son
(c) Cousin
(d) Brother

Q29. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

DFHJ : MOQS : : CGGK : _____

(a) LQQT
(b) NPPT
(c) NQQT
(d) LPPT

Q30. Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

No ball is pen. All pens are boxes.

Conclusions:

I. Some boxes are pens.

II. Some boxes are balls.

III. No box is ball.

(a) Conclusion I and either II or III follows
(b) Only conclusion I follows
(c) All conclusions follow
(d) Either conclusion II or III follows

Q31. Select the number that will come next in the following series.

2, 6, 14, 30, 62, ?

(a) 134
(b) 122
(c) 126
(d) 98

Q32. Select the set in which the numbers are related in the same way as are the numbers of the following set.

(6, 36, 1296)

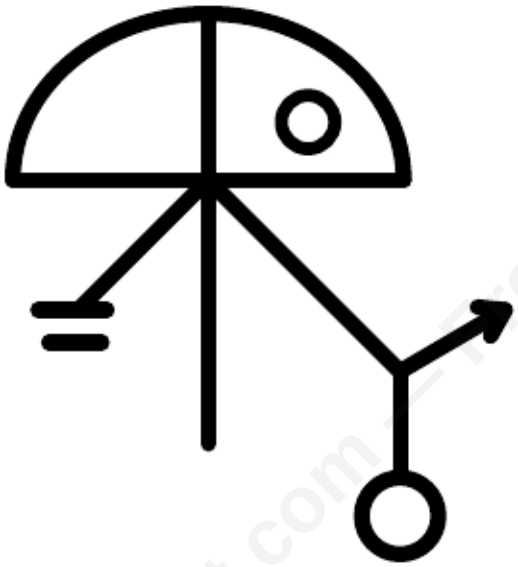
(a) (4, 16, 64)
(b) (3, 9, 81)
(c) (7, 49, 2409)
(d) (10, 100, 5000)

Q33. M is the brother of N. N is the brother of P. Q is the father of M. Based on these statements, which of the following statements cannot be definitely true?

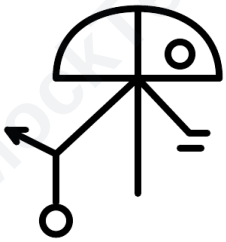
(a) N is the son of Q
(b) M is the brother of P
(c) P is the brother of M
(d) N is the brother of M

Q34. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.

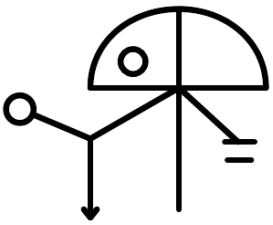
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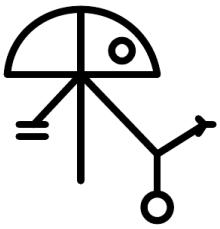
(a)



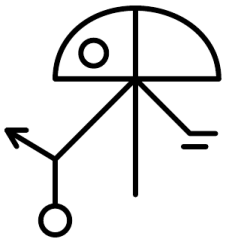
(b)



(c)

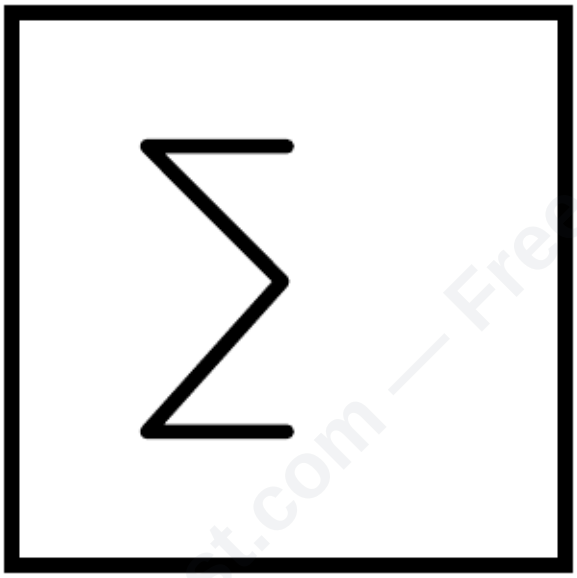


(d)

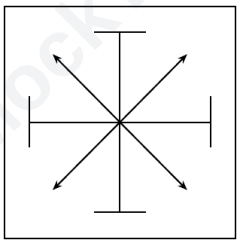


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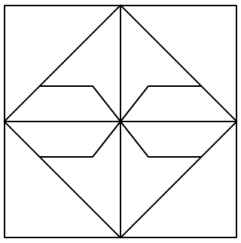
Q35. Select the option in which the given figure is embedded.(rotation is not allowed)



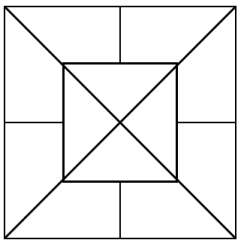
(a)



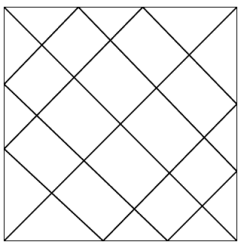
(b)



(c)



(d)



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Q36. Select the word-pair in which the two words are related in the same way as are the two words in the following word-pair.

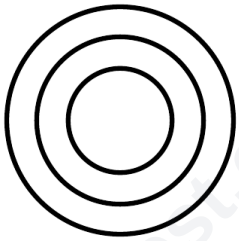
Seismology : Earthquakes : : ___ : ____

(a) Ornithology : Birds
(b) Phycology : Fungi
(c) Entomology : Plants
(d) Nephrology : Nerves

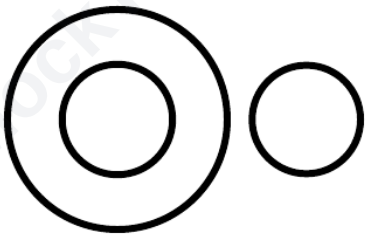
Q37. Select the Venn diagram that best illustrates the relationship between the following classes.

Moon, Venus, Universe

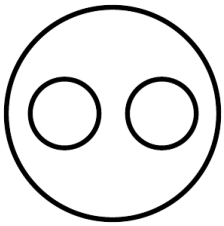
(a)



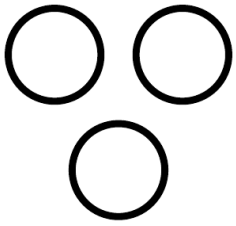
(b)



(c)



(d)



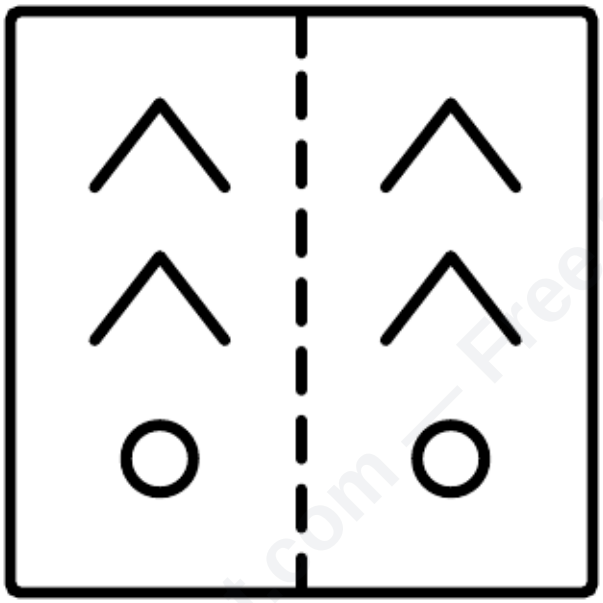
Q38. Three of the following four letter-clusters are alike in a certain way and one is different.

Pick the odd one out.

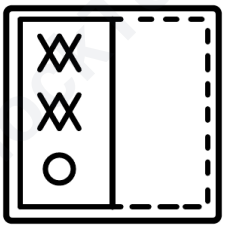
(a) OQTX
(b) IKNQ
(c) ACFJ
(d) EGJN

Q39. A figure of transparent sheet with a pattern is given below. Select the option that shows how the pattern would appear when the transparent sheet is folded at the dotted line.

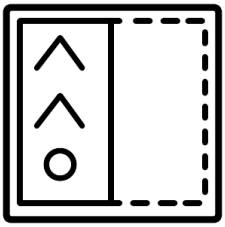
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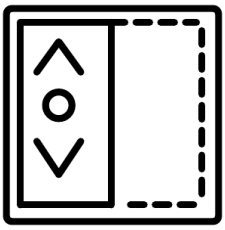
(a)



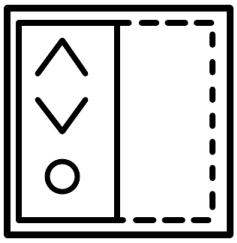
(b)



(c)



(d)



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Q40. Select the letter cluster that will come next in the following series.

LVD, OTF, RRH, ?, XNL

(a) UPJ
(b) UQI
(c) TQJ
(d) TPJ

Q41. Three of the following four numbers are alike in a certain way and one is different.

Pick the number that is different from the rest.

(a) 323
(b) 353
(c) 313
(d) 373

Q42. Select the set in which the numbers are related in the same way as are the numbers of the following set.

(3, 5, 34)

(a) (6, 7, 89)
(b) (4, 7, 65)
(c) (1, 2, 12)
(d) (9, 10, 190)

Q43. 'Man' is related to 'Mammal' in the same way as 'Rat' is related to '_____'.

