SSC CHSL 2020 Official Paper 16 (Held On: 4 Aug 2021 Shift 1) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2020 • 100 questions • 60 minutes • Answer key and solutions

Take this paper as a timed mock test

Practise under exam conditions, then review your answers after you submit.

yourmocktest.com/pyq/ssc-chsl/ssc-chsl-2020-official-paper-16-held-on-4-aug-2021-shift-1-pre…

Scan the QR code or click the link to open it.

YourMockTest.com — Free Study Material

ENGLISH LANGUAGE

Q1. Directions: Select the correct passive form of the given sentence.

The Central Board of Secondary Education has launched a new helpline for students.

(a) A new helpline for students will be launched by the Central Board of Secondary Education.
(b) A new helpline for students had been launched by the Central Board of Secondary Education.
(c) A new helpline for students has been launched by the Central Board of Secondary Education.
(d) A new helpline for students is launched by the Central Board of Secondary Education.

Q2. Directions: Select the most appropriate meaning of the given idiom.

On tenterhooks

(a) very angry
(b) Very tense
(c) Very happy
(d) Very sad

Q3. Directions: Select the most appropriate ANTONYM of the given word.

SUSTENANCE

(a) starvation
(b) nourishment
(c) refreshment
(d) livelihood

Q4. Select the word which means the same as the group of words given.

That which is incapable of being read or understood

(a) Illegible
(b) Indelible
(c) Illegal
(d) Intelligible

Q5. Directions: Select the option that will improve the underlined segment in the given sentence. In case no improvement is needed, select 'No improvement'.

What a palace home!

(a) palatable
(b) No improvement
(c) pushy
(d) palatial

Q6. Directions: Select the option which means the same as the group of words given.

A government run by the wealthy people

(a) oligarchy
(b) aristocracy
(c) monarchy
(d) plutocracy

Q7. Directions: Select the most appropriate word to fill in the blank.

Debjyoti's short animation film _____ highlights the stark contrast between the rich and the poor in India.

(a) sweetly
(b) carelessly
(c) poignantly
(d) strictly

Q8. Directions: Select the INCORRECTLY spelt word.

(a) superflous
(b) superior
(c) superstition
(d) supreme

Q9. Directions: Select the most appropriate option to fill in the blank.

It is claimed that if you take a certain homeopathic medicine, it will _____ you against the coronavirus.

(a) impair
(b) disfigure
(c) fortify
(d) break down

Q10. Select the most appropriate antonym of the given word.

Devious

(a) calculating
(b) shrewd
(c) Deceitful
(d) straight

Q11. Directions: Select the correct indirect form of the given sentence.

Anju said to Vijaya, "You can stay with us whenever you are in Delhi."

(a) Anju told Vijaya that she could stay with them whenever she was in Delhi
(b) Anju told Vijaya that you can stay with us whenever you are in Delhi
(c) Anju told Vijaya that she can stay with us whenever she is in Delhi
(d) Anju told Vijaya that she could stay with them whenever you were in Delhi

Q12. Direction: Examine the four jumbled sentences. Out of the given options, pick the one that gives their correct order.

A. We gently put the fledgling back into the nest.
B. One morning, we found one of the four fallen on the ground.
C. The robin couple built a nest in our verandah and laid four eggs.
D. Once they had hatched, they busily took turns feeding the four.

(a) BADC
(b) CDBA
(c) DABC
(d) ACDB

YourMockTest.com — Free Study Material

Q13. Directions: Select the most appropriate synonym of the given word.

MALIGNANT

(a) loving
(b) healthy
(c) beneficial
(d) vicious

Q14. Directions: Select the most appropriate meaning of the given idiom.

Under wraps

(a) double layered
(b) under estimate
(c) underhand
(d) secretly

Q15. Directions: In the given sentence, identify the segment which contains the grammatical error.

My mother generally read the local newspaper to keep abreast of the local news.

(a) of the local news
(b) My mother generally read
(c) the local newspaper
(d) to keep abreast

Q16. Directions: Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution'.

If he doesn't reach the station in time, he would sure miss the train.

(a) will sure missing
(b) will surely miss
(c) would surely miss
(d) No substitution

Q17. Directions: Given below are four jumbled sentences. Out of the given options, pick the one that gives their correct order.

A. He lived in a small house near the main road of a village.

B. As both, he and his wife, worked hard, they made a small fortune.

C. But one thing caused them great sorrow: they had no children.

D. After he got married, he started a tailor's shop.

(a) BDAC
(b) BACD
(c) ABDC
(d) ADBC

Q18. Directions: The following sentence has been split into four segments. Identify the segment which contains a grammatical error.

Deepu's mother / has repeated asked him / to lower the volume / of his mobile.

(a) Deepu's mother
(b) has repeated asked him
(c) of his mobile
(d) to lower the volume

Q19. Select the INCORRECTLY spelt word.

(a) twelth
(b) temperature
(c) until
(d) disappear

YourMockTest.com — Free Study Material

Q20. Select the most appropriate synonym of the given word.

Wry

(a) crooked
(b) straight
(c) forthright
(d) frank

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.

A year is hardly sufficient time for a Master to _(1) _ about a new school, leave alone absorb a distinct tradition like _(2) _. Most of the new appointees had not served in a residential school and _(3) _ time to learn. But the short tenure did not allow _(4) _. They could not develop an understanding of the student and his _(5) _.

Q21. Select the most appropriate option for blank No. 1.

(a) learning
(b) learn
(c) learns
(d) learnt

Q22. Select the most appropriate option for blank No. 2.

(a) ours
(b) mine
(c) himself
(d) ourselves

Q23. Select the most appropriate option for blank No. 3.

(a) needs
(b) need
(c) needing
(d) needed

Q24. Select the most appropriate option for blank No. 4.

(a) that
(b) those
(c) them
(d) these

Q25. Select the most appropriate option for blank No. 5.

(a) environmentally
(b) environment
(c) environmental
(d) environmentalist

GENERAL INTELLIGENCE

Q26. Four numbers have been given, out of which three are alike in some manner and one is different. Select the number that is different

(a) 5423
(b) 6138
(c) 1652
(d) 6341

YourMockTest.com - Free Study Material

Q27. Study the given pattern carefully and select the number that can replace the question mark (?) in it.

28	16	27
44	16	15
84	?	24

(a) 28
(b) 27
(c) 29
(d) 30

Q28. Which two signs should be interchanged to make the following equation correct?

12 – 8 + 4 ÷ 2 × 8 = 4

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

Q29. 'Straw' is related to 'Nest' in the same way as 'Cotton' is related to '_____'.

(a) Thread
(b) Textile industry
(c) Sewing
(d) Wool

Q30. In a certain code language, FORWARD is written as CSZXQPE. How will NUMERAL be written in that language?

(a) MZSDNTO
(b) KBQFLVM
(c) MUNELAR
(d) KZQDLTL

Q31. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

(a) TXCJ
(b) DHSZ
(c) GKPW
(d) NRJQ

Q32. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Multifocal
2. Movement
3. Multinomial
4. Moviemaker
5. Mutual fund

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

Q33. Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different.

(a) Integrity
(b) Joviality
(c) Honesty

YourMockTest.com — Free Study Material

(d) Truthfulness

Q34. 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.

BYDW : UFSH :: CXFU : ?

(a) SHQJ
(b) TIOL
(c) TGQJ
(d) RIPK

Q35. Select the option in which the words share the same relationship as that shared by the given pair of words.

Ammeter : Electric current

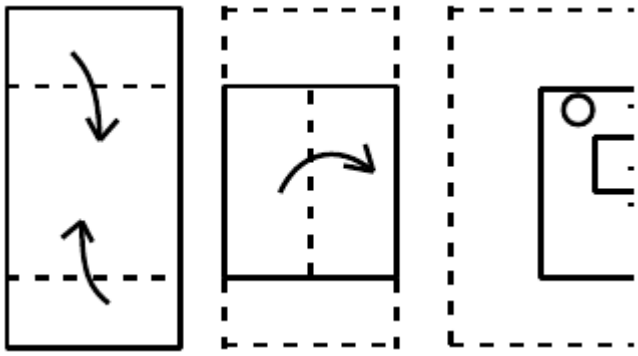
(a) Hygrometer : Humidity
(b) Pressure : Barometer
(c) Density : Lactometer
(d) Polarimeter : Steps

Q36. Select the number from among the given options that can replace the question mark (?) in the following series.

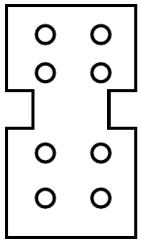
3, 5, 15, 41, ?, 173

(a) 112
(b) 91
(c) 78
(d) 106

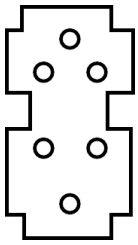
Q37. The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?



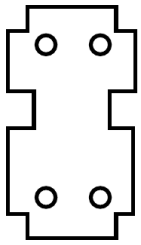
(a)



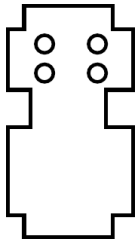
(b)



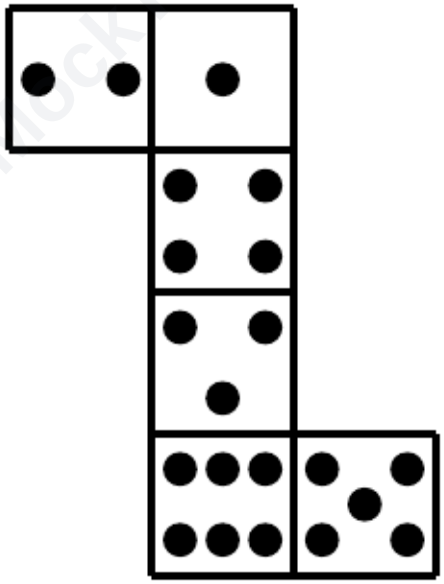
(c)



(d)



Q38. A cube is made by folding the given sheet. In the cube so formed, how many dots lie opposite to the face having 4 dots?



(a) 6
(b) 2
(c) 5
(d) 1

Q39. Snigda said that she met her mother's only brother's son's mother's father-in-law. Whom did she meet?

(a) Uncle
(b) Grandfather
(c) Father
(d) Brother

Q40. Select the option in which the numbers are related in the same way as are the numbers of the following set.

