RRB NTPC Tier I Official Paper (Held On: 05 Apr 2016 Shift 3) (Previous Year Paper)

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

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Q1. Contemporary : Historic ? _____ : Ancient

(a) Past
(b) Classic
(c) Modern
(d) Future

Q2. Project Loon is a search engine project by _____ for providing internet access to rural and remote areas using high-altitude helium-filled balloons.

A. Google
B. Microsoft
C. Apple
D. Yahoo

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

Q3. The communication satellite launched by India in November 2015 is

A. GSAT-6
B. GSAT-15
C. GSAT-16
D. IRNSS - 1E

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

Q4. The HCF of two numbers is 4 and the two other factors of LCM are 5 and 7. Find the smaller of the two numbers.

A. 10
B. 14
C. 20
D. 28

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

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Q5. Capital of Nagaland is

A. Dimapur
B. Kohima
C. Kokokchung
D. Tezpur

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

Q6. E and F can do a work in 10 days. If E alone can do it in 30 days, F alone can do it in _____ days.

A. 15
B. 20
C. 25
D. 18

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

Q7. Who was the founder of the Swaraj Party?

A. C. Rajagopalachari
B. Motilal Nehru
C. Lala Lajpat Rai
D. Mahatma Gandhi

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

Q8. $2\cos(\pi/2 - \theta) + 3\sin(\pi/2 + \theta) - (3\sin\theta + 2\cos\theta) = ?$

A. $\cos\theta - \sin\theta$
B. $\sin\theta - \cos\theta$
C. $\sin\theta + \cos\theta$
D. $\cot\theta - \tan\theta$

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

Q9. Banaras Hindu University which completed 100 years in February 2016 was founded by

A. Gulzari Lal Nanda
B. Madan Mohan Malaviya
C. Jay Prakash Narayan
D. Sarvapalli Radhakrishnan

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

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Q10. Which one is not a good conductor of electricity?

A. Porcelain

B. Aluminum

C. Tungsten

D. Nickel

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

Q11. A statement followed by some conclusions are given below.

Statement: Based on his performance, Rajesh got a poor rating in his office.

Conclusions:

I. Rajesh did not perform well.

II. The rating given to Rajesh was not up to the mark.

Find which of the given conclusions logically follow from the given statement.

(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Both I and II follow.
(d) Neither I nor II follows.

Q12. S can finish 50% of a work in ‘a’ days. T can do 25% of the work in ‘a’ day. Both of them together will finish the work in ____ days.

A. 2.66

B. 2.33

C. 1.33

D. 1.67

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

Q13. ICT is the common abbreviation of

A. International Communication Technology

B. Intelligent Communication Technology

C. Inter-state Communication Technology

D. Information and Communication Technology

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

Q14. Find the fourth proportional to 3.6, 6.9, and 11.4.

A. 20.3

B. 18.9

C. 19.6

D. 21.85

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

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Q15. Select the number that can replace the question mark (?) in the following series.

82, 70, 76, 64, 70, 58, ?

(a) 52
(b) 76
(c) 64
(d) 48

Directions

Directions: Consider the following information and answer the questions based on it

In a group of 75 students, 12 like only cabbage, 15 like only cauliflower, 21 like only carrot, 12 like both carrot and cabbage, 13 like only capsicum and 2 like both capsicum and cauliflower.

Q16. The difference between the people who like carrot and cauliflower is

A. 6
B. 18
C. 16
D. 4

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

Q17. What is the percentage of students that do not like cabbage?

A. 16
B. 32
C. 24
D. 68

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

Q18. How many students like only one vegetable?

A. 60
B. 61
C. 65
D. 71

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

Q19. Who was the first cricketer to score 4 successive centuries in World Cup Cricket?

A. Kumar Sangakkara
B. AB de Villiers
C. Ross Taylor
D. Saeed Anwar

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

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Q20. Cars X and Y start at the same time with speeds of 12 kmph and 16 kmph. Find the distance between them after 3-minutes.(car moving in the same direction.)

A. 200 m

B. 150 m

C. 180 m

D. 120 m

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

Q21. Select the related word from the given alternatives.

Consolation : Grief ? sedative : _____

(a) Chloroform
(b) Anesthesia
(c) Pain
(d) Burn

Q22. If the length (L cm) and breadth (B cm) of a rectangle are increased by 25%. find the difference between the areas of the old and new rectangles.

A. 3LB/2 sq.cm

B. 24LB/9 sq.cm

C. 9LB/16 sq.cm

D. 16LB/9 sq.cm

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

Q23. The technology developed to track enemy submarines in World War II was

A. RADAR

B. SONAR

C. Echolocation

D. LIDAR

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

Q24. Read the given statements carefully and answer the question.

Statement:

A leading tennis star who faced media after failing a dope test said, “I don’t want to end my career this way, I hope I will be given another chance to play this game. I let the sport down.”

Which of the following is true according to the given statement?

(a) He was challenging the outcome of the dope test.
(b) He was confident that he was right and would continue to play.
(c) He had admitted to testing positive in dope test.
(d) The sport let him down.

Q25. A human adult's entire digestive tract from mouth to anus is about _____ meters long.

A. 8

B. 7

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C. 10

D. 9

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

Q26. Which one of the following is not alkaline?

A. Sodium

B. Potassium

C. Lithium

D. Sulphur

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

Q27. The average ages of parents and two children are 30 years and 8 years respectively. The average age of the family is

A. 16 years

B. 19 years

C. 18 years

D. 17 years

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

Q28. A statement followed by some conclusions are given below.

Statement: After landing on the moon, Neil Armstrong said “One small step for a man, a giant leap for mankind.”

Conclusions:

I. Neil Armstrong calls himself as mankind.

II. Neil Armstrong only echoed the feeling of achievement by mankind.

Find which of the given conclusions logically follow from the given statement.

(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Both I and II follow.
(d) Neither I nor II follows.

Q29. A student scored 470 marks in 6 subjects. The maximum marks for each subject was 100. What was his score in percentage terms?

A. 67.33%

B. 69.45%

C. 78.33%

D. 78.67%

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

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Q30. An article was sold for Rs. 26,000 at a discount of 35%. Find the selling price if the discount was 15%.

A. Rs. 36,000
B. Rs. 40,000
C. Rs. 38,000
D. Rs. 34,000

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

Q31. If the mathematical operator '÷' means '×', '+' means '-', '×' means '+' and '_' means '÷', then 25 + 18 – 3 × 7 ÷ 3 = ?

(a) 25
(b) 21
(c) 19
(d) 40

Q32. A man covers 1 km in 10 minutes. What is his speed in m/s?

A. 1.33
B. 1.25
C. 1.67
D. 1.50

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

Q33. The _____ Five Year Plan of the Government of India (2012-17) is under drafting

A. 10^(th)
B. 11^(th)
C. 12^(th)
D. 13^(th)

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

Q34. A man deposits Rs. 500 at the beginning of each year for 2 years at 10% p.a compound annually. Find the maturity value at the end of the 2^(nd) year.

A. Rs. 1,050
B. Rs. 1,150
C. Rs. 1,155
D. Rs. 1,200

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

Q35. Which ailment is not related to the heart?

A. Aneurysm
B. Cardiomyopathy
C. Diphtheria
D. Myocardial rupture

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

Q36. If ‘god is great’ = ‘cp an bo’, ‘great help done’ = ‘er cp fs’ and ‘he is great’ = ‘bo cp dq’, then what represents ‘he is god’?

(a) cp er bo
(b) an bo cp
(c) dq bo cp
(d) an bo dq

Q37. 'Euro' is the currency of

A. UK
B. Sweden
C. Euro Zone
D. Denmark

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

Q38. If the arithmetic mean of 10 numbers is 35 and each number is increased by 2, find the mean of the new set of numbers.

A. 28
B. 34
C. 40
D. 37

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

Q39. Gunpowder mainly contains

A. Calcium sulfate
B. Potassium nitrate
C. Lead sulphide
D. Zinc sulphide

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

Q40. Replace # sign with the mathematical operations '+', '÷' '-' and '=' to get a balanced equation out of (27 # 15 # 2) # 10 # 4. Choose the right sequence from below.