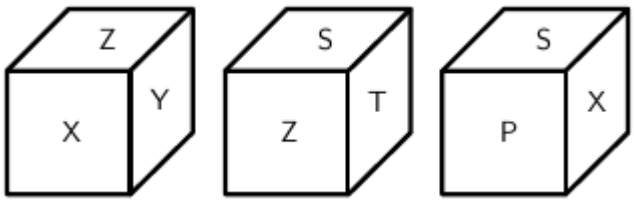
(a) Mice
(b) Rodent
(c) Burrow
(d) Reptile

Q44. Vikarm is twice as old as his brother Ajay. 5 years ago, Vikram was 3 times as old as Ajay.

How old is Vikram now?

(a) 22
(b) 17
(c) 20
(d) 18

Q45. Three different positions of the same dice are shown. Which alphabet will appear on the opposite surface on which alphabet P appears?



(a) S
(b) Z
(c) X
(d) T

Q46. Rohit's age is 10 years less than half of his mother's age who is 5 years younger than Rohit's father. If Rohit's father is 47 years old, what is Rohit's age?

(a) 21 years
(b) 10 years
(c) 11 years
(d) 14 years

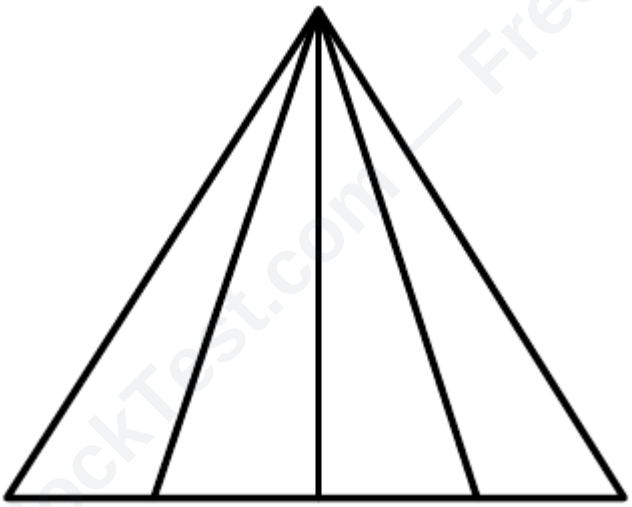
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Q47. Which number will replace the question mark (?) in the following series?

4, 16, 36, 64, 100, 144, 196, ?

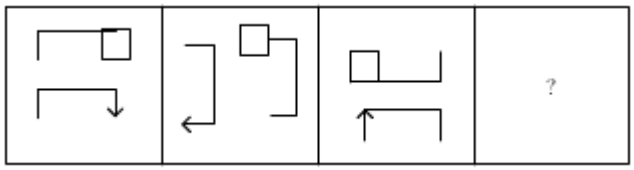
(a) 246
(b) 225
(c) 256
(d) 284

Q48. How many triangles are there in the following figure?

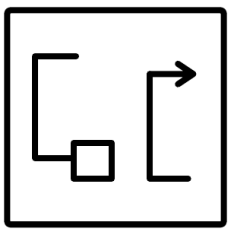


(a) 9
(b) 8
(c) 10
(d) 6

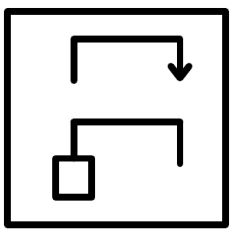
Q49. Select the figure that will come next in the following figure series.



(a)

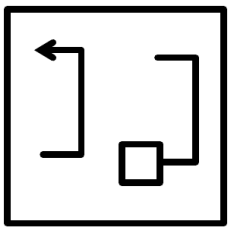


(b)

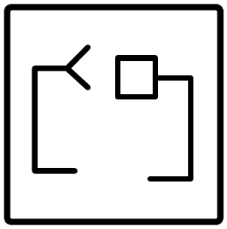


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(c)



(d)



Q50. Three of the following four words are alike in a certain way and one is different.
Pick the odd word out.

(a) Arena
(b) Rink
(c) Pitch
(d) Nib

QUANTITATIVE APTITUDE

Q51. A train covers 60 km at a uniform speed. If the speed had been 8 km/h more, it would have taken 10 hours less for the same journey. What is the speed of the train (in km/h)?

(a) 4
(b) 2.5
(c) 5
(d) 3

Q52. Let ABC ~ QPR and arABC : arQPR = 1 : 16. If AB = 12 cm, BC = 6 cm and AC = 9 cm then PR is equal to:

(a) 12 cm
(b) 9 cm
(c) 24 cm
(d) 8 cm

Q53. If $(x + 1/x) = 10$, then $(x^3 + 1/x^3)$ is equal to:

(a) 970
(b) 1100
(c) 1000
(d) 1030

Q54. If $(3x - 7)^3 + (3x - 8)^3 + (3x + 6)^3 = 3 (3x - 7) (3x - 8) (3x + 6)$, then what is the value of x?

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

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Q55. If x^4 + x^(-4) = 1442, (x > 0) then the value of x - x^(-1) is:

(a) 15
(b) 6
(c) 7
(d) 8

Q56. Three numbers are in the ratio 1/2 : 2/3 : 3/4. The difference between the greatest and the smallest number is 27. The smallest number is:

(a) 54
(b) 81
(c) 72
(d) 40

Q57. There was 29% off on bags. A lady bought a bag and got 13% discount for paying in cash. She paid Rs. 617.70. What was the price tag (in Rs.) on the bag?

(a) 800
(b) 925
(c) 1000
(d) 750

Q58. Two circles of radii 7 cm and 9 cm intersect at the points A and B. If AB = 6 cm and the distance between the centers of the circles is x cm, then the value of x (to the closest integer) is:

(a) 15
(b) 14
(c) 10
(d) 12

Q59. A man gets a discount of 30% and then 20% on his food bill of Rs. 1,500. How much discount, in rupees, did he get?

(a) 500
(b) 360
(c) 700
(d) 660

Q60. If $2\sin^2\theta + 5\cos\theta - 4 = 0$, $0° < \theta < 90°$, then the value of $\tan\theta + \sin\theta$ is:

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

Q61. 9 years ago, the average age of a family of five members was 33 years. Now, three new members join whose ages are in ascending order with consecutive gaps of 8 years. If the present average age of the family is the same as it was 9 years ago, what is the age (in years) of the youngest new member?

(a) 9
(b) 15
(c) 17
(d) 10

Q62. A certain amount invested at a certain rate, compounded annually, grows to an amount in five years, which is a factor of 1.1881 more than to what it would have grown in three years. What is the rate percentage?

(a) 9.2
(b) 9
(c) 8.1
(d) 8

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Q63. In a ΔABC, the bisectors of angle B and angle C meet at point O within the triangle. If angle BOC is given, then which among the given options is true?

(a) angle A = 2 (angle BOC – 90°)
(b) angle A = 180° - angle BOC
(c) angle A = 90° + angle BOC
(d) angle A = 2(90° - angle BOC)

Q64. What is the area of a rhombus (in cm^2) whose side is 13 cm and the smaller diagonal is 10 cm?

(a) 192
(b) 96
(c) 50
(d) 120

Q65. If $a^2 + b^2 = 99$ and $ab = 11$, $(a > 0, b > 0)$ then the value of $(a^3 + b^3)$ is:

(a) 1100
(b) 968
(c) 1250
(d) 1080

Q66. If $\cos\theta = 2p/(p^2 + 1)$, $p \neq 0$ then $\tan\theta$ is equal to:

(a) $(p^2 – 1)/2p$
(b) $(p^2 + 1)/(p^2 – 1)$
(c) $2p/(p^2 + 1)$
(d) $2p/(p^2 – 1)$

Q67. A number is decreased by 30%, then increased by 30%, then further decreased by 10%. What is the net increase/decrease percent in the number (correct to the nearest integer)?

(a) 18% decrease
(b) 19% increase
(c) 19% decrease
(d) 18% increase

Q68. A, B and C can complete a piece of work in 4, 28 and 56 days respectively. Working together, they can complete the same work in how many days?

(a) 34/17
(b) 32/17
(c) 33/17
(d) 35/17

Q69. A circle is inscribed in a triangle ABC. It touches side AB, BC and AC at the points P. Q and R respectively. If BP = 8.5 cm, CQ = 6.5 and AR = 4.5 cm, then the perimeter (in cm) of the ΔABC is:

(a) 49.5
(b) 35
(c) 39
(d) 33

Q70. A man bought 2 articles for Rs. 3050 each. He sold one article at 10% profit and another at 20% profit. The total profit percentage he earned is:

(a) 15%
(b) 20%
(c) 10%
(d) 18%

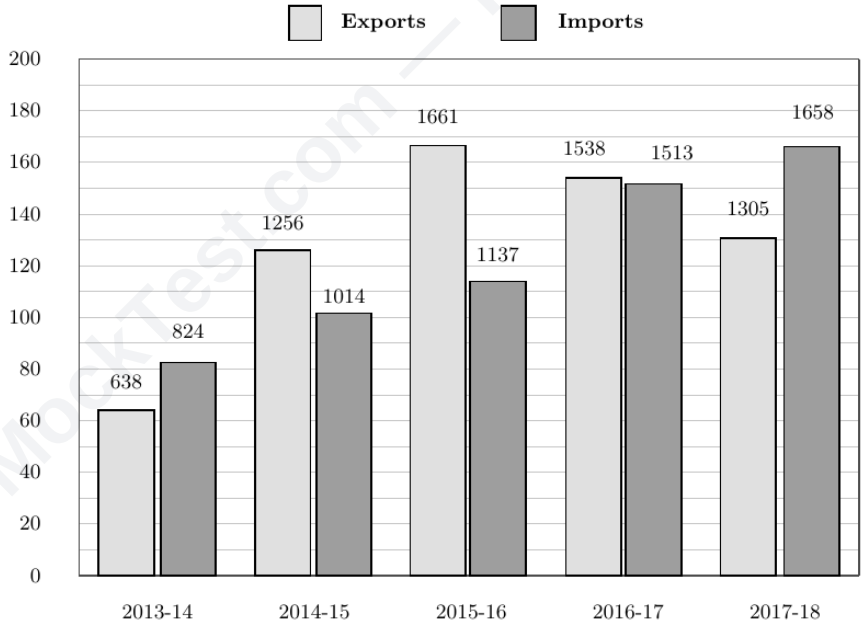
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Q71. In triangle ABC, D and E are two points on the sides AB and AC respectively so that DE || BC and AD/BD = 3/4. The ratio of the area of ΔABC to the area of trapezium DECB is:

(a) 40 : 49
(b) 49 : 40
(c) 49 : 33
(d) 33 : 49

Directions

The given Bar graph presents the imports and exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



Q72. What is the average of import (in tonnes) during the five financial years?

