RRB NTPC Tier I Official Paper (Held On: 2 Apr 2016 Shift 2) (Previous Year Paper)

RRB NTPC • 2016 • 100 questions • 90 minutes • Answer key and solutions

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

Q1. Rearrange the following jumbled sentences to make a meaningful one

P : weather conditions across a vast geographic

Q : the climate of India

R : scale and varied topography

S : comprises a wide range of

The proper sequence should be :

(a) SRQP
(b) QSPR
(c) PQRS
(d) QRPS

Q2. Choose the pair which is related in the same way as the words in the first pair from the given choices.

SOLDIERS : ARMY ? MUSICIANS : ?

(a) FLOCK
(b) GANG
(c) COLONY
(d) BAND

Q3. The process when the computer is switched on and the operating system gets loaded from hard disk to main memory is called__

(a) Booting
(b) Fetching
(c) Processing
(d) Multi – Processing

Q4. Which Indian won the 2014 Nobel Prize for Peace?

(a) Kailash Satyarthi
(b) Malala Yosufzai
(c) Sanjiv Chaturvedi
(d) Anshu Gupta

Q5. If three numbers are in the ratio 2 : 3 : 5 and the twice their sum is 100. Find the square of the largest of the three numbers.

A. 225

B. 625

C. 25

D. 100

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

Q6. Who was the first President of the Indian National Congress?

(a) Womesh Chandra Bonnerjee
(b) Bal Gangadhar Tilak
(c) Allan Octavian Hume
(d) Dadabhai Naoroji

Q7. What is the compound interest on Rs. 48,000 for 2 years at 20% p.a., if interest is compounded annually?

A. Rs. 69,120
B. Rs. 21,120
C. Rs. 76,800
D. Rs. 72,000

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

Q8. A ladder 20 m long is leaning against a vertical wall. It makes an angle of 30° with the ground. How high on the wall does the ladder reach?

A. 10 m
B. 17.32 m
C. 34.64 m
D. 30 m

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

Q9. Ram said, “Sita is my paternal great grandfather’s only son’s only daughter – in law”. How is Sita related to Ram?

(a) Maternal Aunt
(b) Paternal Aunt
(c) Mother
(d) Sister

Q10. A piece of cloth costs Rs. 35. If the piece were 4 m more longer and each meter was to cost Rs. 1 lesser, then the total cost would remain unchanged. How long is the piece of cloth?

A. 10 m
B. 14 m
C. 12 m
D. 8 m

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

Q11. In 2013, the first woman to be elected as the President of South Korea is -

(a) Park Young-sun
(b) Yuk Young-soo
(c) Park Geun-hye
(d) Sim Sang-jung

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Q12. The Mughal empire was founded by -

(a) Babur
(b) Humayun
(c) Akbar
(d) Shah Jahan

Q13. Two poles of the height 15 m and 20 m stand vertically upright on a plane ground. If the distance between their feet is 12 m, find the distance between their tops.

A. 11 m
B. 12 m
C. 13 m
D. 14 m

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

Q14. How is Sameer related to Akbar if Sameer introduced Akbar as his maternal grandmother's only son's son?

(a) Brother
(b) Son
(c) Maternal Uncle
(d) Cousin

Q15. Given below is a statement followed by some conclusions. You have to take the given statement to be true even if it seems to be at variance with the commonly known facts and then decide which of the given conclusions logically follow(s) from the given statement.

Statement:

According to a recent health survey, people who exercise for at least half an hour every day are less prone to lifestyle diseases.

Conclusions:

I. Moderate exercise is essential to lead a healthy life.

II. Everyone with no exercise on their routine suffer from lifestyle diseases.

(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Both I and II follow
(d) Neither of them follows

Q16. Which chess piece moves straight ahead but attacks cornerwise?

A. Knight
B.Rook
C.Bishop
D.Pawn

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

Q17. The oldest oil field in Asia is located in –

(a) Gujarat
(b) Assam
(c) Arunachal Pradesh
(d) Nagaland

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Q18. The simple interest on a certain sum of money invested at a certain rate for 2 years is Rs 1200. The compound interest of the same sum of money invested at the same rate of interest for 2 years is Rs 1290. What was the principal?

A. Rs. 12000

B. Rs. 16000

C. Rs. 6000

D. Rs. 4000

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

Q19. Which of the following is correct?

Sound waves are _____ waves.

(a) Pressure
(b) Longitudinal
(c) Electromagnetic
(d) Magnetic

Q20. Given below is a statement followed by some conclusions. You have to take the given statement to be true even if it seems to be at variance with the commonly known facts and then decide which of the given conclusions logically follow(s) from the given statement.

Statement:

In some tier 2 cities in India, transportation is one of the major problems.

Conclusions:

I. All tier 2 cities are not well connected.

II. Lack of transportation facilities is the only problem in Indian metros.

(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Both I and II follow
(d) Neither of them follows

Q21. Below are given statements. You have to take the given statements to be true even if they seem to be at variance with the commonly known facts and then decide which of the given conclusions logically follows from the given statements.

Statements:

I. All rats are hills.

II. All hills are rivers.

(a) Some rivers are rats
(b) No river is a hill
(c) All hills are rats
(d) No river is a rat

Q22. How many bones does a new born human baby have?

(a) 305
(b) 206
(c) 211
(d) 411

Q23. Which country built the Bird’s Nest Stadium for 2008 Summer Olympics?

(a) China
(b) Brazil
(c) Australia

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(d) Germany

Q24. Which of the following coloured light has the lowest Frequency?

(a) Green
(b) Blue
(c) Red
(d) Violet

Q25. In 2015, which auto manufacturer manipulated emissions testing data leading to the resignation of its CEO Martin Winterkorn?

(a) Volkswagen
(b) Ford
(c) Toyota
(d) General Motors

Q26. A closed wooden rectangular box made of 1 cm thick wood has the following outer dimensions: length 22 cm, breadth 17 cm, and height 12 cm. It is filled with cement. What is the volume of the cement in the box?

A. 1488 cu. cm
B. 3000 cu. Cm
C. 4488 cu. Cm
D. 2880 cu. cm

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

Q27. If the code for MOTHER is JRQKBU then what is the code for PRINCIPAL?

(a) MRFKZLMXI
(b) SULQFLSDO
(c) MUFQZLMDI
(d) MRFKZFMXI

Q28. The only non-metal which is liquid at room temperature is _____.

(a) Mercury
(b) Bromine
(c) Chlorine
(d) Gallium

Q29. Maanch is a folk dance from -

(a) Haryana
(b) Kerala
(c) Assam
(d) Madhya Pradesh

Q30. Which of the following insecticides' harmful effects came under media attention when health issues in Kerala were publicized?

(a) Endosulfan
(b) Lethal
(c) Thimet
(d) Monocil

Q31. The HCF and LCM of two numbers are 3 and 2730 respectively. If one of the numbers is 78, find the other number.

A. 107
B. 103
C. 105

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D. 102

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

Q32. If A = 1 and OAR = 34, then ROAR =

(a) 52
(b) 53
(c) 51
(d) 50

Q33. Choose the one which is different or odd from the following.

(a) Aluminium
(b) Iron
(c) Copper
(d) Brass

Q34. According to the Constitution, the ratio between the length and breadth of the national tricolor should be

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

Q35. If P travelled the first half of a journey at 40 km/hr and the remaining distance at 50 km/hr, what is the average speed of his travel?