A. + ÷ = -
B. - + = ÷
C. + - ÷ =
D. + = ÷ -

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

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Q41. The most significant feature of Indus Valley civilization was

A. Barter system

B. Local transport system

C. Buildings made of brick

D. Administrative system

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

Q42. If ARC is written as $ @ * and HIT is # & % then CHAIR is

(a) • & $ @
(b) • $ & %
(c) • # $ & @
(d) • # $ & %

Q43. If 'health care is wealth' is written as 1372, 'health needs care' is 417, 'he needs wealth' is 463, then 'he is wealth' is _____.

(a) 623
(b) 764
(c) 624
(d) 246

Q44. The difference between the length and breadth of a rectangle is 6 m. If its perimeter is 64 m, then its area is:

A. 256 sq.m

B. 247 sq.m

C. 264 sq.m

D. 238 sq.m

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

Q45. The price of 12 kg of sugar is equal to that of 6 kg of rice. The price of 10 kg of sugar and 8 kg of rice Rs. 1040. Find the price 1 kg of sugar.

A. Rs. 80

B. Rs.70

C. Rs. 60

D. Rs.40

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

Q46. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

CBDA, GFHE, KJLI, ?

(a) NOPM
(b) MNOP
(c) PMNO
(d) ONPM

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Q47. A man who had no brother or sister, pointed out to a photo and said “this boy is my father’s son”. Who was on the photo?

(a) The man’s son
(b) The man’s father
(c) Himself
(d) The man’s grandfather

Q48. The HCF of two numbers is 6 and their LCM is 108. If one of the numbers is 12, then the other is

A. 27
B. 54
C. 48
D. 36

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

Q49. 9876 - ? + 5431 = 5553

A. 9754
B. 9765
C. 8754
D. 9854

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

Q50. Bina is the daughter of Mohan who is the only son-in-law of Meena. Meena has only one child. Kiran is the granddaughter of Meena. How is Kiran related to Bina?

(a) Sister
(b) Daughter
(c) Maternal aunt
(d) Mother

Q51. NGT stands for

A. National Geographic Television
B. National Green Transport
C. National Green Trust
D. National Green Tribunal

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

Q52. If ‘code’ = 6241, ‘made’ = 5346, ‘come’ = 3124’ and ‘to’ = 27 then ‘dome’ = ?

(a) 6134
(b) 5214
(c) 6124
(d) 6234

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Q53. In 2012 Olympics, the maximum gold medals were won by

A. China

B. Great Britain

C. U.S.A

D. Russia

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

Q54. India came directly under the rule of the British Crown in the year _____

A. 1857

B. 1858

C. 1859

D. 1856

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

Q55. E is the daughter of P who is the husband of the only daughter-in-law of K? How is E related to K?

(a) Daughter
(b) Grand daughter
(c) Grand mother
(d) Mother

Q56. A trader bought a bag of 40 kg of basmati rice at Rs. 125 per kg and another bag of 60 kg at Rs. 150 per kg. He sold the entire stock at a profit of 20%. find the selling price per kg.

A. Rs. 152

B. Rs. 158

C. Rs. 168

D. Rs. 172

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

Q57. The mean of 25 values was 40. But one value was written as 25 instead of 50. The corrected mean is

A. 39

B. 41

C. 40

D. 42

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

Q58. What number should be deducted from 1265 to make it divisible by 29 exactly?

A. 15

B. 16

C. 18

D. 17

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

Q59. Headquarters of NASA is at

A. New York
B. Washington
C. Boston
D. Texas

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

Q60. Find a pair similar to 'Arrow : Bow' from the following.

(a) Football : Hand
(b) Salad : Knife
(c) Bullet : Rifle
(d) Smoke : Water

Q61. Read the given statements carefully and answer the question.

Knowledge and wisdom go hand in hand. The deeper the knowledge, the greater is the wisdom. Knowledge is awareness. Wisdom is required to tackle complications.

Which of the following is true according to the given statement?

(a) Knowledge and wisdom are synonymous.
(b) Knowledge and wisdom are entirely different.
(c) Knowledge and wisdom are complementary to each other.
(d) Wisdom can supplant knowledge.

Q62. India covers _____ of earth's land area. (approximate)

A. 2.8%
B. 2.4%
C. 2.0%
D. 3.2%

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

Q63. If a + 2b = 55 and a – 2b = - 13, find the value of b.

A. 21
B. 14
C. 17
D. 19

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

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Q64. An article was sold for Rs. 3,600 at a discount of 10%. Find the selling price if the discount was 15%.

A. Rs. 3,600
B. Rs. 4,000
C. Rs. 3,800
D. Rs. 3,400

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

Q65. Which one is considered as India's first supercomputer?

A. Aditya
B. Vikram - 100
C. Param 8000
D. Shastra T

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

Q66. Bangladesh has a land border with

A. Only India
B. India and Myanmar
C. India and Bhutan
D. India and China

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

Q67. Rearrange the jumbled letters to make meaningful words and then select the one which is different.

(a) DOGL
(b) TSEVO
(c) ENZROB
(d) LVREIS

Q68. Select the alternative that has a different relationship as the given pair –

Inside : Outside

(a) Day : Night
(b) Sun : Star
(c) Light : Dark
(d) White : Black

Q69. INSAT-3D the meteorological Satellite with advanced weather monitoring payloads was launched in

A. 2012
B. 2013
C. 2014
D. 2015

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

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Q70. Verification of log-in name and password is for

A. Authenticating the user

B. Re-confirming the user

C. Providing formal access to the user

D. Completing the formality of login-in

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

Q71. Find out the odd statement in relation to a triangle.

A. The longest side is opposite to the greatest angle.

B. The exterior angle of a triangle = the sum of interior opposite angles.

C. The sum of 2 sides is greater than the 3^(rd) side.

D. The square of one side = the sum of the squares of the other two sides

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

Q72. 99 × 99 = ?

A. 9791

B. 9801

C. 9881

D. 9901

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

Q73. If cot52° = b, tan38° = ?

A. √b

B. √b/2

C. – b

D. b

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

Q74. Infra-red rays are

A. Longitudinal waves

B. Transverse waves

C. Mechanical waves

D. Electromagnetic waves

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

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Q75. Statements followed by some conclusions are given below.

Statement:

1. God has distributed time equally to mankind but not money.
2. But God has compensated by giving commonsense.

Conclusions:

I. God has not done justice to mankind in distributing money.

II. One has to use commonsense to manage money wisely.

Find which of the given conclusions logically follows from the given statements.

(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Both I and II follow.
(d) Neither I nor II follows.

Q76. A compiler is a

A. Hardware
B. Software
C. Neither Hardware nor Software
D. Card

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

Q77. Tashkent Declaration followed Indo-Pak war of

A. 1947
B. 1965
C. 1971
D. 1999

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

Q78. The sum of the ages of 4 children born at the intervals of 4 years is 48. Find the age of the youngest child.

A. 4 years
B. 5 years
C. 6 years
D. 7 years

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

Q79. The product of two numbers is 24 and the sum of their squares is 52. Find their sum.

A. 5
B. 10
C. 15
D. 20

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

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(d) A

Q80. The ratio of two numbers is 3 : 1 and their sum is 72. Find the difference between the numbers.

A. 24
B. 36
C. 32
D. 28

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

Directions

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

P, Q, R, S are four friends who pursue teaching, law, banking, cooking and own red, blue, white and yellow house, in a random order. An individual owns only one house and pursues only one profession.

1. P owns a red house and is not a banker.
2. The owner of blue house is a lawyer.
3. The colour of S's house is neither yellow nor white.
4. R is a teacher.

Q81. The owner of the blue house is

(a) S
(b) R
(c) Q
(d) Cannot be determined

Q82. Q is a

(a) Lawyer
(b) Banker
(c) Cook
(d) Teacher

Q83. White house is owned by whom?

(a) Q
(b) R
(c) S
(d) Cannot be determined

Q84. Which river does not flow into the Arabian Sea?

A. Narmada
B. Tapi
C. Periyar
D. Mahanadi

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

Q85. Name the Chinese President who visited India in 2015.

A. Xi Jinping
B. Hu Jintao
C. Jiang Zemin

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D. Li Xian Ning

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

Directions

Direction: The following table represents the marks of four students in five subjects.

