RRB NTPC CBT-I Official Paper (Held On: 29 Jan 2021 Shift 2) (Previous Year Paper)

RRB NTPC • 2021 • 100 questions • 90 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/rrb-ntpc/rrb-ntpc-cbt-i-official-paper-held-on-29-jan-2021-shift-2-previou…

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

YourMockTest.com — Free Study Material

Q1. A alone can finish a task in 30 days. He works for 6 days on the same task and then B finishes it in 24 days. In how many days can A and B together finish the task?

(a) 25
(b) 15
(c) 20
(d) 10

Q2. How many numbers between 1 and 700 are completely divisible by 17?

(a) 45
(b) 42
(c) 46
(d) 41

Q3. Which of the following systems is NOT found in nematodes?

(a) Digestive system
(b) Excretory system
(c) Reproductive system
(d) Respiratory system

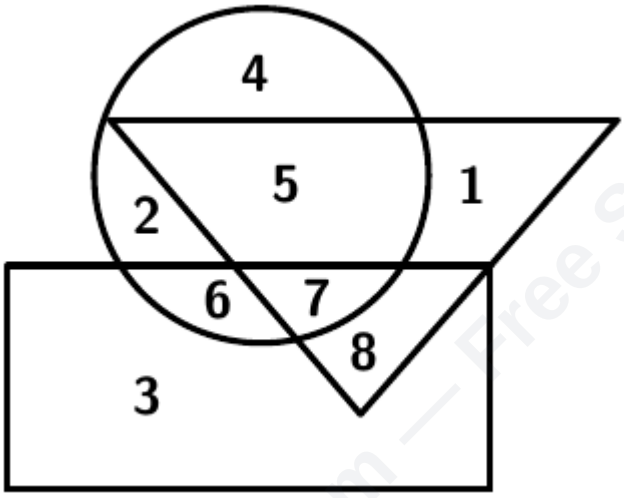
Q4. The value of 3.1overline4 is:

(a) 3 13/90
(b) 3 12/90
(c) 3 11/90
(d) 3 14/90

Q5. How will you write 4.17 hours in hours, minutes and seconds?

(a) 4 hours 10 minutes and 12 seconds
(b) 4 hours 10 minutes and 20 seconds
(c) 4 hours 10 minutes and 7 seconds
(d) 4 hours 17 minutes

Q6. In the given diagram, the triangle represents teachers, the rectangle represents politicians, and the circle represents social workers. Which number in the diagram represents the teachers who are also social workers but not politicians?



(a) 5
(b) 6
(c) 2
(d) 7

Q7. The foundation day of the UN Charter was on:

(a) 24^(th) October 1945
(b) 29th October 1946
(c) 20th October 1932
(d) 21th October 1950

Q8. Who among the following is NOT a recipient of Bharat Ratna 2019?

(a) Nanaji Deshmukh
(b) Rajeshwar Acharya
(c) Pranab Mukherjee
(d) Bhupen Hazarika

Q9. Identify the number that does NOT belong to the following series.

5, 10, 17, 28, 42, 58, 77

(a) 42
(b) 28
(c) 58
(d) 17

Q10. In which year was the Raja Ramanna Centre for Advanced Technology established?

(a) 1981
(b) 1961
(c) 1984
(d) 1989

Q11. Find the value of $((3.17 + 9.\ 12)^2 + (3.17\text{-}9.12)^2)/(3.17 \times 3.17 + 9.12 \times 9.12)$.

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

Q12. _____ is an experimental satellite that was launched first time by Indian Space Research Organisation (ISRO) in August 1979 from Satish Dhawan Space Centre.

(a) Rohini
(b) Himawari 8

(c) Insat-3DR
(d) Cartostat

Q13. Which Cabinet Mission proposed a constituent assembly to frame the Constitution of India?
(a) The Cabinet Mission Plan 1936
(b) The Cabinet Mission Plan 1945
(c) The Cabinet Mission Plan 1946
(d) The Cabinet Mission Plan 1949

Q14. Mr. Cook sold a book at a profit of 14%. If he had sold it for Rs. 5.40 more, then he would have made a profit of 20%. Find the cost price of the book.
(a) Rs. 60
(b) Rs. 30
(c) Rs. 120
(d) Rs. 90

Q15. Ravi is 5 years older than his wife who is 5 times as old as her daughter. Three years ago her daughter's age was 4 years. What is Ravi's present age?
(a) 42 years
(b) 25 years
(c) 24 years
(d) 40 years

Q16. Sachin covers a certain distance by car driving at 80 km/h and he returns to the starting point riding on a scooter at 50 km/h. Find his average speed for the whole journey up to 2 decimal places.
(a) 60.26 km/h
(b) 61.54 km/h
(c) 63.43 km/h
(d) 62.42 km/h

Q17. If the side of a square is tripled, then the ratio of the area of the resulting square to that of original square is:
(a) 9 : 1
(b) 3 : 1
(c) 3 : 2
(d) 9 : 2

Q18. Who ignited the spark of freedom that led to the revolt of 1857?
(a) Subhash Chandra Bose
(b) Jawaharlal Nehru
(c) Bhagat Singh
(d) Mangal Pandey

Q19. What is the place value of 5 in the number 56789214?
(a) 5 × 10^7
(b) 5 × 10^4
(c) 5 × 10^6
(d) 5 × 10^5

Q20. A profit of 20% is earned by selling an article for Rs. 2,400. If the same article were sold for Rs. 2,600, then the gain percentage would be:
(a) 35%
(b) 25%
(c) 20%
(d) 30%

YourMockTest.com — Free Study Material

Q21. Select the number from among the given options that can replace the question mark (?) in the following analogy.
56 : 15 :: 76 : 21 :: 81 : ?
(a) 36
(b) 4
(c) 10
(d) 21

Q22. World-famous Chhattisgarhi folk singer Teejan Bai is an exponent of what type of folk music?
(a) Gondhal
(b) Lavani
(c) Bharud
(d) Pandavani

Q23. If cot 35° = 2 - √3 then the value of tan 35° cot 55° + tan 55° cot 35° is:
(a) 14
(b) 15
(c) 13
(d) 12

Q24. Who was the Viceroy of India when Indian National Congress was founded?
(a) Lord Lawrence
(b) Lord Canning
(c) Lord Ripon
(d) Lord Dufferin

Q25. Four letter-clusters have been listed, out of which three are alike in some manner and one is different. Select the odd one.
(a) TALEN
(b) ATLER
(c) TALER
(d) LATER

Q26. Deen Dayal Upadhyaya Grameen Kaushalya Yojana was launched in _____.
(a) 2017
(b) 2018
(c) 2015
(d) 2014

Q27. BrahMos supersonic missile is a joint venture between _____.
(a) India and Russia
(b) India and China
(c) India and UK
(d) India and USA

Q28. If the difference between the interior and exterior angles of a polygon is 36°, then find the number of sides in the polygon.
(a) 8
(b) 7
(c) 5
(d) 6

Q29. If the angles of a quadrilateral are in the ratio of 4 : 9 : 11 : 12, then the largest of these angles is:
(a) 166°
(b) 72°
(c) 120°

YourMockTest.com — Free Study Material

(d) 168°

Q30. Find the compound interest when the principle is Rs. 6,000 at an interest of 10% per annum for 2 years.

(a) Rs. 1250
(b) Rs. 1230
(c) Rs. 1260
(d) Rs. 1240

Q31. Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

7 : 42 :: 9 : 72 :: 11 : ?

(a) 110
(b) 121
(c) 102
(d) 108

Q32. The population of a town increases at the rate of 10% every year. The present population is 1,000. In how many years will the population become 1,331?

(a) 2
(b) 2.5
(c) 3
(d) 3.5

Q33. If y = x/((2 + a)^Z), then z =?

(a) (log _e(x/y))/(log _e(2 + a))
(b) (log _e(x/y))/(log _e(2 - a))
(c) (log _e(y/x))/(log _e(2 + a))
(d) (log _e(x - y))/(log _e(2 + a))

Q34. Kyoto Protocol is an international agreement that aims to reduce:

(a) greenhouse gas emissions
(b) electron emissions
(c) radioactive emissions
(d) exhaust emissions

Q35. The currency of Malaysia is _____.

(a) Euro
(b) Ringgit
(c) Peso
(d) Kwacha

Q36. If the price of tea increases by 20%, by what percentage should a household reduce its consumption of tea so that the budget remains the same?

(a) 14 2/3 %
(b) 16 2/3 %
(c) 15 2/3 %
(d) 13 2/3 %

Q37. The word ‘comet’ comes from the ancient _____ word, which means long-haired star.

(a) German
(b) French
(c) Greek
(d) Latin

YourMockTest.com — Free Study Material

Q38. Keyboard, monitor and cabinet are components of:

(a) storage unit
(b) control unit
(c) computer hardware
(d) computer software

Q39. If K = 16 and ROW = 25, then NECK will be equal to:

(a) 75
(b) 57
(c) 47
(d) 33

Q40. Find the sum of the place value and the face value of 7 in the number 53736.

(a) 777
(b) 707
(c) 77
(d) 770

Q41. B is A's son. B is my son's only paternal uncle. Then from the following options, A is my:

(a) grandfather
(b) father
(c) brother
(d) uncle

Q42. Who was the first female judge of the Supreme Court in India?

(a) M Fathima Beevi
(b) R Banumathi
(c) Sujatha V Manohar
(d) Indira Banerjee

Q43. Banaras Hindu University was established in _____.

(a) 1916
(b) 1919
(c) 1921
(d) 1918

Q44. If $\sin(x - y) = 1/2$ and $\cos(x + y) = 1/2$, where x and y are positive acute angles and $x \geq y$, then the value of x is:

(a) 30°
(b) 45°
(c) 50°
(d) 70°

Q45. Find the gain percentage when the cost price is Rs. 950 and the selling price is Rs. 1,140.

(a) 10%
(b) 20%
(c) 30%
(d) 40%

Q46. Under which articles of the Constitution of India is the Right to Equality mentioned?

(a) Article 25-28
(b) Article 23-24
(c) Article 19-22
(d) Article 14-18

YourMockTest.com — Free Study Material

Q47. The amount of radiation emitted by a radioactive material is measured using the conventional unit _____.

(a) curie
(b) watt
(c) ampere
(d) pascal

Q48. Planning Commission of India was set up in year:

(a) 1950
(b) 1949
(c) 1951
(d) 1948

Q49. If the radius of a circle is reduced by 25%, its area is reduced by:

(a) 6.25%
(b) 43.75%
(c) 56.25%
(d) 50%

Q50. Find the greatest number that divides 124, 307 and 243, leaving remainders 4, 7 and 3, respectively.

(a) 60
(b) 70
(c) 50
(d) 40

Q51. If the sum of two numbers is 30 and the product is 50, then the sum of their reciprocals is:

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

Q52. In Computer terminology, what is the full form of EPROM?