A. 44.44 km/hr
B. 53.33 km/hr
C. 45 km/hr
D. 60 km/hr

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

Q36. Find the LCM of 15, 25 and 29.

A. 2335
B. 3337
C. 2175
D. 2375

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

Q37. In 1981, ISRO launched India's first geostationary satellite called –

(a) Aryabhata
(b) APPLE
(c) Bhaskarall
(d) INSAT1B

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Q38. Which of the following was the first antibiotic discovered by Alexander Fleming in 1928?

(a) Penicillin
(b) Prontosil
(c) Streptomycin
(d) Tetracyline

Q39. If ' + ' means ×, ' - ' means ÷, ' × ' means + and ' ÷ ' means - ; compute the value of the expression:

17 + 6 × 13 ÷ 8

(a) 100
(b) 107
(c) 110
(d) 109

Q40. Which among the following is true for the given numbers?

A. 3/8 < 19/73 < 29/47 < 17/39
B. 19/73 < 3/8 < 17/39 < 29/47
C. 19/73 < 3/8 < 29/47 < 17/39
D. 19/73 < 29/47 < 3/8 < 17/39

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

Q41. Divide 3740 in three parts in such a way that half of the first part, one-third of the second part and one-sixth of the third part are equal.

A. 700, 1000, 2040
B. 340, 1360, 2040
C. 680, 1020, 2040
D. 500, 1200, 2040

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

Q42. In which Indian state is the white Desert located?

A. Gujarat
B. Tamil Nadu
C. Jammu and Kashmir
D. Sikkim

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

Q43. Which of the following Acts under the Indian Constitution is described by Article 21A?

(a) Right to Education
(b) Right to Information
(c) Representation of the People
(d) Right to Freedom of Religion

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Q44. Which of the following monuments was built by Muhammad Quli Qutb Shah is said to be built to commemorate the eradication of plague?

(a) Alai Minar
(b) Charminar
(c) Fateh Buxj
(d) Qutub Minar

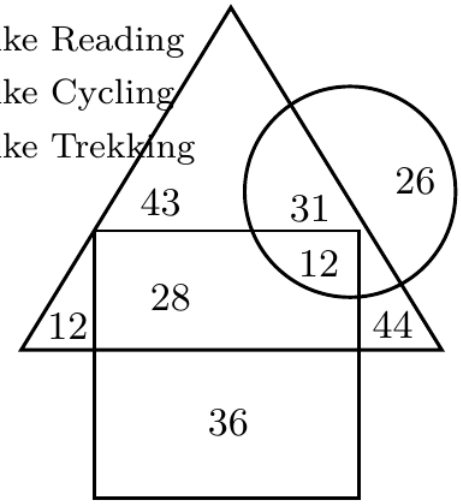
Q45. Which of the following is not an example of a Word Processor?

(a) IBM Lotus Symphony
(b) Microsoft Word
(c) Google Docs
(d) Microsoft Excel

Directions

Consider the following information and answer the questions based on it.

△ represents Persons who like Reading
○ represents Persons who like Cycling
□ represents Persons who like Trekking



Q46. How many persons like Reading?

(a) 170
(b) 154
(c) 176
(d) 117

Q47. How many persons like Trekking and Reading but not cycling?

(a) 12
(b) 31
(c) 44
(d) 28

Q48. How many persons like Reading and Cycling but not Trekking?

(a) 31
(b) 12
(c) 26
(d) 28

Q49. There are 90 coins, comprising 5 and 10 paisa coins. The value of all the coins is Rs. 7. How many 5 paisa coins are there?

A. 50
B. 45
C. 40

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D. 35

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

Q50. How high is the badminton net at the center?

A. 5 Feet

B.5.1 Feet

C. 5.4 Feet

D. 4.8 Feet

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

Q51. `Given below is a statement followed by some conclusions. You have to take the given statement to be true even if it seems to be at variance with the commonly known facts and then decide which of the given conclusions logically follow(s) from the given statement.

Statement:

Success cannot be achieved without hard work.

Conclusions:

I. Every hard working person is successful.

II. Every successful person is hardworking.

(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Both I and II follow
(d) Neither of them follows

Q52. what is the mode of the following numbers

52, 54, 55, 56, 55, 54, 53, 55, 53, 51, 3, 57

A. 53

B. 54

C. 55

D. 52

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

Directions

Directions: Use the following passage for the questions based on it.

There are six flats on a floor in two rows. Out of these, three are north facing and the other three are south facing flats. The flats are to be allotted amongst Arun, Biswajyot, Chitra, Derek, Evan and Fatima. Biswajyot gets a north facing flat and is not next to Derek. Derek and Fatima get diagonally opposite flats. Chitra is next to Fatima, and gets a south facing flat. Evan gets a north facing flat. Fatima has no neighbour in her left.

Q53. Except Derek and Fatima, which other pair is diagonally opposite to each other?

(a) Arun and Biswajyot
(b) Arun and Chitra
(c) Evan and Derek
(d) Evan and Chitra

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Q54. Which of the following pairs is exactly opposite to each other?

(a) Derek and Evan
(b) Fatima and Chitra
(c) Evan and Chitra
(d) Evan and Arun

Q55. Which of the following combination gets south-facing flats?

(a) Arun, Chitra and Fatima
(b) Chitra, Biswajyot and Derek
(c) Evan, Arun and Fatima
(d) Derek, Arun and Biswajyot

Q56. 30 men working 5 hours a day can do a task in 16 days. In how many days will 40 men working 6 hours a day do the same task?

A. 12 days
B. 10 days
C. 15 days
D. 18 days

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

Directions

Direction: Study the following table and answer the questions based on it.

Below is the Household Expenditure (in Thousand Rupees) per annum

Year	Household Expenditure				
Grocery	Rent	Leisure	EMI	Taxes	
2010	32	12	5	3.4	9
2011	37	13	6.5	4.5	13
2012	46	14	7.3	5.6	17
2013	48	16	7.9	6.4	18
2014	52	18	8.5	7.4	19

Q57. What is the total Household Expenditure for the year 2012?

A. Rs. 89,900
B. Rs. 87,120
C. Rs. 89,100
D. Rs. 88,200

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

Q58. Expenditure on EMI forms what percentage of expenditure on Grocery for the year 2014?

A. 11.34%
B. 14.23%
C. 13.22%
D. 15.55%

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

Q59. What is the average spending on Leisure per annum?

A. Rs. 7,040
B. Rs. 6,500
C. Rs. 7,100
D. Rs. 7,400

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

Q60. A triangle has a perimeter of 200. If two of its sides are equal and the third side is 20 more than the equal sides, what is the length of the third side?

A. 60
B. 50
C. 80
D. 70

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

Q61. The operating system UNIX is the trademark of _____.

(a) Microsoft
(b) Bell Laboratories
(c) Apple
(d) Motorola

Q62. The first large scale electrical air conditioning was invented and used in1902 by

(a) Willis Carrier
(b) John Gorrie
(c) Stuart Cramer
(d) H. H. Schultz

Q63. The area of ΔABC is 63 sq. units. Two parallel lines DE, FG, are drawn such that they divide the line segments AB and AC into three equal parts. What is the area of the quadrilateral DEGF?