{9, 12, 18}

(a) {21,29, 44}
(b) {5, 12, 24}
(c) {13,19, 31}
(d) {7,13, 27}

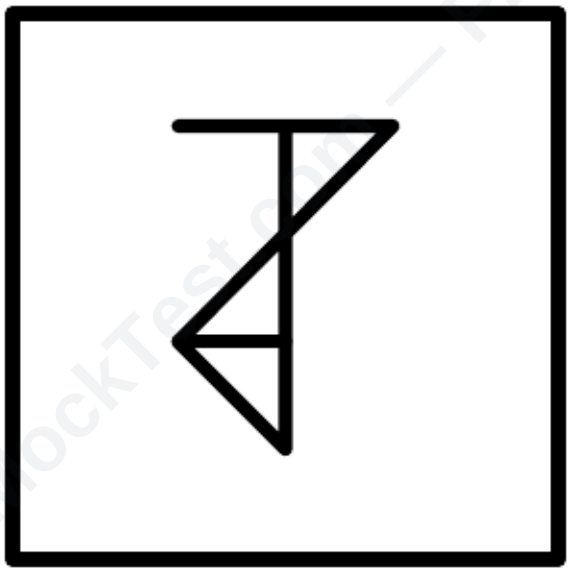
YourMockTest.com — Free Study Material

Q41. Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

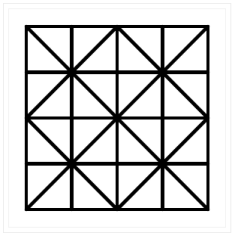
a_ _bcde_ _abbcd_ _aabb_ _ee

(a) aeecdbea
(b) abeaeecd
(c) aeaebecd
(d) abecdeae

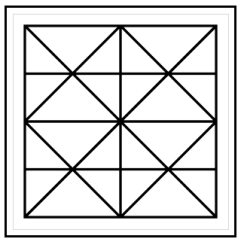
Q42. Select the option in which the given figure is embedded (rotation is NOT allowed).



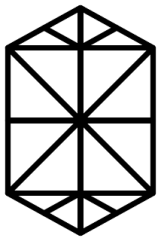
(a)



(b)

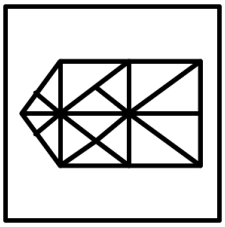


(c)



YourMockTest.com — Free Study Material

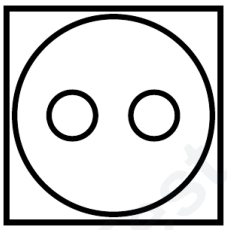
(d)



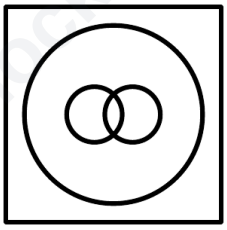
Q43. Select the Venn diagram that best represents the relationship between the following classes.

Women, Professors, Widows

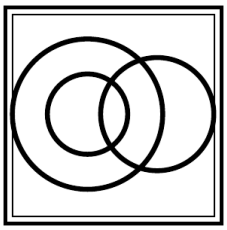
(a)



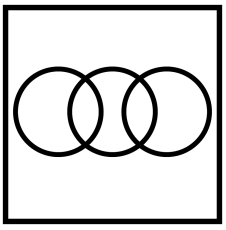
(b)



(c)



(d)



Q44. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All computers are machines.

No television is a computer.

All televisions are instruments.

Conclusions:

I. Some instruments are machines.

YourMockTest.com — Free Study Material

II. Some machines are computers.

III. Some televisions are machines.

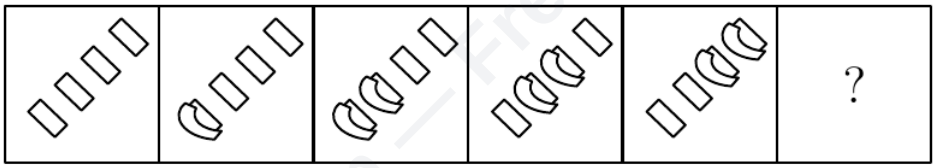
(a) Only conclusion I follows

(b) None of the conclusions follow

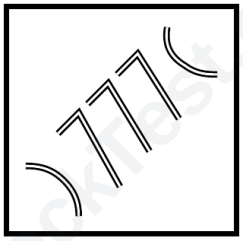
(c) Only conclusions II and III follow.

(d) Only conclusion II follows

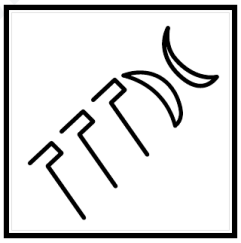
Q45. Select the figure from among the given options that can replace the question mark (?) in the following series.



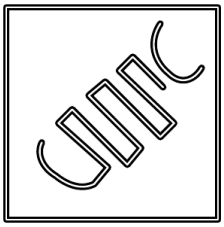
(a)



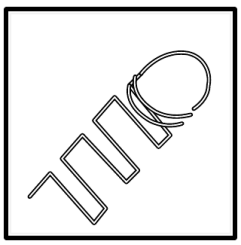
(b)



(c)



(d)



Q46. The sales boy of a washing machine store charges his customers 24% more than the cost price. If a customer paid Rs. 6,200 for a washing machine, then what was the cost price of the washing machine?

(a) Rs. 5000

(b) Rs. 6200

(c) Rs. 7200

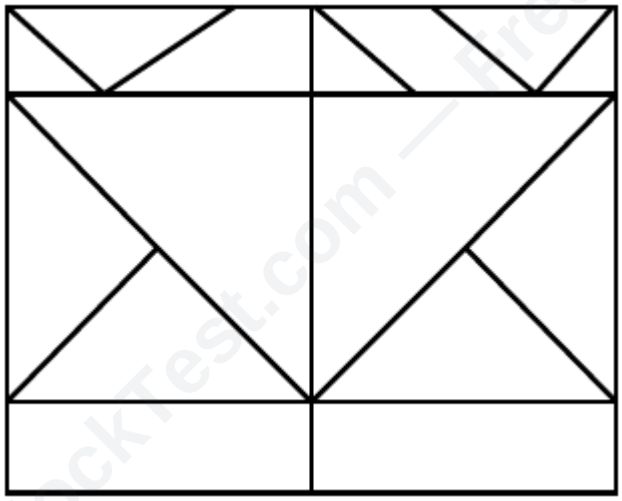
(d) Rs. 5500

YourMockTest.com — Free Study Material

Q47. In a certain code language, HAMPER is coded as 17212322036 and INSULT is coded as 16286421340. How will SAFETY be coded in that language?

(a) 621910550
(b) 612195030
(c) 629101350
(d) 610195320

Q48. Find the number of triangles in the given figure.



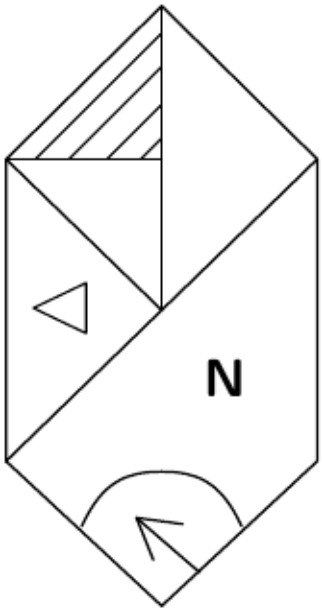
(a) 15
(b) 11
(c) 14
(d) 13

Q49. Select the option that is related to the third number in the same way as the second number is related to the first number.

12 : 150 :: 14 : ?

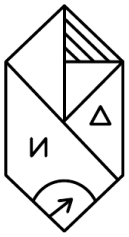
(a) 502
(b) 205
(c) 302
(d) 203

Q50. Select the correct mirror image of the given figure when the mirror is placed at the right side of the figure.

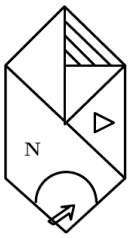


YourMockTest.com — Free Study Material

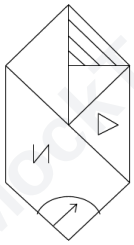
(a)



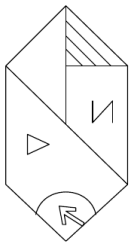
(b)



(c)



(d)



QUANTITATIVE APTITUDE

Q51. The inner and outer radii of two concentric circles are 6.7 cm and 9.5 cm, respectively. What is the difference between their circumferences (in cm) ? Take π = 22/7

(a) 10.4
(b) 6.5
(c) 17.6
(d) 20.5

Q52. The string of a kite is 158 m long and it makes an angle of 30° with the horizontal. What is the height (in m) of the kite ?

Assume there is no slack in the string.

(a) 99
(b) 79
(c) 100
(d) 80

YourMockTest.com — Free Study Material

Q53. In a triangle ABC, angle BAC = 90° and AD is perpendicular to BC. If AD = 8.4 cm and BD = 4.8 cm, then the length of BC is

(a) 18.5 cm
(b) 15 cm
(c) 18 cm
(d) 19.5 cm

Q54. One-quarter of a circular pizza of diameter 28 cm was removed from the whole pizza. What is the perimeter (in cm) of the remaining pizza? (Take π = 22/7)

(a) 88
(b) 80
(c) 66
(d) 94

Q55. By selling an article for Rs. 1,170, Elisa suffers as much loss as she would have gained by selling it at a profit of 22%. If she sells it for Rs. 1,450, then her profit/loss per cent (correct up to one decimal place) is:

(a) Loss, 26.2
(b) Profit, 3.3
(c) Profit, 26.2
(d) Loss, 3.3

Q56. What is the greatest five-digit number that is completely divisible by 8, 15, 16, 21 and 5?

(a) 98320
(b) 92680
(c) 99120
(d) 95760

Q57. If $\cos\theta = 4x/(1 + 4x^2)$, then what is the value of $\sin\theta$?

(a) $(1 - 4x^2)/4x$
(b) $(1 - 4x^2)/(1+4x^2)$
(c) $(1 + 4x^2)/(1-4x^2)$
(d) $(1 + 4x^2)/(4x^2)$

Q58. The value of [{(232 ÷ 29 of 2) + 77 × 10} ÷ 18] - (18 × 8 ÷ 4 of 3 - 4)/(2 × (8 - 6) + 1 - 2 × 3 ÷ 4 of 1/2) is:

(a) 33
(b) 44
(c) 39
(d) 47

Q59. A boat can travel with a speed of 19 km/h in still water. If the speed of the stream is 3 km/h, then what will be the total time (in hours) taken by the boat to go 88 km downstream and 24 km upstream?

(a) 5
(b) 4.5
(c) 5.5
(d) 4

Q60. A solid metallic hemisphere of radius 6.3 cm is melted and recast into a right circular cylinder of radius 9 cm. What is the height (in cm, correct to one decimal place) of the cylinder?

(a) 1.9
(b) 2.1
(c) 2.7
(d) 2.5

YourMockTest.com — Free Study Material

Q61. If (sin A - cos A) = 0, then what is the value of cot A?