(a) Extended Programme Rewritable Only Memory
(b) Erasable Programmable Read-Only Memory
(c) Electronic Programmable Retrieve Only Memory
(d) Executable Programme Revise Only Memory

Q53. You are given a question and two statements. Identify which of the statements is/are necessary/sufficient to answer the question.

Question:

Who is the father of M?

Statements:

I - P and Q are brothers.

II - Q's wife is the sister of M's wife.

(a) Statement I and II both are not sufficient.
(b) Statement I alone is sufficient.
(c) Statement II alone is sufficient.
(d) Statement I and II both are necessary.

Q54. If the LCM of a and b is c, then their HCF is:

(a) ab/c
(b) ac/b
(c) bc/a
(d) c/ab

YourMockTest.com — Free Study Material

Q55. Find the value of x in the given equation.

$\sqrt{2401}/x = x/6.25$

(a) 15.5
(b) 17.5
(c) 7.5
(d) 27.5

Q56. What can humans NOT digest?

(a) Glycogen
(b) Cellulose
(c) Amino Acids
(d) Starch

Q57. Cytoplasm is a jelly-like fluid that is present between:

(a) nucleus and organelles
(b) nerves and cells
(c) fats and tissues
(d) nucleus and cell membrane

Q58. The minimum value of $4\sin^2\theta + 5\cos^2\theta$ is:

(a) 4
(b) 0
(c) 2
(d) 1

Q59. Find the arithmetic mean of the first 15 natural numbers.

(a) 9
(b) 16
(c) 8
(d) 15

Q60. After digestion, protein is converted into:

(a) carbohydrates
(b) small globules
(c) amino acids
(d) starch

Q61. Which of the following does NOT come under Infrastructure?

(a) Electricity
(b) Transportation
(c) Entertainment
(d) Sewage

Q62. If 'A' stands for '-', 'B' stands for '+', and 'C' stands for '×', then what will be the value of 9C5B10A5C12?

(a) -5
(b) -6
(c) +5
(d) +6

Q63. Which of the following mainly causes the depletion of the ozone layer?

(a) Radioactive rays
(b) Volcanic eruptions
(c) Chlorofluorocarbons
(d) Aviation fuels

YourMockTest.com — Free Study Material

Q64. With which of the following tournaments is hockey associated?

(a) Rangaswamy Cup
(b) Irani Cup
(c) Davis Cup
(d) Subroto Cup

Q65. Which of the words among the given options CANNOT be formed using the letters from the following sentence?
Russia is my country.

(a) Your
(b) Cloud
(c) Rain
(d) Minor

Q66. The Indian National Flag (tricolour) was unfurled by Bhikaiji Cama in:

(a) London, 1911
(b) Russia, 1910
(c) Germany, 1907
(d) Poland, 1908

Q67. Who was the first Indian to join the Indian Civil Service?

(a) Lakshmi Kant Jha
(b) Satyendranath Tagore
(c) Hirubhai Patel
(d) Shyamji Krishna Varma

Q68. Which of the following is NOT the cause of a tsunami?

(a) Volcanic Eruptions
(b) Earthquakes
(c) Soil Erosion
(d) Submarine Landslides

Q69. Which of the following films was directed by Satyajit Ray?

(a) Pather Panchali
(b) Kora Kagaz
(c) Mahal
(d) Pyaasa

Q70. Four celestial bodies have been listed, out of which three are alike in some manner and one is different. Select the odd one.

(a) Jupiter
(b) Venus
(c) Mercury
(d) Moon

Q71. The smallest number that is divisible by 10, 14 and 28, and is a perfect square, is:

(a) 18600
(b) 140
(c) 4900
(d) 19600

Q72. Which of the following is NOT a division of National Sample Survey Organisation?

(a) National Development Agenda
(b) Field Operation Division
(c) Survey Design and Research Division
(d) Data Processing Division

YourMockTest.com — Free Study Material

Q73. Ram alone can finish a task in 20 days while Shyam alone can finish it in 30 days. How many days will they take to finish the task if they work together?

(a) 16
(b) 18
(c) 12
(d) 14

Q74. Which of the following temples was built by Raja Raja Chola?

(a) Lingaraj Temple
(b) Brihadisvara Temple
(c) Meenakshi Temple
(d) Jagannath Temple

Q75. When 19^(300) is divided by 20, find the remainder.

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

Q76. Select the option that is related to the third term in the same way as the second term is related to the first term.

Football : Field :: Tennis : ?

(a) Ring
(b) Ball
(c) Court
(d) Net

Q77. Which of the following is NOT a spreadsheet program?

(a) VisiCalc
(b) Ubuntu
(c) Calc
(d) Excel

Q78. If 0 stands for the operation "Subtract and double the value", that is a0b = 2(a - b); and Ø stands for "Multiply and halve", that is aØb = ½ ab then, find the value of:

(8Ø6)0(6Ø4)

(a) 36
(b) 12
(c) 48
(d) 24

Q79. Which of the following Article of the Indian constitution defines the Money bill?

(a) Article 115
(b) Article 109
(c) Article 113
(d) Article 110

Q80. 50% of 500 = _____ of 2500

(a) 40%
(b) 20%
(c) 10%
(d) 30%

YourMockTest.com — Free Study Material

Q81. Who founded the Bahmani kingdom?

(a) Firuzshah Bahmani
(b) Alauddin Bahman Shah (alias Hasan Gangu)
(c) Mohammad bin Tughlaq
(d) Mir Zafar

Q82. The Tibetan Plateau is the best example of a/an _____.

(a) Intermontane Plateau
(b) Doomed Plateau
(c) Erosional Plateau
(d) Volcanic Plateau

Q83. Pseudopodia are finger-like extensions on:

(a) Amoeba
(b) Paramecium
(c) Earthworms
(d) Hydra

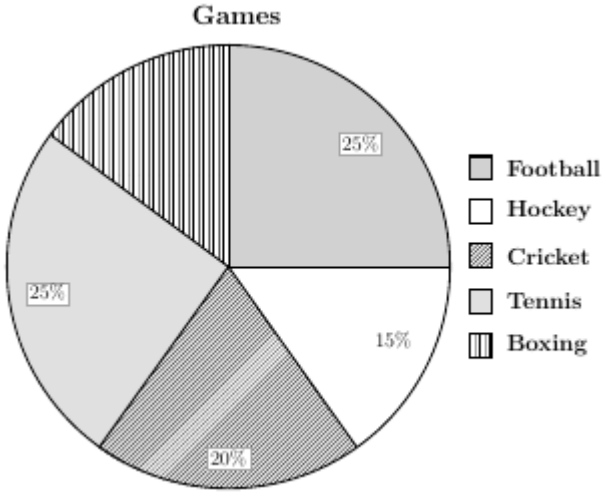
Q84. Who was the first winner of the Jnanpith Award?

(a) Uma Shankar Joshi
(b) Ashapurna Devi
(c) Amrita Pritam
(d) G Sankara Kurup

Q85. In which part of India does the Great Indian Desert lie?

(a) Western part
(b) Northern part
(c) Southern part
(d) Eastern part

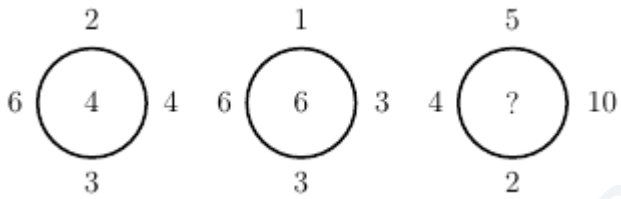
Q86. In the given pie chart, if 300 players have taken up 5 different games, then how many players have taken up boxing?



(a) 75
(b) 60
(c) 45
(d) 55

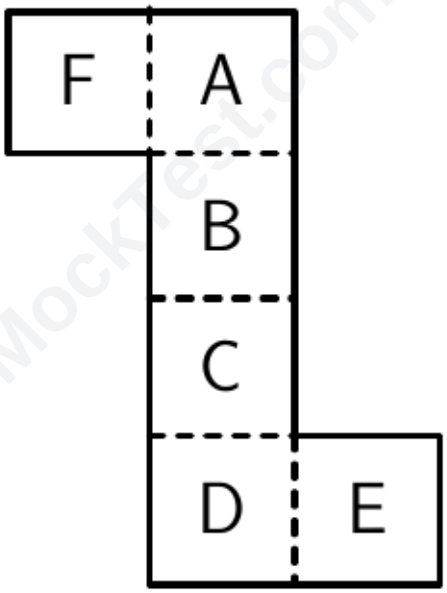
Q87. Study the given pattern carefully and select the number from among the given options that can replace the question mark (?).

YourMockTest.com — Free Study Material



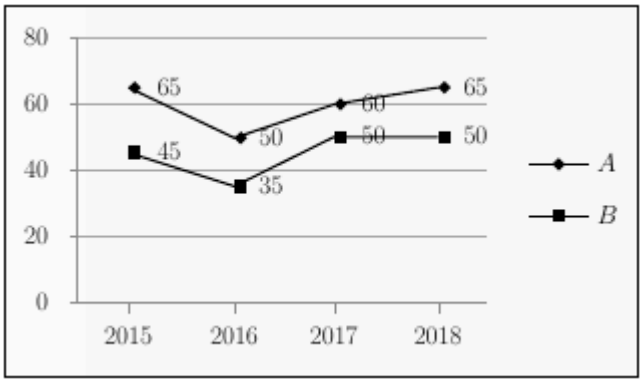
(a) 2
(b) 4
(c) 7
(d) 10

Q88. A cube is made by folding the given sheet. In the cube so formed, what would be the letter on the opposite side of the letter A?



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

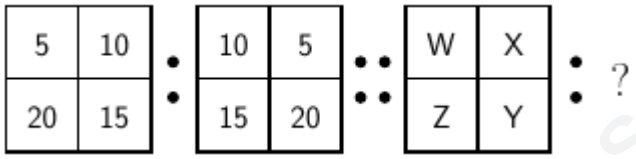
Q89. The given graph shows the percentage of profit gained by two corporate bodies A and B from the year 2015 to 2018. If the expenditure of A was Rs. 60 lakhs, then how much was the revenue (in Rs.) of A in 2018?



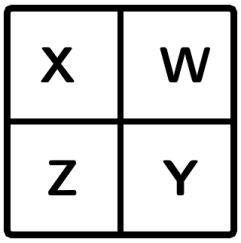
(a) 100 lakh
(b) 50 lakh
(c) 65 lakh
(d) 99 lakh

YourMockTest.com — Free Study Material

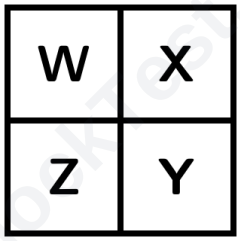
Q90. Select the option that is related to the third pattern in the same way as the second pattern is related to the first pattern.



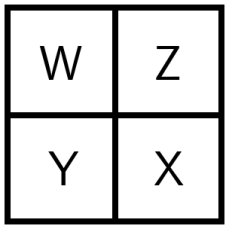
(a)



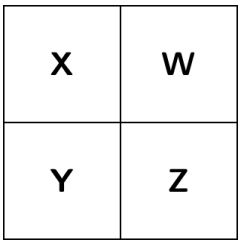
(b)



(c)



(d)



Q91. Select the number that can replace the question mark (?) in the following analogy.