A. 28 sq. units
B. 35 sq. units
C. 21 sq. units
D. 48 sq. units

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

Q64. Which of the following is the most common kidney stone forming compound?

(a) Calcium oxalate
(b) Magnesium oxide
(c) Sodium bicarbonate

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(d) Magnesium citrate

Q65. Compute: (50 + 0.5 × 20) ÷ 0.7

A. 8.571

B. 857.1

C. 85.71

D. 72.85

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

Q66. Working together, P, Q and R reap a field in 6 days. If P can do it alone in 10 days and Q in 24 days, in how many days will R alone be able to reap the field?

A. 32 days

B. 40 days

C. 45 days

D. 60 days

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

Q67. In 2015, underground glaciers of frozen water were discovered on

(a) Mars
(b) Venus
(c) Jupiter
(d) Saturn

Q68. A shopkeeper marks the price of an article at Rs. 320. Find the cost price if after allowing a discount of 10%, he still gains 20% on the cost price.

A. Rs. 240

B. Rs. 280

C. Rs. 300

D. Rs. 264

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

Q69. Which leader adopted Orthodox Christianity as the official religion of Russia”

(a) Vladimir the Great
(b) Michael Romanov
(c) Ivan IV
(d) Boris Godunov

Q70. If RUN = 182114 and BIN 2914 then, BRING =

(a) 2189147
(b) 1178136
(c) 31910158
(d) 21910158

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Q71. On average, how many taste Buds are present in the human tongue?

A. 2000 to 8000

B. 50000 to 10000

C. 1 million to 10 million

D. More than 10 Million

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

Q72. 5.16 × 3.2 = ?

A. 15.502

B. 16.512

C. 17.772

D. 17.52

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

Q73. Choose the pair which is related in the same way as the words in the first pair from the given choices.

DOG : KENNEL : : BEE : _____.

(a) HIVE
(b) BARN
(c) HOLE
(d) NEST

Q74. In the following question below are given some statements followed by some conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:

A. Some fruits are vegetables.

B. All vegetables are plants.

Conclusions:

I. Some plants are vegetables.

II. Some fruits are plants.

(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Both I and II follow
(d) Neither of them follows

Q75. A table was sold at a profit of 10%. If its cost price was 5% less and it was sold for Rs. 7 more, the gain would have been 20%. Find the cost price of the table.

A. Rs. 175

B. Rs. 200

C. Rs. 250

D. Rs. 150

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

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Q76. Which of the following organisms does not reproduce by the asexual reproduction process?

A. Coral
B. Hydra
C. Sponges
D. Annelida

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

Q77. Which of the following astrologers was taken under house arrest for supporting Heliocentrism?

A. Nicolaus Copernicus
B. Galileo Galilei
C. Johannes kepler
D. Friedrich Bessel

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

Q78. The 'Father of Indian Space Program' is _____.

(a) Dr. A. P. J. Abdul Kalam
(b) Dr. VikramA. Sarabhai
(c) Dr. K. Kaslnrirangan
(d) Prof. Satish Dhawan

Q79. The filament of a light bulb is made up of-

(a) Platinum
(b) Tantalum
(c) Tungsten
(d) Antimony

Q80. Who among the following became the first tourist to space by spending $20 million for 8 days in orbit?

(a) Greg Olsen
(b) Charles Simonyi
(c) Dennis Tito
(d) Mark Shuttleworth

Q81. P bought an article for Rs. 1600 and sold it at a profit of 10%. What would have been the increase in the profit percent if it was sold for Rs. 1840?

A. 5%
B. 10%
C. 12%
D. 15%

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

Q82. Ancient hominids who are placed in the category of homo sapiens were -

A. Ergaster line
B. Cro - Magnon
C. Neanderthal

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D. Proconsuls

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

Q83. What is C12H22.O11 also known as-

(a) Sand
(b) Sugar
(c) Salt
(d) Clay

Q84. Select the correct set of symbols:

27_3_19_10 = 90

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

Q85. Simplify: (2/7 + 3/5) ÷ (2/5 + 2/7)

A. 31/24
B. 24/31
C. 26/25
D. 12/13

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

Q86. Select the correct set of symbols:

44_4_7_5 = 82

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

Q87. If R019 is divisible by 11, find the value of the smallest natural number R.

A. 5
B. 6
C. 7
D. 8

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

Q88. Malini said, “Rohit is my maternal aunt’s mother’s only son’s son”. How is Malini related to Rohit?

(a) Cousin
(b) Mother
(c) Sister
(d) Daughter

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Q89. In Tennis, hard court is the type of court whose surface is made of-

(a) Concrete
(b) Clay
(c) Grass
(d) Carpet

Q90. If '+' means '×', '-' means '+', and '×' means '-', compute the value of the expression.

36 - 4 + 7 × 8

(a) 56
(b) 71
(c) 74
(d) 75

Q91. The average of the first 20 multiples of 12 is:

A. 124
B. 120
C. 126
D. 130

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

Q92. What is the median of the following list of numbers: 55, 53, 56, 59, 61, 69 and 31?

A. 55
B. 56
C. 59
D. 61

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

Q93. The sum of digits of a two-digit number is 9. When the digits are reversed, the number decreases by 45. Find the number.

A. 45
B. 72
C. 63
D. 27

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

Q94. If MENTOR = NVMGLI Then PROFESSOR =

A. QSPGFTTPS
B.KILUVHHLI
C.KSLGVTHMI
D. KILGFHHLI

(a) B
(b) C
(c) A

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(d) D

Q95. The national song of India was composed by-

(a) Rabindranath Tagore
(b) Bankim Chnadra Chatterjee
(c) Pydirnarri Venkata Subba Rao
(d) Pingali Venkayya

Q96. Which of the following is NOT an effect of Noise Pollution?

(a) Death of Animals
(b) Tinnitus
(c) Hypertension
(d) Ozone Depletion

Q97. The upstream speed of the boat is 40 km/hr and the speed of the boat in still water is 55 km/hr. What is the downstream speed of the boat?

A. 75 km/hr
B. 70 km/hr
C. 60 km/hr
D. 65 km/hr

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

Q98. Choose the pair which is related in the same way as the words in the first pair from the given choices.

TENNIS : COURT : : BOXING :

(a) STADIUM
(b) RING
(c) PITCH
(d) GROUND

Q99. Six years ago, the ratio of the ages of the two persons P and Q was 3 : 2. Four years hence, the ratio of their ages will be 8 : 7. What is P's age?

A. 10 years
B. 12 years
C. 14 years
D. 8 years

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

Q100. Which of the following popular tourist destinations of India were built in 1911 to commemorate the visit of King George V and Queen Mary?

(a) India Gate
(b) Gateway of India
(c) The Prince of VN/'ales Museum
(d) Victoria Terminus

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ANSWER KEY

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

SOLUTIONS

Q1. Answer: (b) QSPR

Here the correct answer is QSPR.

Key Points:-

• The sentence 'Q' is independent of any other sentences as it is giving general information about the climate of India. Hence, 'Q' is the first part.

• Comprises refers back to the climate of India mentioned in the sentence 'Q'. Hence, 'S' follows 'Q'.

• It will be followed by P as wide range has been used for the weather conditions in India.