(a) 1229.5
(b) 1229.2
(c) 1552.4
(d) 1335.9

Q73. In which financial year the absolute difference between the exports and the imports is the highest?

(a) 2017-2018
(b) 2015-2016
(c) 2016-2017
(d) 2014-2015

Q74. In which financial year the percentage increase in imports and exports taken together is the highest in comparison to its previous financial year?

(a) 2017-2018
(b) 2015-2016
(c) 2014-2015
(d) 2016-2017

Q75. What is the ratio of total exports to total import during the five financial years?

(a) 3073 : 3199
(b) 4175 : 4175
(c) 4011 : 4175
(d) 3199 : 3073

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GENERAL AWARENESS

Q76. As of May 2019, Vidarbha has won _____ Ranji Trophy tournaments.

(a) 8
(b) 2
(c) 5
(d) 3

Q77. After winning ‘Australian Open 2018’, the total number of Grand Slam Men’s singles titles won by Roger Federer is _____.

(a) 21
(b) 20
(c) 18
(d) 24

Q78. At NASA’s annual Human Exploration Rover Challenge, a team from _____ in India won the 'AIAA Neil Armstrong Best Design Award' in April 2019.

(a) Indian Institute of Technology, Delhi
(b) Lovely Professional University, Phagwara
(c) Mukesh Patel School of Technology Management and Engineering, Mumbai
(d) KIET Group of Institutions, Ghaziabad

Q79. Who among the following was elected as the President of South Africa in May 2019?

(a) F W de Klerk
(b) Thabo Mbeki
(c) Cyril Ramaphosa
(d) Jacob Zuma

Q80. According to Indian Bureau of Mines Report 2018, which among the following is the largest mica producing state in India?

(a) Andhra Pradesh
(b) Bihar
(c) Punjab
(d) Odisha

Q81. Who among the following authored the book ‘Poverty and Un-British Rule in India’?

(a) Raja Ram Mohan Roy
(b) Bal Gangadhar Tilak
(c) Rajagopalachari
(d) Dadabhai Naoroji

Q82. Which of the following at 23°30' N divides India into almost two halves?

(a) Equator
(b) Tropic of Capricorn
(c) Prime Meridian
(d) Tropic of Cancer

Q83. In May 2019, _____ became the first judge from the Indian apex court to be appointed to the Supreme Court of Fiji's non-resident panel for a period of three years.

(a) Justice H L Dattu
(b) Justice A K Sikri
(c) Justice Madan Loku
(d) Justice A K Goel

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Q84. Name the Nobel Prize-winning American economist whose report to the US Congress titled “National Income, 1929-35" paved the way for the calculation of Gross Domestic Product (GDP) as the ultimate measure of a country’s overall welfare.

(a) John Maynard Keynes
(b) Simon Kuznets
(c) Paul Samuelson
(d) Kenneth Arrow

Q85. Which one of the following is defined as "a set of instructions, data or programs used to operate computers and execute specific tasks"?

(a) Software
(b) Hardware
(c) Malware
(d) Processor

Q86. Who is the author of the famous book 'Kamayani'?

(a) Sumitranandan Pant
(b) Jaishankar Prasad
(c) Mahadevi Verma
(d) Maithili Sharan Gupt

Q87. The responsibility of regulating and supervising primary (urban) cooperative banks, which are popularly known as Urban Cooperative Banks (UCBs) is vested with which one of the following?

(a) The Department of Non-Banking Supervision of the Reserve Bank of India
(b) The Urban Banks Department of the Reserve Bank of India
(c) State Co-operative Banks
(d) The Department of Corporate Services of the Reserve Bank of India

Q88. As a part of SIMBEX-2019, held from 16 to 22 May 2019, Indian naval ships INS Kolkata and INS Shakti participated in the annual bilateral naval exercise between India and _____.

(a) Singapore
(b) US
(c) Russia
(d) Japan

Q89. Which of the following mountain ranges is home to the second highest peak of the world, K2?

(a) East Karakoram Range
(b) Zanskar Range
(c) Ladakh Range
(d) Pir Panjal Range

Q90. India is a federal republic with 28 states and _____ union territories.

(a) six
(b) Seven
(c) Nine
(d) Eight

Q91. Which one of the following is a Japanese word that means 'harbour wave',?

(a) Jishin
(b) Volcano
(c) Tsunami
(d) Gneiss

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Q92. Which one of the following allows the user to store, organise, calculate and manipulate the available data in a tabular format?

(a) Notepad
(b) Microsoft Word
(c) Microsoft Excel
(d) Microsoft Powerpoint

Q93. Srirangapatnam Fort is located in _____.

(a) Telangana
(b) Tamil Nadu
(c) Kerala
(d) Karnataka

Q94. According to the Constitution of India, how many members from the Anglo-Indian community can be nominated to the Lok Sabha by the President?

(a) Four
(b) Two
(c) Three
(d) Five

Q95. Which of the following states won the maximum number of medals in the inaugural 2018 edition of the 'Khelo India School Games'?

(a) Haryana
(b) Maharashtra
(c) Delhi
(d) Jharkhand

Q96. In which state is the Mormugao port located?

(a) Goa
(b) Gujarat
(c) Maharashtra
(d) Karnataka

Q97. Which of the following options is a degenerative disorder of the brain and one of several conditions that cause an increase in mental function, dementia, resulting in memory loss and confusion?

(a) Alzheimer's disease
(b) Scrinophrenia
(c) Stroke
(d) Amnesia

Q98. In which state are the Dilwara Jain Temples situated?

(a) Bihar
(b) Rajasthan
(c) Maharashtra
(d) Madhya Pradesh

Q99. Who is the current Chief of the Army Staff of India as of May 2019?

(a) General Devraj Anbu
(b) General Bipin Rawat
(c) General Bikram Singh
(d) General Dalbir Singh Suhag

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Q100. Select the option that does NOT have the correct pair of state and its chief minister?

(a) Andhra Pradesh – Sri Nara Chandrababu Naidu
(b) Odisha – Shri Mohan Charan Majhi
(c) Arunachal Pradesh – Shri C.P. Radhakrishnan
(d) Sikkim – P S Golay(Prem Singh Tamang)

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) Dense

The correct answer is option 3) i.e. dense.
• sparse: thinly dispersed or scattered.
• dense: closely compacted in substance, hence, it is the most appropriate antonym of the given word.
• strong: able to perform a specified action well and powerfully.
• weak: lacking power or influence.
• thin: having little, or too little, flesh or fat on the body.

Q2. Answer: (b) will have made

The correct answer is option 2) i.e. will have made.
• The given sentence is in the future perfect tense.
• And in the future perfect tense 'will + have + v3' is used.
• Hence, will have made is the correct answer here.
• So, the sentence after substitution will be: By next week I will have made all the reservations for the trip to Europe.

Q3. Answer: (a) curator

The correct answer is option 1) i.e. curator.
• curator: a keeper or custodian of a museum.
• instructor: a person who teaches something.
• monitor: a person operating a monitor.
• collector: an official who is responsible for collecting money.

Q4. Answer: (d) elementery

The solution is in Hindi. Read it online.

Q5. Answer: (a) to be wrong about the reason for something

To bark up the wrong tree: to attempt or pursue a futile course of action, to have the wrong idea about the reason for something or the way to achieve something.
• E.g: You're barking up the wrong tree if you're expecting us to lend you any money.
• If you think I'll help you cheat, you're definitely barking up the wrong tree.

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Thus, option 1 is the correct answer.

Q6. Answer: (d) philatelist

The correct answer is Option 4, 'philatelist' which means 'A person who collects and studies postage stamps'.

The meanings of the other words are as follows:

• Philanthropist: A person who loves humankind in general.

• Panegyrist: A eulogist; one who delivers a panegyric or eulogy.

• Phonologist: A person who specializes in phonology, the functional use of sounds in language.

Q7. Answer: (a) interesting

• The correct answer is Option 1 'interesting'.

• The passage is talking about climbing Mount Everest which is the biggest conquer. The suitable word that fits in the first blank is 'interesting' because in the passage it is also given people expressing disappointment at it although it is a matter of expressing surprise and happiness.

• Therefore, it is correct to say that this news evoked interesting reactions.

Q8. Answer: (c) at

• The correct answer is Option 3.

• The correct preposition to be used in the given blank is 'at' which is used to indicate an activity.

• Here in the given passage, the activity is conquering Mount Everest.

Q9. Answer: (b) conquered

• The correct answer is Option 2.

• The suitable word to be used in the given blank is 'conquered' because in the beginning of the passage itself it talks about conquering Mount Everest.

• The meaning of the word 'conquer' according to the passage is 'to gain, win or obtain by effort.'

