

RPF Constable PYP

Q1. Which of the following options highlights the phenomenon of light scattering due to dust and axis in the air?

- (a) Tyndall Effect
- (b) Golay Effect
- (c) Seebeck Effect
- (d) Raman Effect

Q2. Which of the following committees is called the "Ongoing Economy Committee"?

- (a) Public Accounts Committee
- (b) Public Undertakings Committee
- (c) Ethics Committee
- (d) Estimates Committee

Q3. Which of the following terms is related to the game of badminton?

- (a) Nelson
- (b) Dolphin Kick
- (c) Drop
- (d) Googly

Q4. Who can remove the Chairman of the State Human Rights Commission?

- (a) Chairman of Lok Sabha
- (b) Chairman of Rajya Sabha
- (c) President
- (d) Prime minister

Q5. Which of the following dynasties introduced the beautiful mural paintings of architecture?

- (a) Maurya
- (b) Chalukya
- (c) Kakatiya
- (d) None of these

Q6. The total number of _____ in the nucleus equals the atomic number.

- (a) Photons
- (b) Protons
- (c) Neutrons
- (d) Plasma

Q7. Metals can be hammered into thin sheets. This property is called:

- (a) density
- (b) malleability
- (c) ductility
- (d) strength

Q8. The second law of motion gives the measure of which of the following?

- (a) Force
- (b) Acceleration
- (c) Momentum
- (d) Angular Momentum

Q9. Large-scale modern grain storage structures are known as _____

- (a) Silos
- (b) Depos
- (c) Wares
- (d) Plinths

Q10. In which state are Javadi and Shevaroy Hills?

- (a) Kerala
- (b) Karnataka
- (c) Tamil Nadu
- (d) Andhra Pradesh

Q11. The sound wave determines its timbre or quality.

- (a) amplitude
- (b) Wave Duration
- (c) waveform
- (d) Dimension

Q12. Who was the founder of the Pala Empire?

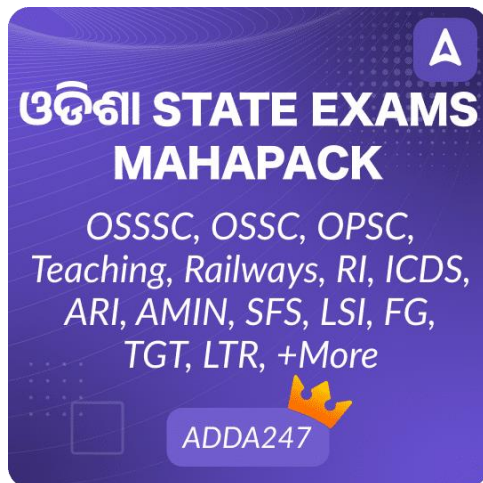
- (a) Shashanka
- (b) Dantidurga
- (c) Simuka
- (d) Gopala

Q13. In the context of a trophy, what is the full form of "MVP"?

- (a) Minimum Value Player
- (b) Most Honored Player
- (c) Most Valuable Player
- (d) Most Bulk Player

Q14. The Milindapanha text is related to which religion?

- (a) Buddhism
- (b) Christianity
- (c) Jainism
- (d) Judaism



Q15. Which of the following discovered new seas for India?

- (a) Table Tennis
- (b) Christopher Columbus
- (c) Vasco da Gama
- (d) Amerigo Vespucci

Q16. The playing area in the game of handball is called a _____.

- (a) Course
- (b) Track
- (c) Court
- (d) Diamond

Q17. The 'Pashupati' is celebrated from which era?

- (a) Mauryan
- (b) Gupta
- (c) Vedic Period
- (d) Harappan Culture

Q18. Which of the following is not an airborne disease?

- (a) Cholera
- (b) Chickenpox (Varicella)
- (c) COVID-19
- (d) Influenza

Q19. Which of the following stars is closest to you?

- (a) Apasti
- (b) Vyadh
- (c) Swati
- (d) Proxima Centauri

Q20. Overuse of resources is called the Tragedy of Commons.

It was propounded by _____.

- (a) Seligman
- (b) Adolph Wagner
- (c) A.P Lernier
- (d) Garrett Hardin

Q21. Who presides over the joint session of Parliament in the absence of the Speaker?

- (a) Deputy Speaker of Lok Sabha
- (b) Deputy Chairman of Rajya Sabha
- (c) Chairman of Rajya Sabha
- (d) Provisional Chairman

Q22. Who is the first Indian woman to win a Paralympic Gold medal in shooting?

- (a) Dipa Karmakar
- (b) Avani Lekhara
- (c) Deepa Malik
- (d) None of these

Q23. In mitosis, a parent cell is divided into ____ for the preparation of somatic cells.

- (a) One Unequal
- (b) Two Unequal
- (c) Two Equal
- (d) Equal

Q24. Who is the author of 'Natya Shastra'?

- (a) Ramaswami
- (b) Nanda
- (c) Sharangdev
- (d) Bharata Muni

Q25. Is the Inter-State Council a _____ body?

- (a) Statutory body
- (b) Constitutional body
- (c) Quasi-Judicial Bodies
- (d) None of these

Q26. Thal Ghat connects Mumbai with _____.

- (a) Nashik
- (b) Surat
- (c) Pune
- (d) Goa

Q27. Which of the following is not associated with the Cricket World Cup?

- (a) Irani Cup
- (b) Kalinga Cup
- (c) Ranji Trophy
- (d) Deodhar Trophy

Q28. Which sex genes are present in men?

- (a) XX
- (b) YY
- (c) XY
- (d) None of the above

Q29. What type of federal practice is used in India, Belgium, and Spain?

- (a) Financial Federation Method
- (b) Natural Federation Method
- (c) Holding together Method
- (d) Federally Constituted States

Q30. By which ruler Patliputra was chosen for the first time as a capital?

- (a) Ashoka
- (b) King Udayin
- (c) Dasharatha
- (d) Chandragupta Maurya

Q31. Under which article does India's Contingency Fund fall?

- (a) Article 267
- (b) Article 263
- (c) Article 280
- (d) Article 266

Q32. Which of these is an island in Niger and Zimbabwe?

- (a) North America
- (b) Europe
- (c) Asia
- (d) Africa

Q33. The chairman of the State Human Rights Commission is _____.

- (a) A retired judge of the Supreme Court
- (b) A retired Chief Justice of the High Court
- (c) A current judge of the Supreme Court
- (d) The current Chief Justice of the High Court

Q34. Who was the last Maurya king?

- (a) Brihadratha
- (b) Kunal
- (c) Dasharatha
- (d) Pushyamitra

Q35. Which of the following is a riverport?

- (a) Ennore
- (b) Chennai
- (c) Kolkata
- (d) Haldia

Q36. In which state is the Kangra painting style prevalent?

- (a) Himachal Pradesh
- (b) Tamil Nadu
- (c) Rajasthan
- (d) Bihar

Q37. The sound produced by the mixture of many frequencies is called _____.

- (a) Voice
- (b) Pink Reception
- (c) Template
- (d) White Curve

Q38. Which of the following oceans has the longest coastline?

- (a) Antarctic
- (b) Arctic
- (c) Indian
- (d) Atlantic

Q39. According to the 2011 census, what percentage of India's population is urban?

- (a) 31.16%
- (b) 10%
- (c) 65%
- (d) 50.1%

Q40. Which Central Administrative Tribunal falls under the Ministry of _____.

- (a) Ministry of Social Justice and Empowerment
- (b) Ministry of Minority Affairs
- (c) Ministry of Home Affairs
- (d) Ministry of Personnel

Q41. Which of the following is a marshy area?

- (a) Bhangar
- (b) Khadar
- (c) Terai
- (d) Hobart

Q42. What posture does the Vrikshasana yoga demonstrate?

- (a) Frog
- (b) Tree
- (c) Lion
- (d) Pigeon

Q43. Dollu Kunitha is a famous folk music tradition in _____.

- (a) Maharashtra
- (b) Karnataka
- (c) Andhra Pradesh
- (d) West Bengal

Q44. The National Human Rights Commission was established in the year _____.

- (a) 1991
- (b) 1995
- (c) 1956
- (d) 1993

Q45. Who is known as the architect of Indian Planning?