• 'Geographic' is an adjective which will be followed by a noun i.e. scale. Therefore, the sentence 'R' is the concluding sentence.

Paragraph after rearranging the sentences: The climate of India comprises a wide range of weather conditions across a vast geographic scale and varied topography.

Hint

• Important Rules to Solve the Para Jumbles:

• Read the sentences attentively and try to comprehend the idea or theme of the sentence and eliminate the irrelevant options.

• Try to identify the opening (independent sentence) and closing sentences (concluding sentence).

• Try to identify the mandatory pairs. Two sentences can be connected through various connectors and other determinants.

Q2. Answer: (d) BAND

Group of Soldiers form an Army.

Similarly, group of Musicians form a Band.

Q3. Answer: (a) Booting

Restarting a computer or its operating system software. It is of two types (1) Cold booting: when the computer is started after having been switched off. (2) Warm booting: when the operating system alone is restarted (without being switched off) after a system crash or 'freeze.'

Q4. Answer: (a) Kailash Satyarthi

Kailash Satyarthi is an children's right activist.Satyarthi is the fifth Nobel Prize winner for India and only the second Indian winner of the Nobel Peace Prize after Mother Teresa in 1979. He is the founder of Bachpan Bachao Andolan

Q5. Answer: (c) B

Let, the numbers are 2x, 3x, and 5x

According to the problem,

=> 2 × (2x + 3x + 5x) = 100

=> 2 × (10x) = 100

=> 20x = 100

=> x = 5

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Therefore The largest number is = 5x = 5 × 5 = 25

Therefore Square of the largest number = $(25)^2$ = 625

Q6. Answer: (a) Womesh Chandra Bonnerjee

The correct answer is Womesh Chandra Bonnerjee.

• Womesh Chandra Bonnerjee was an Indian barrister and was the first president of Indian National Congress.

• He was the first Indian to contest the election for the British House of Commons although he lost the election

Q7. Answer: (a) B

Principal(P) = 48000

Time(n) = 2 years

Rate of interest(r) = 20% p.a

Therefore Amount = $P(1 + r/100)^n$ = $48000(1 + 20/100)^2$ = $48000(1 + 20/100)^2$ = 48000 × 1.44 = 69120

Therefore Compound interest = (69120 - 48000) = Rs. 21,120

Q8. Answer: (d) A

In the figure, AC = 20 m and angle ACB = 30°

According to the question,

=> AB/AC = sin 30°

=> AB = 20 × 1/2

=> AB = 10

Therefore The ladder touches the wall 10 m high.

Q9. Answer: (c) Mother

Consider Ram as your own self

Paternal great grandfather's only son → grandfather

Grandfather's only daughter - in - law → mother

So, Sita is the mother of Ram.

Q10. Answer: (d) A

Let, length of the piece of cloth = x m

Cost of cloth = Rs. 35

Therefore Cost of 1 m cloth = Rs. 35/x

According to the question,

=> (x + 4) (35/x - 1) = 35

=> 35 - x + 140/x - 4 = 35

=> $35x - x^2 + 140 - 4x = 35x$

=> $x^2 + 4x - 140 = 0$

=> $x^2 + 14x - 10x - 140 = 0$

=> x(x + 14) - 10(x + 14) = 0

=> (x + 14) (x - 10) = 0

=> x = - 14 or 10

Therefore The piece of cloth is 10 m long

Alternate Method

We can tabulate the given data according to the following table:

	Rate of cloth (in Rs./m^2)	Length of cloth (in m^2)
Initially	x (assume)	y (assume)
Finally	x – 1	y + 4

As the total remains constant at Rs.35, we get:

xy = 35

=> x = 35/y ----(i)

Also, (x – 1) × (y + 4) = 35 ----(ii)

On substituting the value of x from equation (i) into equation (ii), we get:

[(35/y) – 1] × (y + 4) = 35

On solving, we get:

y = -14 and 10

Therefore The piece of cloth is 10 m long

Q11. Answer: (c) Park Geun-hye

Park Geun-hye is a South Korean politician who served as the 11th President of South Korea, from 2013 to 2017. Park — the first woman to be elected as President of South Korea — served the 18th presidential term

Q12. Answer: (a) Babur

The Mughal Empire was founded by Babur, a Central Asian ruler who was descended from the Turco-Mongol conqueror Timur (the founder of the TimuridEmpire) on his father's side and from Chagatai, the second son of the Mongol ruler Genghis Khan, on his mother's side

Q13. Answer: (d) C

In the figure, BD = OC = 12 m and CD = OB = 15 m and AB = 20 m

Therefore AO = AB - OB = 20 - 15 = 5 m

In ΔAOC we get,

=> $AC^2 = AO^2 + OC^2$

=> $AC^2 = 5^2 + 12^2 = 25 + 144 = 169$

=> AC = 13

Therefore Distance between their tops = 13 m

Q14. Answer: (d) Cousin

Consider Sameer as yourself

Maternal grandmother’s only son → maternal uncle

Uncle’s son → cousin

So, Sameer is the cousin of Akbar.

Q15. Answer: (a) Only conclusion I follows

It is mentioned in the statement itself that exercising daily for a short period of time will lead to a healthy life. So, conclusion I is valid. But, it is not mentioned anywhere that not exercising every day will become a cause for lifestyle diseases for each and every one. So, conclusion II is invalid.

Q16. Answer: (b) D

The Correct Answer is Option D i.e Pawn.

• Pawn moves straight ahead but attacks cornerwise.

• Chess is believed to have been invented 1500 years ago in India.

• King can move exactly one square horizontally, vertically, or diagonally. At most once in every game, each king is allowed to make a special move, known as castling.

• Queen can move any number of vacant squares diagonally, horizontally, or vertically.

• The rook can move any number of vacant squares vertically or horizontally. It also is moved while castling.

• Bishop can move any number of vacant squares in any diagonal direction.

• Knight can move one square along any rank or file and then at an angle. The knight´s movement can also be viewed as an “L” or “7″ laid out at any horizontal or vertical angle.

Q17. Answer: (b) Assam

Digboi is known as the Oil City of Assam where the first oil well in Asia was drilled. The first refinery was started here as early as 1901. Digboi has the oldest oil well in operation.

Q18. Answer: (c) D

Let, the principal = Rs. 100x and rate of interest = r%

Simple interest for 2 years = Rs. 1200

Therefore Simple interest for 1 year = Rs. 1200/2 = Rs. 600

Therefore Compound interest for 1^(st) year = Rs. 600

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Therefore Compound interest for 2^(nd) year = Rs. (1290 - 600) = Rs. 690

Therefore Difference between compound and simple interest for 2^(nd) year = Rs. (690 - 600) = Rs. 90

According to the question,

=> 600 × 1 × r/100 = 90

=> 6r = 90

=> r = 15

Therefore Rate of interest = 15%

According to the question,

=> 100x × 2 × 15/100 = 1200

=> 30x = 1200

=> x = 40

Therefore The principal = Rs. (100 × 40) = Rs. 4000

Q19. Answer: (b) Longitudinal

This type of wave is a longitudinal wave. Longitudinal waves are always characterized by particle motion being parallel to wave motion. A sound wave traveling through air is a classic example of a longitudinal wave.