Q10. Answer: (a) have left

The correct answer is option 1)

• "To + verb¹" acts as infinitive form of nonfinite verbs.

• Due to the presence of 'to', we are compelled to use the first form of the verb after it so, option 2) & option 4) are incorrect.

• "To + be leaving" will be incorrect grammatically as "to + leave" will serve the same purpose. (can not use the verb 'to be' in this syntax)

• So, the correct format will be "to + have left".

Q11. Answer: (d) unassailable

The correct answer is option 4)

• unavailable: not able to be used or obtained; not at someone's disposal.

• unusual: not habitually or commonly occurring or done.

• unruly: disorderly and disruptive and not amenable to discipline or control.

• unassailable: unable to be attacked, questioned, or defeated.

In the previous sentence, disappointment occurred because of concurrence so here, 'nice' will relate with unassailable.

Q12. Answer: (c) The lawyer asked the accused where he had been at the time of the burglary.

• The correct answer is Option 3.

• When changing a direct sentence to its indirect form, the interrogative sentence becomes an assertive sentence. 'said to' changes to 'asked', second person 'you' changes to the third person 'he', 'were' changes to 'had been'. The remaining part of the sentence remains the same as per the given sentence.

• In option 2, the sentence contains an extra adverb 'there' which is not given in the above sentence.

• Therefore, the correct structure is followed only in option 3 'The lawyer asked the burglar where he was at the time of burglary.'

Q13. Answer: (d) to the Chief Guest

• The correct answer is Option 4.

• The verb 'request' doesn't take any prepositions with it.

• Therefore, the correct sentence is 'The Principal requested the Chief Guest to inaugurate the sports meet.'

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Q14. Answer: (b) Pitiful

The correct answer is- 'Pitiful'

Key Points

• 'Pathetic' is an adjective and it means 'arousing pity, especially through vulnerability or sadness.'

• Example: the pathetic cries of the hungry children.

Hence option 2 is the most appropriate answer here.

WORDS	MEANING
Powerful	having great power or strength.
Plentiful	existing in or yielding great quantities; abundant.
Purposeful	having or showing determination or resolve

Q15. Answer: (c) Have your outstanding bills been paid?

The correct answer is Option 3 i.e. Have your outstanding bills been paid?

Explanation:

• While changing the voice the subject and the object exchange their places.

• 'Your outstanding bills' becomes the subject.

• When changing an active sentence to its passive form, if the sentence is in the present perfect tense, its passive form follows the structure 'has/have + been + V3'.

• In Interrogative sentences, 'auxiliary verb' comes before the subject.

• Therefore, the structure is correctly followed by option 3 'Have your outstanding bills been paid?'.

Q16. Answer: (a) timely

The correct answer is option 1) i.e. timely.

Key Points

• opportune: done or occurring at a favorable time; well-timed.

• timely: done or occurring at a favorable or useful time. Example: The timely arrival of the doctor saved the patient's life.

Hence, timely is the most appropriate synonym of the given word.

Hint

• likely: very probable. Example - It is likely to rain this afternoon according to the weather forecast.

• barely: only a very short time before. Example: He barely passed the exam with just one point above the minimum.

• rarely: not often; seldom. Example: She rarely eats dessert, only on special occasions.

Q17. Answer: (a) have arrived on time

The correct answer is option 1) i.e. have arrived on time.

• In the given sentence the use of auxiliary verb 'have' is wrong.

• The given sentence talks about an incident that took place in past so the whole sentence will be in simple past tense.

• We need to use past indefinite tense in the first part of sentence so second form of the main verb should be used.

• So, the correct sentence will be: The ambulance arrived on time, the accident victim was taken to the hospital.

Q18. Answer: (b) weather

The correct answer is option 2) i.e. weather.

• The word weather means the state of the atmosphere at a particular place and time regarding dryness, cloudiness, rain, storm, sunshine, etc.

• And these things can affect the sailing of a ship.

• Hence, the most appropriate word to be used in the given blank is 'weather'.

Meaning of other words:

• environment: the surroundings or conditions in which a person, animal, or plant lives or operates.

• climate: the weather conditions prevailing in an area in general or over a long period.

• atmosphere: the envelope of gases surrounding the earth or another planet.

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Q19. Answer: (b) BADC

The correct answer is option 2) i.e. BADC.

• The only independent sentence among the given sentences is sentence 'B', hence, it will be the first sentence.

• The sentence that will follow the sentence 'B' is sentence 'A' because the sentence 'B' talks about a number of men coming in Dubai and the sentence 'A' tells where they have come from.

• In the sentence 'A' the difference among the men is shown and in the sentence 'D', a contradiction is made by showing some commonality, hence, 'D' will follow the 'A'.

• So, we have got our sequence i.e. 'BAD'.

• In this way, the last sentence will be 'C'.

Q20. Answer: (d) DACB

The correct answer is option 4) i.e. DACB.

• The only independent sentence among the given sentences is sentence 'D', hence, it will be the first sentence.

• The use of the word 'practice' in sentences D and A connects these sentences. Hence, sentence 'D' will be followed by the sentence 'A'.

• This combination i.e. 'DA' is only in one option i.e. 4, so, we do not have to arrange other sentences and option 4 will be our answer.

Q21. Answer: (a) superior

The correct answer is option 1) i.e. superior.

• inferior: lower in rank, status, or quality.

• superior: higher in rank, status, or quality, hence, this is the most appropriate antonym of the given word.

• exterior: relating to the outside of something.

• ulterior: intentionally hidden.

• interior: relating to the inside of something.

Q22. Answer: (d) sensational

The correct answer is option 4) i.e. sensational.

• The meaning of the word sensational is causing great public interest and excitement. This fits in the context of the given sentence, hence, it will be used in the blank.

Meaning of other words:

• sensitive: easily damaged, injured, or distressed by slight changes.

• senile: characteristic of or caused by old age.

• sensible: done or chosen in accordance with wisdom or prudence.

Q23. Answer: (d) To bribe someone

The correct answer is option 4) i.e. to bribe someone.

• To grease the palm: to bribe someone.

• E.g. I greased my brother's palm to stop him from telling Mom that I had a party while she was away.

Q24. Answer: (b) the latter is more

The correct answer is option 2) i.e. the latter is the more.

• The word later means at a time in the near future which does not fit in the context of the given sentence, hence, it will be replaced.

• The correct word to be used in the given sentence is 'latter' which means second mentioned of two people or things.

• And for making a comparison between two things or two persons 'more' is used.

• So, the sentence after improvement will be: Of Rama and Usha the latter is more responsible.

Q25. Answer: (d) repetition

The correct answer is option 4) i.e. repetition.

• Repetition: the recurrence of an action or event.

• Construction: the action of building something.

• Destruction: the action or process of causing so much damage to something that it no longer exists or cannot be repaired.

• Competition: the activity or condition of striving to gain or win something by defeating or establishing superiority over others.

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Q26. Answer: (a) (÷ and +)

Given equation: 5 × 15 ÷ 7 - 20 + 4 = 77

Interchanging signs: (÷ and +)

5 × 15 + 7 – 20 ÷ 4

According to BODMAS rule.

5 × 15 + 7 – 20 ÷ 4

= 5 × 15 + 7 – 5

= 82 - 5

= 77

Hence, after interchanging (÷ and +) the equation becomes correct.

Q27. Answer: (d) 76

R = 36 = the positional value of R × 2 = 18 × 2

For,

BIN = (2 + 9 + 14) × 2 = 50

Similarly,

TALE = (20 + 1 + 12 + 5) × 2 = 76

Hence, the code for TALE is 76.

Q28. Answer: (c) Cousin

Using the below table of symbols, we can draw a family tree.

The family tree is as shown below:

Hence, Sonu is the cousin of Mayank.

Q29. Answer: (d) LPPT

The pattern followed here is:

Similarly,

Hence, LPPT is the code for CGGK.

Q30. Answer: (a) Conclusion I and either II or III follows

The least possible venn diagram is as shown below:

Conclusion:

1) Some boxes are Pens – True (All pens are boxes)

2) Some boxes are balls – False (it is possible but not definite)

3) No box is ball – False (it is possible but not definite)

Here, conclusions II and III form a complementary pair.

Hence, only conclusion I and either II or III follows.

Q31. Answer: (c) 126

The pattern followed here is:

2 = 2 × 2 + 2 = 6

6 = 6 × 2 + 2 = 14

14 = 14 × 2 + 2 = 30

30 = 30 × 2 + 2 = 62

62 = 62 × 2 + 2 = 126

Hence, the next number will be 126.

Q32. Answer: (b) (3, 9, 81)

The pattern followed here is:

For (6, 36, 1296):

(6, 6^2= 36, 36^2= 1296--)

Similarly, for (3, 9, 81): (3, 3^2 = 9, 9^2= 81)

Hence, the set (3, 9, 81) is related to the set (6, 36, 1296).

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Q33. Answer: (c) P is the brother of M

Using the below table of symbols, we can draw the following family tree:

The family tree is shown below:

Here, the gender of P is not determined so we cannot say that P is the brother of M.

Hence, the statement "P is the brother of M" is not definitely true.

Q34. Answer: (d) [figure]

The mirror image of the question figure is as follows:

Hence, the image in option 4 is the correct answer.

Q35. Answer: (c) [figure]

Hence, the figure in option 3 is the correct answer.

Q36. Answer: (a) Ornithology : Birds

Seismology is the study of Earthquakes.

Similarly,

Ornithology is the study of Birds.

But,

Phycology is the study of Algae

Entomology is the study of Insects.

Nephrology is the study of kidney diseases.

Hence, Ornithology : Birds is the correct answer.