	Physics	Chemistry	Maths	History	Geography
Shyam	45	50	49	51	65
Sunil	60	55	60	59	61
Jagdish	35	41	39	30	45
Rajesh	50	55	51	57	62

Consider the information and answer questions based on it.

Q86. The difference between the total marks scored by Sunil and Jagdish is

A. 190
B. 125
C. 105
D. 115

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

Q87. Who has the highest marks in History and Geography put together?

A. Shyam
B. Sunil
C. Jagdish
D. Rajesh

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

Q88. Who has the highest average marks?

A. Shyam
B. Sunil
C. Jagdish
D. Rajesh

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

Q89. 'Khajuraho' group of monuments can be found in

A. Maharashtra
B. Bihar
C. Madhya Pradesh
D. Gujarat

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

Q90. Stainless steel is

A. A compound
B. A mixture
C. An element
D. An alloy

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

Q91. Human respiration releases

A. Mixture of gases
B. Carbon monoxide
C. Oxygen
D. Carbon dioxide

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

Q92. Statue of Liberty is situated in

A. Paris
B. Washington
C. Geneva
D. New York

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

Q93. The historic Conference of Parties (COP 21) 2015, on climate change was held in

A. Geneva
B. Davos
C. Paris
D. Bonn

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

Q94. Usually, color blindness is

A. A genetic disposition
B. A non-genetic condition
C. A lifestyle disease
D. Caused by exposure to light

(a) D
(b) B

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(c) A
(d) C

Q95. What will happen to a person's weight when he is in a moving elevator at a constant speed?

A. Increase
B. Decrease
C. Weight will not change
D. May increase or decrease

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

Q96. Rajya Sabha is also known as

A. Legislative Council
B. Senior House
C. Upper House
D. Lower House

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

Q97. Which one does not belong to the group?

A. Panda Global
B. Rabbit
C. Avast
D. Kaspersky

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

Q98. Which country won the U-19 World Cup Cricket 2016?

A. India
B. Sri Lanka
C. West Indies
D. Bangladesh

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

Q99. Find the mean of the values. 1, 9, 7, 3, 5, 5, 6, 4, 2, 8

A. 3
B. 4
C. 5
D. 6

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

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Q100. At what percentage simple interest per annum a certain sum will double in 10 years?

A. 7%

B. 8%

C. 9%

D. 10%

(a) B

(b) A

(c) D

(d) C

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) Modern

Contemporary and Historic are opposite words.

Similarly, Modern and Ancient are opposite words.

Q2. Answer: (c) A

The Correct Answer is Option (3) i.e A.

• Project Loon is an internet connectivity project by Google for providing internet access to rural and remote areas.

• The parent company of Project Loon, as well as Google, is Alphabet Inc.

• The company uses a high altitude of balloons in the stratosphere at an altitude of 18 km to create an aerial wireless network with high speed.

Company	Headquarters	Founded in	Present CEO (2020)	Founders
Google	Mountain View, California (USA)	4 September 1998	Sunder Pichai	Larry Page & Sergey Brin
Microsoft	Redmond, Washington (USA)	4 April 1975	Satya Nadella	Bill Gates & Paul Allen
Apple	Cupertino, California (USA)	1 April 1976	Tim Cook	Steve Jobs, Steve Wozniak, Ronald Wayne
Yahoo	Sunnyvale, California (USA)	January 1994	Marissa Mayer	Jerry Yang & David Filo

Q3. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• The communication satellite GSAT-15 was launched on 10th November 2015.

The GSAT series of geosynchronous satellites is a system developed by the Indian Space Research Organization (ISRO).

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• The main objective of the GSAT series is to make India self-reliant in broadcasting services.

Satellite	Mission Type	Launched In
GSAT- 6	Communication satellite	2018
GSAT-16	Communication satellite	2014
IRNSS-1E	Navigation	2016

Q4. Answer: (a) C

HCF of two number is = 4

=> so the two numbers be 4x and 4y.

=> The two other factors of LCM are 5 and 7

Therefore the two numbers become (4 × 5) and (4 × 7) since they are the factors of LCM.

=> 20,28

Therefore Smaller number is = 20

Q5. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• Nagaland is a mountainous North-east state of India with its capital in Kohima.

• It is bordered by the state of Assam to the west, Arunachal Pradesh and Assam to the North, Myanmar to east, and Manipur to the south.

• It was formed on 1 December 1963.

• The present Chief Minister of Nagaland is Neiphiu Rio.

• The present Governor of Nagaland is R.N. Ravi.

Place	State
Dimapur	Nagaland
Kokokchung	Nagaland
Tezpur	Assam

Q6. Answer: (a) A

Suppose, Total work = 30 units (LCM of 10, 30)

=> Efficiency of F = 3 – 1 = 2 units/day

Therefore F alone can complete the whole work in = 30/2 = 15 days

Q7. Answer: (d) B

The Correct Answer is Option (4) i.e B -

• Swaraj Party was a political party formed by Motilal Nehru and Chittranjan Das in the year 1923.

• The party was formed after the Gaya annual conference of 1922 of the Indian National Congress.

• After the partition of Bengal, the Swaraj party won the most seats during elections to the Bengal Legislative Council in 1923.

Person	Important Points
C. Rajagopalachari	He was the last Governor-General of India. He was one of the first Bharat Ratna Awardee in 1954.
Lala Lajpat Rai	He played an important role in the Indian Independence movement. He was popularly known as 'Punjab Kesari'.
Mahatma Gandhi	He is also known as the 'Father of Nation' and 'Bapu'. He led the freedom movements like the Non-cooperation Movement, Dandi March (Salt Satyagrah), Quit India Movement, etc.

Q8. Answer: (d) A

Concept used:

Calculation:

$2\cos(\pi/2 - \theta) + 3\sin(\pi/2 + \theta) - (3\sin\theta + 2\cos\theta) = ?$

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=> ? = 2 cos (90 – θ) + 3 sin (90 + θ) – 3 sin θ – 2 cos θ

=> ? = 2 sin θ + 3 cos θ – 3 sin θ – 2 cos θ

Therefore ? = cos θ – sin θ

Q9. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• Benarus Hindu University was founded by Madan Mohan Malviya with cooperation from Annie Besant in the year 1916 in Varanasi.

• BHU was formerly known as Central Hindu College.

• BHU is the largest residential University in Asia, with over 35000 students.

Person	Important Points
Gulzari Lal Nanda	He was the Prime Minister of India for two short periods after the death of Nehru in 1964 and Lal Bahadur Shastri in 1966
Jay Prakash Narayan	He was also known as Lok Nayak and was an Indian Independence activist, socialist and political leader.
Sarvapalli Radhakrishnan	He was the first Vice-President of India and the second President of India. He was also the first person to receive the Bharat Ratna Award.

Q10. Answer: (a) A

The Correct Answer is Option (1) i.e A -

• Porcelain is a ceramic material made by heating materials, generally including material like kaolin, in a kiln to a temperature between 1200-1400 degrees Celsius.

• It is a bad conductor of electricity.

• Bad conductors are the materials that do not allow electricity to pass through them. The electrons in bad conductors do not move freely.

• Some common examples of the bad conductors of electricity or insulators are - Rubber, Glass, Wood, Porcelain, etc.

• Good conductors are the materials that allow the electricity to pass through them. The electrons move freely.

• Some common examples of good conductors are - Silver, Copper, Aluminium, Tungsten, Nickel, etc.

Q11. Answer: (a) Only conclusion I follows.

According to the statement, based on his performance Rajesh got poor rating in his office.

Rajesh got poor rating may be because of his poor performance.

So, conclusion I follows.

Rajesh got poor rating maybe because of the rating given was not up to the mark but it is not mentioned in the statement that rating given by the office is up to the mark or not.

So, conclusion II can not follows.

Hence, Only conclusion I follows.

Q12. Answer: (b) C

S can finish 50% of the work in = a days

=> S can finish 100% work in = 2a days

T can 25% of the work in = a days

=> T can 100% work in = 4a days

Suppose, Total work = 4a units (LCM of 2a, 4a)

=> Efficiency of S = 4a/2a = 2 units/day

=> Efficiency of T = 4a/4a = 1 unit/day

Therefore Both S and T together can complete the whole work in = 4a/(2 + 1) = 4a/3 = 1.33a days

Q13. Answer: (c) D

The Correct Answer is D.