A wave in which the particles vibrate in the same direction of propagation of the wave is called a longitudinal wave.

Longitudinal waves can be produced in all three media such as solids, liquids, and gases. The waves which are produced in the air are always longitudinal.

Q20. Answer: (d) Neither of them follows

In the statement it is mentioned that in some tier 2 cities, transportation isone of the major concerns but was never mentioned that all the tier 2 cities are not well connected. So, conclusion I is invalid.

In conclusion II, it is stated that the lack of transportation is the only problem in Indian metros, however it is not stated that it is the ‘only’ problem that is faced by them. So, conclusion II is also invalid.

Q21. Answer: (a) Some rivers are rats

The least possible Venn diagram for the given statements is,

A. Some rivers are rats → It’s true.

B. No river is a hill → It’s clearly false.

C. All hills are rats → It’s possible but not definite, hence false.

D. No river is a rat → It’s clearly false.

Hence, only conclusion I follows.

Q22. Answer: (a) 305

Concept:-

• Newborn babies have around 305 bones. A baby's skeleton is mostly made up of cartilage.

• Babies have more bones than adults because as they grow up, some of the bones fuse together to form one bone.

• This is because babies have more cartilage than bone.

• As a person grows up, most of this cartilage turns into the bone in a process called ossification. By adulthood, the skeleton has just 206 bones.

Q23. Answer: (a) China

Beijing stadium also known as Birds nest was designed for use throughout the 2008 Summer Olympics and Paralympics and will be used again in the 2022 Winter Olympics and Paralympics. The stadium is currently mostly unused, after having been unsuccessfully suggested as the permanent headquarters of the Beijing football team

Q24. Answer: (c) Red

CONCEPT:

• Electromagnetic waves: The wave which is generated due to vibration between electric field and magnetic field and it does not need any medium to travel is called an electromagnetic wave. It can travel through a vacuum.

• Light is a form of energy which is an example of an electromagnetic wave.

• Wavelength: The distance between two successive crests or troughs is called wavelength of the wave.

• Frequency: The number of vibration per unit time is called frequency.

Speed of wave (v) = frequency (f) × wavelength (λ)

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• White light consists of seven constituent colours: Violet (V), Indigo (I), Blue (B), Green (G), Yellow (Y), Orange (O), Red (R).

• The frequency of the color light in the order from highest to lowest is given as acronym VIBGYOR (V > I > B > G > Y > O > R).

EXPLANATION:

• From the above discussion, the violet has the highest frequency and the shortest wavelength of the visible colors of light.

• The red color light has the lowest frequency and the longest wavelength of the visible colors of light. So option 3 is correct.

Q25. Answer: (a) Volkswagen

Volkswagen has announced the resignation of its chief executive, Martin Winterkorn, in 2015 due to fallout from the diesel emissions test scandal would result in further executive scalps and a likely criminal investigation in Germany.

Q26. Answer: (d) B

Given:

Thickness of wood = 1 cm

Length of box = 22 cm

Breadth of box = 17 cm

Height of box = 12 cm

Calculation:

Inner length of the box = (22 − 2) = 20 cm

Inner breadth of the box = (17 − 2) = 15 cm

Inner height of the box = (12 − 2) = 10 cm

Inner volume of the box = (20 × 15 × 10) = 3000 cu. Cm

Therefore Volume of cement in the box is 3000 cu. cm

Q27. Answer: (c) MUFQZLMDI

The relation between the given words is as follows,

Similarly,

Thus code for PRINCIPAL is MUFQZLMDI.

Q28. Answer: (b) Bromine

The only non-metal which is liquid at room temperature is Bromine.

Mercury and Gallium are both metals, although they are unusual in being liquid near or at room temperature. Chlorine, while non-metal, is a gas at room temperature.

Q29. Answer: (d) Madhya Pradesh

Maanch is a lyrical folk drama and a form of operatic ballet that is very popular in Malwa region of Madhya Pradesh.Maanch has its beginning in the 17th century.It is believed that Guru Balmokand, who died quiet an early age, started modern Maanch

Q30. Answer: (a) Endosulfan

Endosulfan is an off-patent organochlorine insecticide and acaricide that is being phased out globally. The two isomers, endo and exo, are known popularly as I and II. Endosulfan sulfate is a product of oxidation containing one extra O atom attached to the S atom.

Q31. Answer: (d) C

Let, the other number = x

According to the question,

=> 78 × x = 2730 × 3

=> x = 8190/78 = 105

Therefore The other number = 105

Q32. Answer: (a) 52

Considering A = 1, B = 2, C = 3, D = 4, ... Z = 26.

OAR = O → 15, A → 1, R → 18 = 15 + 1 + 18 = 34

Similarly, ROAR = R → 18, O → 15, A → 1, R → 18 = 18 + 15 + 1 + 18 = 52

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Q33. Answer: (d) Brass

Aluminium, Iron, and Copper are metals,

Whereas Brass is an alloy.

Q34. Answer: (a) 3 : 2

According to the Flag code of India, the Indian flag has a ratio of two by three (where the length of the flag is 1.5 times that of the width). All three stripes of the flag (saffron, white and green) are to be equal in width and length.

Q35. Answer: (b) A

Let, the distance travelled = 2x km

For the first half, he travelled at = 40 km/h

Time taken to go x km at the speed of 40 km/h = x/40 hours

For the other half he travelled at = 50 km/h

Time taken to go x km at the speed of 50 km/h = x/50 hours

Therefore Average speed = 2x/(x/40 + x/50) = 2x/((5x + 4x)/200) = 400/9 = 44.44 km/h

Q36. Answer: (c) C

15 = 3 × 5

25 = 5 × 5

29 = 1 × 29

Therefore LCM of 15, 25, 29 = 3 × 5 × 5 × 29 = 2175

Q37. Answer: (b) APPLE

On June 19, 1981 India launched its first geostationary satellite called APPLE. It was an experimental communication satellite launched by the Indian Space Research Organisation (ISRO) with a C-band transponder

Q38. Answer: (a) Penicillin

Penicillin (PCN or pen) is a group of antibiotics which include penicillin G (intravenous use), penicillin V (use by mouth), procaine penicillin, and benzathine penicillin (intramuscular use). Penicillin antibiotics were among the first medications to be effective against many bacterial infections caused by staphylococci and streptococci

Q39. Answer: (b) 107

Given, 17 + 6 x 13 ÷ 8

Now, replace the symbols as per the above statements

17 × 6 + 13 – 8 = (17 x 6) + (13 - 8) = 102 + 5 = 107

Q40. Answer: (b) B

3/8 = 0.375

19/73 ≈ 0.26

29/47 ≈ 0.617

17/39 ≈ 0.436

Therefore 19/73 < 3/8 < 17/39 < 29/47

Q41. Answer: (d) C

Let, the parts are x, y and z

According to the question,

=> x/2 = y/3 = z/6

Let, x/2 = y/3 = x/6 = k

Therefore x = 2k, y = 3k and z = 6k

According to the question,

=> 2k + 3k + 6k = 3740

=> 11k = 3740

=> k = 3740/11 = 340

Therefore First part = 2k = 2 × 340 = 680

Therefore Second part = 3k = 3 × 340 = 1020

Therefore Third part = 6k = 6 × 340 = 2040

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Q42. Answer: (d) A

The Correct Answer is Option A i.e Gujarat.