- (a) Sardar Vallabhbhai Patel
- (b) Mahatma Gandhi
- (c) P.C. Mahalanobis
- (d) Jawaharlal Nehru

Q46. What is the market with very few sellers but many buyers?

- (a) Oligopoly
- (b) Monopoly
- (c) Redtapism
- (d) Advertisement

Q47. The Government of India purchases food grains through _____.

- (a) Food Corporation of India
- (b) National Agriculture Market
- (c) Ministry of Agriculture
- (d) Right Brother's Shop

Q48. The Mahatma Gandhi National Rural Employment Guarantee Scheme was started in the year _____.

- (a) 2010
- (b) 1995
- (c) 2000
- (d) 2005

Q49. In which year did Alexander invade India?

- (a) 326 BC
- (b) Era 556
- (c) Era 226
- (d) 556 BC

Q50. Without which bill can the government withdraw money from the Consolidated Fund of India?

- (a) Ordinary Bill
- (b) Appropriation Bill
- (c) Money Bill
- (d) Financial Bill

Q51. Read the given information carefully and answer the following questions.

A, B, C, D and E are sitting in a row facing in the north direction.

- i) E sits at one end of the row.
- ii) Two members sit between E and C.
- iii) B and D are sitting next to each other.
- iv) D is second to the left of E.

Based on the context given in the question, which of the following statements is incorrect?

- (a) A sits fourth to the left of E.
- (b) B sits third to the left of A
- (c) D sits second to the right of A
- (d) C and A are neighbours

Q52. Write the option that matches the relationships shown in the first pair instead of the question mark.

Lion : Cub :: Deer : ?

- (a) Puppy
- (b) Lamb
- (c) Tadpole
- (d) Fawn

Q53. Find the next number in the series.

59, 45, 70, 56, 81, ?

- (a) 70
- (b) 79
- (c) 67
- (d) 73

Q54. A is the son of F and is married to B, whose brother is C. D is the wife of C and daughter of E. E is married to F. What's the relation of A with E?

- (a) Son-in-law
- (b) Father
- (c) Cousins
- (d) Son

Q55. In a specific code language, if COAT is written as 315120 in the code format, then how will CLUB be written in that language code?

- (a) 314202
- (b) 313212
- (c) 312212
- (d) 314201

Q56. Find the next number in the series.

7, 12, 22, 42, 82, ?

- (a) 162
- (b) 160
- (c) 170
- (d) 174

Q57. In this question there are two statements followed by two conclusions i and ii. Given that the statement is true on the whole, consider both the conclusions together and decide which of the statements is undoubtedly logical.

Statements:

- All parrots are dwarfs.
- Some ducks are birds.

Conclusion:

- i) Some parrots are birds.
- ii) Some ducks are parrots.

Choose the correct one from the next options.

- (A) The only conclusion I have is logical.
- (B) Only conclusion II is logical.
- (C) Either conclusion i or ii is logical.
- (D) Both conclusions i and ii are not logical.
- (E) Both conclusions i and ii are logical.

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

**OSSC CGL-2024
GROUP B & C EXAM**
(Pre + Main)
A Complete Batch

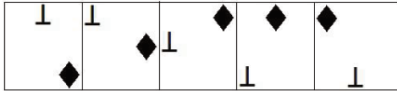
Starts: 5 Apr, 2024

Q58. Choose a suitable option from the following options (by selecting 3 out of the following 5 pictures) which will form a complete square.



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

Q59. Which of the given options will be a carrying figure for the given series?



- (a)
- (b)
- (c)
- (d)

Q60. Find the correct water image of this question from the given options.

- GIZMA**
- (a) **AMZIG**
 - (b) **GIZMA**
 - (c) **GIZMA**
 - (d) **AMZIG**

Q61. Find the next number in the series.

- 1, 2, 5, 12, 27, ?
- (a) 50
 - (b) 60
 - (c) 58
 - (d) 72

Q62. In this question, the relationship between different elements is expressed in the statement. There are two conclusions following this statement:

Statement:

$$S < T < R = A;$$

$$R < C > K$$

Conclusion:

I) $S < C$

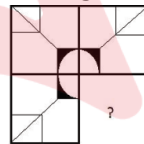
II) $A > K$

Select the appropriate one from the following options.

- (A) Only conclusion I is logical.
- (B) Only conclusion II is logical.
- (C) Conclusion I and II both are not logical.
- (D) Conclusion I and II both are logical.

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

Q63. Select the correct option to complete the image-pattern of the given image.



- (a)
- (b)
- (c)
- (d)

Q64. Four of the next five have a certain similarity and form a group. Which of the following is not a member of the group?

- C, E, O, K, G
- (a) G
 - (b) E
 - (c) O
 - (d) C

Q65. Four of the next five have a certain similarity and form a group. Which of the following is not a member of the group?

UQ, PL, NJ, HE, QM

- (a) PL
- (b) HE
- (c) UQ
- (d) NJ

Q66. While pointing to a photograph, Vinay said "He is my mother's only son's son." How is Vinay related to that person who was in the photograph?

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

Q67. Find the next number in the series.

21, 24, 30, 42, 66, ?

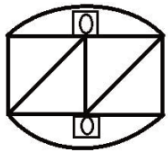
- (a) 120
- (b) 114
- (c) 110
- (d) 115

Q68. Write the option that matches the relationships shown in the first pair instead of the question mark.

Film : Entertainment :: Education : ??

- (a) school
- (b) fees
- (c) teacher
- (d) knowledge

Q69. How many triangles can be made from the given figure?



- (a) 2
- (b) 5
- (c) 0
- (d) 4

Q70. Read the given information carefully and answer the following questions.

A, B, C, D and E are sitting in the row facing in the north direction.

- i) E sits at one end of the row.
- ii) Two members sit between E and C.
- iii) B and D are sitting next to each other.
- iv) D is second to the left of E.

Who are sitting on either side of the row?

- (a) E, C
- (b) E, A
- (c) B, C
- (d) A, D

Q71. Write the option that matches the relationships shown in the first pair instead of the question mark.

F:P::J:??

- (a) T
- (b) Z
- (c) H
- (d) R

Q72. If the mirror is placed on the shaded line, then which of the following options is the correct image?

RECYCLE

- (a)
- (b)
- (c)
- (d)

Q73. Read the next statement and answer the next question.

A4B means A is the mother of B.

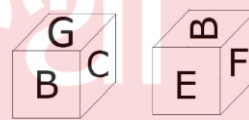
A3B means A and B are the parents of someone.

A5B means A is the son of B.

In the equation Q5P3R4S, How Q is related to S?

- (a) brother
- (b) girl
- (c) niece
- (d) cousin

Q74. As shown in the picture, there are six letters on each side of the face, such as B, C, D, E, F, and G. What is the letter on the opposite side of letter D?



- (a) B
- (b) C
- (c) F
- (d) E

Q75. In this question two statements are given followed by i and ii. Considering the statement to be completely true, think of both the conclusions together and decide whether the given conclusion is undoubtedly logical for the given statement on the basis of the information given in the statement.

Statement: Girls living in Seoul are allowed to marry at the age of 23. Benny is a 24-year-old girl.

Conclusion:

- i) If she is living in Seoul, then she is definitely married.
- ii) If Benny does not live in Seoul, then she definitely should not get married.

Choose the correct option.

- (A) The only conclusion I have is logical.
 - (B) Only conclusion II is logical.
 - (C) One of the conclusions I or II is logical.
 - (D) Conclusions I and II both are not logical.
 - (E) Both conclusions I and II are logical.
- (a) B
 - (b) C
 - (c) A
 - (d) D

Q76. If PITCH is written as UNYHM code in a particular code language, then how will DUSKY be written in that language code?

- (a) JAYQE
- (b) JAZQE
- (c) IZXPB
- (d) IZYPD

Q77. Read the given information carefully and answer the following questions.

A, B, C, D and E are sitting in a row facing to the north direction

- i) E sits at one end of the row.
- ii) Two members sit between E and C.
- iii) B and D are sitting next to each other.
- iv) D is second to the left of E.

Who sits second to the left of D?

- (a) A
- (b) E
- (c) B
- (d) C

Q78. Write the option that matches the relationships shown in the first pair instead of the question mark.