18 : 324 : 5832 :: 36 : 1296 : ?

(a) 46656
(b) 23328
(c) 2592
(d) 5833

Q92. Four numbers have been listed, out of which three are alike in some manner and one is different. Select the odd one.

(a) 435
(b) 342
(c) 413
(d) 348

YourMockTest.com — Free Study Material

Q93. Identify the number from among the given options that does NOT belong to the following series.

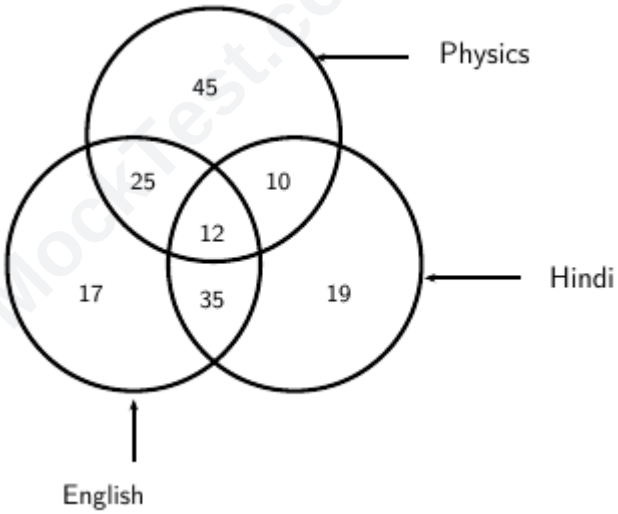
1, 3, 7, 15, 33

(a) 33
(b) 15
(c) 7
(d) 1

Q94. In a code language, COPPER is written as FQTRJT then how will SILVER be written as in that code language?

(a) WJNXTJ
(b) VKPXJT
(c) UJQMJT
(d) VOPYTJ

Q95. The given Venn diagram shows the number of students who got distinction in three subjects among 350 students. Find the percentage of students who got distinction in only two subjects.



(a) 18.5%
(b) 20%
(c) 32%
(d) 25%

Q96. If EGA = 25491, then CAD = ?

(a) 2216
(b) 25166
(c) 52122
(d) 9116

Q97. Select the option that is related to the third term in the same way as the second term is related to the first term.

Boxing : Round : : Badminton : ?

(a) Match
(b) Point
(c) Tournament
(d) Game

Q98. Out of the four sports listed, three are alike in some manner and one is different. Select the odd one.

(a) Shot Put
(b) Discuss Throw
(c) Badminton
(d) Hammer Throw

YourMockTest.com — Free Study Material

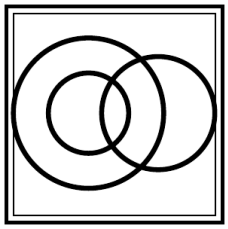
Q99. If 14 + 13 × 3 = 81, then 17 + 16 × 2 = ?

(a) 72
(b) 49
(c) 50
(d) 66

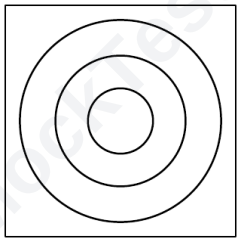
Q100. Select the Venn diagram that best represents the relationship between the given set of classes.

Gold, Metal, Silver

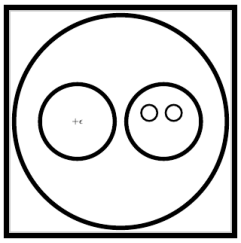
(a)



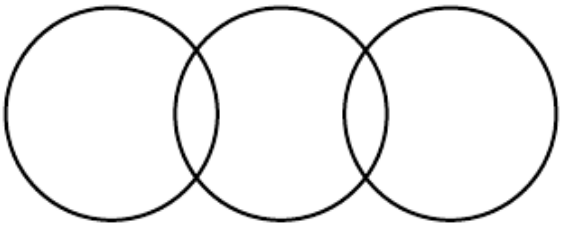
(b)



(c)



(d)



YourMockTest.com — Free Study Material

ANSWER KEY

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

81	b	82	a	83	a	84	d	85	a	86	c	87	b	88	b	89	d	90	d
91	a	92	c	93	a	94	b	95	b	96	d	97	d	98	c	99	d	100	c

SOLUTIONS

Q1. Answer: (b) 15

Given:

A can alone finish a task = 30 days

For the same task, A works for = 6 days and B works for = 24 days

Calculation:

=> Let the number of days taken by B to complete the work be x.

=> Work done by A = 6/30

=> Work done by B = 24/x

=> 6/30+24/x = 1

=> 24/x=1-1/5

=> 24/x=4/5

=> x = (24× 5)/4 = 6 × 5 = 30 days

=> Adding efficiency of both A and B,

=> 1/30+1/30 = 2/30

=> A and B can finish the task together in = 30/2 = 15 days

Therefore, A and B together can finish the task in 15 days.

Q2. Answer: (d) 41

Given:

Numbers between: 1 and 700

Divisor = 17

Concept Used:

a_n=a+(n-1)d

Where, a_n = Last term, a = First term, n= number of terms in a sequence, d = Common difference

Calculation:

The numbers between 1 and 700 which are completely divisible by 17 includes: 17, 34, 51,....., 697 which forms an AP.

=> Here, a (first term) = 17, a_n(last term) = 697, d (common difference) = 17

=> 697=17+(n-1)×17

=> 697-17=17n-17

=> 697=17n

=> n=697÷17=41

Therefore, 41 numbers are divisible by 17 between 1 and 700

Q3. Answer: (d) Respiratory system

The correct answer is the Respiratory system.

Key Points

• Nematodes possess digestive, nervous, excretory, and reproductive systems, but lack a discrete circulatory or respiratory system.

• Nematodes (roundworms) are cylindrical nonsegmented organisms that are found throughout the world both as free-living species and as human and animal pathogens.

• Adult nematodes are comprised of approximately 1,000 somatic cells, and potentially hundreds of cells associated with the reproductive system.

• Nematodes have been characterized as a tube within a tube, referring to the alimentary canal which extends from the mouth on the anterior end, to the anus located near the tail.

• In size, they range from 0.3 mm to over 8 meters.

• Some examples of Nematodes that commonly spread disease in humans include ascarids (Ascaris), filariasis, hookworms, pinworms (Enterobius), and whipworms (Trichuris trichiura).

YourMockTest.com — Free Study Material

Additional InformationDiagram of Male Ascaris (Nematode)-

Q4. Answer: (a) 3 13/90

Given:

Number = 3.1overline4

Calculation:

=> For the first number,

=> 313/90=(270+13)/90=283/90=3.144444.. = 3.1overline4

=> For the second number,

=> 312/90=(270+12)/90=282/90=3.13333... = 3.1overline3

=> For the third number,

=> 311/90=(270+11)/90=281/90=3.12222.. = 3.1overline2

=> For the fourth number,

=> 314/90=(270+14)/90=284/90=3.155555.. = 3.1overline5

Therefore, the required value of 3.14 is 313/90.

Q5. Answer: (a) 4 hours 10 minutes and 12 seconds

Given:

4.17 hours

Concept Used:

1 hour = 60 minutes

1 minute = 60 seconds

Calculation:

=> We have, 4.17 hours

=> As of the whole part, 4 is considered as a number of hours.

=> Left part = 4.17 – 4 = 0.17

=> Convert this 0.17 into minutes by multiplying it by 60,

=> 0.17 × 60 = 10.2

=> As a whole part, we got 10 minutes.

=> Now, convert 0.2 into seconds by multiplying it by 60,

=> 0.2 × 60 = 12

=> So, we got 12 as seconds.

Therefore, 4.17 hours can be written as 4 hours, 10 minutes, and 12 seconds.

Q6. Answer: (a) 5

According to the given Venn diagram,

From this the yellow part in the diagram represents the teachers who are also social workers but not politicians.

Thus, there are 5 teachers in the diagram represents the teachers who are also social workers but not politicians

Hence, the correct answer is 'option 1'.

Q7. Answer: (a) 24^(th) October 1945

The correct answer is 24th October 1945.

Key Points

• The Charter of the United Nations is the founding document of the United Nations.

• It was signed on 26 June 1945, in San Francisco, at the conclusion of the United Nations Conference on International Organization.

• It came into force on 24 October 1945.

• The United Nations can take action on a wide variety of issues and because of its unique set of powers, it is considered an international treaty.

• As such, the UN Charter is an instrument of international law, and the UN Member States are bound by it.

Additional Information

UN Body	Headquarter
UNICEF	New York, USA

WHO	Geneva, Switzerland
IMF	Washington DC, USA
World Bank	Washington DC, USA
UNESCO	Paris, France
UNDP	New York, USA
UNFCCC	Bonn, Germany

Q8. Answer: (b) Rajeshwar Acharya

The correct answer is Rajeshwar Acharya.

Key Points

• Rajeshwar Acharya is a Hindustani classical vocalist from Varanasi, India.

• He belongs to the Gwalior Gharana of music.

• In 2019, he was conferred the Padma Shri.

Additional Information

• Following three are the recipients of Bharat Ratna, 2019-

• Nanaji Deshmukh- He was a social activist from India. He worked in the fields of education, health, and rural self-reliance. He was a member of RSS, a leader of the Bharatiya Jana Sangh.

• Pranab Mukherjee- He is an Indian politician who served as the 13th President of India from 2012 until 2017. He has been a senior leader in the Indian National Congress and has occupied several ministerial portfolios in the Government of India.

• Bhupen Hazarika- He was an Indian playback singer, lyricist, musician, singer, poet, and film-maker from Assam, widely known as Sudhakantha.

Q9. Answer: (a) 42

The logic here is:

Thus, the odd number is 42.

Hence, the correct answer is 'option 1'.

Q10. Answer: (c) 1984

The correct answer is 1984.

Key Points

• The Raja Ramanna Centre for Advanced Technology is a unit of the Department of Atomic Energy, Government of India.

• On 19 February 1984 the then President of India, Gyani Zail Singh, laid the foundation stone of the Centre.

• In June 1986, the first batch of scientists from BARC, Mumbai, moved to RRCAT and scientific activities were started.

• The Centre is situated in Indore, Madhya Pradesh.

• The Centre is primarily engaged in R&D in non-nuclear front-line research areas of lasers, particle accelerators, and related technologies.

Q11. Answer: (a) 2

Given:

$((3.17 + 9. 12)^2 + (3.17-9.12)^2)/(3.17 \times 3.17 + 9.12 \times 9.12)$

Concept Used:

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

$(a – b)^2 = a^2 + b^2 – 2ab$

Calculation:

=> We have, $((3.17 + 9. 12)^2 + (3.17-9.12)^2)/(3.17 \times 3.17 + 9.12 \times 9.12)$

=> Expanding with formulas, we get

=> $((3.17)^2+(9.12)^2+2\times 3.17\times 9.12+(3.17)^2+(9.12)^2-2\times 3.17\times 9.12)/(3.17^2+9.12^2)$

=> $(3.17^2+9.12^2+3.17^2+9.12^2)/(3.17^2+9.12^2)$

=> $(2(3.17^2+9.12^2))/(3.17^2+9.12^2)=2$

Therefore, the required value of the equation is 2

Q12. Answer: (a) Rohini

The correct answer is Rohini.