• The white Desert located in Gujarat.

• The Great Rann of Kutch is also known as the White Desert.

• The White Desert in Kutch is located in western Gujarat.

• It is one of the hottest regions in India.

• The desert is the site of the popular Rann Festival in Gujarat which is held from November to February every year.

Q43. Answer: (a) Right to Education

The Right of Children to Free and Compulsory Education Act' or 'Right to Education Act also known as RTE', is an Act of the Parliament of India enacted on 4 August 2009, which describes the modalities of the importance of free and compulsory education for children between 6 and 14 in India under Article 21A of the Indian ConstitutionB

Q44. Answer: (b) Charminar

There are various theories regarding the purpose for which Charminar was constructed. However, it is widely accepted that charminar was built at the center of the city, to commemorate the eradication of plague", a deadly disease which was wide spread at that time. As Muhammad Quli Qutb Shah had prayed for the end of a plague that was ravaging his city and vowed to build a Mosque at the very place where he prayed

Q45. Answer: (d) Microsoft Excel

• Microsoft Excel is a spreadsheet developed by Microsoft for Windows, macOS, Android and iOS. It features calculation, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications.

• Microsoft Word is a word processor developed by Microsoft.

• Word Star is a word processor application published by Micro Pro International.

• Word Perfect (WP) is a word processing application owned by Corel.

Q46. Answer: (a) 170

Add all the digits in the triangle (as triangle represents reading)

43 + 12 + 28 + 31 + 44 + 12 = 170

Q47. Answer: (d) 28

We have to see for the number which is an intersection of only trekking and reading

Trekking ∩ Reading = 28

Here 28 is the only number which is intersecting with only trekking and reading.

Q48. Answer: (a) 31

Look for the number which is an intersection of only reading and cycling

Reading ∩ Cycling = 31

Here 31 is the only number which is intersecting with only cycling and reading.

Q49. Answer: (a) C

Let the number of 5 paisa coins be x

Number of 10 paisa coins = (90 - x)

According to the question,

=> x × 5 + (90 - x) × 10 = 7 × 100

=> 5x + 900 - 10x = 700

=> 5x = 200

=> x = 40

Therefore Number of 5 paisa coins = 40

Q50. Answer: (d) A

The Correct Answer is Option A i.e 5 Feet.

• The height of the badminton net at the center is 5 Feet.

• Badminton is a racket sport played by either two opposing players (singles) or two opposing pairs (doubles), who take positions on opposite halves of a rectangular court that is divided by a net.

• Badminton has its origins in ancient civilizations in Asia and Europe with a game called battledore (bat or paddle) and a

shuttlecock.

• The International Badminton Federation (IBF) (now known as Badminton World Federation) was established in 1934.

Important Points

• The net is 1.55 meters (5 ft 1 inch) high at the edges and 1.524 meters (5 ft) high in the center.

Q51. Answer: (b) Only conclusion II follows

The given statement explains the fact that success can be achieved only through hard work but it doesn't explain the fact that every hard working person will be successful. So, conclusion I is invalid.

Conclusion II states that every successful person is hard working which certainly explains the fact about the statement. So, conclusion II is valid.

Q52. Answer: (b) C

In the sequence,

Occurrence of 3 = 1 time

Occurrence of 51 = 1 time

Occurrence of 52 = 1 time

Occurrence of 53 = 2 times

Occurrence of 54 = 2 times

Occurrence of 55 = 3 times

Occurrence of 56 = 1 time

Occurrence of 57 = 1 time

Therefore Mode of the sequence = 55

Q53. Answer: (a) Arun and Biswajyot

1) Biswajyot gets a north facing flat and is not next to Derek. So, Biswajyot can be placed at any one of the extreme ends.

2) Biswajyot is not next to Derek. So, he will be next to Evan.

So, Derek will be at the other north end.

3) Derek and Fatima get diagonally opposite flats. Fatima has no neighbour in her left.

4) Chitra is next to Fatima.

So, Arun will be at the remaining south end.

Thus except Derek and Fatima the other pair diagonally opposite to each other is Arun and Biswajyot.

Q54. Answer: (c) Evan and Chitra

1) Biswajyot gets a north facing flat and is not next to Derek. So, Biswajyot can be placed at any one of the extreme ends.

2) Biswajyot is not next to Derek. So, he will be next to Evan.

So, Derek will be at the other north end.

3) Derek and Fatima get diagonally opposite flats. Fatima has no neighbour in her left.

4) Chitra is next to Fatima.

So, Arun will be at the remaining south end.

Thus Evan and Chitra are exactly opposite to each other.

Q55. Answer: (a) Arun, Chitra and Fatima

1) Biswajyot gets a north facing flat and is not next to Derek. So, Biswajyot can be placed at any one of the extreme ends.

2) Biswajyot is not next to Derek. So, he will be next to Evan.

So, Derek will be at the other north end.

3) Derek and Fatima get diagonally opposite flats. Fatima has no neighbour on her left.

4) Chitra is next to Fatima.

So, Arun will be at the remaining south end.

The final arrangement will be:

Arun, Chitra, and Fatima get south-facing flats

Q56. Answer: (b) B

Let, work will be completed in x days

According to the question,

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=> 30 × 5 × 16 = 40 × 6 × x

=> 240x = 2400

=> x = 10

Therefore Work will be completed in = 10 days

Q57. Answer: (d) A

Total household expenditure in 2012,

=> Rs. (46000 + 14000 + 7300 + 5600 + 17000)

=> Rs. 89900

Q58. Answer: (b) B

Expenditure on EMI in 2014 = 7.4 × 1000 = Rs. 7400

Expenditure on Grocery in 2014 = 52 × 1000 = Rs. 52000

Therefore Required percentage = 7400/52000 × 100% = 14.23%

Q59. Answer: (c) A

Total spending on Leisure = Rs. (5000 + 6500 + 7300 + 7900 + 8500) = Rs. 35200

Therefore Average spending on Leisure per annum = Rs. (35200/5) = Rs. 7040.

Q60. Answer: (b) C

Let, length of the equal sides = x cm

Length of the third side = (x + 20) cm

According to the question,

=> x + x + x + 20 = 200

=> 3x = 180

=> x = 60

Therefore Length of the third side = 60 + 20 = 80 cm

Q61. Answer: (b) Bell Laboratories

• Nokia Bell Labs (formerly named AT&T Bell Laboratories, Bell Telephone Laboratories, and Bell Labs) is an American research and scientific development company, owned by Finnish company Nokia.

• Researchers working at Bell Labs are credited with the development of radio astronomy, the transistor, the laser, the charge-coupled device (CCD), information theory, the operating systems Unix, Plan 9, Inferno, and the programming languages C, C++, and S.

• Unix was developed by Ken Thompson, Dennis Ritchie, Brian Kernighan, Douglas McIlroy, and Joe Ossanna in the 1970s at the Bell Labs research center.

• Initially intended for use inside the Bell System, AT&T licensed Unix to outside parties from the late 1970s, leading to a variety of both academic and commercial variants of Unix from vendors such as the University of California, Berkeley (BSD), Microsoft (Xenix), IBM (AIX) and Sun Microsystems (Solaris).