25180:970::54125:??

- (a) 755
- (b) 455
- (c) 555
- (d) 655

Q79. Read the transcript carefully and evaluate the given statements.

In Jules Verne's famous novel of the 1870s, Captain Nemo, the underwater world explorer, predicted that mineral deposits would be mined at the bottom of the ocean. India has decided to increase the treasury to strengthen the economy, now focusing on that direction. The world's oceans are littered with an abundance of minerals at the bottom of the ocean, including copper, nickel, cobalt, iron for pacemakers and the rare earth principles used in the manufacturing of devices such as smartphones. The demand for these resources is increasing worldwide and their resources are depleting rapidly and more and more countries, including major countries like India and China, are now turning to the oceans in the manufacturing sector.

India, Asia's third-largest economy, is set to seek permission from the UN-appointed ISA to allow a commercial settlement in the sea. The Government of India has decided to provide a fund of over \$1 billion for the development and investigation of deep sea technologies like underwater crawling machines. If the plan is successful, the instruments could go deep into the ocean, where metal deposits are 15 times more concentrated than on land. The ISA grants India more than 75,000 sq km in the Indian Ocean, about 2% of the country's size.

Statement: Metal reserves on land are more concentrated than in the deep sea.

Choose the correct one from the next options.

- A. Statement is undoubtedly true.
- B. The Constitution is probably the truth.
- C. Cannot be removed from life.
- D. Statement is clearly false.

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

Q80. In this question, two statements are related to each other, and three conclusions, i, ii and iii are given. Assuming that the statements are true completely, find which of the conclusions are equally true.

Statement: $B < R = E = V$; $V < I = T > Y$

Conclusion:

- i) $B > V$
- ii) $R < T$
- iii) $V > Y$
- (a) Only i) and iii)
- (b) Only ii) and iii)
- (c) only ii)
- (d) All are true

Q81. Four of the next five have a certain similarity and form a group. Which of the following is not a member of the group?

Puppies, Calves, Kitten, Horses, Fawn

- (a) Calves
- (b) Puppies
- (c) Fawn
- (d) Horse



Q82. Read the transcript carefully and evaluate the given statements.

In Jules Verne's famous novel of the 1870s, Captain Nemo, the underwater world explorer, predicted that mineral deposits would be mined at the bottom of the ocean. India has decided to increase the treasury to strengthen the economy, now focusing on that direction. The world's oceans are littered with an abundance of minerals at the bottom of the ocean, including copper, nickel, cobalt, iron for pacemakers and the rare earth principles used in the manufacturing of devices such as smartphones. The demand for these resources is increasing around the world and their resources are depleting rapidly and more and more countries, including major countries like India and China, are now turning to the oceans in the manufacturing sector.

India, Asia's third-largest economy, is set to seek permission from the UN-appointed ISA to allow a commercial settlement in the sea. The Government of India has decided to provide a fund of over \$1 billion for the development and investigation of deep sea technologies like underwater crawling machines. If the plan is successful, the instruments could go deep into the ocean, where metal deposits are 15 times more concentrated than on land. The ISA grants India more than 75,000 sq km in the Indian Ocean, about 2% of the country's size.

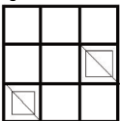
Statement: Many countries with a large requirement of minerals for production purposes will sometimes have to depend on marine resources.

Choose the correct one from the next options.

- A. statement is undoubtedly true.
- B. The Constitution is probably the truth.
- C. cannot be removed from life.
- D. Statement is clearly false.

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

Q83. How many squares are there in the given figure?



- (a) 9
- (b) 16
- (c) 10
- (d) 12

Q84. This question contains three statements followed by three conclusions. Considering the statements to be absolutely true, consider the same conclusions and decide which of the statements is undoubtedly logical.

Statements:

- All girls are women.
- All women are mother.
- Some mothers are sister.

Conclusion:

- i) All girls are mother.
- ii) Some women are sister.
- iii) Some women are girls.
- (a) Only i) and ii)
- (b) Only i) and iii)
- (c) Only ii) and iii)
- (d) No logical

Q85. How many lines are there in the given picture?



- (a) 8
- (b) 6
- (c) 5
- (d) 11

Q86. What will be the amount after 2 years of Rs 48,800 invested at 15% compound interest annually?

- (a) 65,538
- (b) 64,538
- (c) 66,538
- (d) 67,538

Q87. The shopkeeper bought an item for Rs 230 and sold it for Rs 184. Find the percentage of loss.

- (a) 30%
- (b) 25%
- (c) 35%
- (d) 20%

Q88. The breadth of a rectangle is 100 cm and its diagonal is 260 cm. What is its perimeter? (in cm)

- (a) 650
- (b) 680
- (c) 670
- (d) 660

Q89. If the L.C.M. and H.C.F. of two numbers are 64 and 16 respectively. If one of them is 64, find the other number.

- (a) 8
- (b) 16
- (c) 64
- (d) 032

Q90. A certain amount was divided into 2 parts in the ratio 6:5. If the first part is worth Rs 126, what is the total amount? (real terms)

- (a) 251
- (b) 241
- (c) 261
- (d) 231

Q91. Find the fraction of x.

$$x = 0.344444\dots\dots\dots$$

- (a) $\frac{31}{990}$
- (b) $\frac{35}{90}$
- (c) $\frac{31}{90}$
- (d) $\frac{13}{99}$

Q92. Find the value of

$$\sqrt{(189 - X)} = \sqrt{(178 - \sqrt{81})}$$

- (a) 20
- (b) 27
- (c) 38
- (d) 49

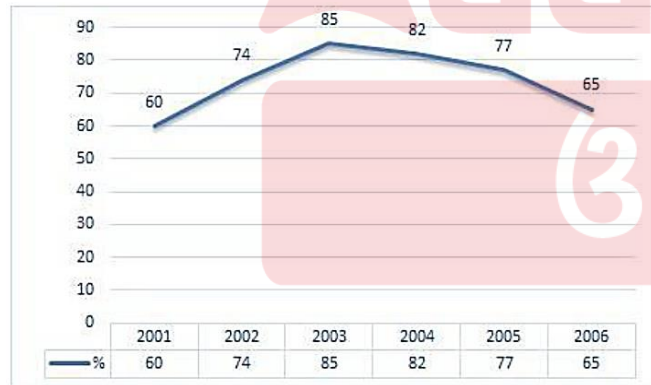
Q93. In a box, pens, pencils and sketches are kept in the ratio 3:2:1. If the cost of pen, pencil and sketches is Rs 3, Rs 2 and Rs 2.

The total amount in the box is Rs 285, then how many pens are there in the box?

- (a) 59
- (b) 60
- (c) 57
- (d) 58

Q94. The following line graph shows the percentage of the number of candidates qualifying the examination over a six-year period from 2001 to 2006. There are 8000 students who appeared in the examination every year.

What is the difference in number of passing the students from 2002 to 2003.



- (a) 850
- (b) 970
- (c) 550
- (d) 880

Q95. The printed price of a book is Rs 2,000. The shopkeeper is giving 10% discount on this. Even if he is making 20% profit, find the cost price of the book.

- (a) 1,800
- (b) 1,700
- (c) 1,600
- (d) 1,500

Q96. On selling an item worth Rs 234, there is a loss of 10%. Find the cost price of the item.

- (a) 230
- (b) 260
- (c) 240
- (d) 250

Q97. A train of length 350 m crosses a bridge of length 250 m in 20 seconds. What is the speed of the train (in km/h)

- (a) 108
- (b) 110
- (c) 115
- (d) 120

Q98. The ratio of ages of Ram and Raj is 4:5. If sum of their age is 243, what is the difference in their ages?

- (a) 26
- (b) 25
- (c) 27
- (d) 24

Q99. The average of 5 number is 126. The average does not change even after excluding one number. Find the excluded number?