Key Points

• Rohini is a series of satellites launched by the Indian Space Research Organization (ISRO).

• The Rohini series consisted of four satellites, each of which was launched by the Satellite Launch Vehicle (SLV).

• Rohini Technology Payload (RTP) was a 35 kg experimental spin-stabilized satellite and was launched on 10 August 1979 from Satish Dhawan Space Centre (SDSC).

• The satellite contained instruments to monitor the launch vehicle.

• Three more satellites RS-1, RS-D1, RS-D2 were launched in 1980, 1981, and 1983 respectively.

Additional Information

• Himawari 8- Himawari-8 (the 8th in the series) is a Japanese geostationary weather satellite operated by the Japan Meteorological Agency.

• Insat-3DR- INSAT-3DR is an Indian weather satellite built by the Indian Space Research Organisation and operated by the Indian National Satellite System. It was launched in 2016.

• Cartostat- This is a series of Indian optical earth observation satellites built and operated by the Indian Space Research Organisation. It was first launched in 2005.

Q13. Answer: (c) The Cabinet Mission Plan 1946

The correct answer is The Cabinet Mission Plan 1946.

Key Points

• The Cabinet Mission of 1946 came to India aiming to discuss the transfer of powers from the British government to the Indian leadership.

• Under the Cabinet Mission Plan of 1946, elections were held for the first time for the Constituent Assembly.

• The Constitution of India was drafted by the Constituent Assembly, and it was implemented under the Cabinet Mission Plan on 16 May 1946.

Additional Information

• The Cabinet Mission of 1946 aimed at preserving India's unity and granting its independence.

• The Cabinet Mission was formulated at the initiative of Clement Attlee, the then Prime Minister of the United Kingdom.

• The mission contained as its members, Lord Pethick-Lawrence (Secretary of State for India), Sir Stafford Cripps (President of the Board of Trade), and A.V. Alexander (First Lord of the Admiralty).

• The cabinet mission recommended an undivided India and turned down the Muslim league's demand for a separate Pakistan.

• It recognized Indian Right to cede from the Commonwealth.

Q14. Answer: (d) Rs. 90

The correct answer is Rs. 90.

Key Points

• Formula Used-

• Profit= SP (selling price)- CP (cost price)

• Profit% = (Profit/CP)x100

• Given-

• Difference between 20% and 14% profit= Rs. 5.40

• Calculation-

• (20/100)CP - (14/100)CP= 5.40

• (6/100)CP= 5.40 => CP= (5.40x100)/6= 90

• So, the CP of the book will be Rs. 90.

Q15. Answer: (d) 40 years

Given:

Age of Ravi's daughter three years ago = 4 years

Age of Ravi's wife = 5 times of daughter's age

Age of Ravi = 5 years more than the wife's age

Calculation:

=> Age of Ravi's daughter three years ago = 4 years

=> Present age of Ravi's daughter = 4 + 3 = 7 years

=> Now, Age of Ravi's wife = 5 times of daughter

=> Age of Ravi's wife = 5 × 7 = 35 years

=> Age of Ravi = 5 more than the age of his wife

=> So, Age of Ravi = 35 + 5 = 40 years

Therefore, the Ravi's present age is 40 years.

Q16. Answer: (b) 61.54 km/h

The correct answer is 61.54 km/h.

Key Points

• Formula used-

• Speed= Distance/Time

• Given-

• Speed= 80Km/hr and 50 Km/hr

• Calculation-

• Let the distance be D Km.

• So, time is taken to cover the distance= D/80 hr.

• And, time is taken for return journey= D/50 hr.

• Total time taken = (D/80) + (D/50) = (8D+5D)/(400)= 13D/400

• Total distance= D+D= 2D

• Average speed= Total distance/ Total Time taken= 2D/(13D/400)= 800/13= 61.5384 ≈ 61.54 (Ans).

Q17. Answer: (a) 9 : 1

Given:

Side of a square is tripled

Concept Used:

Area of a square = $(\text{Side})^2$

Calculation:

=> Let assume that the side of the square is x and the area is A.

=> So, Area of Square, $A = x^2$

=> According to the question, triple the side of a square

=> So, Side of Square = 3x

=> New Area of Square = $3x \times 3x = 9x^2$

=> Ratio of resulting area to that of original area = $(9x^2)/(x^2)=9:1$

Therefore, the ratio of the area of the resulting square to that of the original square is 9 : 1

Q18. Answer: (d) Mangal Pandey

The correct answer is Mangal Pandey.

Key Points

• Mangal Pandey ignited the spark of freedom that led to the revolt of 1857.

• The major cause of the revolt was the fact that the cartridges of the new Enfield rifles were greased with the fat of cows and pigs.

• Before loading these rifles the sepoys had to bite off the paper on the cartridges. Both Hindu and Muslim sepoys refused to use them.

• Other reasons were British policies of heavy taxation, west-driven educational, social, and social reforms,

• The revolt started from Merrut and later spread across different parts of the country.

Additional Information

Centres Of Revolt	Leaders Who Led The Revolt	British Generals Who Suppressed The Revolt
Delhi	General Bakht Khan	Lieutenant Willoughby, John Nicholson, and Lieutenant Hudson
Kanpur	Nana Saheb	Sir Hugh Wheeler and Sir Colin Campbell

YourMockTest.com — Free Study Material

Lucknow	Begum Hazrat Mahal	Henry Lawrence, Brigadier Inglis, Henry Havelock, James Outram, and Sir Colin Campbell
Bareilly	Khan Bahadur	James Outram
Bihar	Kunwar Singh	Colin Campbell
Faizabad	Maulvi Ahmadullah	Colin Campbell
Jhansi	Rani Laxmibai	Hugh Rose

Q19. Answer: (a) 5 × 10^7

Given:

Number = 56789214

Concept used:

Place value = It is the value of each digit in a number. Like 3 in 234 has the place value of 3 tens or 30 or 3 x 10.

Calculation:

=> The number 5 is in the one crore's place in the number 56789214.

=> So, Place value of 5 = 5 x 10000000

=> Place value of 5 = 50000000 = 5 × 107

Therefore, the place value of 5 in the number 56789214 is 5 × 107

Q20. Answer: (d) 30%

Given:

Profit earned by selling article for Rs. 2,400 = 20%

New selling price = Rs 2,600

Concept used:

Cost price = CP = 100/(100+Profit%)×SP

Profit % = Profit/CP×100

Calculation:

=> CP = 100/(100+Profit %)×SP

=> Cost price of article = 100/(100 + 20)× 2400=100/120× 2400=2000 Rs

=> New selling price = Rs 2600

=> Now, Profit = SP – CP

=> Profit = 2600 – 2000 = Rs. 600

=> Profit % = Profit/CP× 100

=> Profit % = 600/2000× 100 = 30%

Therefore, if the same article were sold for Rs. 2,600, then the gain profit percentage would be 30%.

Q21. Answer: (b) 4

The logic followed here is:

Product of the L.H.S number ÷ 2 = R.H.S number

Now, for 56 : 15

= (5 × 6) ÷ 2 = 30 ÷ 2 = 15.

for, 76 : 21

= (7 × 6) ÷ 2 = 42 ÷ 2 = 21.

Similarly, for 81 : ?

= (8 × 1) ÷ 2 = 8 ÷ 2 = 4.

So, 2 is the number that will be replace the question mark.

Hence, the correct answer is "Option 2".

Q22. Answer: (d) Pandavani

The correct answer is Pandavani.

Key Points

• Teejan Bai is an exponent of Pandavani, a traditional performing art form, from Chhattisgarh.

• In this art form, the actors narrate tales from the Mahabharata, with musical accompaniments.

• In this story, Bhima, the second eldest son of Pandava is the hero.

• This art form is famous in the neighbouring areas of Madhya Pradesh, Orissa, and Andhra Pradesh as well.

• Jhaduram Devangan and Ritu Verma are also associated with this art form.

Additional Information

• Gondhal is a famous musical art form of Maharashtra. Lallati Bhandar is a hit Gondhal song from the movie Jogwa, sung by Ajay Gogavale.

• Lavani is a genre of music popular in Maharashtra. Some of the notable artists of this art form are Kantabai Satarkar, Surekha Punekar, Mangala Bansode, Sandhya Mane, etc.

• Bharud is a very old poetic form that was used by 16th-century poets like Eknath to compose devotional songs. It is one of the important folk arts of Maharashtra.

Q23. Answer: (a) 14

Given:

cot 35° = 2 - √3

Concept Used:

tan(90-θ)=cotθ

cot(90-θ)=tanθ

Calculation:

=> We have, cot 35° = 2 - √3

=> So, tan 35º = 1/(2-√3)

=> Rationalizing it, we get

=> tan 35º = 1/(2-√3)× (2+√3)/(2+√3)=(2+√3)/(4-3)=2+√3

=> Now, tan 35° cot 55° + tan 55° cot 35° = tan 35º cot (90 – 35) + tan (90 – 35) cot 35º

=> tan 35º tan 35º + cot 35º cot 35º

=> tan² 35º + cot² 35º

=> Putting the values,

=> (2+√3)²+(2-√3)²

=> 4+3+4√3+4+3-4√3=7+7=14

Therefore, the required value of tan 35° cot 55° + tan 55° cot 35° is 14

Q24. Answer: (d) Lord Dufferin

The correct answer is Lord Dufferin.

Key Points

• Lord Dufferin was the viceroy of India when the Indian National Congress was formed in 1885.

• Indian National Congress was a major event of the tenure of Viceroy Lord Dufferin.

• The tenure of Lord Dufferin was from 1884 to1888.

• The main aim of the Indian National Congress was to develop close relations between national workers, consolidation of national unity among all and dissolution of all religions, and nepotism.

• During Lord Dufferin's tenure, the following things took place-

• Bengal Tenancy Act 1885.

• Third Burmese War and annexation of Burma (1885).

Additional Information

• Lord Curzon served as Viceroy of India from 1899 to 1905.

• On the resignation of Lord Curzon, Lord Minto was appointed Viceroy and Governor-General of India from 1905 to 1910.

• Lord Ripon (1880-1884) was the Viceroy of India when the Ilbert bill was introduced in legislation.

• Lord Ripon was the son of Prime Minister F.J.Robinson(UK).

• Lord Irwin was the Viceroy of India from 1926-to 1931.

• Major Incidents took place in India under him:

• In 1928, Simon's commission came to India.

• The incidence of Dandi took in 1930.

• The Civil Disobedience movement was started in 1930.