(a) 1
(b) π/4
(c) 0
(d) π/6

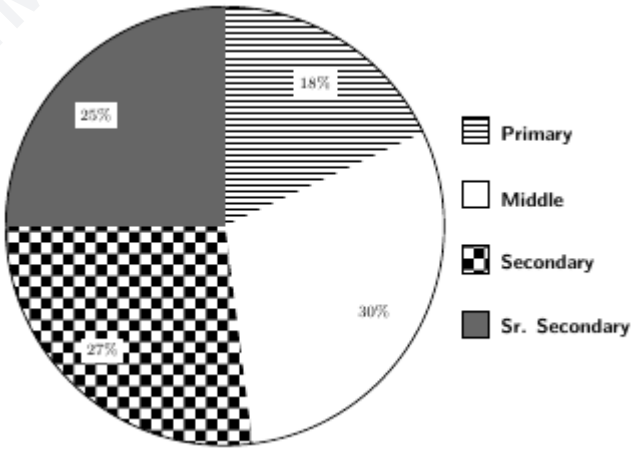
Q62. Tap P can fill a cistern in 6 hours and tap Q can empty the full cistern in 10 hours. If both taps P and Q are kept open simultaneously, then in how many hours will the empty cistern be completely full ?

(a) 15
(b) 18
(c) 12
(d) 16

Q63. A man invests Rs. 7,000 at 8% per annum simple interest for 2 years and Rs. 10,000 at compound interest at the same rate for the same period, compounded annually. What will be the total interest and the total amount (in Rs.) respectively, on maturity?

(a) 19,748 and 2,874
(b) 19,784 and 2,784
(c) 2,784 and 19,784
(d) 2,748 and 19,784

Q64. Students of Primary, Middle, Secondary and Sr. Secondary classes collected donation for a Relief Fund as shown in the pie chart. If the donation collected from Middle classes was Rs. 6,750, then how much money was collected by the Primary classes?



(a) Rs. 4,500
(b) Rs. 4,005
(c) Rs. 3,960
(d) Rs. 4,050

Q65. If A : B = 11 : 7 and B : C = 5 : 19, then what is A : B : C ?

(a) 35 : 55 : 133
(b) 55 : 133 : 35
(c) 55 : 35 : 133
(d) 35 : 133 : 55

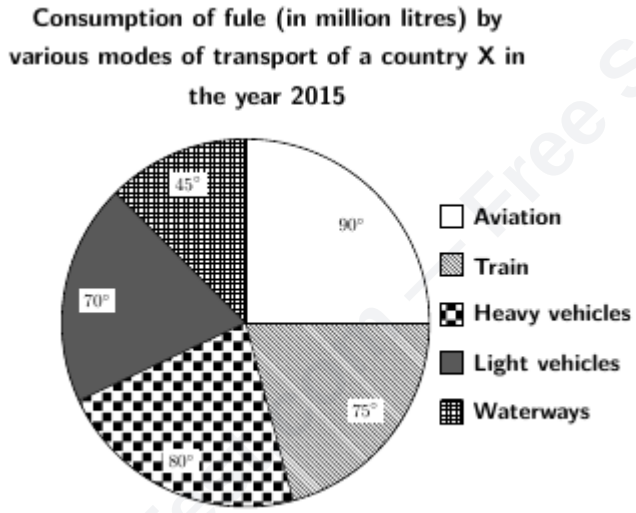
Q66. What is the perimeter (in cm) of an equilateral triangle whose height is 3.46 cm ? Take √3 = 1.73.

(a) 6
(b) 9
(c) 12
(d) 10.4

YourMockTest.com — Free Study Material

Q67. Study the given pie-chart and answer the question that follows.

The pie-chart represents the consumption of fuel (in million litres) by various modes of transport of a country X in the year 2015. The total consumption of fuel by various modes of transport of the country is 800 million litres. (The data shown here is only for mathematical exercise. They do not represent the actual figures of the country.)

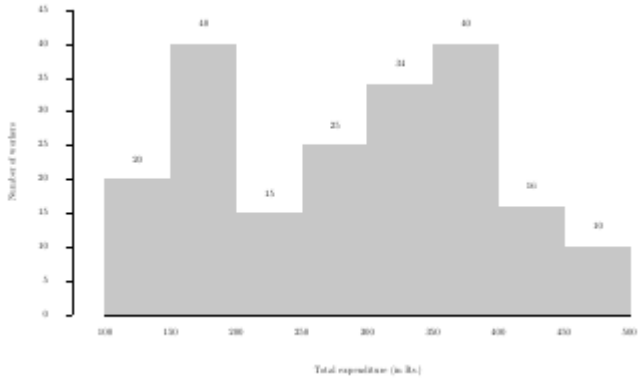


To obtain fuel, energy is required to run the machinery. which is to be produced by burning coal.

If 1 tonne of coal is burnt to produce 0.4 million litres of oil, then approximately what is the requirement of coal (in tonnes) for the Trains sector?

(a) 417
(b) 415
(c) 420
(d) 418

Q68. The following histogram represents the distribution of household expenditure (in Rs.) of 200 manual workers in a city.



The ratio of the number of workers whose household expenditure is less than Rs. 200 to the number of workers whose household expenditure is Rs. 300 and above is:

(a) 4 : 5
(b) 3 : 4
(c) 2 : 5
(d) 3 : 5

Q69. One-fifth of a journey is covered at a speed of 30 km/h, one-fourth of the journey at a speed of 25 km/h and the rest at 60 km/h. What is the average speed (in km/h, correct to one decimal place) for the whole journey?

(a) 30.6
(b) 40.5
(c) 25.4
(d) 38.7

Q70. If a + b = p, ab = q, then (a^4 + b^4) is equal to

(a) p^4 - 4p²q + 2q²
(b) p^4 - 4p²q² + 2q²
(c) p^4 - 2p²q² + q²
(d) p^4 - 4p²q + q²

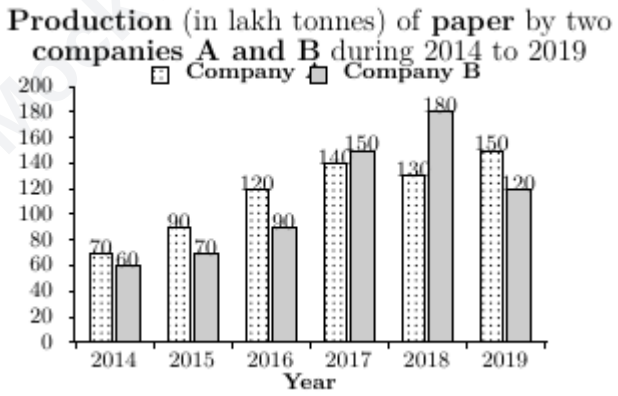
Q71. A is 150% of B and B is 40% of C. If A + B + C = 20, then the value of 2B + 3C - 4A is equal to:

(a) 15
(b) 20
(c) 16
(d) 14

Q72. One dozen notebooks quoted at Rs. 125 are available at 20% discount. How many notebooks can be bought for Rs. 75?

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

Q73. Study the given graph and answer the question that follows.



The average production of paper by company B in 2014, 2017 and 2018 was 13 1/4 % less than the production of paper by company A in the year:

(a) 2017
(b) 2016
(c) 2018
(d) 2019

Q74. If $(x + 1/x)^3 = 27$, then what is the value of $(x^2 + 1/(x^2))$? Given that x is real.

(a) 7
(b) 25
(c) 11
(d) 9

Q75. Using algebraic identities, simplify the following expression.

$(x^4 + x^2 + 1)/(x^2 + x + 1)$

(a) $(x^2 - x + 1)$
(b) (x2 + x + 1)
(c) (x2 - 2x + 1)
(d) (x2 + 2x + 1)

YourMockTest.com — Free Study Material

GENERAL AWARENESS

Q76. Vitamin B12 is generally NOT present in _____.

(a) fish products
(b) plant foods
(c) poultry products
(d) milk products

Q77. _____ is the process of turning on a computer and powering up the system.

(a) Execution
(b) Booting
(c) Saving
(d) Loading

Q78. _____ plains are formed due to the weathering of soluble rocks such as limestone and dolomite.

(a) Desert
(b) Deposition
(c) Karst
(d) Glacial

Q79. Which of the following state governments unveiled a Braille version of the Constitution of India in January 2021?

(a) Andhra Pradesh
(b) Haryana
(c) Maharashtra
(d) Punjab

Q80. What happens to Indian exports when Indian rupee is devalued?

(a) Export prices fluctuate
(b) Exports become cheaper
(c) Export prices remain stable
(d) Exports become dearer

Q81. Who among the following Indian nationals got the ‘Legion of Merit’ Award 2020 from the US?

(a) Narendra Modi
(b) General Bipin Rawat
(c) Dr Manmohan Singh
(d) Dr K Sivan

Q82. Which part of soil has organic materials incorporated with the mineral matter, nutrients and water?

(a) Horizon C
(b) Horizon A
(c) Horizon D
(d) Horizon B

Q83. _____ are gently sloping areas of the ocean basins

(a) Oceanic deeps
(b) Continental shelfs
(c) Continental slopes
(d) Deep sea plains

Q84. What do you call a key on a computer keyboard that is used to move the pointer (cursor) around on the screen?

(a) Navigation key
(b) Numeric key
(c) Control key
(d) Function key

YourMockTest.com — Free Study Material

Q85. Who among the following was awarded the Rabindranath Tagore Literary Award 2020?

(a) Vidyut Mohan
(b) Ranjitsinh Disale
(c) Ashraf Patel
(d) Raj Kamal Jha

Q86. Identify the Indian state which was known as 'Pragjyotisha' during the epic period.

(a) Kerala
(b) Odisha
(c) Assam
(d) Bihar

Q87. In which of the following cities is the corporate centre of State Bank of India (SBI) situated?

(a) Mumbai
(b) Bengaluru
(c) Hyderabad
(d) Kolkata

Q88. What is the SI unit for measuring pressure?

(a) Pascal
(b) Candela
(c) Kelvin
(d) Ampere

Q89. Kabartal Wetland was designated as a Ramsar site in 2020. In which of the following states is it located?

(a) Bihar
(b) Himachal Pradesh
(c) Punjab
(d) Haryana

Q90. Who among the following became the first Lokpal of India?

(a) Dilip B Bhosale
(b) Pradip Kumar Mohanty
(c) Pinaki Chandra Ghose
(d) Ajay Kumar Tripathi

Q91. Who among the following is considered as the ‘Father of Modern Atomic Theory’?

(a) Willard Gibbs
(b) Otto Hahn
(c) John Dalton
(d) Robert Boyle

Q92. Who among the following was appointed by AIFF (All India Football Federation) as its first Deputy General Secretary in January 2021?