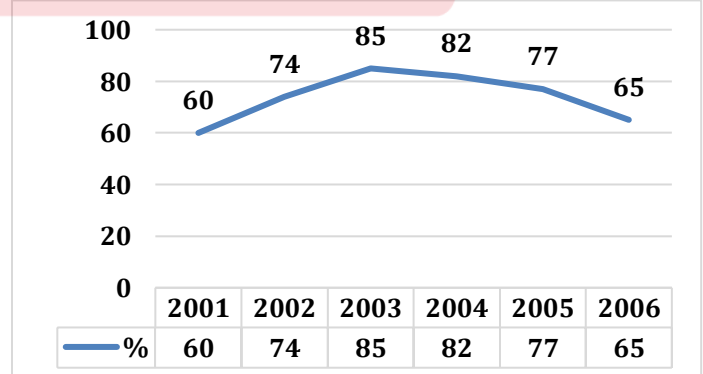
- (a) 126
- (b) 123
- (c) 124
- (d) 125

Q100. Which of the following numbers can be perfectly divisible by 12?

- (a) 74276
- (b) 78726
- (c) 78286
- (d) 78276

Q101. The following line graph shows the percentage of the number of candidates qualifying the examination over a six-year period from 2001 to 2006. The total number of appearing candidates in the exam are same in all the given six years.

What is the average percentage of candidates who passed the exam in all the given years?



- (a) 71.83%
- (b) 73.83%
- (c) 73.98%
- (d) 83.83%

Q102. A train running at a speed of 46 meters per second takes 12 seconds to complete one signal. What is the length of the train? (in meters)

- (a) 552
- (b) 562
- (c) 542
- (d) 572

Q103. The price of one piece was increased from Rs 180 to Rs 216. What is the increase percentage of price?

- (a) 30
- (b) 20
- (c) 25
- (d) 15

Q104. What will be the remainder when 5224 is divisible by 9?

- (a) 4
- (b) 3
- (c) 0
- (d) 5

Q105. An interest of Rs 4,500 is earned on investment at 12% per annum in 5 years. What was the amount invested? (real terms)

- (a) 7,400
- (b) 7,600
- (c) 7,500
- (d) 7,300

Q106. A box contains 80 soaps, out of which 56 have been used. What is the remaining percentage of soap in the box?

- (a) 35
- (b) 45
- (c) 30
- (d) 40

Q107. What will be the amount of an investment of Rs 8,700 for 4 years at an annual interest rate of 12%?

- (a) 12,876
- (b) 13,876
- (c) 15,876
- (d) 14,876

Q108. The shopkeeper bought an item for Rs 136 and sold it for Rs 170. Find the profit percentage.

- (a) 25
- (b) 20
- (c) 35
- (d) 30

Q109. Ericsson completed the first round at a speed of 370 kmph and the second round at a speed of 555 kmph. Find his average speed(in kmph).

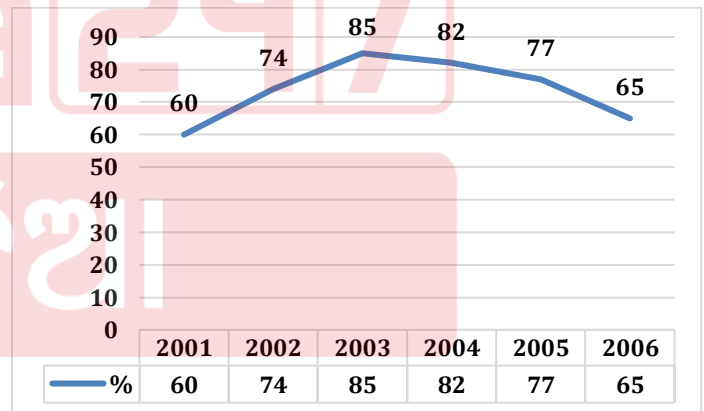
- (a) 464
- (b) 454
- (c) 474
- (d) 444

Q110. 80% of 25% of 50% of 75% of the number is 5919. Find 40% of that number.

- (a) 34676
- (B) 37856
- (c) 31569
- (D) 31568

Q111. The following line graph shows the percentage of the number of candidates qualifying the examination over a six-year period from 2001 to 2006.

If the number of candidates qualified in 2002 was 111000, then what was the total number of candidates who attempted the examination in 2002?



- (a) 180000
- (b) 170000
- (c) 150000
- (d) 160000

Q112. The sides of a quadrilateral shaped figure are in the ratio 2:3:4:5 and its perimeter is 294 cm. Find its shortest side. (in cm)

- (a) 43
- (b) 42
- (c) 41
- (d) 44

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Q113. Find the area (in cm^2) of an equilateral triangle with side $56\text{ cm}(\sqrt{3} = 1.73)$.

- (a) 1356.3 cm^2
- (b) 1365.3 cm^2
- (c) 1360.3 cm^2
- (d) 1366.3 cm^2

Q114. To qualify for a competition, Haumi must score an average of 80 points across four exams. He scored 81, 91 and 66 marks in the first three examinations. How many points does it need to score in the fourth Test to qualify for the competition?

- (a) 84
- (b) 85
- (c) 82
- (d) 83

Q115. The average weight of the eleven players of the state cricket team is 83 kg. When a coach is also added in the team, the average weight of the whole team increases by 1. What is the weight of the coach? (in kg)

- (a) 94
- (b) 96
- (c) 97
- (d) 95

Q116. The price of LPG tank has been increased from Rs 508 to Rs 635. What percentage of consumption will be reduced so that the cost of LPG tank remains the same?

- (a) 30
- (b) 20
- (c) 25

(d) 35

Q117. Find the simplification value of the given equation.

$$128 - [56 \div (46 \div 23 - \{9 - 81 \div 9\})]$$

- (a) 130
- (b) 100
- (c) 140
- (d) 120

Q118. Find the simplification value of the given equation.

$$\sqrt{(157 - \sqrt{(182 - \sqrt{(156 + \sqrt{169}))})})}$$

- (a) 11
- (b) 12
- (c) 14
- (d) 13

Q119. Find the simplification value of the given equation.

$$[2^4 \div 8]^4 + \sqrt{(135 - \sqrt{196}}$$

- (a) 42
- (b) 37
- (c) 27
- (d) 13

Q120. What is the area of a rhombus whose diagonals are 51 cm and 52 cm?

- (a) 1326
- (b) 1426
- (c) 1126
- (d) 1226

SOLUTIONS

S1. Ans.(a)

Sol. The Tyndall effect can also be observed when a fine beam of light enters a room through a small hole. This happens due to the scattering of light by the particles of dust and smoke in the air.

The Tyndall effect is the phenomenon in which the particles in a colloid scatter the beams of light that are directed at them.

This effect is exhibited by all colloidal solutions and some very fine suspensions.

S2. Ans.(d)

Sol. The committee called the "Ongoing Economy Committee" is most likely the Estimates Committee. While not officially named the "Ongoing Economy Committee," it is often referred to as such due to its primary function of examining budget estimates and suggesting ways to optimize public expenditure. It is a standing committee of the Indian Parliament specifically tasked with ensuring efficient and economical use of government funds.

Therefore, while other committees like the Cabinet Committee on Economic Affairs deal with economic policy more broadly, the Estimates Committee directly scrutinizes ongoing economic activity through budget analysis, making it the closest fit to the "Ongoing Economy Committee" description.

S3. Ans.(c)

Sol. "drop" is a term related to the game of badminton! It refers to a deceptive and skilful shot hit softly with a delicate touch, causing the shuttlecock to fall steeply just over the net and land close to the opponent's court. The aim is to catch them off guard, making it difficult for them to react and return the shot effectively.

The word 'Googly' is related to Cricket. A googly is a type of delivery bowled by a right-arm leg-spin bowler.

The Dolphin kick is associated with the Swimming.

Nelson is a piece of cricket slang terminology and superstition.

S4. Ans.(c)

Sol. The President of India can remove the Chairman of the State Human Rights Commission, on grounds of proven misbehavior or incapacity, after an inquiry by the Supreme Court. Although appointed by the Governor, removal requires Presidential action following a specific process.

The members of the National Human Rights Commission are eligible for re-appointment for another term of five years. The chairperson or a member is ineligible for further employment under the government of India or the government of any state.

S5. Ans.(b)

Sol. The Chalukyas ruled parts of Southern and Central India between the 6th century and the 12th century.

Chalukyan kings were famous for building gigantic temples with intricate architecture which could be found at places such as Aihole, Badami and Pattadakal.

Architecture:

They built cave temples depicting both religious and secular themes.

The temples also had beautiful mural paintings.