Q25. Answer: (a) TALEN

The logic followed here is:

Option 1: TALEN has the word N in it but not R. So, it is not a combination of the letters of the word LATER.

Option 2: ATLER is a combination of the word LATER.

Option 3: TALER is a combination of the word LATER.

Option 4: LATER is a combination of the word LATER.

So, from the given options, TALEN is the odd one among them.

Hence, the correct answer is "option 1".

Q26. Answer: (d) 2014

The correct answer is 2014.

Key Points

• Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) was launched on 25 September 2014.

• DDU-GKY was launched by Union Ministers Nitin Gadkari and Venkaiah Naidu on the occasion of the 98th birth anniversary of Pandit Deendayal Upadhyaya.

• The Vision of DDU-GKY is to skill rural youth who are poor and provide them with jobs having regular monthly wages or above the minimum wages.

• DDU-GKY aims to target youth, in the age group of 15–35 years.

• DDU-GKY is one of the clusters of initiatives of the Ministry of Rural Development, Government of India.

• DDU-GKY is a part of the National Rural Livelihood Mission (NRLM)- the Mission for poverty reduction called Aajeevika.

Q27. Answer: (a) India and Russia

The correct answer is India and Russia.

Key Points

• BrahMos is a joint venture between India's Defence Research and Development Organisation (DRDO) and NPO Mashinostroyenia of Russia.

• The name Brahmos is a portmanteau formed from the names of two rivers, the Brahmaputra of India and the Moskva (river) of Russia.

• Brahmos Missile is manufactured by The BrahMos Aerospace Private Limited, headquartered in New Delhi, India.

• The BrahMos is a medium-range ramjet supersonic cruise missile that can be launched from submarines, ships, aircraft, or land.

• It is notably one of the fastest supersonic cruise missiles.

Additional Information

• Important missiles in India

Name	Type
Aakash	Surface-to-air
Agni	Surface to surface
Nag	Anti-tank missile
Prithvi	surface-to-surface
Trishul	Surface-to-air

Q28. Answer: (c) 5

Given:

Difference between the interior and exterior angles of a polygon = 36º

Concept Used:

Number of sides in polygon = (360º)/(Measure of Exterior angle)

Calculation:

=> Let the interior angle be x and the exterior angle is y.

=> So, Sum of the Interior and Exterior angle is 180º.

=> x + y = 180º → (1)

=> According to the question,

=> x – y = 36º → (2)

YourMockTest.com — Free Study Material

=> Solving both the equations, we get
=> x = 108º and y = 72º.
=> Number of sides = 360/72=5
Therefore, the number of sides in the polygon is 5

Q29. Answer: (c) 120°

Given:
Ratio of angles = 4 : 9 : 11 : 1
Concept used:
Sum of all the angles of the quadrilateral = 360°
Calculation:
=> Let the angles of the quadrilateral be 4x, 9x, 11x and 12x.
=> Sum of all the angles of the quadrilateral = 360°
=> So, 4x + 9x + 11x + 12x = 360°
=> 36x = 360°
=> x = 360/36 = 10°
=> Now, the largest of these angle is 12x.
=> Largest angle = 12x = 12 × 10° = 120°
Therefore, the largest angle of this quadrilateral is 120°.

Q30. Answer: (c) Rs. 1260

Given:
Principal = Rs 6,000
Rate of Interest = 10%
Time = 2 years
Concept Used:
Compound Interest = Principal(1+r/100)^t – Principal
Calculation:
=> Putting all the values in the formula,
=> Compound Interest = 6000(1+10/100)²-6000
=> Compound Interest = 6000× 110/100× 110/100-6000
=> Compound Interest = 6000× 121/100-6000=60× 121-6000=7260-6000=Rs 1260
Therefore, the compound interest for the principal amount Rs 6,000 at the rate of 10% per annum for 2 years is Rs 1,260

Q31. Answer: (a) 110

The logic followed here is: Number × (Number - 1) in L.H.S : R.H.S
Now, for 7 : 42
7 × (7 - 1)
= 7 × 6 = 42,
for 9 : 72
9 × (9 - 1)
9 × 8 = 72,
Similarly, for 11
11 × (11 - 1)
11 × 10 = 110.
So, 11 is related to 110.
Hence, the correct answer is "110".

Q32. Answer: (c) 3

Given:
Increase in population every year = 10%
Present population = 1000
Required population = 1331

YourMockTest.com — Free Study Material

Concept Used:

Compound Interest = Principal (1+r/100)^t

Calculation:

=> Principal = 1000

=> Putting the values in the formula,

=> 1000 (1+10/100)^t=1331

=> ((100+10)/100)^t=1331/1000

=> (11/10)^t=1331/1000

=> (11/10)^t=(11/10)³

=> Equating the values, we get t = 3 years.

Therefore, the number of years in which population will become 1331 is 3 years.

Q33. Answer: (a) (log _e(x/y))/(log _e(2 + a))

Given:

y = x/((2 + a)^Z)

Concept Used:

System of log on the base e

Calculation:

=> We have, y = x/((2 + a)^Z)

=> y× (2+a)^z=x

=> (2+a)^z=x/y

=> Taking log of both the sides,

=> z × log_e(2 + a) = log_e x/y

=> z = (logx/y)/(log(2+a))

Therefore, the required value of z is (log _e(x/y))/(log _e(2 + a)).

Q34. Answer: (a) greenhouse gas emissions

The correct answer is greenhouse gas emissions.

Key Points

• Kyoto Protocol is an international agreement that aims to reduce greenhouse gas emissions.

• The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005.

• There are 84 signatories and 192 parties of the protocol.

• The Protocol is applied to seven greenhouse gases carbon dioxide (CO2), Methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6), Nitrogen trifluoride (NF3). Nitrogen trifluoride was added for the second compliance period during the Doha Round in 2012.

Additional Information

• Important international treaties related to science and the environment

Montreal Protocol	Ozone Layer Depletion
Nagoya Protocol	Access and Benefit Sharing of Genetic Resources
Minamata Convention	Protection from Mercury and Mercury compounds
Ramsar Convention	Protection of Wetlands
Rotterdam Convention	Handling of hazardous chemicals and pesticides in international trade

Q35. Answer: (b) Ringgit

The correct answer is Ringgit.

Key Points

• The Malaysian Ringgit is the currency of Malaysia.

• It is divided into 100 Sen, so that 100 Sen= 1 Ringgit (similar to 100 Paise= 1 Rupee).

• The ringgit is issued by the Central Bank of Malaysia.

Additional Information

YourMockTest.com — Free Study Material

Currency	Country	Capital
Euro	European Union	NA
Peso	Philippines, Uruguay, Mexico, Cuba, Argentina, Chile	Manila, Montevideo, Mexico City, Havana, Buenos Aires, Santiago
Kwacha	Zambia, Malawi	Lusaka, Lilongwe

Q36. Answer: (b) 16 2/3 %

Given:

Increase in price of tea = 20%

Concept Used:

Percentage Decrease = (Increase/(Increased Price)) × 100

Calculation:

=> Let the original price of tea be Rs 100

=> Increased price of tea = 100 + 20% of 100

=> Increased price of tea = 100+20/100× 100=100+20=Rs 120

=> Increase in price = 120 – 100 = Rs 20

=> Percentage decrease in consumption of tea = 20/120× 100=50/3=162/3%

Therefore, the percentage should a household reduce its consumption of tea so that the budget remains the same is 162/3%.

Q37. Answer: (c) Greek

The correct answer is Greek.

Key Points

• The word comet has been taken from the Greek word kometes meaning "a head with long hair".

• Comets are cosmic snowballs of frozen gases, rock, and dust that orbit the Sun.

• The dust and gases form a tail that stretches away from the Sun for millions of miles.

• There are likely billions of comets orbiting our Sun in the Kuiper Belt.

• The Kuiper belt is a circumstellar disc in the outer Solar System, around the orbit of Neptune.

Additional Information

• Asteroid- A rocky object that orbits the sun and has an average size between a meteoroid and a planet.

• Meteoroid- A space rock which is relatively a small object travelling through space, between the size of a grain of dust and a small asteroid.

• Meteorite- A rock that falls to Earth from space. Meteorites can be rocks from other planets, asteroids, and possibly comets.

• Meteor- A meteoroid that enters Earth’s atmosphere and burns up.

Q38. Answer: (c) computer hardware

The correct answer is computer hardware.

Key Points

• Computer hardware is the physical component that a computer system requires to function.

• Examples of computer hardware are circuit board (including the motherboard, graphics card), the cabinet enclosing the CPU (Central Processing Unit), ventilation fans, Keyboard, monitor, etc.

Additional Information

• Storage unit- It is a part of the computer system which is employed to store the information and instructions to be processed.

• Control unit- It is a component of a computer's central processing unit (CPU) that directs the operation of the processor. It also directs the flow of data between the CPU and the other devices.

• Computer software- It is a collection of instructions that tell a computer how to work.

Q39. Answer: (a) 75

The alphabets and their positions are:

The logic here is:For K

And for ROW

Similarly for NECK we have:

Thus, the code for the given word is 75.

YourMockTest.com — Free Study Material

Hence, the correct answer is 'option 1'.

Q40. Answer: (b) 707

Given:

Number = 53736

Concept Used:

Face Value and Place Value

Calculation:

=> In the given number 53736,

=> Face value of 7 = 7

=> Place value of 7 = 700

=> Sum of face and place value of 7 = 7 + 700 = 707

Therefore, the sum of the place value and face value of 7 is 707

Q41. Answer: (b) father

Option 2 is correct.

Given that, B is A's son. B is my son's only paternal uncle.

Now, B is my son's paternal uncle, that means B is my only brother. B is A's son means that A is our father.

Thus, Option 2 is correct.

Q42. Answer: (a) M Fathima Beevi

The correct answer is M Fathima Beevi.

Key Points

• The first female judge of the Supreme Court of India was Fathima Beevi.

• She was appointed on 6 October 1989.

• So far, no woman has been appointed as the Chief Justice of India.

• As per seniority, B. V. Nagarathna is assumed to become the first female Chief Justice of India in 2027.

• Leila Seth was an Indian judge who served as the first woman judge on the Delhi High Court and later, she became the first woman Chief Justice of a state High Court, Himachal Pradesh High Court, on 5 August 1991.

• Recently on 24th January 2022, Ayesha A. Malik took the oath to become the first female judge of the Supreme Court of Pakistan.

Additional Information

• R Banumathi is the 6th female Judge in the Supreme Court of India.

• Sujatha V Manohar is the 2nd female Judge in the Supreme Court of India.

• Indira Banerjee is the 8th female Judge in the Supreme Court of India.

Q43. Answer: (a) 1916

The correct answer is 1916.

Key Points

• The Banaras Hindu University was founded by Pandit Madan Mohan Malviya, in 1916.

• The university was formerly called Central Hindu College, which was founded by Annie Besant in 1898.

• She later gifted the Central Hindu College to Pandit Madan Mohan Malviya to get it converted into Banaras Hindu University.

• Banaras Hindu University was created under the Parliamentary legislation - B.H.U. Act 1915.