Q37. Answer: (c) [figure]

Venus is a planet in the universe. Moon is a satellite in the universe. Thus, we get the following Venn diagram:

Hence, the figure in option 3 is the correct answer.

Q38. Answer: (b) IKNQ

The pattern followed here is:

1)

2)

3)

4)

Hence, IKNQ is different from all others.

Q39. Answer: (b) [figure]

When the sheet is unfolded, it will appear like the figure given below:

Hence, the figure in option 2 is the correct answer.

Q40. Answer: (a) UPJ

The pattern followed here is:

Hence, UPJ will come in place of question mark.

Q41. Answer: (a) 323

The pattern followed here is:

3 + 2 + 3 = 8

3 + 5 + 3 = 11

3 + 1 + 3 = 7

3 + 7 + 3 = 13

Here, 11, 7 and 13 are prime numbers.

Hence, 8 is the odd one among the alternatives.

Q42. Answer: (b) (4, 7, 65)

The pattern followed here is:

3^2= 9 and 5^2 = 25; 9 + 25 = 34

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Similarly,

$4^2 = 16$ and $7^2 = 49$; $16 + 49 = 65$

Hence, the set (4, 7, 65) is related to the set (3, 5, 34).

Q43. Answer: (b) Rodent

Man is a type of mammal

Similarly, rat is a type of rodent.

Hence, rat is related to rodent.

Q44. Answer: (c) 20

Vikram = 2 (Ajay) …..(i)

Five years ago,

Vikram - 5 = 3(Ajay - 5)

Vikram - 5 = 3 (Ajay) - 15

Therefore, Vikram = 3 (Ajay) - 15 + 5 = 3 (Ajay) - 10 …..(iI)

From (i) and (ii),

3 (Ajay) - 10 = 2 (Ajay)

=> 3 (Ajay) - 2 (Ajay) = 10

=> Ajay = 10

Therfore, Ajay's present age = 10 years.

Now, Vikram's present age = 2 × Ajay's present age

Hence, Vikram is 20 years old now.

Q45. Answer: (b) Z

From the 2nd and 3rd positions, we notice that Z, T, P, and X are adjacent to S.

Therefore, Z should be opposite to either one among T, P, and X.

Now, from position 1, we know that Z is adjacent to X. Also, from position 2, it can be seen that Z is adjacent to T.

Therefore, Z must be on the face opposite to that of P.

Hence, Z will appear on the opposite surface on which alphabet P appears.

Q46. Answer: (c) 11 years

Let's Rohit's age be x.

According to the given information, x = 1/2 × (mother's age) - 10

=> x + 10 = 1/2 × (mother's age)

=> Therefore, mother's age = 2 × (x + 10) = 2x + 20.

Also, father's age = mother's age + 5 = 2x + 20 + 5 = 2x + 25.

Given that father's age = 47 years.

Therefore, 2x + 25 = 47

=> 2x = 47 - 25 = 22

=> x = 22 ÷ 2 = 11.

Hence, Rohit's age is 11 years.

Q47. Answer: (c) 256

The pattern followed here is:

$4^2 = 16$

$6^2 = 36$

$8^2 = 64$

$10^2 = 100$

$12^2 = 144$

$14^2 = 196$

$16^2 = 256$

Hence, the next number will be 256.--

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Q48. Answer: (c) 10

The triangles in the given figure are: AOE, AOB, AOC, AOD, BOC, BOD, BOE, COD, COE, DOE

Hence, there are 10 triangles.

Q49. Answer: (a) [figure]

In the given series, the part of the figure with pointed arrow moves in the clockwise direction.

In the first step, the arrow is facing downwards; in the second step, it faces left; in the third step, it faces upwards.

Therefore, the pointed arrow should be facing towards the right in the answer figure.

Only the figure in option 1 satisfies this condition.

Hence, the figure in option 1 is the correct answer.

Q50. Answer: (d) Nib

Arena is an area where sporting events held

Rink is an enclosed area for ice skating.

Pitch is an area where cricket held

Nib is the metal point of pen

Hence, Nib is the odd word among all.

Q51. Answer: (a) 4

Calculation:

Let the speed of train be x km /h

Distance = 60 km

So, time = 60 / x

When speed is 8 km/h more, time taken = 60/(x + 8)

According to the question,

=> 60/x - 60/(x + 8) = 10

=> 60 × (x + 8 - x)/x(x + 8) = 10

=> 60 × 8 = x(x + 8)

=> 48 = x^2 + 8x

=> x^2 + 8x – 48 = 0

=> x^2 + 12x - 4x - 48 = 0

=> x(x + 12) - 4(x + 12) = 0

=> (x + 12)(x – 4) = 0

=> x = 4 or – 12

But x being speed cannot be negative.

So, x = 4

Therefore The speed of the train is 4 km/h.

Alternate Method

Concept use:

Distance = (S1 × S2)/(S1 - S2) × (time difference)

Where S1 & S2 are the speed before and after respectively.

Calculation:

Let's assume that the initial speed of the train is x km/hr

After the speed becomes (x + 8), so,

=> ((x+8) × x)/8 × 10 = 60

=> (x + 8) × x = 48

Now, from the option test, the option A (4) satisfies the equation

=> x = 4

Therefore The speed of the train is 4 km/hr

Q52. Answer: (c) 24 cm

Given:

ΔABC is similar to ΔQPR.

Concept Used:

The ratio of areas of two similar triangles is equal to the ratio of the square of the respective sides of the same triangles.

Calculations:

ΔABC ~ ΔQPR

=> AB/QP = BC/PR = AC/QR

Now, area(ΔABC) : area(ΔQPR) = $BC^2 : RP^2$

According to the question,

=> $1 : 16 = 6^2 : RP^2$

=> 1/4 = 6/RP

=> RP = 6 × 4 = 24 cm

Therefore The value of PR is 24 cm.

Q53. Answer: (a) 970

Given:

(x + 1/x) = 10

Calculation:

(x + 1/x) = 10

on cubing both the side,

=> $(x + 1/x)^3 = 10^3$

=> $(x^3 + 1/x^3 + 3(x × 1/x)(x + 1/x) = 1000$

=> $(x^3 + 1/x^3) + 3 × 10 = 1000$

=> $(x^3 + 1/x^3) = 970$

Alternate Method

Concept used:

If (x + 1/x) = a then $(x^3 + 1/x3) = a3 - 3a$

Calculation:

=> (x + 1/x) = 10

=> (x³ + 1/x3) = 103 - 3 × 10

=> (x3 + 1/x3) = 970

Therefore The correct answer is 970

Q54. Answer: (a) 1

Given:

(3x - 7)3 + (3x - 8) 3 + (3x + 6)3 = 3 (3x - 7) (3x - 8) (3x + 6)

Concept used:

If a3 + b3 + c3 = 3abc then a + b + c = 0

Calculation:

Let (3x - 7), (3x - 8), and (3x + 6) be a, b and c respectively

Now the equation can be written as,

=> a3 + b3 + c3 = 3abc

Using the above concept, we can write,

=> a + b + c = 0

=> (3x - 7) + (3x - 8) + (3x + 6) = 0 [put the values of a, b, c]

=> 9x = 9

=> x = 1

Therefore The value of x is 1

Q55. Answer: (b) 6

Given:

x^4 + x^(-4) = 1442

Concept use:

(x2 + x-2)2 = x4 + x-4 + 2

Calculation:

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x4 + x-4 = 1442
On adding 2 on both sides,
=> x^4 + x^(-4) + 2 = 1444
=> $(x^2 + x^{(-2)})^2 = 38^2$
=> $(x^2 + x^{(-2)}) = 38$
On subtracting 2 from both sides,
=> $(x^2 + x^{(-2)}) – 2 = 36$
=> $(x - x^{(-1)})^2 = 6^2$
=> $(x - x^{(-1)}) = 6$

Q56. Answer: (a) 54

Shortcut Trick
Convert the fractional Ratio to integers by multiplying by the LCM of denominators (2, 3, 4) = 12.
Simplified Ratio = 6 : 8 : 9.
Difference between Greatest (9) and Smallest (6) = 3 units.
3 units = 27 => 1 unit = 9.
Smallest number = 6 units = 6 × 9 = 54.
Therefore The correct answer is 54.
Alternate Method
Given:
Ratio of three numbers = 1/2 : 2/3 : 3/4
Difference (Greatest − Smallest) = 27
Formula Used:
To simplify a ratio of fractions, multiply each term by the Least Common Multiple (LCM) of the denominators.
Calculations:
=> LCM of denominators (2, 3, 4) = 12
=> Multiplied ratio = (1/2 × 12) : (2/3 × 12) : (3/4 × 12)
=> Integer Ratio = 6 : 8 : 9
=> Let the numbers be 6x, 8x, and 9x
=> Difference = 9x − 6x = 27
=> 3x = 27
=> x = 27 ÷ 3 = 9
=> Smallest number = 6x = 6 × 9 = 54
Therefore The correct answer is 54.
Additional Information
Ratio Simplification
To convert a fractional ratio a/b : c/d into an integer ratio, multiply both terms by the LCM of b and d.
Ratio Properties
A ratio remains unchanged if all its terms are multiplied or divided by the same non-zero quantity.
Comparison of Ratios
To compare two ratios, convert them into fractions or decimals, or bring them to a common denominator.

Q57. Answer: (c) 1000

Given:
There was 29% off on bags but the lady got 13% further discount.
Calculation:
Selling price = Marked price × (100 – 29)/100 × (100 – 13)/100
=> 617.70 = MP × 71/100 × 87/100
=> MP = Rs. 1000
Therefore The price tag on the bag was Rs.1000

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Q58. Answer: (a) 15

Given:

AB = 6 cm, O1O2 = x and radii (O1A = O2B = 7 cm and O2A = O2B = 9 cm)

Concept used:

When two circles intersect each other, the shortest distance between them is perpendicular on the intersecting line and also bisects it.