The temples under the Chalukyas are a good example of the Vesara style of architecture.

S6. Ans.(b)

Sol. The number of protons in a nucleus is called the atomic number and always equals the number of electrons in orbit about that nucleus (in a nonionized atom). Thus, all atoms that have the same number of protons--the atomic number--are atoms of the same element.

S7. Ans.(b)

Sol. The ability to be hammered, pressed, or rolled into thin sheets without breaking is called malleability. Metals are generally malleable.

The property of metals by which they can be beaten into thin sheets is called malleability. Examples of malleable metals are gold Au, silver Ag, iron Fe, and copper Cu.

S8. Ans.(a)

Sol. Newton's second law gives the measure of force.

Newton's second law of motion states that $F = ma$, or net force is equal to mass times acceleration. A larger net force acting on an object causes a larger acceleration, and objects with larger mass require more force to accelerate.

S9. Ans.(a)

Sol. Large-scale modern storage structures known as silos and bins are used for bulk storage of food grains and oil seeds.

- These are vertical cylindrical storage structures with inbuilt facilities for loading, unloading, drying, cleaning, and bagging of foodgrains and oil seeds.
- Aeration, fumigation, and temperature recording facilities are also provided.
- Wheat, paddy, barley, and soybean can be safely stored in these structures.
- The silos are made of either steel or cement concrete.

S10. Ans.(c)

Sol. Javadi Hills is a range of hills, one of the larger of the Eastern Ghats, in northern Tamil Nadu state, southeastern India. Shevaroy Hills, an outlying range of the Eastern Ghats, north-central Tamil Nadu state, southern India.

The Servarayan Hills, with the anglicised name Shevaroy Hills, are a towering mountain range (1620 m) near the city of Salem, in Tamil Nadu state, southern India.

S11. Ans.(c)

Sol. The quality or timbre of a sound is determined by its waveform. Two sounds of the same amplitude and frequency sound different if their waveforms are different.

The frequency of the sound waves determines the pitch of the sound. The amplitude of sound determines the loudness. The quality of sound is affected by the pitch and the loudness.

The number of such overtones and harmonics, their relative frequencies and intensities as compared to the fundamental frequency play a role in determining the quality or richness of the sound. Therefore, in essence, it can be said that the quality of sound primarily depends upon the waveform of the sound.

S12. Ans.(d)

Sol. Gopala founded the Pala dynasty. Although he did not have any royal antecedents, he was elected by the people for his superior capabilities.

Pala administration, administering tradition in Bihar and Bengal, India, from the eighth to the twelfth century. Its organizer, Gopala, was a nearby tribal leader who rose to control during the eighth century during a time of disorder.

S13. Ans.(c)

Sol. In team sports, a most valuable player award (abbreviated MVP award) is an honour typically bestowed upon an individual (or individuals, in the instance of a tie) whose individual performance is the greatest in an entire league, for a particular competition, or on a specific team.



S14. Ans.(a)

Sol. According to the Milindapanha, Milinda/ Menander, identified as Menander I, embraced the Buddhist faith. He is described as constantly accompanied by a guard of 500 Greek (Yonaka) soldiers, and two of his counsellors are named Demetrius and Antiochus.

'Menander the Saviour'; Pali: Milinda; sometimes called Menander the Great) was a Greco-Bactrian and later Indo-Greek King (reigned c. 165/155 –130 BC) who administered a large territory in the Northwestern regions of the Indian Subcontinent from his capital at Sagala.

S15. Ans.(c)

Sol. Vasco da Gama, a Portuguese traveller, was the first to discover the sea route to India.

The Portuguese navigator Vasco da Gama, sailing around Africa in 1497, signed on an Arabian pilot at Malindi before he crossed the Indian Ocean to reach the western shores of India.

S16. Ans.(c)

Sol. Playing court. Schematic diagram of a handball court An outdoor handball court. Handball is played on a court 40 by 20 metres (131 ft 3 in × 65 ft 7 in), with a goal in the centre of each end. The goals are surrounded by a near-semicircular area, called the zone or the crease, defined by a line six metres from the goal.

S17. Ans.(d)

Sol. The Pashupati described in the Veda is the guardian of cattle, animals that have been domesticated, while the Pashupati seal in Harappa, which is 4,000 years old, shows a man, or woman, surrounded by wild animals including a tiger and a rhino.

Pashupata Shaivism: It is the oldest of the major Shaivite schools. The philosophy of the Pashupata sect was systematized by Lakulish or Nakulīśa in the 2nd century A.D.

S18. Ans.(a)

Sol. The cholera bacteria are passed through faeces (poop). It is spread by eating or drinking food or water contaminated by the faeces of an infected person.

Cholera and Typhoid are the disease due to water pollution.

Chickenpox. Influenza. Pertussis (whooping cough) Respiratory Syncytial Virus (RSV)

Airborne diseases are bacteria or viruses that are most commonly transmitted through small respiratory droplets. These droplets are expelled when someone with the airborne disease sneezes, coughs, laughs, or otherwise exhales in some way.

chickenpox, caused by the Varicella zoster virus. mumps, caused by a paramyxovirus. measles, caused by another paramyxovirus. whooping cough is a bacterial infection caused by Bordetella pertussis.

S19. Ans.(d)

Sol. Proxima Centauri, the closest star to our own, is still 40,208,000,000,000 km away. (Or about 268,770 AU.)

Proxima Centauri (Alpha Centauri C)

At 4.2 light-years from Earth, Proxima Centauri is the closest star to our planet other than the sun. Its name means "nearest to Centaurus" in Latin. Proxima Centauri is a red dwarf star with a mass of around 12.5% of the sun and a diameter of about 14% of our star's.

It consists of three stars: Rigil Kentaurus (Alpha Centauri A), Toliman (B) and Proxima Centauri (C).

S20. Ans.(d)

Sol. The tragedy of commons means working independently for self-profit only. It was propounded by Garrett Hardin. Hence, the answer is Garrett Hardin.

S21. Ans.(a)

Sol. The joint sitting of the Parliament is called by the President of India (Article 108) and is presided over by the Speaker of the Lok Sabha or, in their absence, by the Deputy Speaker of the Lok Sabha, or in their absence, the Deputy Chairman of the Rajya Sabha.

In India, if an ordinary bill has been rejected by any house of the parliament and if more than six months have elapsed, the President may summon a joint session to pass the bill. The bill is passed by a simple majority of a joint sitting.

S22. Ans.(b)

Sol. Avani Lekhara became the first Indian to win a gold medal at the Paralympic Games. She went on to clinch a bronze at a later event thus becoming the first Indian woman to win multiple Paralympic medals. Lekhara lost her legs in an accident when she was 11 years old.

S23. Ans.(c)

Sol. In mitosis, a cell divides to form two identical daughter cells. The daughter cells must have a copy of every chromosome, so the process involves copying the chromosomes first and then carefully separating the copies to give each new cell a full set.

Mitosis is a process of nuclear division in eukaryotic cells that occurs when a parent cell divides to produce two identical daughter cells.

S24. Ans.(d)

Sol. The authorship of the Natya Shastra is traditionally attributed to Bharata Muni, a revered sage and scholar in Indian culture. While the exact dates of his life remain debated, most estimates place him somewhere between the 2nd century BCE and the 3rd century CE.

S25. Ans.(b)

Sol. the current status of ISC is that of a permanent constitutional body. The objective of the ISC is to discuss or investigate policies, subjects of common interest, and disputes among states.

It was formed under the recommendation of the Sarkaria Commission in the year 1990. The Inter-State Council is a Constitutional Body whereas the Zonal Council is a Statutory Body.

Statutory entities are controlled by legislation, whereas constitutional bodies are founded under the Indian Constitution. Constitutional Bodies: Election Commission, Finance Commission, etc. Statutory Body: National Human Rights Commission, National Investigation Agency, etc.

S26. Ans.(a)

Sol. The Thal Ghat is located on the busy Mumbai–Nashik route and is one of the four major routes, rail and road routes, leading into Mumbai. The railway line, which passes through the ghat is the steepest in India with a gradient of 1 in 37.

Bhor Ghat - It provides connectivity between Pune and Mumbai. Thal Ghat - It provides connectivity between Nasik and Mumbai.