Q62. Answer: (a) Willis Carrier

On July 17, 1902, Willis Haviland Carrier designed the first modern air-conditioning system, launching an industry that would fundamentally improve the way we live, work and play. Willis Carrier's invention gave rise to numerous industries that power our economy today. Manufacturing of everything from baked goods to wartime supplies was made possible by air conditioning

Q63. Answer: (b) C

Let, AD = DF = FB = x units and AE = EG = GC = y units

According to the question,

=> Area of ΔADE/Area of ΔABC = $(AD/AB)^2$

=> Area of ΔADE/63 = $(x/3x)^2$

=> Area of ΔADE = 63 × 1/9

=> Area of ΔADE = 7

According to the question,

=> Area of ΔAFG/Area of ΔABC = $(AF/AB)^2$

=> Area of ΔAFG/63 = $(2x/3x)^2$

=> Area of ΔAFG = 63 × 4/9

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=> Area of ΔAFG = 28

Therefore Area of the quadrilateral DEGF = Area of (ΔAFG - ΔADE) = (28 - 7) = 21 sq. units

Q64. Answer: (a) Calcium oxalate

Kidney stones form when your urine contains more crystal-forming substances - such as calcium oxalate and uric acid - than the fluid in your urine can dilute. At the same time, your urine may lack substances that prevent crystals from sticking together, creating an ideal environment for kidney stones to form

Q65. Answer: (b) C

(50 + 0.5 × 20) ÷ 0.7

=> (50 +10) ÷ 0.7

=> 60 ÷ 0.7

=> 85.71

Q66. Answer: (d) B

Let, R alone can reap the field in x days

According to the question,

=> 1/10 + 1/24 + 1/x = 1/6

=> 1/x = 1/6 - 1/10 - 1/24

=> 1/x = (20 - 12 - 5)/120

=> 1/x = 3/120

=> x = 40

Therefore R alone can reap the field in = 40 days

Q67. Answer: (a) Mars

Mars has distinct polar ice caps, but Mars also has belts of glaciers at its central latitudes in both the southern and northern hemispheres. A thick layer of dust covers the glaciers, so they appear as surface of the ground, but radar measurements show that underneath the dust there are glaciers composed of frozen water

Q68. Answer: (a) A

Let, cost price = Rs. 100x

According to the question,

=> 100x + 100x × 20/100 = 320 - 320 × 10/100

=> 120x = 288

=> x = 2.4

Therefore Cost price = Rs. (100 × 2.4) = Rs. 240

Q69. Answer: (a) Vladimir the Great

Vladimir I, Grand Prince of Kiev and of all Russia, was an outstanding political figure in ancient Russia. During his rule, Christianity was adopted in Russia and it was made official religion of Russia. He is also known as St. Vladimir.

Q70. Answer: (a) 2189147

Consider, A = 1, B = 2, C = 3, D = 4, ... Z = 26

RUN = R → 18, U → 21, N → 14 → 182114

Similarly, BIN → B → 2, I → 9, N → 14 → 2914

In the same way, BRING → B → 2, R → 18, I → 9, N → 14, G → 7 → 2189147

Q71. Answer: (b) A

The Correct Answer is Option 2 i.e 2000 to 8000.

- On an average, 2000 to 8000 taste Buds are present in the human tongue.
- The tongue is a muscular organ in the mouth.
- The tongue is covered with moist, pink tissue called the mucosa.
- Taste buds are small structures present within the papillae of the tongue.
- Taste buds contain the taste receptor cells, which are also known as gustatory cells.

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Q72. Answer: (b) B

=> 5.16 × 3.2 = 16.512

Additional Information

Move the decimal so there is one non-zero digit to the left of the decimal point. The number of decimal places you move will be the exponent on the 10. If the decimal is being moved to the right, the exponent will be negative.

Q73. Answer: (a) HIVE

A dog lives or takes shelter in a kennel.

In the same way, Bee takes shelter in the hive.

Q74. Answer: (c) Both I and II follow

The least possible Venn diagram for the given statements is as follows,

Conclusions:

I. Some plants are vegetables → True (as all vegetables are plants)

II. Some fruits are plants → True (as some fruits are vegetable and all vegetables are plants)

Hence both I and II follow.

Q75. Answer: (b) A

Let, cost price of the table = Rs. 100x

Therefore Selling price of the table at 10% profit = Rs. (100x + 100x × 10/100) = Rs. 110x

According to the question,

=> (100x - 100x × 5/100) (1 + 20/100) = 110x + 7

=> 95x × 6/5 = 110x + 7

=> 114x - 110x = 7

=> x = 7/4 = 1.75

Therefore Cost Price of the table = Rs. 100 × 1.75 = Rs. 175

Q76. Answer: (a) D

The Correct Answer is Option 1 i.e Annelida.

• Coral, Hydra, and Sponges reproduce by the asexual reproduction process.

• Most of the annelids is reproduce by the sexual reproduction process.

• The annelids also are known as the ringed worms or segmented worms.

• They have a unique reproductive organ, the ring-shaped clitellum around their bodies, which produces a cocoon that stores and nourishes fertilized egg.

• Examples of Annelids are Earthworm, Leeches, Lugworms, and Polychaetes.

Q77. Answer: (a) B

The Correct Answer is Option 1 i.e Galileo Galilei.

• Galileo Galilei was taken under house arrest for supporting Heliocentrism.

• Galileo Galilei was an Italian astronomer, physicist, and engineer from Pisa.

• Galileo Galilei discovered the four biggest moons of Jupiter and the rings of Saturn. He also improved upon the telescope and invented an early type of the thermometer.

• Nicolaus Copernicus proposed that Earth and other planets revolve around the sun or the Heliocentric Theory of the universe.

• Johannes Kepler discovered three major laws of planetary motion. They are 1) The planets move in elliptical orbits with the Sun at one focus. 2) The line joining the planet to the sun sweeps over equal areas in equal intervals of time. 3) There is an exact relationship between the squares of the planets' periodic times and the cubes of the radii of their orbits.

Additional Information

• https://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/h/Heliocentrism.htm

Q78. Answer: (b) Dr. VikramA. Sarabhai

Vikram Ambalal Sarabhai (12 August 1919 – 30 December 1971) was an Indian scientist and innovator widely regarded as the father of India's space programme. Sarabhai received the Shanti Swarup Bhatnagar Medal in 1962. The nation honoured him awarding Padma Bhushan in 1966 and Padma Vibhushan (posthumously) in 1972

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Q79. Answer: (c) Tungsten

Incandescent light bulbs consist of an air-tight glass enclosure (the envelope, or bulb) with a filament of tungsten wire inside the bulb, through which an electric current is passed. Pure tungsten has some amazing properties including the highest melting point (3695 K), lowest vapor pressure, and greatest tensile strength out of all the metals. Because of these properties it is the most commonly used material for light bulb filaments.

Q80. Answer: (c) Dennis Tito

Dennis Anthony Tito (born August 8, 1940) is an American engineer and multimillionaire, most widely known as the first space tourist to fund his own trip into space. In mid - 2001, he spent nearly eight days in orbit as a crew member of ISS EP - 1, a visiting mission to the International Space Station.