(a) Abhishek Yadav
(b) Umesh Sinha
(c) Kushal Das
(d) Praful Patel

Q93. Who among the following was appointed as the Chief Justice of the Andhra Pradesh High Court in January 2021?

(a) Rajan Datta
(b) Arup Kumar Goswami
(c) Sharad Arvind Bobde
(d) Hima Kohli

YourMockTest.com — Free Study Material

Q94. Who among the following is the first Indian pistol shooter to reach number one in world rankings by the International Shooting Sport Federation?

(a) Kajal Saini
(b) Suma Shirur
(c) Heena Sidhu
(d) Tejaswini Sawant

Q95. In which of the following states is Sabarimala Sree Dharma Sastha Temple located?

(a) Kerala
(b) Andhra Pradesh
(c) Karnataka
(d) Telangana

Q96. In which of the following years was the Vijayanagar empire founded?

(a) 1412
(b) 1336
(c) 1229
(d) 1456

Q97. 'Kati Bihu' in Assam is celebrated by lighting a lamp in front of a _____ tree / plant.

(a) banana
(b) neem
(c) tulsi
(d) banyan

Q98. Who among the following has become the first woman umpire to officiate in a men's Test match in January 2021?

(a) Danielle Wyatt
(b) Suzie Bates
(c) Jess Jonassen
(d) Claire Polosak

Q99. In which of the following years did Telangana become the 29^(th) state of India after the reorganisation of the state of Andhra Pradesh?

(a) 2010
(b) 1998
(c) 2014
(d) 1994

Q100. In which of the following states did the Land Grabbing (Prohibition) Act, 2020 come into force in December 2020?

(a) Gujarat
(b) Madhya Pradesh
(c) Maharashtra
(d) Punjab

ANSWER KEY

1	c	2	b	3	a	4	a	5	d	6	d	7	c	8	a	9	c	10	d
11	a	12	b	13	d	14	d	15	b	16	b	17	d	18	b	19	a	20	a
21	b	22	a	23	d	24	a	25	b	26	b	27	c	28	a	29	a	30	b
31	d	32	b	33	b	34	c	35	a	36	b	37	d	38	a	39	b	40	c
41	b	42	a	43	c	44	d	45	b	46	a	47	a	48	c	49	d	50	c
51	c	52	b	53	d	54	d	55	d	56	c	57	b	58	c	59	c	60	b
61	a	62	a	63	c	64	d	65	c	66	c	67	a	68	d	69	d	70	a

YourMockTest.com — Free Study Material

71	d	72	d	73	d	74	a	75	a	76	b	77	b	78	c	79	c	80	b
81	a	82	b	83	d	84	a	85	d	86	c	87	a	88	a	89	a	90	c
91	c	92	a	93	b	94	c	95	a	96	b	97	c	98	d	99	c	100	a

SOLUTIONS

Q1. Answer: (c) A new helpline for students has been launched by the Central Board of Secondary Education.

The solution is in Hindi. Read it online.

Q2. Answer: (b) Very tense

The solution is in Hindi. Read it online.

Q3. Answer: (a) starvation

The solution is in Hindi. Read it online.

Q4. Answer: (a) Illegible

The solution is in Hindi. Read it online.

Q5. Answer: (d) palatial

The solution is in Hindi. Read it online.

Q6. Answer: (d) plutocracy

The solution is in Hindi. Read it online.

Q7. Answer: (c) poignantly

The solution is in Hindi. Read it online.

Q8. Answer: (a) superflous

The solution is in Hindi. Read it online.

Q9. Answer: (c) fortify

The solution is in Hindi. Read it online.

Q10. Answer: (d) straight

The solution is in Hindi. Read it online.

Q11. Answer: (a) Anju told Vijaya that she could stay with them whenever she was in Delhi

The solution is in Hindi. Read it online.

Q12. Answer: (b) CDBA

The solution is in Hindi. Read it online.

Q13. Answer: (d) vicious

The solution is in Hindi. Read it online.

Q14. Answer: (d) secretly

The solution is in Hindi. Read it online.

Q15. Answer: (b) My mother generally read

The solution is in Hindi. Read it online.

Q16. Answer: (b) will surely miss

The solution is in Hindi. Read it online.

Q17. Answer: (d) ADBC

The solution is in Hindi. Read it online.

Q18. Answer: (b) has repeated asked him

The solution is in Hindi. Read it online.

YourMockTest.com — Free Study Material

Q19. Answer: (a) twelth

The solution is in Hindi. Read it online.

Q20. Answer: (a) crooked

The solution is in Hindi. Read it online.

Q21. Answer: (b) learn

The solution is in Hindi. Read it online.

Q22. Answer: (a) ours

The solution is in Hindi. Read it online.

Q23. Answer: (d) needed

The solution is in Hindi. Read it online.

Q24. Answer: (a) that

The solution is in Hindi. Read it online.

Q25. Answer: (b) environment

The solution is in Hindi. Read it online.

Q26. Answer: (b) 6138

The logic followed here is:

Sum of digit of given number = 14

By checking options:

(1) 5423 → 5 + 4 + 2 + 3 = 14

(2) 6138 → 6 + 1 + 3 + 8 = 18 ≠ 14

(3) 1652 → 1 + 6 + 5 + 2 =14

(4) 6341 → 6 + 3 + 4 + 1 = 14

Hence, 6138 is the odd one.

Q27. Answer: (c) 29

Here the pattern followed in each row is:

(1^(st) number ÷ 4) + (3^(rd) number ÷ 3) = 2^(nd) number

Row 1: (28 ÷ 4) + (27 ÷ 3) = 7 + 9 = 16

Row 2: (44 ÷ 4) + (15 ÷ 3) = 11 + 5 = 16

Similarly

Row 3: (84 ÷ 4) + (24 ÷ 3) = 21 + 8 = 29

Hence, “29” is correct answer.

Q28. Answer: (a) × and +

Given; 12 – 8 + 4 ÷ 2 × 8 = 4

By checking options and changing signs and then using BODMAS Rule:

(1) × and +

=> 12 – 8 × 4 ÷ 2 + 8 = 4

LHS = 12 – 8 × 4 ÷ 2 + 8

= 12 - 8 × 2 + 8

= 12 - 16 + 8

= 20 - 16

= 4

LHS = RHS

(2) × and ÷

=> 12 – 8 + 4 × 2 ÷ 8 = 4

LHS = 12 – 8 + 4 × 2 ÷ 8

= 12 - 8 + 4 × 0.25

= 12 - 8 + 1

YourMockTest.com — Free Study Material

= 13 - 8
= 5
≠ 4
LHS ≠ RHS
(3) ÷ and –
=> 12 ÷ 8 + 4 - 2 × 8 = 4
LHS = 12 ÷ 8 + 4 - 2 × 8
= 1.5 + 4 - 2 × 8
= 1.5 + 4 - 16
= 5.5 - 16
= - 10.5
≠ 4
LHS ≠ RHS
(4) – and ×
=> 12 × 8 + 4 ÷ 2 - 8 = 4
LHS = 12 × 8 + 4 ÷ 2 - 8
= 12 × 8 + 2 - 8
= 96 + 2 - 8
= 98 - 8
= 90
≠ 4
LHS ≠ RHS
Hence, × and + is the correct answer.

Q29. Answer: (a) Thread

Given: 'Straw' is related to 'Nest' in the same way as 'Cotton' is related to '_____'.
The logic followed here is:
Nest is made up of Straws.
Similarly,
Thread is made up of Cotton.
Hence, thread is the correct answer.
Important PointsSewing → Sewing is the activity of making or mending clothes or other things using a needle and thread.
Wool → Wool is the textile fibre obtained from sheep and other animals, including cashmere and mohair from goats, qiviut from muskoxen, hide and fur clothing from bison, angora from rabbits, and other types of wool from camelids. Wool consists of protein together with a small percentage of lipids.

Q30. Answer: (b) KBQFLVM

Given: FORWARD is written as CSZXQPE.
The logic followed here is:
Similarly,
Hence, KBQFLVM is the correct answer.

Q31. Answer: (d) NRJQ

By checking the options:
(1) TXCJ
(2) DHSZ
(3) GKPW
(4) NRJQ
(here, J is not the opposite of R, I is the opposite of R)
Hence, NRJQ is the odd one.

YourMockTest.com — Free Study Material

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

Arranging all the words as per their order in the dictionary:

2. Movement

4. Moviemaker

1. Multifocal

3. Multinomial

5. Mutual fund

Hence, 2, 4, 1, 3, 5 is the correct order.

Q33. Answer: (b) Joviality

The logic followed here is:

All Integrity, Honesty, and Truthfulness are Synonyms.

Whereas,

Joviality is not a Synonym of Honesty.

Hence, joviality is the odd one.

Important PointsIntegrity → the quality of being honest and having strong moral principles.

Joviality → Joviality is the characteristic of being cheerful and festive.

Q34. Answer: (c) TGQJ

Given: BYDW : UFSH :: CXFU : ?

The logic followed here is:

BYDW : UFSH

Similarly,

CXFU : ?

Hence, TGQJ is the correct answer.

(Note: In original paper this question has discrepancy. The option 2 in question are to be changed. We have corrected option 3.)

Q35. Answer: (a) Hygrometer : Humidity

Given: Ammeter : Electric current

The logic followed here is:

First one is Measurements and second one is Quantity.

Ammeter measures Electric Current.

Similarly,

Hygrometer measures Humidity.

Hence, hygrometer : humidity is the correct answer.

Important PointsBarometer → measures atmospheric pressure.

Lactometer → measures amount of water in milk you drink.

Polarimeter → measures the angle of rotation caused by passing polarized light through an optically active substance.

Q36. Answer: (b) 91

Given: 3, 5, 15, 41, ?, 173

The logic followed here is:

Hence, 91 is the correct answer.

Q37. Answer: (d) [figure]

The logic followed here is:

The paper when unfolded, will look like:

Hence, option (4) is the correct answer.

Q38. Answer: (a) 6

In this question, We will use the opposite face relation of cube which is shown below-

The opposite faces are:

Hence, 6 dots lie opposite to the face having 4 dots.

YourMockTest.com — Free Study Material

Q39. Answer: (b) Grandfather

From the given information,

Snigda met her mother's only brother's son's mother's father-in-law, implies she met her maternal grandfather as shown below, the final family tree is as follows:

Hence, grandfather is the correct answer.

Q40. Answer: (c) {13,19, 31}

Given: {9, 12, 18}

The logic followed here is:

(2nd number - 1st number) × 2 = 3rd number - 2nd number.