Additional Information

• Madan Mohan Malaviya was an Indian scholar, educational reformer, and politician.

• He has been the president of the Indian National Congress four times.

• He is remembered for his role in the Indian independence movement.

• He is the founder of Akhil Bharatiya Hindu Mahasabha.

Q44. Answer: (b) 45°

Given:

$\sin(x - y) = 1/2$

$\cos(x + y) = 1/2$

Concept Used:

Basic Trigonometry Calculation

Calculation:

=> We have, sin(x – y) = 1/2

=> We know that, sin 30º = 1/2

=> So, sin(x – y) = sin 30º

=> Equating both, we get

=> x – y = 30 → (1)

=> Same way for cos(x + y) = 1/2

=> cos 60º = 1/2

=> So, cos(x + y) = cos 60º

=> Equating both, we get

=> x + y = 60 → (2)

=> Solving equations (1) and (2), we get

=> x = 45º and y = 15º

Therefore, the required value of x is 45º.

Q45. Answer: (b) 20%

Given:

Cost price = Rs 950

Selling price = Rs 1,140

Concept Used:

Gain Percentage = Gain/CP× 100

Calculation:

=> Gain = Selling Price – Cost Price

=> Gain = 1140 – 950 = Rs 190

=> So, Gain percentage = 190/950× 100=20%

Therefore, the gain percentage is 20%.

Q46. Answer: (d) Article 14-18

The correct answer is Article 14-18.

Key Points

• The Right to Equality is one of the six fundamental rights of the Constitution.

• It is contained in the Indian Constitution from Article 14 to 18.

• Following are the provisions under the Right to Equality-

• Article 14- equality before the law as well as equal protection of the law to all people.

• Article 15- prohibits discrimination on the grounds of religion, race, caste, sex, place of birth, and also gender or any of them.

• Article 16- guarantees equality of opportunity in matters of public employment.

• Article 17- Abolition of untouchability.

• Article 18- Abolition of all titles except military and academic

Q47. Answer: (a) curie

The correct answer is curie.

Key Points

• Curie (Ci) is a unit for measuring radiation emitted by radioactive material. It is used in the US system of units.

• The System International of units (SI system) uses the unit of becquerel (Bq) as its unit of radioactivity.

• One Curie is 37 billion Bq.

Additional Information

• Watt- It is the SI unit of power.

• Ampere- It is the SI unit of electric current.

• Pascal- It is the SI unit of pressure.

YourMockTest.com — Free Study Material

Q48. Answer: (a) 1950

The correct answer is 1950.

Key Points

• The Planning Commission was an institution in the Government of India formed in 1950.

• Its primary function was the formulation of India's Five-Year Plans.

• The commission comprises the Prime Minister as the ex officio Chairman and a Deputy Chairman, with the rank of a full Cabinet Minister.

• Cabinet Ministers with certain important portfolios acted as ex-officio members of the Commission.

• The full-time members were experts in various fields like economics, industry, science, and general administration.

• The Planning Commission was dissolved in 2014.

• The Government of India constituted NITI Aayog on 1 January 2015 to replace the Planning Commission.

Q49. Answer: (b) 43.75%

Given:

Radius of circle is reduced by 25%

Concept Used:

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

Calculation:

=> Let the radius of circle be x cm.

=> Area of circle = $\pi \times x^2 = \pi x^2$ cm²

=> Reduction in the radius = 25%

=> Radius after reduction = $x - 25/100 \times x = x - x/4$

=> Radius after reduction = $(4x - x)/4 = 3x/4$

=> Area of circle = $\pi \times 3x/4 \times 3x/4 = (\pi 9x^2)/16$

=> Reduction in Area of Circle = $\pi x^2 - (\pi 9x^2)/16 = (16\pi x^2 - 9\pi x^2)/16 = (7\pi x^2)/16$

=> Percentage decrease in area of circle = $((7\pi x^2)/16)/(\pi x^2) \times 100 = 7/16 \times 100$

=> Percentage decrease in area of circle = 700/16=43.75%

Therefore, the area of circle is reduced by 43.75%.

Q50. Answer: (a) 60

Given:

Dividend = 124, 307 and 243

Remainders = 4, 7 and 3

Concept Used:

Prime Factorization

Calculation:

=> On division, 124, 307 and 243 leaves remainders 4, 7 and 3 respectively.

=> Subtracting the remainder from the numbers, we get

124 – 4 = 120,

307 – 7 = 300,

243 – 3 = 240

=> Now, required greatest number is the HCF of 120, 300 and 240.

=> Factoring the numbers, we get

=> 120 = 2 × 2 × 2 × 3 × 5

=> 300 = 2 × 2 × 3 × 5 × 5

=> 240 = 2 × 2 × 2 × 2 × 3 × 5

=> HCF = 2 × 2 × 3 × 5 = 60

Therefore, the greatest number that divides 124, 307 and 243, leaving remainders 4, 7 and 3 is 60.

Q51. Answer: (a) 3/5

Given:

Sum of two numbers = 30

Product of two numbers = 50

Calculation:

=> Let the two numbers be x and y.

=> According to the question,

=> x + y = 30 and xy = 50

=> Sum of the reciprocals of numbers = 1/x+1/y

=> Sum of reciprocals of numbers = (y+x)/xy

=> Putting the values, we get

=> Sum of reciprocals of numbers = 30/50=3/5

Therefore, the sum of the reciprocals of two numbers is 3/5.

Q52. Answer: (b) Erasable Programmable Read-Only Memory

The correct answer is Erasable Programmable Read-Only Memory.

Key Points

• EPROM (Erasable Programmable Read-Only Memory) is a form of computer memory.

• It does not lose its content when the power supply is cut off and that can be erased and reused.

• EPROMs are generally employed for programs designed for repeated use but that can be upgraded with a later version of a program.

• EPROMs are erased with ultraviolet light.

Additional Information

• The EPROMs have been upgraded with extended capability as an EEPROM (Electrically Erasable Programmable Read-Only Memory).

• Flash memory, which is extensively used in computers is an EEPROM.

Q53. Answer: (a) Statement I and II both are not sufficient.

Option 1 is correct.

Statement I says that P and Q are brothers and statement II says that Q's wife is the sister of M's wife.

Both statements are not sufficient to answer the given question as the only information given about M is that M has a wife who is the sister of Q's wife, an information which has no relation in analyzing the identity of M's father.

Thus, Option 1 is correct.

Q54. Answer: (a) ab/c

Given:

Numbers = a and b

LCM = c

Concept Used:

LCM × HCF = Product of two numbers

Calculation:

=> According to the formula,

=> c × HCF = a × b

=> HCF = ab/c

Therefore, the HCF for the given numbers is ab/c.

Q55. Answer: (b) 17.5

Given:

√2401/x = x/6.25

Calculation:

=> We have, √2401/x = x/6.25

=> x× x=6.25× √2401

=> x^2=6.25× √(7× 7× 7× 7)

=> x^2=6.25× 7× 7=306.25

=> x=√306.25=17.5

Therefore, the required value of x is 17.5

Q56. Answer: (b) Cellulose

The correct answer is Cellulose.

Key Points

• Humans cannot digest cellulose.

• It is because they lack the enzymes essential for breaking the beta-acetyl linkages in cellulose.

• The undigested cellulose acts as fiber that binds together waste in our digestive tracts.

• However, animals like cows and buffaloes can digest cellulose because of the presence of anaerobic symbiotic bacteria in their digestive tracts.

• Humans can digest Glycogen, Amino Acids, and Starch.

Q57. Answer: (d) nucleus and cell membrane

The correct answer is nucleus and cell membrane.

Key Points

• The cytoplasm is the gel-like fluid present between the nucleus and cell membrane inside the cell. It is the medium for chemical reactions.

• All of the organelles in eukaryotic cells, such as the nucleus, endoplasmic reticulum, and mitochondria, are located in the cytoplasm.

• The portion of the cytoplasm that is not contained in the organelles is called the cytosol.

Q58. Answer: (a) 4

Given:

$4\sin 2\theta + 5\cos 2\theta$

Concept Used:

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

Calculation:

=> We have, $4\sin 2\theta + 5\cos 2\theta$

=> We can write, $\sin^2\theta=1-\cos^2\theta$

=> Putting the values in the equation,

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

=> $4-4\cos^2\theta+5\cos^2\theta=4+\cos^2\theta$

=> For the minimum value, $\cos^2\theta=0$

=> $4+\cos^2\theta=4$

Therefore, the minimum value of $4\sin 2\theta + 5\cos 2\theta$ is 4

Q59. Answer: (c) 8

Given:

First 15 natural numbers

Concept Used:

Sum of n terms = (n(n+1))/2

Arithmetic Mean = Total Sum ÷ Number of values

Calculation:

=> We have, n = 15

=> Sum of n terms = $(15(15+1))/2=(15\times 16)/2=120$

=> Total number of values = 15

=> Arithmetic Mean of first 15 natural numbers = 120/15=8

Hence, the arithmetic mean of first 15 natural numbers is 8

Q60. Answer: (c) amino acids

The correct answer is amino acids.

Key Points

• When protein reaches our stomach, hydrochloric acid and enzymes called proteases (also called a peptidase or proteinase) break it down into smaller chains of amino acids.

• From our stomach, these smaller chains of amino acids move into the small intestine.

• As this happens, the pancreas releases enzymes and a bicarbonate buffer that reduces the acidity of digested food.

• This reduction allows more enzymes to work on further breaking down amino acid chains into individual amino acids.

Additional Information

• Carbohydrates - It is digested by amylase, converted into glucose, and is finally converted into glycogen for storage.

• Starch - It is a special type of carbohydrate and is digested in a similar manner.

• Small globules - It is basically a small drop or ball of a liquid floating in a medium.

• A protease (also called a peptidase or proteinase) is an enzyme that catalyzes (increases reaction rate or "speeds up") proteolysis, breaking down proteins into smaller polypeptides or single amino acids, and spurring the formation of new protein products.

Q61. Answer: (c) Entertainment

The correct answer is Entertainment.

Key Points

• Infrastructure refers to the basic or fundamental systems, services, and facilities that are necessary for a country or an organization.

• These basic facilities include buildings, transport, water and power supplies, sewage, etc.

• Infrastructure does not include entertainment like cinema, circus, and music or art shows.

Q62. Answer: (a) -5

According to the given information:

Letter	A	B	C
Stands for	•	•	×

Given expression: 9C5B10A5C12

After replacing the symbols: 9 × 5 + 10 - 5 × 12

Now, by BODMAS Rule:

9 × 5 + 10 - 5 × 12

= 45 + 10 - 60

= 55 - 60

= - 5.

Hence, the correct answer is "- 5".

Q63. Answer: (c) Chlorofluorocarbons

The correct answer is Chlorofluorocarbons.

Key Points

• Chlorofluorocarbons are a major cause of the depletion of the ozone layer.

• These halocarbons are used as refrigerants, solvents, propellants, and foam-blowing agents.