Key Points

• ICT is the common abbreviation of Information and Communication Technology.

• It stresses the role of unified communications and the integration of telecommunications and computers, as well as necessary

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enterprise software, storage, that enables the user to access, store, transmit, and manipulate information.

• The term ICT is generally accepted to mean all devices, networking components, applications, and systems that combined allow people and organizations to interact in the digital world.

• ICT encompasses both the internet-enabled sphere as well as the mobile one powered by wireless networks.

Q14. Answer: (c) D

Given:

The numbers are 3.6, 6.9, and 11.4.

Concept used:

For finding the fourth proportional of a, b and c.

a/b = c/d

Where d is the fourth proportional.

d = c × b/a

Calculation:

Let the fourth proportional to 3.6, 6.9 and 11.4 be x

=> 3.6/6.9 = 11.4/x

=> x = 11.4 × 6.9/3.6

Therefore x = 21.85

Therefore The fourth proportional of the given numbers is 21.85.

Q15. Answer: (c) 64

Hence, the next number in the series is 64.

Q16. Answer: (d) C

Total number of people who like carrot = 21 + 12 = 33

Total number of people who like cauliflower = 15 + 2 = 17

Therefore Required difference = 33 – 17 = 16

Q17. Answer: (b) D

Total students = 75

Total number of students who like cabbage = 12 + 12 = 24

=> Percentage of students who like cabbage = 24/75 × 100 = 32%

Therefore Percentage of students who do not like cabbage = 100 – 32 = 68%

Q18. Answer: (d) B

Number of students who like only carrot = 21

Number of students who like only cabbage = 12

Number of students who like only capsicum = 13

Number of students who like only cauliflower = 15

Therefore Total number of students who like only one vegetable = 21 + 12 + 13 + 15 = 61

Q19. Answer: (c) A

The Correct Answer is Option (3) i.e A -

• Kumar Sangakkara was the first cricketer to score 4 successive centuries in World Cup Cricket in the 2015 Cricket World Cup.

• Kumar Sangakkara and Rohit Sharma are the only cricketers to hit 4 centuries in one World Cup.

• Rohit Sharma hit 4 centuries in the World Cup of 2019, thereby sharing the record for the highest number of centuries in a world cup with Sangakkara.

• Kumar Sangakkara is the second-highest run-getter of the world after Sachin Tendulkar in the ODI Cricket.

Players	Representing Country
Kumar Sangakkara	Sri Lanka
AB de Villiers	South Africa
Ross Taylor	New Zealand
Saeed Anwar	Pakistan

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Q20. Answer: (c) A

GIVEN:

The speed of X = 12 km/hr

The speed of Y = 16 km/hr.

FORMULAE USED:

Distance = Speed × Time

CALCULATION:

=> Relative speed = 16 – 12 = 4 km/hr

Therefore Distance between them after 3 min = 4 × 1000 × 3/60 = 200 m

Q21. Answer: (c) Pain

Consolation soothes the grief.

Similarly, sedative alleviates the pain.

Q22. Answer: (c) C

As we know,

Area of the rectangle = Length × Breadth = L × B

=> New length of the rectangle = L × 125/100 = 5L/4

=> New breadth of the rectangle = B × 125/100 = 5B/4

New area of the rectangle = 5L/4 × 5B/4 = 25LB/16

Therefore Difference between area new to old one = 25LB/16 - LB = (25LB – 16LB)/16LB

= 9LB/16 sq.cm.

Q23. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• The technology that was developed to track enemy submarines in World War II was SONAR.

• This technique was first used by the Americans in World War II.

• SONAR stands for Sound Navigation and Ranging.

• SONAR is a technique that uses sound propagation to navigate, communicate with, or detect objects on or under the surface of the water.

Technology	Detail
RADAR	It is a detection system that uses radio waves to determine the range, angle, or velocity of the objects. It is used to detect aircraft, ships, spacecraft, etc.
Echolocation	It is also known as bio-sonar, is a biological sonar used by several animal species like bats, whales, dolphins, etc.
LIDAR	It is a remote sensing method that uses light in the form of a pulsed laser to measure ranges to the earth

Q24. Answer: (c) He had admitted to testing positive in dope test.

According to the given statement, after failing the dope test the tennis player said “I hope I will be given another chance to play this game. I let the spot down”. It clearly says that he had admitted to testing positive in dope test. Hence, only statement C is true.

Q25. Answer: (b) D

The Correct Answer is Option (2) i.e D -

• A human adult's entire digestive tract from the mouth to the anus is about 9 meters or 30 feet long.

• The digestive tract is open at two ends, with the mouth at the anterior end and anus at the posterior end.

• The digestive tract is also known as the Alimentary Canal.

• The Alimentary Canal is a long tube through which food is taken into the body and digested.

• The main organs of the alimentary canal are - The Mouth, Esophagus, Stomach, Small Intestine, and the large intestine.

• The human digestive system is also known as the Alimentary Canal.

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Q26. Answer: (b) D

The Correct Answer is Option (2) i.e D -

• Sulfur or Sulfur belongs to the chalcogen family and has an atomic number of 16.

• Some of the other members of the chalcogen family are - Oxygen, Selenium, Tellurium, and Polonium.

• Lithium, Sodium, Potassium, Rubidium, Caesium, and Francium belongs to the group of Alkali Metals.

• Alkali metals family of metals is also known as the lithium family after its leading element and belongs to group-1 of the periodic table.

• Alkali metals belong to the s-block elements in the periodic table.

Element	Symbol	Atomic Number
Sodium	Na	11
Potassium	K	19
Lithium	Li	3
Sulfur	S	16

Q27. Answer: (b) B

The average age of parents and two children are 30 years and 8 years respectively

=> Sum of age of parents = 2 × 30 = 60 years

=> Sum of the age of two children = 2 × 8 = 16 years

Sum of age of 4 members in the family = 60 + 16 = 76 years

Therefore Average age of whole family = 76/4 = 19 years

Q28. Answer: (b) Only conclusion II follows.

According to the given statement, Neil Armstrong said “One small step for a man, a giant leap for mankind.” What he meant was that it only took him one small step to step out of the rocket and onto the moon, but his walking on the moon was huge progress for the scientific knowledge of mankind.

Neil Armstrong didn’t call himself as mankind. So, conclusion I doesn’t follow.

Neil Armstrong only echoed the feeling of achievement by mankind. Clearly it is stated in the statement. So, conclusion II follows.

Hence, only conclusion II follows.

Q29. Answer: (a) C

Student scored in all 6 subjects = 470 marks

Maximum score in all 6 subjects = 600 marks

Therefore Percentage marks = 470/600 × 100 = 78.33%

Q30. Answer: (c) D

SP of the article = Rs. 26,000

=> MP of the article = 26,000 × 100/65 = Rs. 40,000

Therefore New SP of the article = 40,000 × 85/100 = Rs. 34,000

Q31. Answer: (d) 40

‘÷’ means ‘×’

‘+’ means ‘-’

‘×’ means ‘+’

‘_’ means ‘÷’

25 + 18 – 3 × 7 ÷ 3 means 25 – 18 ÷ 3 + 7 × 3

Thus, 25 – 18 ÷ 3 + 7 × 3 = 40

Q32. Answer: (a) C

As we know,

Distance covered in 10 min = 1 km

Distance covered in 60 min (1 hr) = 1/10 × 60 = 6 km/hr

Speed of man = 6 × 5/18 = 1.67 m/sec

Q33. Answer: (d) C

The Correct Answer is Option (4) i.e C -

• The twelfth five-year plan of the Planning Commission was applicable from 2012-2017. Planning Commission was replaced by the NITI Aayog in 2015.

• The plan had set a target of 9% average growth of GDP over the plan period.

• The Twelfth Five Year Plan of the Government of India was India's last Five Year Plan.