Calculation:

O1O2is perpendicular on AB.

In ΔAO1K,

Using Pythagoras theorem,

$(O1A)^2 = (O1K)^2 + (KA)^2$

$\Rightarrow 7^2 = (O1K)^2 + 3^2$

$\Rightarrow (O1K) = 2\sqrt{10} = 6.324$

In ΔAO2K,

Using Pythagoras theorem,

$(O2A)^2 = (O2K)^2 + (KA)^2$

$\Rightarrow 9^2 = (O2K)^2 + 3^2$

$\Rightarrow (O2K) = 6\sqrt{2} = 8.485$

On adding,

(O1K) + (O2K) = 14.809 or 15 (approx)

Therefore The correct answer is 15

Q59. Answer: (d) 660

Given:

Marked price = Rs. 1500

Calculation:

After discount the selling price = 1500 × (100 - 30)/100 × (100 - 20)/100 = Rs.840

Discount in Rupees = (1500 - 840) = Rs.660

Shortcut Trick

We know, 30% = 3/10 and 20% = 1/5

	MP	SP
1st Discount	10	7
2nd Discount	5	4
All over Discount	50	28

According to the question,

=> 50 unit → 1500

Then, the discount (50 - 28) = 22 unit → 1500/50 × 22 = Rs.660

Q60. Answer: (d) 3√3/2

Concept used:

• $\sin^2\theta = 1 - \cos^2\theta$

Calculation:

$2\sin^2\theta + 5\cos\theta - 4 = 0$

$\Rightarrow 2(1 - \cos^2\theta) + 5\cos\theta - 4 = 0$

$\Rightarrow 2 - 2\cos^2\theta + 5\cos\theta - 4 = 0$

$\Rightarrow 2\cos^2\theta - 5\cos\theta + 2 = 0$

$\Rightarrow 2\cos^2\theta - 4\cos\theta - \cos\theta + 2 = 0$

$\Rightarrow 2\cos\theta(\cos\theta - 2) - 2(\cos\theta - 2) = 0$

$\Rightarrow (2\cos\theta - 2)(\cos\theta - 2) = 0$

$\Rightarrow \cos\theta = 2, 1/2$

Valid value of $\cos\theta = 1/2 = \cos 60°$

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=> θ = 60°

Therefore the value of tan θ + sin θ = tan60° + sin60° = √3 + √3/2 = 3√3/2

Q61. Answer: (d) 10

Calculation:

The age of the family 9 years ago = 5 × 33 = 165

The age of the family at present = 165 + 5 × 9 = 210

Let the ages of three new members of the family are a, (a + 8) and (a + 16).

According to the question,

Present average age of the family = 33

=> [210 + a + (a + 8) + (a + 16)]/8 = 33

=> 210 + 3a + 24 = 264

=> 3a = 30

=> a = 10 years.

Therefore the age of the youngest member = 10 years.

Q62. Answer: (b) 9

Formula Used:

A = P(1 + R/100)n,

CI = A – P,

where,

A is amount,

P is principle,

R is rate of interest,

n is total number of years,

Calculation:

Let the principal and the amount be P and 1.1881P.

From five years to three years,

Difference in the time = 5 – 3 = 2 years

Using formula,

$A = P(1 + R/100)^n$

$=> 1.1881P = P(1 + R/100)^2$

$=> 1.1881 = (1 + R/100)^2$

=> 1.09 = 1 + R/100

=> 0.09 = R/100

=> R = 9%

Therefore Rate of interest in 9%.

Q63. Answer: (a) angle A = 2 (angle BOC – 90°)

In ΔABC, by angle sum property we have

2x + 2y + angle A = 180°

=> x + y + (angle A/2) = 90°

=> x + y = 90° – (angle A/2) à (1)

In ΔBOC, we have

x + y + angle BOC = 180°

=> 90° – (angle A/2) + angle BOC = 180° [From (1)]

=> angle BOC = 180° – 90° + angle A/2

=> angle BOC = 90° + angle A/2

=> angle A = 2 (angle BOC – 90°).

Q64. Answer: (d) 120

Given:

The side of a rhombus is 13 cm and the smaller diagonal is 10 cm

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Concept use:

• All sides of a rhombus are equal

• Diagonals of a rhombus bisect each other at a right angle (90°)

• Area of a rhombus = 1/2 × (product of two diagonals)

Calculation:

Let ABCD be the rhombus, where AC and BD be the diagonals intersecting at point O

Here, AC = 10, then OC = 5 and BC = 13

Now, ΔBOC is a right-angle triangle where right-angle at O

So, BO = √(132 - 52) = √144 = 12

So, BD = 12 × 2 = 24 cm

Now, area of the rhombus is 1/2 × 24 × 10 = 120 cm2

Therefore The area of the rhombus is 120 cm2

Q65. Answer: (b) 968

Concept used:

• $(a + b)^2 = a^2 + b^2 + 2ab$

• (a3 + b3) = (a + b) (a2 + b2 - ab)

Calculation:

(a + b)2 = a2 + b2 + 2ab

=> $(a + b)^2 = 99 + 2 \times 11$

=> $(a + b) = \sqrt{121}$

=> (a + b) = 11

$(a^3 + b^3) = (a + b) (a^2 + b^2 - ab)$

=> $(a^3 + b^3) = 11 \times (99 - 11) = 968$

Therefore The value of (a3 + b3) is 968

Q66. Answer: (a) $(p^2 – 1)/2p$

$\cos\theta = 2p/(p^2 + 1)$ = Base/Hypotenuse

Base (B) = 2p

Hypotenuse (H) = $(p^2 + 1)$

Perpendicular $(P)^2 = H^2 – B^2$

=> $P^2 = (p^2 + 1)^2 – (2p)^2$

=> $P^2 = (p^2 - 1)^2$

=> $P = (p^2 - 1)$

$\tan\theta = P/B = (p^2 - 1)/2p$

Q67. Answer: (a) 18% decrease

Let the number be x.

New number = x × 70/100 × 130/100 × 90/100 = 819x/1000

Required percentage = (x – 819x/1000)/x × 100 = 18.1 or 18%(Approximately)

Q68. Answer: (d) 35/17

Given:

A can do the work = 4 days

B can do the work = 28 days

C can do the work = 56 days

Calculation:

One-day work of A = 1/4 days ----(1)

One-day work of B = 1/28 days ----(2)

One-day work of C = 1/56 days ----(3)

Adding equations (1), (2) and (3), we get

One-day work of (A + B + C) = {(1/4) + (1/28) + (1/56)}

=> (A + B + C) = {(14+ 2 + 1)/56}

=> (A + B + C) = 17/56
One-day work of (A + B + C) = (17/56) = 17/56 days
The total work will be completed in 56/17 days. = 35/17 days
Therefore The total work will be completed in 35/17 days.
Total work = LCM of the 4, 28 and 56 days = 56 units
A's efficiency = 56/4 = 14 units/day
B's efficiency = 56/28 = 2 units/day
C's efficiency = 56/56 = 1 unit/day
Together they complete the task in = 56/(14 + 2 + 1) = 35/17 days.

Q69. Answer: (c) 39

Concept used:
Theorem: If from any external point two tangents are drawn on the circle, they are equal in length
Calculation:
From point C,
CQ = CR = 6.5 cm
From point B,
BQ = BP = 8.5 cm
From point A,
AP = RA = 4.5 cm
Perimeter = AP + PB + BQ + QC + CR + RA
=> 4.5 + 8.5 + 8.5 + 6.5 + 6.5 + 4.5 = 39 cm

Q70. Answer: (a) 15%

For Article 1,
CP1 = 3050
SP1 = 3050 × 110/100 = 305 × 11
For article 2,
CP2= 3050
SP2 = 3050 × 120/100 = 305 × 12
Total CP = 2 × 3050 = 6100
Total SP = 305 × 11 + 305 × 12 = 305 × (11 + 12)
=> 305 × 23 = 7015
Profit percentage (Overall) = (7015 – 6100)/6100 × 100 = 15%
Alternate Method
Given:
CP of two articles Rs. 3050 each and sold one article at 10% profit and another at 20% profit.
Concept used:
• 10% = 1/10
• 20% = 1/5
Calculation:
1st article sold at a profit of 10%, CP = 10 and SP = 11
2nd article sold at a profit of 20%, CP = 5 and SP = 6
Now, according to the question CP of two articles are same,

	CP	SP
1st Article	10	11
2^(nd)Article × 2	10	12
Total	20	23

So, CP = 20 and SP =23
=> Profit = (23 - 20)/20 × 100 = 15%
Therefore The correct answer is 15%

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Q71. Answer: (b) 49 : 40

Using Thale's theorem,

AD/AB = DE/BC = 3/(3 + 4) = 3/7

BC = 2k + 3k + 2k, BD = 4k

Height of trapezium $(h)^2 = (4k)^2 – (2k)^2 = 2\sqrt{3}k$

As the sides of the triangle ABC are same (7k).

Area of equilateral triangle = $\sqrt{3}/4 \times side^2$

=> $A_E = (\sqrt{3}/4) \times (7k)^2 = 49(\sqrt{3}/4)k^2$

Area of the trapezium = ½ × perpendicular distance between to parallel lines × sum of the two parallel lines

$A_T = ½ \times 2\sqrt{3}k \times (3k + 7k) = 10\sqrt{3}k^2$

Required ratio = $49(\sqrt{3}/4)k^2 : 10\sqrt{3}k^2 = 49 : 40$.