{9, 12, 18} → (12 - 9) = 3 → 3 × 2 = 6 = (18 - 12)

By checking options:

(1) {21, 29, 44} → (29 - 21) = 8 → 8 × 2 = 16 ≠ 15 = (44 - 29)

(2) {5, 12, 24} → (12 - 5) = 7 → 7 × 2 = 14 ≠ 12 = (24 -12)

(3) {13, 19, 31} → (19 - 13) = 6 → 6 × 2 = 12 = (31 - 19)

(4) {7,13, 27} → (13 - 7) = 6 → 6 × 2 = 12 ≠ 14 = (27 - 13).

Hence, {13, 19, 31} is the correct answer.

Q41. Answer: (b) abeaeecd

Given: a_ _bcde_ _abbcd_ _aabb_ _ee

By substituting optionss in given series,

(1) aeecdbea → aeebcdee - cabbcddb - aabbeaee

(2) abeaeecd → aabbcdee - aabbcdee - aabbcdee

► (here, aabbcdee is repeating).

(3) aeaedecd → aaebcdea - eabbcdde - aabbcdee

(4) abecdeae → aabbcdee - cabbcdde - aabbaeee

• Option (2) gives a pattern of aabbcdee - aabbcdee - aabbcdee.

Hence, abeaeecd is the correct answer.

Q42. Answer: (a) [figure]

Given:

The logic followed here is: the given image is embedded as shown below,

Hence, option (1) is the correct answer.

Q43. Answer: (c) [figure]

The logic followed here is: all widows are women, some women are professors, and some widows are professors.

Hence, option (3) is the correct answer.

Q44. Answer: (d) Only conclusion II follows

The least possible Venn diagram is:

Conclusion:

I. Some instruments are machines → False (it is possible but not definite as shown in the diagram above that no instrument is machine is possible).

II. Some machines are computers → True (all computers are machine, implies some machines are computers).

III. Some televisions are machines → False (it is possible but not definite, as shown in the diagram above that no television is machine is possible).

Hence, only conclusion II follows.

Additional Information

Q45. Answer: (b) [figure]

Given:

The logic followed here is:

We can see in the given series that the symbols

is moving diagonally upward with every step.

So the complete series is as follows:

Hence, option (2) is the correct answer.

Q46. Answer: (a) Rs. 5000

Given: The sales boy of a washing machine store charges his customers 24% more than the cost price.

Now, let the cost price of washing machine be "X".

Then, according to the question,

Selling Price = X + 24% of X = 6200

X × (1 + 24/100) = 6200

X = (6200 × 100)/124

X = 5000

Hence, the cost price of the washing machine is Rs. 5000.

Q47. Answer: (a) 621910550

Table show alphabet serial number –

The pattern for the code is as follows,

So, HAMPER is coded as 17212322036

And,

So, INSULT is coded as 16286421340.

Similarly,

Hence, SAFETY is coded as “621910550”.

Q48. Answer: (c) 14

By counting the triangles:

The triangles are → ABG, CHI, DEJ, EKJ, AFG, FHO, HOK, KMP, PMO, FLN, NLO, FNO, KPO, FKO → 14 triangles.

Hence, 14 is the correct answer.

Q49. Answer: (d) 203

Given: 12 : 150 :: 14 : ?

The logic followed here is:

(1st number)² + 1st number ÷ 2 = 2nd number.

12 : 150

= 12² + 12 ÷ 2

= 144 + 6 = 150.

Similarly,

14 : ?

= 14² + 14 ÷ 2

= 196 + 7 = 203.

Hence, 203 is the correct answer.

Q50. Answer: (c) [figure]

Given:

The logic followed here is: let the line AB be the mirror,

Detailed Explanation:

• The line AB is the mirror

• In option (1) one slant line at the right side is missing => option (1) is eliminated.

• The mirror image of the word "N" will be "

" => option (2) is eliminated.

• The mirror image of the word "N" should be to the left side and that of the triangle should be at the right side => option (4) is eliminated.

Hence, option (3) is the correct answer.

YourMockTest.com — Free Study Material

Q51. Answer: (c) 17.6

Given:

Inner radius of concentric circles = 6.7cm

Outer radius of concentric circles = 9.5 cm

Formula:

Circumference of circle = 2πr

Calculation:

Circumference of small circle = π × 2 × 6.7 = 13.4π

Circumference of big circle = π × 2 × 9.5 = 19π

Therefore Difference between their circumference = (19 - 13.4)π = 5.6 × 22/7 = 17.6 cm

Q52. Answer: (b) 79

Shortcut Trick

In a 30°−60°−90° triangle, the side opposite to 30° is half of the hypotenuse.

Given Hypotenuse (String) = 158 m.

Height = 158 ÷ 2 = 79 m.

Therefore The correct answer is 79 m.

Alternate Method

Given:

Length of the string (Hypotenuse AC) = 158 m

Angle of elevation (θ) = 30°

Formula Used:

sin θ = Perpendicular (Height) ÷ Hypotenuse (String)

Calculations:

=> sin 30° = h ÷ 158

=> 1/2 = h ÷ 158

=> h = 158 ÷ 2

=> h = 79 m

Therefore The correct answer is 79 m.

Additional Information

Trigonometric Ratios

Common values: sin 30° = 1/2, sin 45° = 1/√2, sin 60° = √3/2.

30°−60°−90° Triangle Rule

The sides are always in the ratio 1 : √3 : 2 corresponding to the angles 30° : 60° : 90°.

Angle of Elevation

The angle formed by the line of sight with the horizontal when looking upwards at an object.

Q53. Answer: (d) 19.5 cm

Given:

Calculation:

In ΔADB,

Using pythagoras theorem,

=> $AB^2 = BD^2 + AD^2$

In ΔADC,

Using pythagoras theorem,

=> $AC^2 = AD^2 + DC^2$

In ΔBAC,

Using pythagoras theorem,

=> $BC^2 = AB^2 + AC^2$

=> $(4.8 + DC)^2 = 4.8^2 + 8.4^2 + (8.4^2 + DC^2)$

=> $4.8^2 + 9.6DC + DC^2 = 4.8^2 + 8.4^2 + (8.4^2 + DC^2)$

=> $9.6DC = 2 \times 8.4 \times 8.4$

YourMockTest.com — Free Study Material

=> DC = (8.4 × 2.1)/1.2 = 14.7 cm

Therefore BC = BD + DC = 4.8 + 14.7 = 19.5 cm

Q54. Answer: (d) 94

Given:

Diameter of pizza = 28cm

Formula:

Circumference of circle = πd

Calculation:

Radius of pizza = 28/2 = 14cm

Total circumference of pizza = 22/7 × 28 = 88cm

Circumference of 3/4 of pizza = 88 × 3/4 = 66cm

Therefore Perimeter of remaining pizza = 66 + 14 + 14 = 94cm

Q55. Answer: (d) Loss, 3.3

Shortcut Trick

Let Cost Price (CP) be 100%.

As Loss equals profit of 22%, the first Selling Price (SP) = 100% − 22% = 78%.

=> 78% = Rs. 1,170 => 100% = (1,170 ÷ 78) × 100 = Rs. 1,500.

New SP = Rs. 1,450 => Loss = 1,500 − 1,450 = Rs. 50.

Loss% = (50 ÷ 1500) × 100 = 3.33... ≈ 3.3%.

Therefore The correct answer is Loss, 3.3.

Alternate Method

Given:

SP1 = Rs. 1,170

Profit% (for comparison) = 22%

SP2 = Rs. 1,450

Formula Used:

Loss = CP − SP | Profit = SP − CP | Loss% = (Loss ÷ CP) × 100

Calculations:

Let the Cost Price of the article be x.

According to the question, Loss at Rs. 1,170 = Profit at 22%.

=> x − 1,170 = 22% of x

=> x − 1,170 = 0.22x

=> x − 0.22x = 1,170

=> 0.78x = 1,170

=> x = 1,170 ÷ 0.78 = 1,500

The Cost Price (CP) is Rs. 1,500.

Now, if the article is sold for Rs. 1,450 (SP2):

=> Loss = CP − SP2 = 1,500 − 1,450 = Rs. 50

=> Loss% = (50 ÷ 1,500) × 100

=> Loss% = 10 ÷ 3 = 3.33...

Rounding to one decimal place, we get 3.3%.

Therefore The correct answer is Loss, 3.3.

Additional Information

Profit and Loss Percentage

Profit% = (Profit ÷ CP) × 100 and Loss% = (Loss ÷ CP) × 100. Both are always calculated on the Cost Price unless stated otherwise.

Selling Price Calculation

SP = CP × (100 + Profit%) ÷ 100 or SP = CP × (100 − Loss%) ÷ 100. Use these to find SP directly from CP and percentage change.

Cost Price as Base

Assuming CP = 100 units simplifies calculations. A 22% profit makes SP = 122 units, while a 22% loss makes SP = 78 units.

YourMockTest.com — Free Study Material

Q56. Answer: (c) 99120

Shortcut Trick

LCM of 8, 15, 16, 21, and 5 is 1680.

Check options for divisibility by 1680 (must be divisible by factors 7, 16, and 3).

99120 ÷ 16 = 6195; 99120 ÷ 3 (sum of digits 21) is true; 99120 ÷ 7 = 14160.

Since 99120 is the largest option divisible by 1680, it is the required number.

Therefore The correct answer is 99120.

Alternate Method

Given: Divisors are 8, 15, 16, 21, 5; Target is the greatest 5-digit number.

Formula Used: Required Number = LCM(8, 15, 16, 21, 5) × k ≤ 99999.

10000 99999 Greatest Divisible: 99120 Multiples of LCM (1680)

=> Prime factorization of divisors:

=> 8 = 2^3

=> 15 = 3 × 5

=> 16 = 2^4

=> 21 = 3 × 7

=> 5 = 5

=> LCM = 2^4 × 3 × 5 × 7 = 16 × 15 × 7 = 1680

=> Divide the largest 5-digit number (99999) by 1680:

=> 99999 ÷ 1680 = 59 with remainder 879

=> Required number = 99999 − 879 = 99120

Therefore The correct answer is 99120.

Additional Information

LCM and HCF Relationship

For any two numbers a and b, HCF(a, b) × LCM(a, b) = a × b.

Divisibility Rule of 16

A number is divisible by 16 if the last four digits of the number are divisible by 16.

Finding Greatest N-digit Number

To find the greatest N-digit number divisible by x, divide the largest possible N-digit number (9...9) by x and subtract the remainder.