S27. Ans.(b)

Sol. Kalinga Cup (also known as All India Kalinga Cup) is an Indian association football tournament held in Odisha and organised by the Football Association of Odisha and the Department of Sports and Youth of the Government of Odisha annually. The tournament was first started in 1962 by former chief minister Biju Patnaik.

S28. Ans.(c)

Sol. The genes on the Y chromosome are only inherited from the father since men have X and Y chromosomes while women have two X chromosomes. The Y chromosome contains all the genes required for male development.

In most cases, the female is XX and the male is XY. Every individual must have at least one X chromosome. Since the female is XX, each of her eggs has a single X chromosome. The male, being XY, can generate two types of sperm: half bear the X chromosome and half the Y.

S29. Ans.(c)

Sol. All three countries, India, Belgium, and Spain, are classified as "holding together" federations. This means that they originally existed as unitary states and then later chose to devolve certain powers to subnational units, creating a federal system.

India is a federal system but with more tilt towards a unitary system of government. It is sometimes considered a quasi-federal system as it has features of both a federal and a unitary system. Article 1 of the Indian Constitution states, 'India, that is Bharat, shall be a union of states'.

The Belgian federal Constitution follows a model of dual federalism. Regions, communities, and the federal level usually have exclusive competencies; a very limited number are concurrent.

Spain is not a federation as the central government retains full sovereignty. Spain is often referred to as having a form of asymmetrical federalism – comprised of regions with differing powers.

S30. Ans.(b)

Sol. King Udayin laid the foundation of the city of Pataliputra at the confluence of two rivers, the Son and the Ganges. He shifted his capital from Rajgriha to Patliputra because of the latter's central location in the Magadha empire.

King Udayin was the Indian ruler of the Haryanka dynasty who ruled over Magadha from 460 BCE to 440 BCE. He was the son of Ajatashatru and he first established Pataliputra as the capital of Magadha.

S31. Ans.(a)

Sol. Article 267(1) of the Indian Constitution authorised the establishment of a contingency fund of India. Accordingly, in 1950, the Indian Parliament enacted the Contingency Fund of India Act 1950.

S32. Ans.(d)

Sol. Zimbabwe is home to some of the world's most incredible natural wonders and wildlife. Located in southern Africa, the country is famous for its diverse landscapes and for being an epic safari destination.

S33. Ans.(b)

Sol. The chairperson of the State Human Rights Commission shall be a retired chief justice of a High Court or a Judge of a High Court.

A person who is a retired Chief justice of the Supreme Court of India can only be appointed as the chairman of the National Human Rights Commission. The tenure of the chairman of the National Human Rights Commission for five years or until he is 70 years old (whichever is earlier).



S34. Ans.(a)

Sol. The last Mauryan emperor was Emperor Brihadratha, also known as Brihadratha Maurya. He ascended to the throne in approximately 185 BCE. However, his reign was short-lived, and he is often considered the last ruler of the Mauryan Empire.

Brihadratha was the 9th and last Emperor of the Mauryan Empire. He ruled from 187 to 185 BCE, when he was killed by his general, Pushyamitra Shunga, who went on to establish the Shunga Empire.

S35. Ans.(c)

Sol. The Kolkata Port is the only riverine port in India. It is located on the left bank of the Hugli River and is the first major port in India.

Kolkata is an inland riverine port. This port serves a very large and rich hinterland of the Ganga- Brahmaputra basin.

On the west coast, there are the ports of Mumbai, Kandla, Mangalore, JNPT, Mormugao, and Cochin. The ones on the east coast are the ports at Chennai, Tuticorin, Visakhapatnam, Paradip, Kolkata, and Ennore.

S36. Ans.(a)

Sol. The Kangra painting style is prevalent in Himachal Pradesh. It is known for its elegant depiction of feminine beauty, lush landscapes, and intricate detailing.

S37. Ans.(a)

Sol. The term 'voice' can be used to describe the sound produced by a mixture of many frequencies, particularly in the context of human vocalization.

S38. Ans.(d)

Sol. The Atlantic Ocean is the second largest ocean in the world and it also has the longest coastline among all the oceans. The Pacific Ocean is the largest ocean as well as the deepest ocean in the world. The Indian Ocean is the only ocean that is named after a country and it is deeper than the Atlantic Ocean.

Including these marginal seas the coastline of the Atlantic measures 111,866 km (69,510 mi) compared to 135,663 km (84,297 mi) for the Pacific.

Canada's coastline has a length of 202,080 kilometres and is considered the longest coastline worldwide. Canada is surrounded by three oceans: the Atlantic Ocean on the east, the Pacific Ocean on the west, and the Arctic Ocean to the north.

The sovereign country with the shortest coastline is Monaco, with 5.6 km (3.5 miles), excluding piers and breakwaters. The length of Monaco's coastline has been increased by land reclamation.

S39. Ans.(a)

Sol. According to the 2011 Census of India, 31.16% of the population is urban. This indicates the proportion of the population living in urban areas.

S40. Ans.(d)

Sol. The Central Administrative Tribunal, which adjudicates disputes and complaints concerning recruitment and conditions of service of persons appointed to public services, falls under the Ministry of Personnel, Public Grievances, and Pensions.

The CAT was created by the Act in 1985 under Article 323A of the Constitution of India. The Tribunal derives its jurisdiction, powers, and authority from this Section. It was established via the 42nd Constitutional Amendment of the Constitution.

Administrative Tribunal is a creation of a statute. An Administrative Tribunal is vested in the judicial power of the State and thereby performs quasi-judicial functions as distinguished from pure administrative functions. Administrative Tribunal is bound to act judicially and follow the principles of natural justice.

S41. Ans.(c)

Sol. A marsh is a type of wetland, an area of land where water covers the ground for long periods. Unlike swamps, which are dominated by trees, marshes are usually treeless and dominated by grasses and other herbaceous plants.

Terai is the region which is marshy and swamp land extending between the Yamuna and Brahmaputra rivers. It is marshy probably because this region is modulated by the water of the rivers throughout the year. These rivers are perennial and the continuous flow of water through these lands makes them marshy and swampy.

Terai refers to a lowland region in northern India and southern Nepal that is characterized by tall grasslands, scrub savannah, sal forests, and clay-rich swamps.

S42. Ans.(b)

Sol. Vrikshasana, or Tree Pose, is a standing yoga posture that mimics the steady, balanced stance of a tree. This pose requires balance and concentration.

Vrikshasana is a standing pose. The name is derived from the word 'Vṛkṣa' meaning tree. So, it is also called the 'Tree pose'. This asana is named so that the final posture looks like the shape of a tree.

S43. Ans.(b)

Sol. Dollu Kunitha is a popular drum dance in Karnataka. It is characterized by vigorous drum beats and is performed in honour of the deity Beeralingeshwara.

It is a popular folk dance associated with the worship of Sree Beeralingeshwara who is considered as a form of Lord Shiva, originated in the rituals of the Kuruba Gowda community of North Karnataka.

S44. Ans.(d)

Sol. The National Human Rights Commission (NHRC) of India was established on 12 October 1993. It is a statutory public body constituted to protect and promote human rights in India.

India Code: Protection of Human Rights Act, 1993. Long Title: An Act to provide for the constitution of a National Human Rights Commission, State Human Rights Commissions in States and Human Rights Courts for better protection of human rights and matters connected therewith or incidental thereto.

S45. Ans.(c)

Sol. P.C. (Prashant Chandra) Mahalanobis is known as the architect of Indian planning. He played a pivotal role in the formulation of India's Five-Year Plans, especially the Second Five-Year Plan which focused on industrialization.

The Father of Indian Economic Planning is Sir M. Vishweshwaraiah. Sir M Visvesvaraya, popularly known as Sir MV, was an engineer, statesman, and scholar. Sir MV served as the Diwan of Mysore from 1912 through 1918.

S46. Ans.(a)

Sol. An oligopoly is a market characterized by few sellers and many buyers.

In an oligopoly, there are only a few firms in the market. While there is no clarity about the number of firms, 3-5 dominant firms are considered the norm. So in the case of an oligopoly, the buyers are far greater than the sellers.