Q72. Answer: (b) 1229.2

The average of import during the five financial years = (824 + 1014 + 1137 + 1513 + 1658)/5 = 1229.2

Q73. Answer: (b) 2015-2016

The absolute difference between the exports and the import in (2013 – 2014) = 824 – 638 = 186

The absolute difference between the exports and the import in (2014 – 2015) = 1256 – 1014 = 242

The absolute difference between the exports and the import in (2015 – 2016) = 1661 – 1137 = 524

The absolute difference between the exports and the import in (2016 – 2017) = 1538 – 1513 = 25

The absolute difference between the exports and the import in (2017 – 2018) = 1658 – 1305 = 353

Therefore The absolute difference between the exports and the import in (2015 – 2016) is maximum.

Q74. Answer: (c) 2014-2015

(Import + export) for year (2013 – 2014) = 638 + 824 = 1462

(Import + export) for year (2014 – 2015) = 1256 + 1014 = 2270

(Import + export) for year (2015 – 2016) = 1661 + 1137 = 2798

(Import + export) for year (2016 – 2017) = 1538 + 1513 = 3051

(Import + export) for year (2017 – 2018) = 1305 + 1658 = 2963

Percentage change in two consecutive years (I) = (2270 - 1462)/1462 × 100 = 55.27%

Percentage change in two consecutive years (II) = (2798 – 2270)/2270 × 100 = 23.26%

Percentage change in two consecutive years (III) = (3051 - 2798)/2798 × 100 = 9.04%

Percentage change in two consecutive years (IV) = (2963 - 3051)/3051 × 100 = 2.89% (drop)

Therefore Percentage change in two consecutive years (I) i.e. 2014 – 2015 is highest.

Q75. Answer: (d) 3199 : 3073

The Total import during the five financial years = (824 + 1014 + 1137 + 1513 + 1658) = 6146

The Total export during the five financial years = (638 + 1256 + 1661 + 1538 + 1305) = 6398

Required ratio = 6398 : 6146 = 3199 : 3073.

Q76. Answer: (b) 2

The correct answer is option 2 i.e 2

2019 Ranji Trophy:

- As of May 2019, Vidarbha has won two Ranji Trophy tournaments.
- The 2018–19 Ranji Trophy was the 85th season of the Ranji Trophy.
- The 2018-19 season was won by Vidarbha who defeated Saurashtra at Vidarbha Cricket Association Stadium, Nagpur.
- The Ranji Trophy is a domestic first-class cricket championship.
- Vidarbha Captain: Faiz Faisal.
- Man of the Match in finals: Aditya Sarwate.

Team	Number of times it won the championship
Mumbai	41
Karnataka	8

Delhi	7
Vidarbha	2

Q77. Answer: (b) 20

The correct answer is option 2 i.e 20

• Roger Federer is a tennis player who hails from Switzerland.

• He has won 20 Grand Slam singles titles.

• Federer has won 103 ATP singles titles in which he won the record 20 Grand Slam singles titles, 28 ATP Masters 1000 titles, and a record 6 ATP Finals.

Switzerland:

• Currency: Swiss franc

Tennis governing body:

• International Tennis Federation is the governing body of world tennis, wheelchair tennis, and beach tennis.

• Headquarters: London

The Grand Slam tournaments are the four most important annual tennis events

• Australian Open

• French Open

• Wimbledon

• US Open

Tennis is one of the sports played in the Olympics.

Name of the tournament	Played on
Australian Open	Hard surface
French Open	Clay
Wimbledon	Grass
US Open	Hard surface

Q78. Answer: (d) KIET Group of Institutions, Ghaziabad

The correct answer is option 4 i.e KIET Group of Institutions, Ghaziabad

• NASA has awarded three teams from India as part of the US space agency's annual Human Exploration Rover Challenge.

• The team from KIET Group of Institutions in Ghaziabad, Uttar Pradesh, won the "AIAA Neil Armstrong Best Design Award"

• Mukesh Patel School of Technology Management and Engineering from Mumbai won the "Frank Joe Sexton Memorial Pit Crew Award" for ingenuity and persistence in overcoming problems during the race as well as the "System Safety Challenge Award

• A team from Lovely Professional University in Phagwara, Punjab, won the "STEM Engagement Award" as they best-informed others about rocketry and other space-related topics

NASA:

• Headquarter: Washington DC, US

Q79. Answer: (c) Cyril Ramaphosa

The correct answer is option 3 i.e Cyril Ramaphosa.

• Cyril Ramaphosa is the 5th and current president of South Africa.

• He succeeded Jacob Zuma.

• Cyril Ramaphosa served as the Deputy President of South Africa from 2014 to 2018

South Africa:

• Capital: Cape Town, Pretoria, Bloemfontein

• Currency: South African Rand

Q80. Answer: (a) Andhra Pradesh

The correct answer is option 1 i.e Andhra Pradesh

• The Indian Bureau of Mines (IBM) was established in 1948, is a multi-disciplinary government organisation under the Department of Mines, Ministry of Mines.

• Headquartered: Nagpur.

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• According to 2018 report of Indian Bureau of Mines, Andhra Pradesh is the largest producer of mica in India. Other states are Jharkhand, Bihar and Rajasthan etc.

• China is the world's largest producer of mica followed by India.

Q81. Answer: (d) Dadabhai Naoroji

The correct answer is option 4 i.e Dadabhai Naoroji

• The book titled 'Poverty and Un-British Rule in India' was written by Dadabhai Naoroji. It has his famous drain of wealth theory

• This theory explained the constant flow of wealth from India to England for which India didn't get any type of return.

• Some other books and notes written by Dadabhai Naoroji were: Poverty of India, Admission of educated natives into the Indian Civil Service and Condition of India.

Dadabhai Naroji:

• He was also known as the "Grand Old Man of India" and 'Father of Indian Nationalism'.

• He was the first Indian to be elected as a member of the British Parliament.

• He was the founder of Indian National Congress, Zoroastrian Trust Funds of Europe, National Congress, London Indian Society.

Q82. Answer: (d) Tropic of Cancer

The correct answer is option 4 i.e Tropic of Cancer.

Tropic of Cancer

• The Tropic of Cancer is also known as the Northern Tropic, is the most northerly circle of latitude on Earth at which the Sun can be directly overhead.

• This occurs on the June solstice when the Northern Hemisphere is tilted toward the Sun to its maximum extent.

• In India Tropic of Cancer passes through 8 States: Rajasthan, Gujarat, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura and Mizoram.

Equator:

• The Equator is an imaginary line around the middle of a planet. It is halfway between the North Pole and the South Pole, at 0 degrees latitude.

• An equator divides the planet into a Northern Hemisphere and a Southern Hemisphere.

Prime Meridian:

• The Prime Meridian is a zero-degree longitude which divides the Earth into two equal halves i.e the Eastern Hemisphere and the Western Hemisphere, which contain 180 meridians each.

Q83. Answer: (c) Justice Madan Loku

The correct answer is option 3 i.e Justice Madan Loku

• Justice Madan Loku was the former Chief Justice of Supreme court of India and the first judge from the Indian apex court who was appointed as the Supreme court judge of Fiji.

• He will hold the office for three years.

Fiji:

• Capital: Suva

• Currency: Fijian dollar.

Q84. Answer: (b) Simon Kuznets

The Correct answer is option 2 i.e Simon Kuznets

• Simon Kuznets was awarded Nobel Prize in Economics in 1971 for his research on Economic Growth.

• He set a new standard for national income accounting, enabling accurate estimates of gross national product to be calculated for the first time.

2019 Nobel Prize in Economics:

• In 2019 the Nobel price in Economics was given to Abhijit Banerjee, Esther Duflo and Michael Kremer for their experimental approach to reduce poverty.

• Duflo Became the second female who won the Nobel Prize in Economics after Elinor Ostrom.

Q85. Answer: (a) Software

The correct answer is option 1 i.e Software

Key Points

Software:

• It is a set of instructions, data or programs used to operate computers and execute specific tasks.

• Examples: Microsoft Windows, Linux, Microsoft office.

Additional Information

Hardware:

• Hardware refers to the physical elements of a computer. This is also sometimes called the machinery or the equipment of the computer.

• Examples: Keyboard, Monitor, CPU etc.

Malware:

• It is any program or file that is harmful to a computer user.

• Example are Trojans, Worms, Spyware

Processor:

• A processor is a small chip that resides in computers and other electronic devices. Its basic job is to receive input and provide the appropriate output

Q86. Answer: (b) Jaishankar Prasad

The correct answer is Jaishankar Prasad.

Key Points

Kamayani:

• Kamayani is a Hindi poem by Jaishankar Prasad.

• It is one of the greatest literary works written in modern times in Hindi literature.

• It signifies the epitome of Chhayavadi school of Hindi poetry which gained popularity in the late 19th and early 20th centuries.

Additional Information

Name of the writer	Famous Book
Sumitranandan Pant	Chidambara
Jaishankar Prasad	Kamayani
Mahadevi Verma	Gillu, Nirja
Maithili Sharan Gupt	Bharat Bharti

Q87. Answer: (b) The Urban Banks Department of the Reserve Bank of India

The correct answer is option 2 i.e. The Urban Banks Department of the Reserve Bank of India.

• Cooperative banks of India are registered as cooperative societies where members from a community band together to extend loans to each other at favourable terms.

• Cooperative banks are broadly classified into Urban or Rural Co-operative Banks based on their region of operation.

• Urban Cooperative banks are further classified into Scheduled and Non-Scheduled banks.

• UCBs are only partly regulated by the RBI.