Q81. Answer: (b) A

C.P of the article = Rs. 1600

Profit = 10%

S.P of the article = Rs. 1600 + (1600 × 10/100) = Rs. (1600 + 160) = Rs. 1760

If S.P = Rs. 1840, Therefore Profit = (1840 - 1600) = 240

Therefore Profit percentage = (240/1600) × 100 = 15%

Therefore Increase profit percentage = (15 - 10) % = 5%

Q82. Answer: (b) B

The Correct Answer is Option B i.e Cro - Magnon.

• Cro-Magnon was among the first fossils to be recognized as belonging to our own species—Homo sapiens.

• Cro-Magnon was discovered in 1868.

• This famous fossil skull is from one of several modern human skeletons found at the famous rock shelter site at Cro-Magnon, near the village of Les Eyzies, France.

• Homo Ergaster is an extinct species or subspecies of archaic humans who lived in Africa in the Early Pleistocene.

• Neanderthals are an extinct species or subspecies of archaic humans who lived in Eurasia until about 40,000 years ago.

Q83. Answer: (b) Sugar

Sucrose is a common saccharide found in many plants and plant parts. Saccharose is an obsolete term for sugars in general, especially sucrose. Sucrose is a compound that breaks down into one molecule of glucose and one molecule of fructose

Q84. Answer: (d) ×, +, -

Given, 27_3_19_10 = 90

Now see the options and place the symbols,

27 x 3 - 19 ÷ 10 = (27 x 3) – (19 ÷ 10) = 81 – 1.9 → 79.1 ≠ 90

27 + 3 ÷ 19 - 10 = 27 + (3 ÷ 19) – 10 = 27 + (0.15) – 10 → 17.15 ≠ 90

27 + 3 - 19 ÷ 10 = (27 + 3) – (19 ÷ 10) = 30 – 1.9 → 28.1 ≠ 90

27 x 3 + 19 - 10 = (27 x 3) + (19 - 10) = 81 + 9 → 90 = 90

Thus option (×, +, -) is correct one.

Q85. Answer: (d) A

Calculation:

=> (2/7 + 3/5) ÷ (2/5 + 2/7) = (10 + 21)/35 + (14 + 10)/35

=> (31/35) ÷ (24/35)

=> 31/24

Q86. Answer: (d) ÷, ×, +

Given, 44_4_7_5 = 82

Now see the options,

44 x 4 - 7 ÷ 5 = (44 x 4) – (7 ÷ 5) = 176 – 1.4 = 174.6 ≠ 82

44 + 4 ÷ 7 - 5 = 44 + (4 ÷ 7) - 5 = 44 + (0.57) – 5 = 39.5 ≠ 82

44 + 4 - 7 ÷ 5 = 44 + 4 – (1.4) = 48 – 1.4 = 46.6 ≠82

44 ÷ 4 x 7 + 5 = ((44 ÷ 4) x 7) + 5 = ((11) x 7) + 5 = 82

Hence option (÷, ×, +) is correct one.

Q87. Answer: (d) D

Sum of the digit in odd places = 9 + 0 = 9

Sum of the digit in even places = R + 1

Therefore The difference of sum of odd place digit and sum of even place digit = (9 - R - 1) = 8 - R

For a number to be divisible by 11 the difference has to be 0 or a multiple of 11

In this case, we get

=> 8 - R = 0

=> R = 8

Q88. Answer: (a) Cousin

Consider Malini as yourself

Maternal aunt's mother → grandmother

Grandmother's only son → maternal uncle

Uncle's son → cousin

So, Malini is the cousin of Rohit.

Q89. Answer: (a) Concrete

A hardcourt (or hard court) is a surface or floor on which a sport is played, most usually in reference totennis courts. They are typically made of rigid materials such as asphalt or concrete, and covered with acrylic material to seal the surface and mark the playing lines, while providing some cushioning.

Q90. Answer: (a) 56

Given, 36 – 4 + 7 x 8

Now replace the symbols

Symbols	•	•	×
Meaning	×	•	•

36 – 4 + 7 x 8 → 36 + (4 x 7) - 8 = 56

Hence, 56 is the correct answer.

Q91. Answer: (c) C

First multiple of 12 = 12 × 1 = 12

20^(th) multiple of 12 = 12 × 20 = 240

Therefore required average = (12 + 240)/2 = 252/2 = 126

The average of the first 20 multiples of 12 = (First multiple of 12 + 20th multiple of 12)/2

Q92. Answer: (a) B

Ascending order of the given list = 31, 53, 55, 56, 59, 61, 69

Number of data in the list = 7

Therefore Median = (7 + 1)/2 = 4^(th) number of the list = 56

Q93. Answer: (a) B

Given:

Sum of digits of two-digit number = 9

When digit are reversed then the number decreased by 45

Calculation:

Let the two-digit number be 10x + y

So, the reversed number is 10y + x

Now, According to the question

x + y = 9 ----(1)

10x + y = 45 + 10y + x

=> 9x - 9y = 45

=> x - y = 5 ----(2)

From (1) and (2), we get

x = 7 and y = 2

Therefore The two digit number is 10 × 7 + 2 = 72

Q94. Answer: (a) B

The logic followed is:

Word	M	E	N	T	O	R
Reverse position alphabets	N	V	M	G	L	I

Similarly,

Word	P	R	O	F	E	S	S	O	R
Reverse position alphabets	K	I	L	U	V	H	H	L	I

Hence, the correct answer is KILUVHHLI.

Q95. Answer: (b) Bankim Chnadra Chatterjee

The song Vande Mataram, composed in Sanskrit by Bankimchandra Chatterji, was a source of inspiration to the people in their struggle for freedom. It has an equal status with Jana - gana - mana. The first political occasion when it was sung was the 1896 session of the Indian National Congress

Q96. Answer: (d) Ozone Depletion

Ozone depletion is due to release of CFC (Chloro fluoro carbon) in the atmosphere which result in depletion of Ozone in the stratosphere. The Ozone in the stratosphere protect Living being on Earth from Harmful rays. The other option such as death of animals, Tinnitus and hypertension is due to noise pollution.

Q97. Answer: (b) B

Let, speed of the stream = x km/hr

According to the question,

=> 55 - x = 40

=> x = 15

Therefore Downstream speed of the boat = (55 + 15) = 70 km/hr

Q98. Answer: (b) RING

Tennis is played in a court.

Similarly, boxing is played in a ring.

Q99. Answer: (b) B

Let, 6 years ago, age of P = 3x and age of Q = 2x

According to the question,

=> (3x + 10)/ (2x + 10) = 8/7

=> 21x + 70 = 16x + 80

=> 5x = 10

=> x = 2

Therefore P's age = 3x + 6 = (3 × 2) + 6 = 12 years

Alternate Method

Concept used:

Basics of ratio and proportion.

Calculation:

Six years ago P : Q = 3 : 2

↓ 5 unit = (6 + 4 = 10 years)

Four years hence P : Q = 8 : 7

1 unit → 10/5 = 2 years

Age of P after 4 years = 8 × 2 = 16

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Present age of P = 16 - 4 = 12 years

Q100. Answer: (b) Gateway of India

The Gateway of India is a monument built during the 20th century in Mumbai City of Maharashtra. The structure was erected to commemorate the landing of King George V and Queen Mary at Apollo Bunder, when they visited India in 1911. Built in Indo - Saracenic style, the foundation stone for the Gateway of India was laid on 31 March 1911.

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