Five Year Plan	Year	Target GDP Growth(%)	Achieved GDP Growth (%)
Ninth	1997-2002	6.5	5.4
Tenth	2002-2007	8.0	7.2
Eleventh	2007-2012	9.0	8.0

Q34. Answer: (c) C

Deposit amount = Rs. 500, r = 10% and time = 2 years

As we know,

$A = P (1 + r/100)^n$ [A = amount, P = principal, r = rate of interest, n = time]

$\Rightarrow A = 500 \times (1 + 10/100)^2 + 500 (1 + 10/100)$

$\Rightarrow A = 500 \times (11/10)^2 + 500 \times (11/10)$

$\Rightarrow A = 500 \times 121/100 + 500 \times 11/10$

$\Rightarrow A = 605 + 550$

Therefore A = Rs. 1155

Q35. Answer: (a) C

The Correct Answer is Option (1) i.e C -

• Diphtheria is an infection caused by the bacterium Corynebacterium diphtheriae.

• Diphtheria causes a thick covering in the back of the throat.

• It usually affects the mucous membranes of the nose and throat.

Ailment	Detail
Aneurysm	It is an enlargement of the artery caused by weakness in the arterial wall.
Cardiomyopathy	It is a disease of the heart muscle that makes it harder for the heart to pump blood to the rest of the body. It can lead to heart failure
Myocardial rupture	It is a laceration of the ventricles or atria of the heart, of the interatrial or interventricular septum, or the papillary muscles.

Q36. Answer: (d) an bo dq

Code for he - dq, is - bo, god - an

Thus, ‘he is god’ = ‘an bo dq’.

Q37. Answer: (d) C

The Correct Answer is Option (4) i.e C -

• Eurozone is a monetary union of 19 of the 27 European Union member states which have adopted the Euro as their common currency.

• The 17 countries of the Eurozone are - Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

Country	Capital	Currency
UK	London	Pound Sterling
Sweden	Stockholm	Swedish Krona
Denmark	Copenhagen	Danish Krone

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Q38. Answer: (d) D

Arithmetic mean of 10 numbers = 35

=> Sum of 10 numbers = 35 × 10 = 350

If each number increased by 2,

=> New sum of 10 numbers = 350 + 10 × 2 = 370

Therefore New arithmetic mean of 10 numbers = 370/10 = 37

Shortcut Trick

When each number is increased by n, then the arithmetic mean also increases by n.

Therefore Each number increased by 2, New arithmetic will be = 35 + 2 = 37

Q39. Answer: (c) B

The Correct Answer is Option (3) i.e B -

• Gunpowder is the earliest known chemical explosive which is also known as Black powder.

• It consists of a mixture of sulfur (S), charcoal (C), and Potassium nitrate (KNO3)_.

• Gunpowder is widely used as the propellant in firearms, artillery, rockets, and fireworks.

• It is also used as blasting powder in quarrying, mining, and road building.

• Gunpowder was first invented by China in the 9^(th) Century.

Chemical	Uses
Calcium Sulphate	It is used in the manufacture of Plaster of Paris, used as a coagulant, etc
Lead Sulfide	They are used in infra-red detectors, Photo-optic applications, etc
Zinc Sulfide	It is used as a phosphor in X-ray Screens, Cathode ray tubes, used in infra-red optics, etc.

Q40. Answer: (c) C

The logic followed here is:

equation: (27 # 15 # 2) # 10 # 4

1) + ÷ = -

(27 + 15 ÷ 2) = 10 - 4

34.5 ≠ 6

2) - + = ÷

(27 - 15 + 2) = 10 ÷ 4

14 ≠ 2.5

3) + - ÷ =

(27 + 15 - 2) ÷ 10 = 4

40 ÷ 10 = 4

4) + = ÷ -

(27 + 15 = 2) ÷ 10 - 4 (Not applicable)

Hence, the correct answer is '+ - ÷ ='

Q41. Answer: (c) C

The Correct Answer is Option (3) i.e C -

• The most significant feature of Indus Valley civilization was the buildings made of the bricks.

• Indus Valley Civilization is also known as Harappan Civilization, which flourished around 2500 BC in Pakistan and Western India.

• Some of the important Harappan sites are - Harappa (Pakistan), Mohenjodaro (Pakistan), Sutkagendor (Pakistan), Chanhudaro (Pakistan), Kalibangan (Rajasthan), Lothal and Surkotada (Gujarat), Banawali (Haryana), Dholavira (Gujarat), etc

• In 1924, John Marshall, Director-General of Archaeological Society of India (ASI), announced the discovery of a new civilization in the Indus Valley to the World.

• Indus Valley Civilization was the largest of the ancient urban civilization of Egypt, Mesopotamia, India, and China.

• ASI was founded by Alexander Cunningham in the year 1861.

Additional Information

• The Indus Valley Civilization was spread from present-day North-East Afghanistan to Pakistan and North-West India. This

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civilization flourished in the river basins of the Ghaggar-Hakra river and the Indus. Indus valley civilization is one of the four oldest civilizations in the world. It is also known as Harappan Civilization and is well-known for its organized planning based on the grid system. Important facts to be remembered

• John Marshall was the first researcher to use the term, 'Indus Valley Civilization'.
• Indus Valley Civilization spread from the year 2500 – 1750 BC according to radio-carbon dating.
• The most distinctive feature of the Harappan Civilization was its urbanization.
• Moreover, sheep and goats, dogs, humped cattle buffalo, and elephants were domesticated in the Indus Valley Civilization.
• The capital cities are Mohenjodaro and Harappa.
• The port cities are Sutkagendor, Balakot, Lothal, Allahdino, and Kuntasi.
• The Indus valley people were well-acquainted with the use of both cotton and wool.
• Name of the major cities are given below:
• Mohenjodaro (Sind)-It is located on the right bank of the Indus.
• Kalibangan (Rajasthan)-It was on the banks of the river Ghaggar river
• Chanhudaro-It lies on the left bank of the Indus in the south of Mohenjodaro.
• Lothal- It is located at the head of the Gulf of Cambay.
• Surkotada (Gujarat)-It is at the head of the Rann of Kutch.
• Banawali (Haryana)-It was situated on the banks of the now-extinct Sarasvati
• Dholavira (Gujarat)-It excavated is in the Kutch district

Q42. Answer: (c) • # $ & @

The relation as follows,
The given word is,
Hence, the answer is * # $ & @.

Q43. Answer: (a) 623

code for 'he' → 6
code for 'is' → 2
code for 'wealth' → 3
Hence, he is wealth is 326.

Q44. Answer: (b) B

Given,
l – b = 6 m ----(i)
As we know,
Perimeter of the rectangle = 2 (l + b)
2 (l + b) = 64
=> l + b = 32 ----(ii)
Add equation (i) and equation (ii), we get
2l = 38
=> l = 19 m
From equation (ii), we get
=> b = 32 – 19
=> b = 13 m
Therefore Area of the rectangle = lb = 19 × 13 = 247 sq.m.

Q45. Answer: (c) D

Let price of 1 kg sugar and 1 kg rice be Rs. x and Rs. y respectively,
According to the question
12x = 6y
=> 2x = y
Also, 10x + 8y = 1040
=> 10x + 8 × 2x = 1040
=> 10x + 16x = 1040

=> 26x = 1040

=> x = Rs. 40

Therefore Price of sugar 1 kg is Rs. 40.

Q46. Answer: (d) ONPM

The relation among the terms is as follows,

Hence, the missing term in the series is ONPM.

Q47. Answer: (c) Himself

Given, man had no brother or sister.

“The boy is my father’s son” → his father’s son → man himself.

Hence, the man himself was on the photo.

Q48. Answer: (b) B

Let the second number be x

As we know,

Product of two number = HCF × LCM

=> 12 × x = 6 × 108

=> x = (6 × 108)/12

=> x = 54

Therefore The second number is 54.

Q49. Answer: (a) A

9876 - ? + 5431 = 5553

=> 9876 + 5431 – 5553 = ?

=> ? = 9754

Q50. Answer: (a) Sister

Hence, Kiran is the sister of Bina.

Q51. Answer: (b) D

The Correct Answer is Option (2) i.e D -

• NGT stands for the National Green Tribunal which is an Environmental Protection Law of India.

• National Green Tribunal was established under Section 3 of the National Green Tribunal Act, 2010.

• NGT was established on 18th October 2010 under the National Green Tribunal Act, 2010.

• It has been established to provide speedy environmental justice and help reduce the burden of litigation in the higher courts.

• It draws inspiration from Article 21 of the Constitution which deals with the protection of life and personal liberty, which assures the citizens of India the Right to a healthy environment.