• While their banking operations are regulated by the RBI, which lays down their capital adequacy, risk control and lending norms, their management and resolution in the case of distress are regulated by the Registrar of Co-operative Societies either under the State or Central government.

• UCBs are structured as co-operatives, with their members carrying unlimited liability.

• In the event UCBs fail, deposits with them are covered by the Deposit Insurance and Credit Guarantee Corporation of India up to a sum of Rs. 5 lakh per depositor.

Reserve Bank of India:

• HQ: Mumbai

• Governor - Sanjay Malhotra

Q88. Answer: (a) Singapore

The correct answer is option 1 i.e Singapore

• SIMBEX Stands for Singapore India Maritime Bilateral Exercise is an annual bilateral naval exercise between India and Singapore.

• SIMBEX was first initiated in 1993.

• In 2019 SIMBEX was held in Singapore.

• This was the 26th edition of SIMBEX.

• For that, the Indian Navy has deployed Kolkata Class Destroyers, INS Kolkata and INS Shakti.

India Defence Minister: Rajnath Singh.

Singapore:

• Currency: Singapore dollar

• PM: Lee Hsien Loong

Q89. Answer: (a) East Karakoram Range

The correct answer is option 1 i.e East Karakoram Range.

Key Points

• K2 is also known as Mount Godwin Austen and locally it is known as Dapsang or Chogori is the world's second-highest peak.

• K2 is located in the Karakoram Range.

• It was given the symbol K2 because it was the second peak measured in the Karakoram Range.

• World's Highest mountain peak is Mount Everest.

Name of the Range	country/state/UT in which they are situated
Karakoram Range	Borders of India, Pakistan and China
Zanskar Range	Ladakh (India)
Ladakh Range	Ladakh (India)
Pir Panjal Range	Jammu and Kashmir

Q90. Answer: (d) Eight

• Recently, GOI has repealed Article 370(Except clause 370(1) and Article 35A which grants the special status to Jammu and Kashmir.

• The State was bifurcate into 2 Union Territories:

Jammu and Kashmir: have a legislature like Delhi

Ladakh which doesn't have the legislature like Chandigarh.

• First Governor of Jammu and Kashmir UT is Girish Chandra Murmu and that of Ladakh is Radha Krishna Mathur

• Now there are 28 states and 8 UT'S in India

• The country currently had nine Union Territories after the creation of the UTs of Jammu and Kashmir, and Ladakh.

PLEASE NOTE THIS CAREFULLY

• With the merger of Daman and Diu, and Dadra and Nagar Haveli, the number of UTs has come down to eight.

Q91. Answer: (c) Tsunami

The correct answer is option 3 i.e Tsunami

Tsunami:

• A tsunami or tidal wave is a series of waves in a water body caused by the displacement of a large volume of water, generally in an ocean or a large lake.

• Example 2004 Indian Ocean Tsunami.

Volcano:

• A volcano is an opening in the earth's crust through which lava, volcanic ash, and gases escape.

• Example: Kīlauea in Hawaii, Mount Etna in Italy.

Jishin:

• Gneiss is a high-grade metamorphic rock.

• It is formed by the metamorphosis of granite or sedimentary rock.

Q92. Answer: (c) Microsoft Excel

The correct answer is option 3 i.e Microsoft Excel

Microsoft Word:

• Microsoft Word or MS-WORD is a Graphical word processing program that users can type with.

• Its purpose is to allow users to type and save documents.

Microsoft Excel:

• Microsoft Excel is a software program that allows users to organize, format and calculate data with formulas using a spreadsheet system.

• Excel is basically used to organize data and perform financial analysis. It is used across all business functions and at companies

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from small to large.

• In Excel there are 1,048,576 rows and 16,384 columns

Notepad:

• Notepad is a text editor included with all versions of Microsoft Windows that allows you to create, open, and read plain text files.

• If the file contains special formatting or is not a plain text file, it cannot be read in Microsoft Notepad.

Microsoft Powerpoint:

• It is the part of the MS office suite designed to create electronic presentations consisting of a series of separate pages or slides.

Q93. Answer: (d) Karnataka

The correct answer is option 4 i.e Karnataka.

• Srirangapatnam fort was located in Srirangapatna, Karnataka

• The fort was built by Timmnanna Nayaka in 1454.

• The fort was surrounded by River Kaveri.

Karnataka:

• Capital: Bengaluru

Q94. Answer: (b) Two

The correct answer is 2.

Important PointsThe Anglo-Indian reserved seats in the Lok Sabha and state legislative assemblies of India were discontinued in January 2020 by the 104th Constitutional Amendment Act of 2019.

Key Points

• Article 81 of the Constitution of India 1949 has specified the maximum strength of Members of Parliament in the Lok Sabha to be 550.

• Earlier it was 552, but the provision of 2 nominated Anglo - Indian persons has now been removed.

• Out of the maximum permitted strength, not more than 530 members are to be chosen by direct election from territorial constituencies in the Indian states,

• Not more than 20 members are to represent the union territories, chosen in such manner as Parliament of India may by law provide.

Additional Information

Article	Statement
Article 79	States about the Constitution of parliament.
Article 80	States about the Composition of the council of states.
Article 81	States about the Composition of the house of the people.
Article 82	States about the Readjustment after each census in the parliament.
Article 83	States about the Duration of houses of parliament.
Article 84	States about the Qualification for the membership of parliament.
Article 85	States about the Sessions of Parliament, prorogation or dissolution.

Q95. Answer: (b) Maharashtra

The correct answer is Maharashtra

Khelo India Programme:

• The Khelo India programme has been introduced to revive the sports culture in India at the grass-root level by building a strong framework for all sports played in our country and establish India as a great sporting nation.

• The inaugural ceremony of the first edition of the Khelo India School Games (KISG) was held at the Indira Gandhi Indoor Stadium in New Delhi.

• Haryana accounted for 15 gold medals on the final day to race ahead of Maharashtra.

• Maharashtra, however, had the consolation of winning most medals, 110, as compared to Haryana's 102 medals.

Note:

• The second edition of Khelo India was held in Shree Shiv Chhatrapati Sports Complex, Pune Maharashtra.

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• Maharashtra topped the medal tally followed by Haryana and Delhi.
• The third edition of Khelo India will be held in Guwahati, Assam in 2020.
• Now Khelo India School Games is known as Khelo India Youth Games.
• Recently, PM Narendra Modi launched the Khelo India App at the Youth Indian Parliament in Vigyan Bhawan, New Delhi to promote sports and fitness.
• They come under the Ministry of Youth Affairs & Sports.

Q96. Answer: (a) Goa

The Correct answer is Goa.

Key Points:

• Mumbai port:
• It is the largest Natural port and Harbor India.
• Located on the western coast of India, in the state of Maharashtra.
• Mormugao port:
• It is located on the western coast of India, in the state of Goa.
• It is an open type of natural harbor.
• Kochi port:
• It is a natural port situated in the state of Kerala in India.
• It is situated on Willingdon Island.
• Paradip:
• It is located in the state of Odisha.
• It is a natural harbor.
• It was the first Major Port commissioned after Independence.
• Panambur Port is also known as the New Mangalore Port.
• It is located in the Dakshina Kannada district of Karnataka.
• Kandla Port is located at the eastern end of the Gulf of Kutch.
• Mormugao is an important Port of Goa located at the entrance of the Zuvari estuary.
• Tuticorin Port is a port located in Tamil Nadu.

Q97. Answer: (a) Alzheimer's disease

• Alzheimer's disease, which starts with memory loss and escalates to severe brain damage, is believed to cause 60% to 70% of the cases of dementia reported worldwide, according to the World Health Organization.
• Dementia: Dementia is a general term for loss of memory and other mental abilities severe enough to interfere with daily life.
• Alzheimer: ; Alzheimer's disease (AD) is a chronic neurodegenerative disease. Alzheimer’s disease is a progressive form of dementia.
• Dementia affects an estimated 50 million people worldwide, including 9.5 million people in mainland China, Hong Kong, and Taiwan.

Q98. Answer: (b) Rajasthan

The correct answer is option 2 i.e. Rajasthan

• It is one of the finest Jain temple known world over for its extraordinary architecture and marvelous marble stone carvings.
• It was built by Vimal Shah in 11th century.
• It is the pilgrimage place of the Jains

Rajasthan:

• Capital: Jaipur
• Chief Minister: Bhajan Lal Sharma
• Governor: Haribhau Bagade

Q99. Answer: (b) General Bipin Rawat

Current Information

• Note: General Bipin Rawat has been named the country's first Chief of Defence Staff (CDS).
• He is the first officer to hold the post of the Chief of Defence Staff, which was set up recently.
• Lt Gen Manoj Mukund Naravane took over as the new Army Chief on 31 Dec 2019. He is 28th Chief of Army Staff of the Indian Army.

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The below information is of May 2019.

• General Bipin Rawat was the 27th Chief of Army Staff of the Indian Army.

• Defence Minister: Rajnath Singh.

Q100. Answer: (c) Arunachal Pradesh – Shri C.P. Radhakrishnan

The Correct answer is option 3 i.e Arunachal Pradesh- Shri Pema Khandu.

State	Capital	Chief Minister	Governor
Andhra Pradesh	Amravati	Sri Nara Chandrababu Naidu	Shri Justice (Retd.) S. Abdul Nazeer
Odisha	Bhubaneshwar	Shri Mohan Charan Majhi	Shri Raghubar Das
Arunachal Pradesh	Itanagar	Shri Pema Khandu	Lt. General Kaiwalya Trivikram Parnaik
Sikkim	Gangtok	Prem Singh Tamang	Shri Om Prakash Mathur

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