S47. Ans.(a)

Sol. The Food Corporation of India (FCI) is the organization through which the Government of India purchases food grains. It plays a vital role in India's food security and public distribution system.

the Minimum Support Price. The Food Corporation of India (FCI) purchases wheat and rice from the farmers in states where there is surplus production. The farmers are paid a preannounced price for their crops called the Minimum Support Price.



S48. Ans.(d)

Sol. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was launched in 2005. It aims to enhance livelihood security in rural areas by providing at least 100 days of wage employment in a financial year.

This is a labour law and social security measure that aims to guarantee the 'Right to Work'. It was officially launched on 2 February 2006 under The Mahatma Gandhi National Rural Employment Guarantee Act, passed on 23 August 2005. The act was first proposed in 1991 by P.V. Narasimha Rao.

S49. Ans.(a)

Sol. Alexander the Great invaded India in 326 BC. His invasion marked a significant event in ancient Indian history and had lasting impacts on the Indian subcontinent.

In 326 BC, Alexander invaded India, after crossing the river Indus he advanced towards Taxila. He then challenged King Porus, ruler of the kingdom between the rivers Jhelum and Chenab. The Indians were defeated in the fierce battle (Battle of Hydaspes).

S50. Ans.(b)

Sol. The government cannot withdraw money from the Consolidated Fund of India without the Appropriation Bill. This bill authorizes the government to withdraw funds from the Consolidated

An appropriation bill is used for actually providing money for "discretionary" programs. Appropriations are generally done on an annual basis, but multi-year appropriations are occasionally passed.

S51. Ans.(b)

Sol. Correct sitting arrangement: A C D B E
So, B sits third to right of A.
Hence, option (b) is correct.

S52. Ans.(d)

Sol. Cub is the young ones of Lion
Similarly, Fawn is the young ones of Deer.

S53. Ans.(c)

Sol.

59, 45, 70, 56, 81, ?

56+11= 67

S54. Ans.(d)

Sol.

Here,
A and D are siblings and B and C are siblings
So, A is the son of E

S55. Ans.(c)

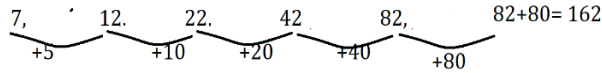
Sol. Logic: Alphabetical place value are coded.

C= 3, O= 15, A= 1, T = 20 ⇒ COAT = 315120

C= 3, L = 12, U = 21, B = 2 ⇒ CLUB = 312212

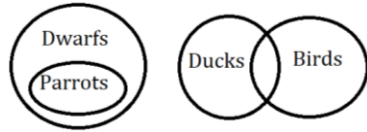
S56. Ans.(a)

Sol.



S57. Ans.(d)

Sol.



There is no conclusion that is logical

S58. Ans.(d)

Sol. On arranging the figure 4, 2 and 1 it will make a perfect square

S59. Ans.(d)

Sol. Option (d) is the correct answer.

S60. Ans.(d)

Sol. Option (d) is the correct answer.

S61. Ans.(c)

Sol. $1 \times 2 + 0 = 2$

$2 \times 2 + 1 = 5$

$5 \times 2 + 2 = 12$

$12 \times 2 + 3 = 27$

$27 \times 2 + 4 = 58$

S62. Ans.(d)

Sol. $S < T < R < C > K$ (after combining both equations)

$S < C$ is logical

$R = A < C > K$

No definite relation between A and K. Hence, $A > K$ is illogical

S63. Ans.(a)

Sol. Option (a) is the correct answer.

S64. Ans.(c)

Sol. C= 3, E= 5, O= 15, K= 11, G= 7

O is the odd one out. Because the alphabetical place value of O is not a prime number.

S65. Ans.(b)

Sol. $UQ = 21 - 17 = 4$

$PL = 16 - 12 = 4$

$NJ = 14 - 10 = 4$

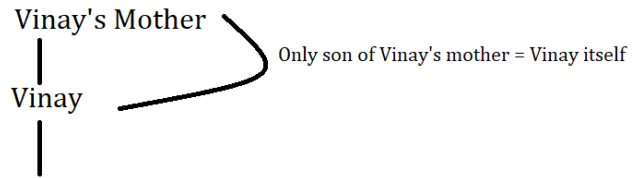
$HE = 8 - 5 = 3 \neq 4$

$QM = 17 - 13 = 4$

HE is the odd one out

S66. Ans.(c)

Sol.



Vinay's Son = Photograph

Vinay is the father of that person who was in the photograph

S67. Ans.(b)

Sol. $21 + 3 \times 1 = 24$

$24 + 3 \times 2 = 30$

$30 + 3 \times 4 = 42$

$42 + 3 \times 8 = 66$

$66 + 3 \times 16 = 114$

S68. Ans.(d)

Sol. Film gives us entertainment.

Similarly, Education gives us knowledge.

S69. Ans.(d)

Sol. Four triangles are there in the figure.

S70. Ans.(b)

Sol. Correct sitting arrangement: A C D B E

So, A and E are sitting at the corners

Hence, Option (b) is the correct.

S71. Ans.(a)

Sol. $F + 10 = P$

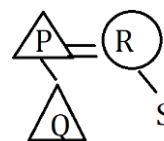
$J + 10 = T$

S72. Ans.(a)

Sol. Option (a) is the correct answer.

S73. Ans.(a)

Sol.



Q is the brother of S.

S74. Ans.(a)

Sol. Opposite faces of the given picture:

B G C

B F E

So, B is opposite side to D.

S75. Ans.(d)**Sol.** Both conclusions are not logical.

Conclusion I assume that because Benny is of marriageable age and lives in Seoul, she must be married. However, the statement only says girls are allowed to marry at 23, not that they must be married by then.

Conclusion II suggests that if Benny does not live in Seoul, she should not get married, which is not a logical deduction from the given statement either. The statement doesn't dictate marriage rules for locations outside Seoul or imply that being 24 and unmarried is wrong. Therefore, neither conclusion is logically derived from the statement.

S76. Ans.(c)**Sol.**

P	I	T	C	H
+5	+5	+5	+5	+5
U	N	Y	H	M

Similarly,

DUSKY is coded as IZXPD

S77. Ans.(a)**Sol.** Correct sitting arrangement: A C D B E

So, A is sitting second to the left of D

Option(a) is the correct answer.

S78. Ans.(a)**Sol.** Logic: Sum of the digit on left side and right side are equal.

$$2 + 5 + 1 + 8 + 0 = 9 + 7 + 0 = 16$$

$$5 + 4 + 1 + 2 + 5 = 17 = 7 + 5 + 5$$

755 is the answer

S79. Ans.(c)

Sol. The statement is false. The transcript indicates that metal deposits in the deep sea are significantly more concentrated than on land, with a mention that these deposits are 15 times more concentrated in the ocean compared to land. This directly contradicts the statement that metal reserves on land are more concentrated than in the deep sea.

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S80. Ans.(c)**Sol. (i)** $B < R = E = V$ From this statement we can conclude $B < V$.

So, Conclusion (i) is not true.

$$R = E = V < I = T$$

From this statement we can conclude $R < T$

So, Conclusion (ii) is true.

$$V < I = T > Y$$

From this statement, there is no definite conclusion between V and Y.

Only (ii) is true

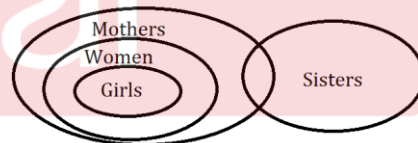
S81. Ans.(d)

Sol. Puppies, Calves, Kitten and Fawn are the young ones of Dog, Cow, Cat and Deer respectively.

But Horse is an odd-out.

S82. Ans.(a)

Sol. The statement is correct. Given the increasing global demand for minerals and the rapid depletion of terrestrial resources, many countries, including major economies like India and China, are indeed turning to marine resources for mineral extraction. The ocean floor is rich in minerals such as copper, nickel, cobalt, and rare earth elements used in various technologies, making it a viable alternative to land-based mining. The scenario described aligns with the statement that countries with significant mineral requirements for production will increasingly rely on marine resources.