Q52. Answer: (d) 6234

The relation between the given terms is shown below,

Hence, the given word dome = 6234.

Q53. Answer: (c) C

The Correct Answer is Option (3) i.e C -

• In the 2012 Olympics, the maximum gold medals were won by the USA. The total medals won by the USA was 104 (46 Gold, 28 Silver, 30 Bronze).

• The USA was followed by the country of China (38 Gold), and Great Britain (29 Gold).

• 2012 Olympics (or Game of XXX Olympiad) was hosted by the United Kingdom with 204 Nations participating in the event.

• 2016 Olympics was held in Rio de Janeiro, Brazil with 207 participating nations. The event was topped by the US (Total 121 medals including 46 Gold), followed by Great Britain (27 Gold), and China (26 Gold).

• India was ranked 67^(th) in the 2016 Olympics with a total of 2 Medals (1 Silver (P.V. Sindhu), 1 Bronze (Sakshi Malik)).

• The 2020 Olympics is supposed to be hosted by Japan. Due to the Coronavirus pandemic, the event is shifted to July 2021.

• The present President of the International Olympic Committee is Thomas Bach (April 2020).

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Q54. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• Government of India Act, 1858 was passed to end the rule of the company and transferred it to the British crown which was the outcome of 1857 revolt.

• Queen Victoria was the queen of Britain in 1858.

• The supreme body of India was also transferred to the British Parliament.

• In the year 1876, Queen Victoria has proclaimed the Empress of India. This new title was proclaimed at Delhi Darbar of 1 January 1877.

• This system of governance lasted until the year 1947 when British provinces of India were partitioned into India and Pakistan.

Q55. Answer: (b) Grand daughter

E is the daughter of P

P is the husband of the only daughter-in-law of K

Hence, E is the granddaughter of K.

Q56. Answer: (a) C

CP of the first rice of 1 kg = Rs. 125

=> CP of first rice of 40 kg = 125 × 40 = Rs. 5000

CP of second rice of 1 kg = Rs. 150

=> CP of second rice of 60 kg = 150 × 60 = Rs. 9000

Total CP of 100 kg mixed rice = 9000 + 5000 = Rs. 14000

=> CP of 1 kg mixed rice = 14000/100 = Rs. 140

Therefore SP of 1 kg mixed rice = 140 × 120/100 = Rs. 168

Q57. Answer: (b) B

Mean of 25 values = 40

=> Sum of 25 values = 25 × 40 = 1000

=> Correct sum of 25 values = 1000 – 25 + 50 = 1025

Therefore Correct mean of 25 values = 1025/25 = 41

Q58. Answer: (b) C

On expanding the given number,

1265 = 29 × 43 + 18

On dividing the given number by 29, Remainder = 18

Therefore 18 should be deducted from 1265 to make it exactly divisible by 29.

Q59. Answer: (c) B

The Correct Answer is Option (3) i.e B -

• The headquarters of NASA is located in Washington D.C. (USA).

• The National Aeronautics and Space Administration (NASA) is an independent agency of the US federal government responsible for the civilian space programs, as well as aeronautics and aerospace research.

• It was established on 1st October 1958, succeeding in the National Advisory Committee for Aeronautics.

• The founder of this agency was Dwight D. Eisenhower, who was the 34th President of the USA from 1953 to 1961.

• The first human sent to the moon was through the Apollo program of NASA, wherein 12 men were sent to the moon from 1969 to 1972.

• The first spacecraft to visit the solar system was Pioneer 10 and Pioneer 11 which was sent by NASA.

Q60. Answer: (c) Bullet : Rifle

Arrow is shot with a bow.

Similarly, bullet is fired from a gun.

Q61. Answer: (c) Knowledge and wisdom are complementary to each other.

According to the given statement, knowledge and wisdom are closely related. The deeper the knowledge, the greater is the wisdom. Knowledge is awareness and wisdom is required to deal with complications.

Hence, knowledge and wisdom are complementary to each other is true.

Q62. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• India is the 7th largest country of the world covering 2.4% (approx.) of Earth's land area.

• The total area of India is 3,287,263 square kilometers.

• The largest state of India is Rajasthan and the smallest state in Goa.

• The total forest cover of India is 21.54% of the total geographical area of the country.

• Russia is the largest country in the world covering more than 1/8th of Earth's inhabited land area.

• The top 10 largest countries in descending order are - Russia, Canada, the USA, China, Brazil, Australia, India, Argentina, Kazakhstan, and Algeria.

Additional Information

• It has a land boundary of 15,200 km and the coastal boundary that includes the islands is 7,516 km.

• It lies completely in the Northern hemisphere and Eastern hemisphere between latitudes 8°4′ N and 37°6’N and longitudes 68°7′ E and 97°25′ E.

Q63. Answer: (c) C

a + 2b = 55 ----(i)

a – 2b = -13 ----(ii)

From equation (i) and equation (ii), we get

2a = 42

=> a = 21

From equation (i), we get

21 + 2b = 55

=> 2b = 55 – 21

=> 2b = 34

Therefore b = 17

Q64. Answer: (b) D

SP of the article = Rs. 3600

=> MP of the article = Rs. 3600 × 100/90 = Rs. 4000

Therefore New SP of the article = Rs. 4000 × 85/100 = Rs. 3400

Q65. Answer: (d) C

The Correct Answer is Option (4) i.e C -

• PARAM 8000 that was launched on July 1, 1991, is considered India's first supercomputer.

• It was developed by the Centre of Development of Advanced Computing (C-DAC).

• It was indigenously built-in 1991 by C-DAC and was replicated and installed at ICAD Moscow in 1991 under Russian collaboration.

• As of November 2019, India has two systems on the TOP 500 list ranking. They are - Pratyush and Mihir.

Supercomputer	Site
Aditya	Indian Institute of Tropical Meteorology, Pune
Vikram 100	Physical Research Laboratory, Ahmedabad
Shashtra T	Indian Institute of Science, Bengaluru

Q66. Answer: (c) B

The Correct Answer is B.

• Bangladesh is a neighboring country of India that has a land border with India and Myanmar.

• Bangladesh shares land borders with India to the west, north, and east, Myanmar to the south-east, and the Bay of Bengal to the south.

• Indian states that share borders with Bangladesh are Assam, West Bengal, Mizoram, Meghalaya, and Tripura.

• The land border of Bangladesh with India stretches up to 4096.7 km.

• The capital of Bangladesh is Dhaka and the currency is Bangladeshi taka.

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Q67. Answer: (b) TSEVO

DOGL → GOLD

TSEVO → STOVE

ENZROB → BRONZE

LVREIS → SILVER

GOLD, BRONZE, SILVER are metals but STOVE isn't a metal.

So, STOVE is different among the given words.

Q68. Answer: (b) Sun : Star

Inside and outside are the opposite words. Similarly all the words are opposite to each other except sun and star. The sun is the star at the center of the solar system.

Q69. Answer: (c) B

The Correct Answer is Option (3) i.e B.

• INSAT-3D the meteorological Satellite with advanced weather monitoring payloads was launched in the year 2013.

• INSAT-3D satellite has four payloads: 6 channel-multi-Spectral Imager, 19 channel sounder, Data Relay Transponder, and Satellite Aided Search and Rescue.

• The launch of this satellite was successfully carried out on 26^(th)July 2013 from French Guiana.

• This satellite was developed by the Indian Space Research Organization (ISRO).

• The headquarters of ISRO is located in Bengaluru, Karnataka.

Q70. Answer: (d) A

The Correct Answer is Option (4) i.e A -

• The verification of the log-in name and password is for authenticating the user.

• Authentication is the act of proving an assertion, such as the identity of a computer system user.

• Log-ins are used by websites, computer applications, and mobile apps. They are security measures designed to prevent unauthorized access to confidential data.

• In computer security, logging in is the process by which an individual gains access to a computer system by identifying and authenticating themselves.

• The modern security systems often require a second factor such as email or SMS confirmation for extra security.

Q71. Answer: (c) D

As per the properties of a triangle,

The side opposite to the greatest angle is always the longest side.

The exterior angle of any triangle is always equal to the sum of opposite interior angles.

The sum of 2 sides of all triangles is always greater than the third side.

The square of one side of a triangle is equal to the sum of the squares of the other two sides is true only for a right-angled triangle. Hence, this statement is not true for all triangles.