Q57. Answer: (b) $(1 - 4x^2)/(1+4x^2)$

Given:

cos θ = $4x/(1 + 4x^2)$

Formula:

$\sin^2\theta + \cos^2\theta = 1$

Calculation:

sin2θ = 1 - cos2θ

$\sin^2\theta = 1 - (4x/(1 + 4x^2))^2$~~

=> $((1 + 4x^2)^2 - 16x^2)/((1 + 4x^2)^2)$

=> $(1 + 8x^2 + 16x^4 - 16x^2)/((1 + 4x^2)^2)$

=> $(1 - 8x^2 + 16x^4)/((1 + 4x^2)^2)$

=> $((1 - 4x^2)^2)/((1 + 4x^2)^2)$

Therefore sin θ = $(1 - 4x^2)/(1+4x^2)$

Q58. Answer: (c) 39

Concept:

Calculation:

[{(232 ÷ 29 of 2) + 77 × 10} ÷ 18] - (18 × 8 ÷ 4 of 3 - 4)/(2 × (8 - 6) + 1 - 2 × 3 ÷ 4 of 1/2)

=> [232 ÷ 58 + 77 × 10) ÷ 18] - [(18 × 8 ÷ 12 - 4)/(2 × 2 + 1 - 2 × 3 ÷ 4 × 1/2)]

=> [(4 + 77 × 10) ÷ 18] - [(18 × 8 ÷ 12 - 4)/(2 × 2 + 1 - 2 × 3 ÷ 2)]

=> [4 + 770] ÷ 18 - [(12 - 4)/(4 + 1 - 3)]

=> 43 - 8/(2)
=> 43 - 4
=> 39

Q59. Answer: (c) 5.5

Given:
Speed of boat in still water = 19kmph
Speed of stream = 3kmph
Formula:
Downstream speed = Speed of boat in still water + Speed of stream
Upstream speed = Speed of boat in still water - Speed of stream
Calculation:
Downstream speed = 19 + 3 = 22 kmph
Upstream speed = 19 - 3 = 16kmph
Required time = 88/22 + 24/16 = 4 + 3/2 = 5.5
Therefore total time (in hours) taken by the boat to go 88 km downstream and 24 km upstream is 5.5 hours.

Q60. Answer: (b) 2.1

Given:
Radius of hemisphere = 6.3 cm
Radius of cylinder = 9 cm
Formula:
Volume of hemisphere = $2/3 \times \pi r^3$
Volume of cylinder = $\pi r^2 h$
Calculation:
Volume of hemisphere = $2/3 \times \pi \times (6.3)^3$
Volume of cylinder = $\pi h \times (9)^2$
Then,
=> $2\pi/3 \times 6.3^3 = \pi h \times 9^2$
=> h = 2.058
=> h = 2.1 cm(nearest value)
Therefore Height of cylinder is 2.1cm

Q61. Answer: (a) 1

Given:
(sin A - cos A) = 0
Formulae used:
cot A = cos A/sin A
Calculation:
=> (sin A - cos A) = 0
=> sinA = cosA
Therefore cot A = cosA/sinA = 1

Q62. Answer: (a) 15

Given:
Tap P's 1 hour's work = 1/6
Tap Q's 1 hour's work = 1/10
Calculation:
Tap(P + Q)'s 1 hour's work = 1/6 - 1/10 = 4/60 = 1/15
Therefore In 15 hours tank will be full.
Shortcut Trick

	Time	Work	Efficiency

P	6	30	5
Q	10	3	

=> (P + Q)'s combined efficiency = 5 - 3 = 2units/h

=> Time is taken to fill tank = 30/2 = 15 h

Q63. Answer: (c) 2,784 and 19,784

Given:

Sum = Rs.7000

Rate of interest = 8%

Time = 2 years

Formula:

Let P = Principal, R = rate of interest and N = time

SI = PNR/100

CI = $P(1 + R/100)^2 - P$

Calculation:

SI = 7000 × 8 × 2/100 = Rs.1120

Amount after SI = 7000 + 1120 = Rs.8120

CI = $10000(1 + 8/100)^2 - 10000$ = Rs.1664

Amount after CI = 10000 + 1664 = Rs.11664

Therefore Total amount after maturity = 8120 + 11664 = Rs.19784

Total interest after 2 years = 1120 + 1664 = Rs.2784

Q64. Answer: (d) Rs. 4,050

Calculation:

Total amount collected as donation = 6750 × 100/30 = Rs.22500

Percentage amount collected by Primary classes = 18%

Therefore Amount collected by Primary classes = 22500 × 18/100 = Rs.4050

Q65. Answer: (c) 55 : 35 : 133

Given:

A : B = 11 : 7 and B : C = 5 : 19

Calculation:

A : B = 11 : 7

A : B = 55 : 35

Then,

B : C = 5 : 19

B : C = 35 : 133

Therefore A : B : C = 55 : 35 : 133

Q66. Answer: (c) 12

Given:

Height of equilateral triangle = 3.46cm

Formula:

Side of equilateral triangle = 2/√3 × height

Calculation:

Side of an equilateral triangle = 2/√3 × 3.46 = 4 cm

Therefore Perimeter of an equilateral triangle = 3 × 4 = 12 cm

Q67. Answer: (a) 417

Calculation:

Total fuel consumption by various transport = 800 million litres

Fuel consumption by Train sector = 800 × 75/360 = 500/3 million litres

YourMockTest.com — Free Study Material

=> 0.4 million litre → 1 tonne coal

=> 1 million litre → 1/0.4 tonne coal

=> 500/3 million litres → (1/0.4) × 500/3

=> 5000/12 = 416.666 ~ 417 tonne coals

Therefore For 500/3 million litres, 417 tonne coals will required.

Q68. Answer: (d) 3 : 5

Calculation:

Number of workers whose household expenditure is less than Rs.200

=> 20 + 40 = 60

Number of workers whose household expenditure is Rs. 300 and above

=> 34 + 40 + 16 + 10 = 100

Therefore The ratio of the number of workers whose household expenditure is less than Rs. 200 to the number of workers whose household expenditure is Rs. 300 and above is

=> 60 : 100 = 3 : 5

Q69. Answer: (d) 38.7

Given:

1/5 of journey = 30kmph

1/4 of journey = 25kmph

(1 - 1/5 - 1/4 = 11/20) of journey = 60kmph

Formula:

Average speed = Total distance/Total time

Calculation:

Let total distance of journey be a km.

Time taken for 1/5 of journey = a/150 hours

Time taken for 1/4 of journey = a/100 hours

Time taken for 11/20 of journey = 11a/1200 hours

Total time taken for a km = a/150 + a/100 + 11a/1200 = 31a/1200 hours

Therefore Average speed = a/(31a/1200) = 38.7kmph

Q70. Answer: (a) p^4 - 4p²q + 2q²

Given:

a + b = p, ab = q

Formula:

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

Calculation:

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

$p^2 = (a^2 + b^2) + 2q$

$(a^2 + b^2) = p^2 - 2q$

Then,

$(a^4 + b^4) = (a^2 + b^2)^2 - 2a^2b^2$

$= (p^2 - 2q)^2 - 2q^2$

$= p^4 - 4p^2q + 2q^2$

Therefore $(a^4 + b^4) = p^4 - 4p^2q + 2q^2$

Q71. Answer: (d) 14

Given:

A = 150/100 × B

B = 40/100 × C

Calculation:

=> A + B + C = 20

=> 3B/2 + B + 5B/2 = 20

=> 10B/2 = 20

=> B = 4

=> A = 6

=> C = 10

Therefore 2B + 3C - 4A = 2 × 4 + 3 × 10 - 4 × 6 = 14

Alternate MethodStep 1: Convert the percentage into ratios.

A B C

3 : 2

2 : 5

Step 2: Equalize all three ratios.

A B C

3 : 2 2

2 2 : 5

_____

6 : 4 : 10

_____

3 : 2 : 5

_____

Given, A + B + C = 20

3 + 2 + 5 units --------- 20

10 units -------- 20

1 unit ------2

Therefore A = 3 × 2 = 6, B = 2 × 2 = 4, C = 5 × 2 = 10

Therefore 2B + 3C - 4A = 2 × 4 + 3 × 10 - 4 × 6 = 14

Q72. Answer: (d) 9

Given:

Discount % = 20%

Calculation:

Marked price of 12 notebooks = Rs.125

Selling price of 12 notebooks = 125 × 80/100 = Rs.100

Selling price of a notebook = 100/12 = Rs.25/3

Therefore Number of notebooks bought for Rs.75 = 75 × 3/25 = 9

Q73. Answer: (d) 2019

Calculation:

Total production of paper of company B in 2014, 2017 and 2018

=> 60 + 150 + 180 = 390 lakh tonnes

Average production of paper by company B in 2014, 2017 and 2018

=> 390/3 = 130 lakh tonnes

Production of company A

=> 130 × 100/(100 - 13.25) = 149.85 ≈ 150 lakh tonnes

Therefore The average production of paper by company B in 2014, 2017 and 2018 was 13 1/4 % less than the production of paper by company A in the year 2019.

Q74. Answer: (a) 7

Given:

$(x + 1/x)^3 = 27$,

(x + 1/x) = cbrt27 = 3

Formula:

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

Calculation:

(x + 1/x) = 3

YourMockTest.com — Free Study Material

Squaring both the sides, we get

$(x + 1/x)^2 = 3^2$

$\Rightarrow x^2 + 1/(x^2) + 2. x^2.1/(x^2) = 9$

$\Rightarrow (x^2 + 1/(x^2)) = 9 - 2 = 7$

Therefore The value of $(x^2 + 1/(x^2)) = 7$

Shortcut TrickIf $(x + 1/x) = a$, then $(x^2 + 1/(x^2)) = a^2 - 2$

$\Rightarrow (x + 1/x) = 3$, then $(x^2 + 1/(x^2)) = 3^2 - 2 = 9 - 2 = 7$

Q75. Answer: (a) $(x^2 - x + 1)$

Given:

$\Rightarrow ? = (x^4 + x^2 + 1)/(x^2 + x + 1)$

Formula:

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

Calculation:

$\Rightarrow ? = (x^4 + 2x^2 + 1 - x^2)/(x^2 + x + 1)$

$\Rightarrow ? = [(x^2 + 1) - x^2]/(x^2 + x + 1)$

$\Rightarrow ? = [(x^2 + 1 - x)(x^2 + 1 + x)]/(x^2 + x + 1)$

$\Rightarrow ? = x^2 - x + 1$

Therefore $(x^4 + x^2 + 1)/(x^2 + x + 1) = x^2 - x + 1$

Q76. Answer: (b) plant foods

The correct answer is plant foods.

Key Points

• Vitamin B12 is generally NOT present in plant foods.

• Plant-based foods are generally classified into fruits, vegetables, legumes, grains, nuts, and seeds and their derived processed counterparts.

• Vitamin B12 is an essential vitamin found in foods such as meat, fish, and dairy.

• It is required for the function and development of many parts of the body, including the brain, nerves, and blood cells.