• The molecules of chlorofluorocarbons in the stratosphere are broken down by ultraviolet radiations and release chlorine atoms. These atoms react with ozone and destroy it.

Additional Information

• The Ozone layer reduces harmful UV radiation reaching the Earth's surface.

• The Ozone layer is present in Earth’s atmosphere (15 - 35 km above Earth) in the lower portion of the stratosphere and has relatively high concentrations of ozone (O3).

• Ozone layer depletion is the gradual thinning of the earth’s ozone layer present in the upper atmosphere.

• World Ozone Day is observed on September 16 every year to spread awareness among people about the depletion of the Ozone Layer.

Q64. Answer: (a) Rangaswamy Cup

The correct answer is Rangaswamy Cup.

Key Points

• The Rangaswamy Cup is associated with hockey.

• The Rangaswami Cup was first held in 1928 as an Inter-Provincial Tournament to select players for the national team for the Olympics.

Additional Information

YourMockTest.com — Free Study Material

Hockey	Agha Khan Cup, Dhyan Chand Trophy, Azlan Shah Cup, Indira Gandhi Gold Cup, Rangaswami Cup
Cricket	C.K.Naidu Trophy, Deodhar Trophy, Duleep Trophy, Irani Trophy, Ranji Trophy
Tennis	Davis Cup, Billie Jean King Cup, Hopman Cup, Laver Cup, ATP Cup
Football	B.C. Roy Trophy, Bordoloi Trophy, Durand Cup, Nehru Gold Cup, Rovers Cup, Santosh Trophy, Subroto Cup

Q65. Answer: (b) Cloud

Given: Russia is my country

Now,

Option 1) 'Your' - Can be formed (country - All letters are present)

Option 2) 'Cloud' - Can be formed (Russia is my country - L and D is not present)

Option 3) 'Rain' - Can be formed (Russia is my country - All letters are present)

Option 4) 'Minor' - Can be formed (Russia is my country - All letters are present)

So, Cloud can not be formed from the given word.

Hence, the correct answer is "Cloud".

Q66. Answer: (c) Germany, 1907

The correct answer is Germany, 1907.

Key Points

• Bhikhaiji Cama popularly called Madam Cama was a prominent figure in the Indian independence movement.

• The Indian National Flag (tricolor) was unfurled by Bhikhaiji Cama on 22 August 1907, at the International Socialist Conference in Stuttgart, Germany.

• The flag was referred to as the "Flag of Indian Independence".

• It was co-designed by Cama and Vinayak Damodar Savarkar and it later served as one of the templates from which the current national flag of India was created.

Additional Information

• In India, the first flag was hoisted on August 7, 1906, in the Parsee Bagan Square (Green Park) in Calcutta now Kolkata.

• At that time, the flag flaunted only three horizontal stripes of red, yellow, and green, with Vande Mataram written in the middle.

Q67. Answer: (b) Satyendranath Tagore

The correct answer is Satyendranath Tagore.

Key Points

• Satyendranath Tagore was the first Indian who became an Indian Civil Service officer in 1864.

• He was an Indo-Bengali civil servant, poet, composer, writer, social reformer, and linguist from Kolkata, West Bengal.

• He was a member of Brahmo Samaj.

• Some of his literary works include Bombai Chitr, Nabaratnamala, Bouddhadharma, Bharatbarsiyo Ingrej, etc.

• His patriotic Bengali language song "Mile Sabe Bharat Santan, Ektan Gago Gaan" (unite, India's children, sing in unison), is considered as the first national anthem of India.

Additional Information

• Lakshmi Kant Jha from Bihar is the eighth Governor of the Reserve Bank of India from 1967 to 1970.

• Hirubhai Patel was an Indian civil servant who played a major role in the issues regarding internal and national security in the first years after the independence of India. From 1977 to 1979, he served as the Finance Minister and later Home Minister of India.

• Shyamji Krishna Varma is an Indian revolutionary and freedom fighter, lawyer, and journalist who founded the Indian Home Rule Society, India House, and The Indian Sociologist in London.

Q68. Answer: (c) Soil Erosion

The correct answer is Soil Erosion.

Key Points

• Tsunamis are catastrophic ocean waves, usually caused by a submarine, underwater or coastal landslide, earthquakes, or volcanic eruption.

YourMockTest.com — Free Study Material

• The sea phenomena cause a large volume of water to displace creating massive waves.

• Tsunami is a Japanese word meaning Harbour Wave. It is also called Tidal Wave because it appears as a rapidly rising tide.

• Tsunami waves do not resemble normal undersea currents or sea waves because their wavelength is far longer.

• Soil Erosion cannot be a cause for the phenomena of Tsunami.

• Soil erosion is a gradual process that occurs when the impact of water or wind detaches and removes soil particles, causing the soil (or soil quality) to deteriorate.

• Tsunamis may cause soil erosion in the areas affected but the reverse is not true.

Additional Information

• Volcanic Eruptions - A volcano is an opening or rupture in the earth's surface that allows magma (hot liquid and semi-liquid rock), volcanic ash, and gases to escape. A volcanic eruption is when lava and gas are released from a volcano—sometimes explosively. The most dangerous type of eruption is called a 'glowing avalanche' which is when freshly erupted magma flows down the sides of a volcano.

• Earthquakes - An earthquake (also known as a quake, tremor, or temblor) is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves.

• Submarine Landslides are marine landslides that transport sediment across the continental shelf and into the deep ocean. A submarine landslide is initiated when the downwards driving stress (gravity and other factors) exceeds the resisting stress of the seafloor slope material, causing movements along one or more concave to planar rupture surfaces.

Q69. Answer: (a) Pather Panchali

The correct answer is Pather Panchali.

Key Points

• Pather Panchali is an epic drama film written and directed by Satyajit Ray and produced by the Government of West Bengal.

• It is an adaptation of Bibhutibhushan Bandyopadhyay's 1929 Bengali novel of the same name and marked Ray's directorial debut.

• It is an Indian Bengali-language film and was released in 1955.

• Other famous films by Satyajit Ray are Charulata (The Lonely Wife) (1964), Aparajito (1956), Jalsaghar (1958), Devi (1960), etc.

Additional Information

• Kora Kagaz - It was directed by Anil Ganguly and was released in 1974.

• Mahal - It is a 1970 Indian mystery thriller film that stars Dev Anand, Asha Parekh, and Farida Jalal and was directed by Kamal Amrohi.

• Pyaasa - It is a 1957 movie directed by Guru Dutt.

Q70. Answer: (d) Moon

The logic followed here is:

Jupiter	Planet
Venus	Planet
Mercury	Planet
Moon	Natural Satellite

Jupiter, Venus, and Mercury all are the planets.

Whereas,

Moon is the natural satellite of the planet Earth.

Hence, the correct answer is "Moon".

Q71. Answer: (c) 4900

Given:

Divisors = 10, 14 and 28

Concept Used:

Smallest Divisible Number = LCM × Unpaired prime factors

Calculation:

=> LCM of 10, 14 and 28 = 140

=> Prime factors of 140 = 2 × 2 × 5 × 7

=> While pairing to make the number a perfect square, 5 and 7 have no pair.

=> So, 140 should be multiplied by 5 and 7 to make it a perfect square number.

=> 140× 5× 7=4900

Hence, the smallest number which is divisible by 10, 14 and 28 which is perfect square is 4900

Q72. Answer: (a) National Development Agenda

The correct answer is National Development Agenda.

Key Points

• The NSSO (National Sample Survey Organisation) consists of four divisions-

• The Survey Design and Research Division (SDRD)

• The Field Operations Division (FOD)

• The Data Processing Division (DPD)

• The Coordination and Publication Division (CPD).

• The NSSO comes under the Ministry of Statistics and Programme Implementation.

• The NSSO functions under the overall direction of a Governing Council.

• In addition to the non-official Chairman, the Governing Council is composed of five academicians, five data users from Central and State Government departments, and senior officers of the Ministry.

• The NSSO is headed by the Director-General and Chief Executive Officer (DG&CEO) who is also the Member-Secretary of the Governing Council.

Q73. Answer: (c) 12

Given:

Time taken by Ram to finish the work = 20 days

Time taken by Shyam to finish the work = 30 days

Concept Used:

Per day work = 1 ÷ Efficiency

Calculation:

=> Work done by Ram in one day = 1/20 units

=> Work done by Shyam in one day = 1/30 units

=> If they work together,

=> Efficiency to finish the work = 1/20+1/30

=> Efficiency to finish the work = (3+2)/60=5/60

=> Efficiency to finish the complete work = 1/12

=> Time taken by both to complete the work = 12 days

Therefore, while working together Ram and Shyam take 12 days to complete the work.

Q74. Answer: (b) Brihadisvara Temple

The correct answer is Brihadisvara Temple.

Key Points

• Brihadishvara Temple was built by Tamil king Raja Raja Chola I between 1003 and 1010 AD.

• It is located on the South Bank of the Cauvery river in Thanjavur, Tamil Nadu, India.

• The temple is dedicated to Lord Shiva.

• It is also a part of the UNESCO World Heritage Site.

Additional Information

• Lingaraj Temple - It is a Hindu temple dedicated to Shiva, located in Bhubaneswar, Odisha. It was built by King Jajati Keshari and completed by King Lalatendu Keshari.

• Meenakshi Temple - It is located in Madurai, Tamil Nadu. It was built by the Pandayan Emperor Sadayavarman Kulasekaran I (1190 CE–1205 CE).

• Jagannath Temple - It is located in Puri, Odisha, and was built by Ananta Varman Chodaganga Deva, the first king of the Eastern Ganga dynasty.

• Raja Raja Chola I was a Chola emperor who reigned from 985 CE to 1014 CE and was the most powerful king in the south at his time chiefly remembered for reinstating the Chola power and ensuring its supremacy in South India and the Indian Ocean.

Q75. Answer: (b) 1

Given:

Dividend = 19^(300)

YourMockTest.com — Free Study Material

Divisor = 20

Calculation:

=> We have, (19^(300))/20

=> Writing it as, (20-1)^(300)/20=(-1^(300))/20

=> As power on –1 is 300, which is even, so

=> (-1^(300))/20=1/20

=> On dividing 1 with 20, we got Remainder = 1

Therefore, the remainder on dividing 19^(300) by 20 is 1

Q76. Answer: (c) Court

The logic followed here is:

Football is a sport that needs a field to play in it.

Whereas,

Tennis is a sport that is played in a court.

We know that, a Ring is used for boxing, a ball is an equipment of a sport and net too, is an equipment of a sport.

Hence, the correct answer is "Option 3".

Additional Information

Term	Related with
Ring	Boxing
Ball	Cricket/Tennis
Court	Tennis
Net	Badminton

Q77. Answer: (b) Ubuntu

The correct answer is Ubuntu.

Key Points

• Ubuntu is a Linux-based open-source Operating System.

• It can be used in enterprise servers, desktops, the cloud, and IoT.

• VisiCalc (visible calculator) is the first spreadsheet computer program for personal computers, originally released for Apple II by VisiCorp in 1979.