Hence, Statement D is an odd statement.

Q72. Answer: (b) B

$99 \times 99 = 9801$

Alternate method

$99 \times 99 = (100 - 1)(100 - 1)$

$\Rightarrow (100 - 1)^2$

$\Rightarrow 100^2 + 1^2 - 2 \times 100 \times 1$ $[(a - b)^2 = a^2 - 2ab + b^2]$

$\Rightarrow 10000 + 1 - 200$

$\Rightarrow 9801$

Q73. Answer: (b) D

Concept used:

Calculation:

$\cot 52° = b$

$\Rightarrow \cot (90° - 38°) = b$ [Because $\cot (90 - \theta) = \tan \theta$]

Therefore $\tan 38° = b$

Q74. Answer: (b) B and D

The Correct Answer is B and D.

• Infra-red rays are electromagnetic waves that have a wavelength between 700 nanometers and 1 mm.

• Some other electromagnetic waves include gamma rays, x-rays, ultraviolet, visible light, microwaves, and radio.

• The most common use of the infra-red waves in everyday life is the remote-controls, thermal imaging, Infra-red astronomy, etc.

Waves	Definition	Examples
Longitudinal Waves	They are waves in which the displacement of the medium is in the same direction as or the opposite direction to, the direction of propagation of the wave.	Sound Waves, Ultrasonic Waves, Seismic P Waves, etc.
Transverse Waves	It is a moving wave whose oscillations are perpendicular to the direction of the wave.	Electromagnetic waves, vibrations in guitar strings, etc.
Mechanical Waves	It is a wave that is an oscillation of matter and therefore transfers energy through a medium	Water wave, sound wave, seismic wave, etc.

Q75. Answer: (b) Only conclusion II follows.

According to the statements god hasn't equally distributed money to mankind but he has distributed time equally. But god has compensated this unequal distribution of money by giving commonsense to mankind.

It isn't mentioned that God has not done justice to mankind in distributing money. So, conclusion I doesn't follow.

It is mentioned that God has compensated this unequal distribution of money by giving commonsense to mankind to use the money wisely. So conclusion II follows.

Hence, only conclusion II follows.

Q76. Answer: (c) B

The Correct Answer is Option (3) i.e B -

• A compiler is a software program that translates computer code written in one programming language into another language.

• A compiler is used for programs that translate source code from a high-level programming language to a lower-level language.

• A low-level language is a type of programming language that contains basic instructions recognized by a computer.

• Two types of low-level programming languages are - Assembly language and Machine language.

• A high-level programming language is a programming language with strong abstraction from details of the computer. For eg, COBOL, FORTRAN, C++, JAVA, etc.

• Computer software is the collection of data or computer instructions that tell the computer how to work.

Q77. Answer: (b) B

The Correct Answer is Option (2) i.e B -

• Tashkent Declaration was a peace agreement between India and Pakistan signed on 10th January 1966 to resolve the Indo-Pakistan War of 1965.

• The major signatories of the declaration were the then Prime Minister of India, Lal Bahadur Shastri, and Pakistan's President Muhammad Ayub Khan.

• The War of 1965 was over control of the resources and population of the State of Jammu and Kashmir.

Year	Name	Result
1947	First Indo-Pakistan War	Partitioning of Kashmir between India and Pakistan
1971	Bangladesh Liberation War or Third Indo-Pak War	Independence of Bangladesh
1999	Kargil War	India regains possession of Kargil.

Q78. Answer: (d) C

Let age of younger child be x

According to the question

x + x + 4 + x + 8 + x + 12 = 48

=> 4x + 24 = 48

=> 4x = 48 – 24

=> x = 6

Therefore Age of youngest child is 6 years.

Q79. Answer: (c) B

Let the two numbers are x and y

=> xy = 24

=> $x^2 + y^2 = 52$

As we know,

$(x + y)^2 = x^2 + y^2 + 2 (x \times y)$

=> $(x + y)^2 = 52 + 2 \times 24$

=> $(x + y)^2 = 52 + 48$

=> $x + y = \sqrt{100}$

Therefore x + y = 10

Q80. Answer: (c) B

Given:

The ratio of two numbers is 3 : 1 and their sum is 72.

Calculation:

Let the two numbers be 3x and x

According to the question,

=> 3x + x = 72

=> 4x = 72

=> x = 72/4

=> x = 18

Therefore Difference between two numbers is = 3x – x = 2x

= 2 × 18 = 36

Therefore The difference of two number is 36.

Q81. Answer: (a) S

By summarizing the given information we can form the below table,

Person	Color of the house	Profession
P	Red	Cook
Q	White/Yellow	Banker
R	White/Yellow	Teacher
S	Blue	Lawyer

Hence, the owner of blue house is S.

Q82. Answer: (b) Banker

By summarizing the given information we can form the below table,

Person	Color of the house	Profession
P	Red	Cook
Q	White/Yellow	Banker
R	White/Yellow	Teacher
S	Blue	Lawyer

Hence, Q is a banker.

Q83. Answer: (d) Cannot be determined

By summarizing the given information we can form the below table,

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Person	Color of the house	Profession
P	Red	Cook
Q	White/Yellow	Banker
R	White/Yellow	Teacher
S	Blue	Lawyer

Hence, either Q or R owns the white house.

Q84. Answer: (a) D

The Correct Answer is Option (1) i.e D -

• Mahanadi is a river flowing through the states of Chattisgarh and Odisha and empties into the Bay of Bengal.

• The Hirakud Dam is built across the Mahanadi river.

• The length of the river is around 900 km after originating from Sihawa in Dhamtari district of Chattisgarh.

River	Mouth	Flows through the states
Narmada	Arabian Sea	Madhya Pradesh, Gujarat, Maharashtra
Tapi	Arabian Sea	Gujarat, Madhya Pradesh, Maharashtra
Periyar	Arabian Sea	Kerala, Tamil Nadu

Q85. Answer: (c) A

The Correct Answer is Option (3) i.e A -

• The Chinese President who visited India in 2015 was Xi Jinping.

• Xi Jinping is the President of the Republic of China from 2013 to the present.

• He is the 7th President of China and replaced Hu Jintao in 2013.

Person	Importance
Hu Jintao	6^(th) President of China (2003-2013)
Jiang Zemin	5^(th) President of China (1993-2003)
Li Xian Ning	Former President of China from 1983-1988

Q86. Answer: (a) C

Total marks scored by Sunil = 60 + 55 + 60 + 59 + 61 = 295

Total marks scored by Jagdish = 35 + 41 + 39 + 30 + 45 = 190

Therefore Required difference = 295 – 190 = 105

Q87. Answer: (b) B

Marks of Shyam in History and Geography together = 51 + 65 = 116

Marks of Sunil in History and Geography together = 59 + 61 = 120

Marks of Jagdish in History and Geography together = 30 + 45 = 75

Marks of Rajesh in History and Geography together = 57 + 62 = 119

Therefore Sunil has the highest marks in History and Geography.

Q88. Answer: (b) B

Average marks of Shyam = (45 + 50 + 49 + 51 + 65)/5 = 52

Average marks of Sunil = (60 + 55 + 60 + 59 + 61)/5 = 59

Average marks of Jagdish = (35 + 41 + 39 + 30 + 45)/5 = 38

Average marks of Rajesh = (50 + 55 + 51 + 57 + 62)/5 = 55

Therefore Sunil has the highest average marks.

Q89. Answer: (a) C

The Correct Answer is Option (1) i.e C -

• 'Khajuraho' group of monuments can be found in the state of Madhya Pradesh.

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• The largest of the temples in the Khajuraho is the Kandariya Mahadeo Temple dedicated to the glory of Lord Shiva.

• In the year 1986, UNESCO recognized Khajuraho as a World Heritage Site for its "human creativity".

• The temples of Khajuraho were built between 900 to 1130 AD by the Chandella rulers.

• There are 40 UNESCO World Heritage Sites in India. Dholavira and Ramappa Temple are the latest addition to the list under the 'Cultural' category.