Additional Information

Vitamins	Main Source	Deficiency diseases
A	leafy vegetables, carrots, pumpkin, orange, Fish, dairy products, etc	Night blindness
B	B1-Pork, wholemeal grains, brown rice, vegetables, potatoes, liver, eggs, etc B3-Meat, fish, eggs, many vegetables, mushrooms, tree nuts, etc B12-Meat, poultry, fish, eggs, milk, etc	B1- Beri Beri B3- Pellagra B12-Anemia
E	nuts and seeds, vegetables and seed oils, etc	Mild hemolytic anemia
C	Citric fruits, liver, etc	Scurvy

Q77. Answer: (b) Booting

The correct answer is Booting.

Key Points

• Booting is the process of turning on a computer and powering up the system.

• In other words, it is a startup sequence that starts the operating system of a computer when it is turned on.

Additional Information

• There are two types of Booting-

• Warm Booting

• It is the process of restarting a computer.

• Warm boots are typically initiated by a "Restart" command in the operating system.

• Cold Booting

YourMockTest.com — Free Study Material

• It is the process of starting a computer from shutdown or a powerless state and setting it to normal working condition.

• It refers to the general process of starting the hardware components of a computer, laptop, or server to the point that its operating system and all startup applications and services are launched.

Q78. Answer: (c) Karst

The correct answer is Karst.

• Karst plains are formed due to the weathering of soluble rocks such as limestone and dolomite.

Key Points

• Karst is a distinctive topography in which the landscape is largely shaped by the dissolving action of water on carbonate bedrock such as limestone and dolomite, etc.

• When the rain falls through the atmosphere, it picks carbon dioxide which dissolves in the droplets.

• Once the rain hits the ground, it percolates through the soil and picks more carbon dioxide to form a weak solution of carbonic acid.

• The infiltrating water naturally exploits cracks in the rock.

• Over long periods, carbon bedrock begins to dissolve.

• Opening in bedrock increases in size and an underground drainage system begins to develop and allows more water to pass which further accelerates the formation process of karst.

• Some of the landforms develop within the bedrock such as pools, sinkholes, doline, stalactites, stalagmites etc.

• Examples of karst topography:

• Skocjan Caves, Slovenia

• The Puerto Princesa Underground River, Philippines

• Doline in the causse de Sauveterre, Lozere, France

• Li River, Guilin, China

Q79. Answer: (c) Maharashtra

The correct answer is Maharashtra.

Key Points

• Maharashtra government unveiled a Braille version of the Constitution of India in January 2021.

• Maharashtra Social Justice Minister-Dhananjay Munde unveiled the Braille version of the Indian Constitution at an event in Mumbai.

• The Braille version of the Constitution has been prepared on behalf of Thane-based NGO Astitva Foundation.

• A valuable work of making available the Indian Constitution in Braille script for the visually impaired has been done.

Additional Information

• The official language of Maharashtra is Marathi.

• Capital: Mumbai.

• State animal: Giant Squirrel.

• State bird: Yellow-footed green pigeon.

• State tree: Mango.

• State flower: Jarul.

Q80. Answer: (b) Exports become cheaper

The correct answer is Exports become cheaper.

• Exports become cheaper when the Indian rupee is devalued.

Important Points

• Devaluation occurs when a country intentionally reduces the value of its currency relative to one or more foreign countries.

• When the country follows a fixed exchange rate regime the government constantly has to revalue and devalue the currency to maintain the pegged exchange rate.

• When there is upwards market pressure on the currency to appreciate, the central bank will artificially devalue the currency by buying up foreign reserves.

• Devaluation occurs when a government wishes to increase its balance of trade by decreasing the relative value of its currency.

• Since the value of Indian currency decreases, it makes Indian goods cheaper which in turn encourages foreign countries to import more goods from India.

• The foreign countries find it extremely profitable to import goods from India when the INR is devalued, hence, exports become cheaper too.

YourMockTest.com — Free Study Material

• In the short term, a devaluation tends to cause inflation, higher growth and increased demand for exports.

Q81. Answer: (a) Narendra Modi

The correct answer is Narendra Modi.

Key Points

• Narendra Modi got the 'Legion of Merit' Award 2020 from the US.

• Then US President Donald Trump presented the Legion of Merit award to PM Narendra Modi.

• He had been awarded for his leadership in elevating the strategic partnership of the two countries and the emergence of India as a global power.

• India's Ambassador to the US, Taranjit Singh Sandhu, accepted the award on behalf of him from the US National Security Advisor Robert O'Brien at the White House.

Additional Information

• The Legion of Merit award was instituted in 1942 by former U.S President Franklin D. Roosevelt.

• It is awarded to members of the U.S. armed forces and also members of foreign armed forces and sometimes heads of state or government.

• The 2020 award was also presented to former Japanese Prime Minister Shinzo Abe and Australian Prime Minister Scott Morrison.

Q82. Answer: (b) Horizon A

The correct answer is Horizon A.

Key Points

• Horizon A part of soil has organic materials incorporated with the mineral matter, nutrients and water.

• Soil horizons are layers parallel to the soil surface whose physical, chemical and biological characteristics differ from the layers above and beneath.

Important Points

• There are commonly 5 layers or horizons found in the soil. They are known as O, A, B, C & R horizons.

• O Horizon Soi:l It contains a huge amount of organic matter.

• A Horizon Soil: It is a leached mineral horizon (dark in color) with a high content of organic matter. This horizon is also called 'Topsoil'.

• B Horizon Soil: This horizon is a zone of accumulation of fine materials and mineral Precipitates like clay, iron, carbonates, gypsum, etc. This horizon is also called 'Subsoil'.

• C Horizon Soil: This horizon contains rock fragments of different sizes (partly weathered rocks).

• R Horizon Soil: This layer is composed of hard bedrock (unaltered rock layer).

Q83. Answer: (d) Deep sea plains

The correct answer is Deep sea plains.

• Deep-sea plains are gently sloping areas of the ocean basins.

Additional Information

• Ocean Floor Division can be divided into various parts such as Continental Shelf, Continental Slope, Continental Rise or Foot, Deep Ocean basins, Abyssal plains or Deep Sea plain, Oceanic Trenches, Seamounts, and Guyots.

• Deep-Sea Plain or Abyssal plain

• These plains are gently sloping areas of the ocean basins.

• These are the flattest and smoothest regions of the world.

• It is an underwater plain on the deep ocean floor, usually found at depths between 3,000 and 6,000m.

• These plains are covered with fine-grained sediments like clay and silt.

• Lying generally between the foot of a continental rise and a mid-ocean ridge, abyssal plains cover more than 50% of the Earth's surface.

• Oceanic Deeps or Trenches

• These areas are the deepest parts of the oceans.

• The trenches are relatively steep-sided, narrow basins.

• They are some 3-5 km deeper than the surrounding ocean floor.

• They occur at the bases of continental slopes and along island arcs and are associated with active volcanoes and strong earthquakes.

• Continental Shelf

YourMockTest.com — Free Study Material

• The continental shelf is the extended margin of each continent occupied by relatively shallow seas and gulfs.
• It is the shallowest part of the ocean showing an average gradient of 1° or even less.
• The shelf typically ends at a very steep slope, called the shelf break.
• Continental Slope
• The continental slope connects the continental shelf and the ocean basins.
• It begins where the bottom of the continental shelf sharply drops off into a steep slope.
• The gradient of the slope region varies between 2-5°.
• The depth of the slope region varies between 200 and 3,000 m.
• The slope boundary indicates the end of the continents.

Q84. Answer: (a) Navigation key

The correct answer is Navigation key.
• A navigation key is a key on a computer keyboard that is used to move the pointer (cursor) around on the screen.
• Navigation Keys include the four Arrow keys, PageUp, PageDown, Home, and End keys.
Additional Information
• Numeric key- It is used to put digits. It is located on the top, right-hand side of the keyboard.
• Control key- It is a modifier key. When pressed in conjunction with another key, performs a certain action.
• Function key- It is a key on a computer or terminal keyboard which can be programmed so as to cause an operating system command interpreter or application program to perform certain actions.

Q85. Answer: (d) Raj Kamal Jha

The correct answer is Raj Kamal Jha.
Key Points
• Raj Kamal Jha was awarded the Rabindranath Tagore Literary Award 2020.
• He won the prize for his novel- "The City and The Sea".
• The novel 'The City and The Sea' by Jha is based on the Nirbhaya rape and murder case in December 2012.
• From ten shortlisted novels, including Nirmala Govindarajan's Taboo, Ranjit Hoskote's Jonahwhale, and Amitav Ghosh's Gun Island, it was selected as the award winner.
• The honour comes with a $5,000 cash prize.

Q86. Answer: (c) Assam

The correct answer is Assam.
• Assam was known as 'Pragjyotisha' during the epic period.
Important Points
• In ancient Sanskrit literature, both the names ‘Pragjyotisha’ and ‘Kamrupa’ were used as a designation for ancient Assam.
• Its antiquity can be established from the fact that it has been mentioned in the two great epics- The Mahabharata and the Ramayana and also in the Puranas.
• Regarding the name ‘Prajyotisha’ or ‘Pragjyotishpura’, Gait (1992, reprint) writes that Prag means ‘former’ or ‘eastern’ and Jyotisha ‘a star’, astrology, shining. Pragjyotishpur may, therefore, be taken to mean the ‘City of Eastern Astrology’.
• References of Kamarupa are found in literature as well as in many epigraphs.
• The mythology regarding the origin of the name Kamarupa tells us the story of Sati who died due to the discourtesy shown to her husband by her father Daksha.
Additional Information
• The formation of the Indian State Assam was on 26 January 1950.
• Assam became a constituent state of India with the partition of India in 1947.

Q87. Answer: (a) Mumbai

The correct answer is Mumbai.
Key Points
• The corporate centre of State Bank of India (SBI) is situated at Mumbai, Maharastra.
• The Imperial Bank was established in the year 1921 by merging three main Presidency Banks.
• The Imperial Bank was nationalized in 1955 on the recommendation of the Gorewala Committee and renamed as State Bank of India.
• SBI is the 43rd largest bank in the world and ranked 221st in the Fortune Global 500 list of the world's biggest corporations of

2020.

• It is also the largest bank in India with a 23% market share by assets and a 25% share of the total loan and deposits market.

Q88. Answer: (a) Pascal

The correct answer is Pascal.

Key Points

• Pascal is the SI unit for measuring pressure.

• The unit is named after Blaise Pascal, a French mathematician and physicist.

• 1 Pascal is equal to 1 Newton per Meter squared.

• In base units, 1 Pascal is equivalent to 1 kg?m^(−1)?s^(−2).

Additional Information

• Candela is the SI unit of luminous intensity.

• Luminous intensity is the quantity of visible light that is emitted in unit time per unit solid angle.

• Kelvin is the SI unit of temperature.

• Ampere is the SI unit of electric current.

Q89. Answer: (a) Bihar

The correct answer is Bihar.

Key Points

• Kabartal Wetland in Bihar was designated as a Ramsar site in 2020.