• Calc is a spreadsheet program specially used for heavy scientific and financial operations.

• Excel is a spreadsheet program of Microsoft for Windows, macOS, Android, and iOS. It forms part of the Microsoft Office suite of software.

Q78. Answer: (d) 24

Given:

a0b = 2(a – b)

aØb = ½ ab

(8Ø6)0(6Ø4)

Calculation:

=> We have, (8Ø6)0(6Ø4)

=> Expanding it, we get

=> (1/2× 8× 6)0 (1/2× 6× 4)

=> (4× 6)0((3× 4)=(24)0(12)

=> 2(24-12)=2× 12=24

Therefore, the required value of the equation is 24

Q79. Answer: (d) Article 110

The correct answer is Article 110.

Key Points

• The money bill has been defined in Article 110 of the Indian Constitution.

YourMockTest.com — Free Study Material

• Article 110(1) provides certain provisions for a bill to be a money bill.

• Article 110(2) provides reasons for a bill not to be considered a money bill.

• Article 110(3) says the decision of the Speaker of the House of the People thereon shall be final.

Additional Information

• Article 115 - It has provisions for the demand for an excess grant. The demand is made when the expenditure has been incurred after a financial year has expired.

• Article 109 - It says that a money bill can not be introduced in Rajya Sabha, also Rajya Sabha cannot reject or amend the Bill and must return it within 14 days. The Bill is deemed to have been passed by both Houses once passed by Lok Sabha.

• Article 113 - It mandates that estimates of expenditure from the Consolidated Fund of India are included in the Annual Financial Statement.

Q80. Answer: (c) 10%

Given:

50% of 500 = _____ of 2500

Calculation:

=> Let the required value be x%.

=> So, 50% of 500 = x% of 2500

=> 50/100× 500=x/100× 2500

=> 50× 5=25× x

=> x=250/25=10

Therefore, the required percentage is 10%.

Q81. Answer: (b) Alauddin Bahman Shah (alias Hasan Gangu)

The correct answer is Alauddin Bahman Shah (alias Hasan Gangu).

Key Points

• The Bahmani kingdom was founded by Ala-ud-Din Bahman Shah (alias Hasan Gangu) in 1347.

• His original name was Zafar Khan titled "Alauddin Bahman Shah Sultan – Founder of the Bahmani Dynasty" with his capital at Gulbarga and all his coins were minted at Hasanabad.

• It was the first independent Muslim kingdom of the Deccan in South India.

Additional Information

• Firuzshah Bahmani - Firuz Shah Bahmani also known as Taj ud-Din Firuz Shah, was the ruler of the Bahmani Sultanate from 1397 to 1422.

• Mohammad bin Tughlaq - He was the eldest son of Ghiyas-ud-Din-Tughlaq, the founder of the Tughlaq dynasty.

• Mir Zafar - Syed Mir Jafar Ali Khan Bahadur was a military general who became the first dependent Nawab of Bengal of the British East India Company.

Q82. Answer: (a) Intermontane Plateau

The correct answer is Intermontane Plateau.

• The Plateau of Tibet is an intermontane plateau in Asia.

• When a plateau is surrounded by mountains on all sides, it is referred to as an Intermontane plateau.

• Intermontane literally means located between mountains or mountain ranges.

• Some examples of intermontane plateaus are the Plateau of Mongolia & Altiplano Plateau or Bolivian Plateau.

• Doomed Plateau - A plateau that is eroded and broken into numerous smaller pieces becomes a doomed or dissected plateau.

• Erosional Plateau - It is the same as the doomed plateau.

• Volcanic Plateau - A volcanic plateau is a plateau produced by volcanic activity.

Q83. Answer: (a) Amoeba

The correct answer is Amoeba.

Key Points

• Pseudopodia (singular pseudopodium) are temporary arm-like projections or extensions of the body of a microorganism, filled with cytoplasm.

• The organism can change the shape and size of the pseudopodia, making it able to move.

• The pseudopodia are also used as a tool to capture prey.

• They are often found in amoebas and other protozoa.

Q84. Answer: (d) G Sankara Kurup

The correct answer is G Sankara Kurup.

Key Points

• The first recipient of the award was the Malayalam writer G. Sankara Kurup.

• He received the award in 1965 for his collection of poems, 'Odakkuzhal (The Bamboo Flute)', published in 1950.

• Ashapurna Devi was the first woman to receive the Jnanpith Award in 1975 for her novel 'Pratham Pratisruti'.

• The most recent Jnanpith award (57th) has been conferred to Konkani Author Damador Mauzo in December 2021.

Additional Information

• Jnanpith Award is the oldest and the highest Indian literary award presented annually by the Bharatiya Jnanpith organization.

• It was instituted in 1961 and is awarded to an author for his/her outstanding contribution to literature.

• The award is bestowed only on Indian writers writing in Indian languages included in the Eighth Schedule of the Constitution of India and English.

• The winner is given a cash prize of Rs.11 lakh and a bronze replica of Goddess Saraswati, the Hindu goddess of learning.

Q85. Answer: (a) Western part

The correct answer is the Western part.

Key Points

• The Great Indian Desert, also known as the Thar Desert lies in the western part of India.

• About 85% of the desert lies in the Indian territory and the remaining 15% is in Pakistan.

• The desert in Pakistan is known by the name Rohi or Cholistan desert.

• About 60% of the desert in India lies in Rajasthan and the remaining extends into Gujarat, Punjab, and Haryana.

Q86. Answer: (c) 45

Given:

Total number of players = 300

Calculation:

=> Total percentage of Football, Hockey, Cricket and Tennis = 25 + 15 + 20 + 25

=> Total percentage of Football, Hockey, Cricket and Tennis = 85%

=> So, Percentage of Boxing players = 100 – 85 = 15%

=> Number of players playing boxing = 15% of 300

=> Number of players playing boxing = 15/100× 300=45

Therefore, the number of players taken up boxing are 45

Q87. Answer: (b) 4

The logic followed here is:

(Product of left and right side numbers) ÷ (Product of upper and lower numbers) = Middle Number.

For the first figure,

=> (6 × 4) ÷ (2 × 3) = 24 ÷ 6 = 4

For the second figure,

=> (6 × 3) ÷ (1 × 3) = 18 ÷ 3 = 6

Similarly, for the third figure,

=> (10 × 4) ÷ (2 × 5) = 40 ÷ 10 = 4

So, 4 will come in the question mark.

Hence, the correct answer is "4".

Q88. Answer: (b) C

The opposite faces are:

Given figure is,

Here,

The face C is opposite to the face A.

The face B is opposite to the face D and,

The face F is opposite to the face E.

Thus, C is the opposite side of A.

Hence, the correct answer is "Option 2"..

Q89. Answer: (d) 99 lakh

Given:

Expenditure of A in 2018 = 60 lakhs

Concept Used:

Gain% = [(Revenue - Expenditure) / Expenditure] × 100

Calculation:

Expenditure of A in 2018 = 60 lakhs

So,

Gain% = [(R - 60) / 60] × 100

=> 65 = (R - 60) × 5/3

=> 195 = (R - 60) × 5

=> 195 = 5R - 300

=> 5R = 195 + 300

=> 5R = 495

=> R = 495/5 = 99

Hence, revenue of A in 2018 was 99 lakhs.

Therefore The correct answer is option (4).

Q90. Answer: (d) [figure]

Given:

The logic here is:

The 1st row interchange the numbers and the 2nd row interchange the numbers.

Similarly for given we have:

Hence, the correct answer is 'option 4'.

Q91. Answer: (a) 46656

The logic followed here is:

Number : $(Number)^2$: $(Number)^3$

Given:- 18 : 324 : 5832 :: 36 : 1296 : ?

Here, the following pattern is followed,

18 : 18 × 18 : 18 × 18 × 18 = 18 : 324 : 5832

36 : 36 × 36 : 36 × 36 × 36 = 36 : 1296 : 46656 (? = 46656)

Therefore, ? will be replaced by 46656

Hence, the correct answer is option(1)

Q92. Answer: (c) 413

The logic followed here is:

Option(1) 435

4 + 3 + 5 = 12, divisible by 3

Option(2) 342

3 + 4 + 2 = 9, divisible by 3

Option(3) 413

4 + 1 + 3 = 8, not divisible by 3

Option(4) 348

3 + 4 + 8 = 15, divisible by 3

Here, the sum of digits of every number is divisible by 3, except option(3)

Hence, the correct answer is option(3).

Q93. Answer: (a) 33

Given series:- 1, 3, 7, 15, 33

Here, the pattern is as follows,

(1 × 2) + 1 = 3

(3 × 2) + 1 = 7
(7 × 2) + 1 = 15
(15 × 2) + 1 = 31 ≠ 33
Therefore, 33 is not belonging to the given series
Hence, the correct answer is option(1).

Q94. Answer: (b) VKPXJT

The positional value of the alphabets are as follows:
Here, COPPER = FQTRJT
Similarly, for SILVER = ?
SILVER will be written as VKPXJT
Hence, the correct answer is option(2)

Q95. Answer: (b) 20%

Here, the number of the students who got distinction in only subjects are as follows
Total number of students = 350
English and Physics = 25
Physics and Hindi = 10
English and Hindi = 35
Total number of students who got distinction in 2 subjects = 25 + 10 + 35 = 70
Percentage of students who got distinction in only 2 subjects = (70 ÷ 350) × 100
= 0.2 × 100 = 20%
Hence, the correct answer is option(2)

Q96. Answer: (d) 9116

The positional value of the alphabets are as follows
EGA = 25491, then CAD = ?
Here, the square of the positional value is given as the code
EGA = $(5)^2$ $(7)^2$ $(1)^2$= 25491
CAD = (3)2 (1)2 (4)2 = 9116
Therefore, ? will be replaced by 9116
Hence, the correct answer is option(4)

Q97. Answer: (d) Game

As in boxing, there are number of rounds played. So round is a term used in the boxing.
Similarly,
In badminton, there are number of game played. So game is a term used in the badminton.
Hence, the correct answer is option(4)

Q98. Answer: (c) Badminton

From the given options:

Shot Put	Outdoor Games
Discuss Throw	Outdoor Games
Badminton	Indoor Games
Hammer Throw	Outdoor Games

Shot Put, Discuss Throw, and Hammer Throw all are the Outdoor Games,
Whereas,
Badminton is an Indoor Game,
Hence, the correct answer is "Option 3".

YourMockTest.com — Free Study Material

Q99. Answer: (d) 66

Here, we will first do the addition and then the multiplication of the given equation to get the answer.

Given :

14 + 13 × 3

= (14 + 13) × 3

= 27 × 3

= 81

Similarly,

17 + 16 × 2

= (17 + 16) × 2

= 33 × 2

= 66.

Hence, the correct answer is '66'.

Q100. Answer: (c) [figure]

Here, the following Venn diagram best represents the relationship between Gold, Metal, and Silver.

Both, Gold and Silver are the Metal.

Hence, the correct answer is option(3)

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

YourMockTest.com — Free Study Material