State	World Heritage Sites
Maharashtra (5)	Ajanta Caves, Ellora Caves, Elephanta Caves, Chatrapati Shivaji Terminus, The Victorian and Art Deco Ensemble of Mumbai
Bihar (2)	Mahabodhi Temple Complex at Bodh Gaya, Nalanda Mahavihara at Nalanda
Gujarat (3)	Champaner-Pavagarh Archaeological Park, Rani ki Vav, Historical city of Ahmedabad, Dholavira

Q90. Answer: (a) D

The Correct Answer is Option (1) i.e D

Explanation:

• Stainless Steel is an iron-based alloy containing a minimum of 11% of Chromium. Other compositions include - carbon, nitrogen, aluminum, silicon, sulfur, titanium, nickel, etc.

• An alloy is a combination of a metal with at least one other metal or non-metal. For eg. Brass, Bronze, steel, solder, etc.

Material	Meaning	Example
A Compound	A compound is a substance that is composed of two or more different elements.	Water, Table Salt, Carbon Monoxide, etc.
A Mixture	A physical combination of two or more substances.	Sand and water, Salt and Water, Solutions, Colloids, etc.
An Element	An element is a pure substance that is made from a single type of atom.	Iron, Hydrogen, Oxygen, Gold, Helium, etc.

Q91. Answer: (b) D

The Correct Answer is D.

• The function of the respiratory system is to breathe in Oxygen for respiration produce energy of food and to breathe out Carbon dioxide produced by respiration.

• Respiration is the process by which energy is released from food in our body.

• There are two types of respiration - Aerobic (breaking down in presence of oxygen), and Anaerobic (breaking down in the absence of oxygen).

• The three major parts of the respiratory system are :

• The Airways - consists of the nose, mouth, pharynx, larynx, and the trachea, bronchi, and bronchioles.

• The Lungs

• The Muscles of Respiration.

Additional Information

Structure	Function
Nose/ nasal cavity	Warms moisten and filter the air as it is inhaled.
Pharynx	A passageway for air leads to the trachea.
Larynx	The voice box or Adam's apple, where vocal cords are located.
Trachea (windpipe)	Keeps the windpipe "open", the trachea is lined with fine hairs called cilia which filter air before it reaches the lungs.
Bronchi	Two branches at the end of the trachea, each lead to a lung.
Bronchioles	A network of smaller branches leading from the bronchi into the lung tissue and ultimately to air sacs.

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Alveoli	The functional respiratory units in the lungs where gases are exchanged.

Mistake Points

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.04	4
Nitrogen	79	79

• Since there is only a change in the percentage of oxygen and carbon dioxide in inhaled and exhaled air.

Q92. Answer: (b) D

The Correct Answer is Option (2) i.e D -

• Statue of Liberty is a 93 meters tall statue in the city of New York, USA.

• The Statue of Liberty was a gift from French people commemorating the alliance of France and the United States during the American Revolution.

• This copper statue was dedicated on October 28, 1886.

Place	Country
Paris	France
Washington	USA
Geneva	Switzerland

Q93. Answer: (a) C

The Correct Answer is Option (1) i.e C -

• The historic Conference of Parties (COP21) 2015, on Climate Change was held in Paris, France.

• The United Nations Climate Change Conferences are yearly conferences held in the framework of the United Nations Framework Convention on Climate Change (UNFCCC).

• The first UN Climate Change Conference was held in 1995 in Berlin, Germany.

• The only UNFCCC held in India was in the year 2002 in New Delhi (COP 8).

• The latest UNFCCC of the year 2019 (COP 25) was held in the city of Madrid, Spain.

• COP 26 was scheduled to take place in Glasgow, UK but has been postponed to 2021 due to coronavirus pandemic.

Q94. Answer: (c) A

The Correct Answer is Option (3) i.e A -

• Usually, color blindness is a genetic disposition. This usually happens between greens and reds, and occasionally blues.

• Colour blindness is a genetic condition caused by a difference in how one or more light-sensitive cells found in the retina of the eye respond to certain colors.

• The light-sensitive cells are called cones. They sense the wavelengths of the light and enable the retina to distinguish between colors.

• The three types of color blindness are - Red-Green Color Blindness, Blue-Yellow Color Blindness, and Total Color Blindness.

• Red-Green color blindness is the most common form.

Q95. Answer: (d) C

Concept:

Apparent weight of a person inside a lift

(i) When the lift moves upward with acceleration a. Then the net upward force on the person is-

R - mg = ma

Therefore Apparent weight, R = mg + ma = m (g + a)

So, when a lift accelerates upwards, the apparent weight of the person inside it increases.

(ii) When the lift moves downwards with acceleration a. Then the net downward force on the person is-

Mg - R = ma

Therefore Apparent weight, R = mg - ma = m (g - a)

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So, when a lift accelerates downwards, the apparent weight of the person inside it decreases.

(iii) When the lift is at rest or moving with uniform velocity v downward/upward. The acceleration a = 0, then the net force on the person is-

R - mg = m x 0 = 0

R = mg

Therefore Apparent weight = Actual weight

(iv) When the lift falls freely. If the supporting cable of the lift breaks, the lift falls freely under gravity. Then a = g. The net downward force on the person is -

R = m(g - g) = 0.

Thus, the apparent weight of the man becomes zero. This is because both the man and the lift are moving downwards with same acceleration 'g' and so there are no forces of action and reaction between the person and the lift. Hence a person develops a feeling of weightlessness when he falls freely under gravity.

Explanation:

• From the above explanation and given condition when person in an elevator is moving at constant speed in such case the net acceleration will be zero

• Thus we can say that person's weight when he is in a moving elevator will not change because the apparent weight of the person will be equal to its true weight.

• If the elevator is going up with acceleration, the apparent weight of the person is more than the true weight.

• If the elevator is going down with acceleration, the apparent weight of the person is less than the true weight.

• If the cord of the lift is broken, it falls freely. In this situation, the weight of the person in the elevator becomes zero.

• While going down, if the acceleration of the elevator is more than the acceleration due to gravity, a body in the elevator goes in contact with the ceiling of the elevator.

• The Correct Answer is Option (4) i.e., Weight will not change

Q96. Answer: (c) C

The Correct Answer is Option (3) i.e C -

• Rajya Sabha is also known as the Upper House or Council of States.

• The present membership of the Rajya Sabha is 245 members (233 elected members and 12 nominated by the President).

• Article 80 of the Constitution lays down the maximum strength of the Rajya Sabha as 250, out of which 12 members are nominated by the President and 238 members are representatives of the States and of the two Union Territories.

• The Vice President of India is the ex-officio chairman of the Rajya Sabha, who presides over its sessions.

• The present Vice President of India is Shri Jagdeep Dhankhar.

• The present Deputy Chairman of the Rajya Sabha is Harivansh Narayan Singh.

Q97. Answer: (a) B

The Correct Answer is Option (1) i.e B -

• Rabbits are small mammals in the family Leporidae of the order Lagomorpha.

• Panda Global, Avast, and Kaspersky are the antivirus software.

• Antivirus Software is a type of program designed and developed to protect computers from malware like viruses, computer worms, spyware, etc.

• John McAfee is considered as the inventor of the Antivirus Software. The name of the first Antivirus was Virus Scan (1987).

• Avast Antivirus was initially released in the year 1995.

• Kaspersky Antivirus was initially released in the year 1997.

• Panda Global Security was founded in the year 1990.

Q98. Answer: (b) C

The Correct Answer is Option (2) i.e C -

• West Indies won the U-19 World Cup Cricket 2016 by defeating India in the finals.

• The U-19 Cricket World Cup 2016 was held in Bangladesh in the month of January and February.

• The U-19 Cricket World Cup 2020 was held in South Africa.

• Bangladesh won the World Cup Cricket 2020 by defeating India in the finals.

• U-19 World Cup was first held in the year 1988.

• India has won this tournament most number of times (5 times).

• It recently won under Yash Dhull in 2022.

Q99. Answer: (b) C

As we know,

Average = sum of all observation/total number of observation

Therefore Mean = (1 + 9 + 7 + 3 + 5 + 5 + 6 + 4 + 2 + 8)/10 = 50/10 = 5

Q100. Answer: (c) D

Time = 10 years

Let the sum be Rs. X and rate of interest be r%

=> Amount = 2x

=> SI = 2x – x = x

As we know,

SI = (P × r × t/100)

=> x = (x × r × 10)/100

=> r = 100/10

Therefore r = 10%

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