• The Site is one of 18 wetlands within an extensive floodplain complex.

• This absorption of floodwaters is a vital service in Bihar State where 70% of the land is vulnerable to inundation.

• During the dry season, areas of marshland dry out and are used for agriculture.

• Significant biodiversity is present, with 165 plant species and 394 animal species recorded, including 221 bird species.

• The Wetland is an important stopover along the Central Asian Flyway, with 58 migratory waterbirds using it to rest and refuel.

Additional Information

• Ramsar Convention on Wetlands is an international treaty for “the conservation and sustainable use of wetlands”.

• It is also known as the Convention on Wetlands and is named after the city of Ramsar in Iran.

• The treaty was established in 1971 by UNESCO and came to force in 1975.

Q90. Answer: (c) Pinaki Chandra Ghose

The correct answer is Pinaki Chandra Ghose.

Key Points

• Pinaki Chandra Ghose became the first Lokpal of India.

• Justice Pradip Kumar Mohanty is currently the Lokpal of India.

• He is a retired judge of the Supreme Court of India.

• On 28 May 2022,Shri Justice Pradip Kumar Mohanty was appointed as the acting Chairperson of the Lokpal after the superannuation of the first Lokpal chairperson Pinaki Chandra Ghose.

Important Points

• A Lokpal is an anti-corruption authority or body of ombudsman who represents the public interest in the Republic of India.

• The Lokpal has jurisdiction over the central government to inquire into allegations of corruption against its public functionaries and for matters connected to corruption.

• The Lokpal is responsible for enquiring into corruption charges at the national level while the Lokayukta performs the same function at the state level.

• The Lokpal consists of a Chairperson and eight members. Four of the judicial members have been former Chief Justices of different High Courts and the four non-judicial members have been from All India Services/Central Services.

Q91. Answer: (c) John Dalton

The correct answer is John Dalton.

Key Points

• John Dalton is considered the ‘Father of Modern Atomic Theory.

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

• Law of conservation of mass – According to the law, mass can neither be destroyed nor created in any chemical reaction.

• Law of constant proportion/ definite proportion – The laws state that in a chemical substance, the elements are always present in

certain proportions by mass.

Important Points

• Willard Gibbs was a mathematical physicist who made enormous contributions to science. He founded modern statistical mechanics, chemical thermodynamics, and invented vector analysis.

• Otto Hahn discovered the fission of uranium and thorium in medium-heavy atomic nuclei.

• Robert Boyle discovered that the volume of a gas decreases with increasing pressure and vice versa.

Q92. Answer: (a) Abhishek Yadav

The correct answer is Abhishek Yadav.

Key Points

• Abhishek Yadav was appointed by AIFF (All India Football Federation) as its first Deputy General Secretary in January 2021.

• It was a rare instance in Indian football to see a former player appointed to such a high-ranked position.

• He had played with the likes of Bhaichung Bhutia, Sunil Chhetri, Mahesh Gawli and Climax Lawrence.

• He developed the AIFF's international scouting project in cooperation with the Sports Authority of India (SAI), helping create opportunities for Indian passport holders, who were based abroad.

• He was also the Chief Operating Officer (COO) of India's U-17 World Cup team.

• He also played a key role in chalking out a plan for the revival of Indian Arrows, which included picking the best of talent from the India U-16 and U-17 teams.

Q93. Answer: (b) Arup Kumar Goswami

The correct answer is Arup Kumar Goswami.

Key Points

• Arup Kumar Goswami was appointed as the Chief Justice of the Andhra Pradesh High Court in January 2021.

• He was transferred from the Sikkim High Court.

• He replaced J.K. Maheswari who had been posted as the Chief Justice of Sikkim High Court.

• Chief Justice Goswami began his career as an advocate with the Bar Council of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura in 1985.

Important Points

• The judges of a high court are appointed by the President.

• Article 217 of the Indian Constitution

• Appointment and conditions of the office of a Judge of a High Court

• Every Judge of a High Court shall be appointed by the President by warrant under his hand and seal after consultation with the Chief Justice of India, the Governor of the State.

Q94. Answer: (c) Heena Sidhu

The correct answer is Heena Sidhu.

Key Points

• On 7 April 2014, Heena Sidhu became the first Indian pistol shooter to reach number one in world rankings by the International Shooting Sport Federation.

• In 2013, she became the first Indian pistol shooter to win a gold medal in an ISSF World Cup finals when she won the 10-metre air pistol event.

• In 2009, Sidhu won a silver medal at the ISSF World Cup in Beijing.

• At the 2018 Commonwealth Games, she won a silver medal in the women's 10-metre air pistol event and a gold medal in the women's 25-metre air pistol event.

• She broke the Commonwealth Games record of 38 in winning the gold medal.

• Sidhu was awarded the Arjuna Award on 28 August 2014.

Additional Information

• Kajal Saini is an Indian sport shooter.

• Suma Shirur is a former Indian shooter who competed in the 10-metre air rifle event.

• Tejaswini Sawant is an Indian sport shooter.

Q95. Answer: (a) Kerala

The correct answer is Kerala.

Key Points

• Sabarimala Sree Dharma Sastha Temple is located in Kerala.

• It is located inside the Periyar Tiger Reserve.
• It is located in Pathanamthitta Distt of Kerala.
• The temple is dedicated to Lord Ayyappan.
• Lord Ayyappan is also known as Darma Sastha.
• It is believed that the lord Ayyappan is the Son of Lord Shiva and Mohini (The Female Incarnation of Lord Vishnu).

Important Points

Temple	Place
Virupaksha Temple	Hampi, Karnataka
Vitthala Temple	Hampi, Karnataka
Meenakshi Temple	Madurai, Tamil Nadu
Ramanathaswamy Temple	Rameshwaram Island, Tamil Nadu
Suchindram Temple	Kanyakumari, Tamil Nadu
Ranganathaswamy Temple	Tamil Nadu
Brihadeshwara Temple	Thanjavur, Tamil Nadu
Rajagopalaswamy Temple	Tamil Nadu
Airavateswara Temple	Darasuram, Tamil Nadu
Venkateswara Temple	Tirumala, Andhra Pradesh

Q96. Answer: (b) 1336

The correct answer is 1336.

Key Points

• The Vijayanagar empire was founded in 1336.
• The Vijayanagara kingdom was founded by Harihara and Bukka of the Sangama dynasty.
• The Vijayanagara Empire also called the Karnata Kingdom was based in the Deccan Plateau region in South India.
• Harihara and Bukka made Hampi the capital city.

Important Points

• The Vijayanagar kingdom was one of the important kingdoms in medieval Indian history.
• Krishnadeva Raya of the Tuluva dynasty was the most famous king of the Vijayanagar Empire.
• The Vijayanagara Empire was ruled by 4 dynasties:
• Sangama Dynasty
• Saluva Dynasty
• Tuluva Dynasty
• Aravidu Dynasty
• Bukka Raya defeated almost all the southern kingdoms and extended his empire till the present day Rameshwaram.

Q97. Answer: (c) tulsi

The correct answer is tulsi.

Key Points

• 'Kati Bihu' in Assam is celebrated by lighting a lamp in front of a tulsi tree/plant.
• Kongali Bihu or Kati Bihu as it is commonly known derives its name from the month of Kartik which is traditionally known as Kati.
• Unlike Bohag Bihu, Kati Bihu is not a flamboyant festival and the festivities are more somber in nature.
• This Bihu is celebrated during the time of relocation of the rice sapling during the month of October.
• The granaries of the farmers usually remain empty during this time, hence it is known as Kongali (poor) Bihu.

Important Points

• The main part of this Bihu celebration involves the lightening of lamps or saaki (candles) in different parts of the household or paddy field.
• The main lamp is lit in the courtyard near the Tulsi plant.
• The Tulsi plant holds a special significance for Hindu people as it is considered to be very auspicious in the Hindu religion.

YourMockTest.com — Free Study Material

• Besides being very auspicious, the plant is known to possess various medicinal properties that can cure a person of various ailments.

Q98. Answer: (d) Claire Polosak

The correct answer is Claire Polosak.

• Claire Polosak has become the first woman umpire to officiate in a men's Test match in January 2021.

Important Points

• Australia's Claire Polosak created history by becoming the first woman umpire to officiate a men's Test during India vs Australia match at the Sydney Cricket Ground on 7 Jan 2021.

• She was appointed as the fourth umpire in the third Test of the Border-Gavaskar trophy, while Australians Paul Reiffel and Paul Wilson were serving as the on-field umpires.

• The fourth umpire at a test match has duties related to pitch preparation, equipment changes and support for the on-field umpires.

• She was also the first woman umpire to stand in an Australian men's domestic fixture after officiating a one-day match between New South Wales and a Cricket Australia XI in 2017.

• In 2016, New Zealand's Kathy Cross and Polosak became the first two female umpires to officiate at the Women's World T20.

Q99. Answer: (c) 2014

The correct answer is 2014.

Key Points

• Telangana became the 29th state of India after the reorganisation of the state of Andhra Pradesh in 2014.

Important Points

• Telangana became the 29th state of India in 2014 by reorganizing Andhra Pradesh.

• Lok Sabha passed the Telangana bill on 18th February 2014.

• Rajya Sabha passed the Telangana bill on 20th February 2014.

• Telangana bill received the President's assent on 1st March 2014.

• Telangana was formed as the 29th state of India on 2nd June 2014.

• Srikrishna Committee was set up by the center to look into the need for a separate state of Telangana from Andhra Pradesh, and which had accorded the highest priority to a non-separation of the state. The committee was headed by former chief justice B. N. Srikrishna.

Additional Information

• Four icons of Telangana are:

• State Bird - Palapitta (Indian Roller or Blue Jay)

• State Animal - Jinka (Deer)

• State Tree - Jammi Chettu (Prosopis Cineraria)

• State Flower - Tangedu (Tanner's Cassia)

Q100. Answer: (a) Gujarat

The correct answer is Gujarat.

• The Land Grabbing (Prohibition) Act, 2020 come into force in Gujarat in December 2020.

Important Points

• The State Government of Gujarat had been witnessing increasing land grabbing activities in the state for the past few years.

• Under the law, anyone who illegally grabs land provides money for construction, threatens the owner, extorts rent, or helps in any such activity will be considered a land grabber.

• Section 3, read along with Section 4, deems land grabbing prohibited and unlawful in all forms. Any activity arising out of or connected with the same shall be a punishable offense under the legislation.

• Any person who continues to engage in this occupation shall be guilty of the wrongdoing of land grabbing.

• Actions in violation of these provisions shall invite imprisonment for not less than ten years. This period of punishment may extend up to fourteen years.

More previous year papers and mock tests: **www.yourmocktest.com/pyq**