S83. Ans.(b)**Sol.** There are 16 squares in the given figure.**S84. Ans.(b)****Sol.**

Conclusion (i) and (iii) follows

S85. Ans.(a)**Sol.** There are 8 lines in the given figure.**S86. Ans.(b)**

$$\text{Sol. } A = P \left(1 + \frac{r}{100} \right)^t$$

$$A = 48,800 \left(1 + \frac{15}{100} \right)^2$$

$$A = 48,800(1 + 0.15)^2$$

$$A = 48,800(1.15)^2$$

$$A = \text{Rs. } 64538$$

S87. Ans.(d)**Sol.** CP of an item = 230

SP of an item = 184

$$\text{Loss \%} = \frac{230-184}{230} \times 100 = 20\%$$

S88. Ans.(b)

Sol. $D^2 = L^2 + B^2$

$260^2 = L^2 + 100^2$

$67600 = L^2 + 10000$

$L^2 = 67600 - 10000$

$L = 240 \text{ cm}$

$P = 2(L + B)$

$P = 2(240 \text{ cm} + 100 \text{ cm}) = 680 \text{ cm}$

S89. Ans.(b)**Sol.** L.C.M. \times H.C.F. = A \times B

$64 \times 16 = 64 \times B$

$16 = B$

S90. Ans.(d)

Sol. $\frac{6}{5} = \frac{126}{B}$

$B = 105$

Total amount = 126 + 105

Total amount = Rs 231

S91. Ans.(c)**Sol.** Let $x=0.\overline{34}$

$100x=34.\overline{34}$

$100x = 34 + 0.\overline{34} \dots\dots\dots(1)$

$10x=3.\overline{34}$

$10x=3 + 0.\overline{34} \dots\dots\dots(2)$

On subtracting equation 2 from equation 1

$90x=31$

$x=\frac{31}{90}$

S92. Ans.(a)

Sol. $\sqrt{(189 - X)} = \sqrt{(178 - \sqrt{81})}$

$189 - X = (178 - \sqrt{81})$

$189 - X = (178 - 9)$

$189 - X = 169$

$X = 20$

S93. Ans.(c)**Sol.** The number of pens, pencils and sketches be 3x, 2x and x.

Total Cost = $(3x \times \text{Rs } 3) + (2x \times \text{Rs } 2) + (x \times \text{Rs } 2) = 9x + 4x +$

$2x = 15x$

Total amount in the box is Rs 285.

$15x = 285$

$x = \frac{285}{15} = 19$

Number of pens = $3x = 3 \times 19 = 57$

S94. Ans.(d)**Sol.** Percentage of students passing in year 2002 = 74%

Percentage of students passing in year 2003 = 85%

Difference in percentage = 11%

Difference in number = 11% of 8000 = 880

S95. Ans.(d)

Sol. $\frac{M.P.}{C.P.} = \frac{100+p}{100-d}$

$\frac{2000}{C.P.} = \frac{120}{90}$

$C.P. = \text{Rs. } 1500$

S96. Ans.(b)

Sol. S.P. = C.P. \times $(1 - \frac{10}{100})$

$234 = C.P. \times \frac{90}{100}$

$C.P. = \text{Rs. } 260$

S97. Ans.(a)**Sol.** Total Distance = Speed \times time

$350+250 = S \times 20$

$600 = 20S$

$S = 30 \text{ m/s}$

$S = 30 \times \frac{18}{5} = 108 \text{ km/hr}$

S98. Ans.(c)**Sol.** Let the age of Ram and Raj be 4x and 5x

Sum of their ages = 243

$4x + 5x = 243$

$9x = 243$

$x = 27$

Difference in their ages = $5x - 4x = x = 27$ **S99. Ans.(a)****Sol.** Sum of 5 numbers = $126 \times 5 = 630$

After excluding one number, the sum of 4 numbers

$= 126 \times 4 = 504$

Excluding number = $630 - 504 = 126$

S100. Ans.(d)**Sol.** Divisibility of 12: A number must be divisible by 4 and 3.

Divisibility of 4: The last two digit of the given numbers must be divisible by 4.

Divisibility of 3: The sum of all the digits of the given number must be divisible by 3.

So,

78276 is perfectly divisible by 12.

S101. Ans.(b)

Sol. Average Percentage = $\frac{60+74+85+82+77+65}{6} = \frac{443}{6} = 73.83\%$

S102. Ans.(a)**Sol.** Length of train = Speed × Time

Length of train = $46 \times 12 = 552 \text{ m}$

S103. Ans.(b)

Sol. increased % = $\frac{216-180}{180} \times 100 = 20\%$

S104. Ans.(a)

Sol. $5 + 2 + 2 + 4 = 13$

When 13 is divisible by 9, then remainder=4

S105. Ans.(c)

Sol. Simple Interest = $\frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$

$4500 = \frac{\text{Principal} \times 12 \times 5}{100}$

Principal = Rs. 7500

S106. Ans.(c)

Sol. Remaining percentage of soap = $\frac{80-56}{80} \times 100 = \frac{24}{80} \times 100$

$100 = 30\%$

S107. Ans.(a)

Sol. Simple Interest = $\frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$

Simple Interest = $\frac{8700 \times 12 \times 4}{100}$

Simple Interest = Rs. 4176

Amount after 4 years = $4176 + 8700 = \text{Rs.} 12,876$

S108. Ans.(a)

Sol. Profit % = $\frac{170-136}{136} \times 100 = 25\%$

S109. Ans.(d)

Sol. Average speed = $\frac{2 \times S_1 \times S_2}{S_1 + S_2}$

Average Speed = $\frac{2 \times 370 \times 555}{370 + 555}$

Average Speed = 444 kmph

S110. Ans.(d)**Sol.** Let the number be x

80% of 25% of 50% of 75% of x = 5919

$\frac{4}{5} \times \frac{1}{4} \times \frac{1}{2} \times \frac{3}{4} \times x = 5919$

$x = \frac{5919 \times 8 \times 20}{12} = 78920$

40% of x = $\frac{40}{100} \times 78920 = 31568$

S111. Ans.(c)**Sol.** Percentage of qualified candidate in 2002 = 74%

74%111000

1% = 1500

So, 100% = 150000

Total number of candidates who attempted the examination in 2002 = 1500000

S112. Ans.(b)**Sol.** Let the sides of quadrilateral be 2x, 3x, 4x and 5x

So, Perimeter = Sum of all sides of any quadrilateral

$294 = 2x + 3x + 4x + 5x$

$294 = 14x$

$x = 21$

Shortest Side = $21 \times 2 = 42 \text{ cm}$

S113. Ans.(a)

Sol. Area of equilateral triangle = $\frac{\sqrt{3}}{4} (\text{Side})^2$

Area of equilateral triangle = $\frac{\sqrt{3}}{4} (56)^2 = 1356.3 \text{ cm}^2$

S114. Ans.(c)

Sol. Average = $\frac{81+91+66+x}{4}$

$80 = \frac{81+91+66+x}{4}$

$320 = 238 + x$

$x = 82$

S115. Ans.(d)

Sol. Total weight of eleven players = $11 \times 83 = 913 \text{ kg}$

Total weight of eleven players and coach = $12 \times 84 = 1008 \text{ kg}$

Weight of coach = $1008 - 913 = 95 \text{ kg}$

S116. Ans.(b)

Sol. Reduction in consumption percentage = $\frac{635-508}{635} \times 100 = 20\%$

S117. Ans.(b)

Sol. $128 - [56 \div (46 \div 23 - \{9 - 81 \div 9\})]$

$128 - [56 \div (46 \div 23 - \{9 - 9\})]$

$128 - [56 \div (46 \div 23)]$

$128 - [56 \div 2]$

$128 - 28 = 100$



S118. Ans.(b)

Sol.

$$\begin{aligned} & \sqrt{157 - \sqrt{182 - \sqrt{156 + \sqrt{169}}}} \\ & \sqrt{157 - \sqrt{182 - \sqrt{156 + 13}}} \\ & \sqrt{157 - \sqrt{182 - \sqrt{169}}} \\ & \sqrt{157 - \sqrt{182 - 13}} \\ & \sqrt{157 - \sqrt{169}} \\ & \sqrt{157 - 13} \\ & \sqrt{144} = 12 \end{aligned}$$

S119. Ans.(c)

Sol. $[2^4 \div 8]^4 + \sqrt{(135 - \sqrt{196})}$
 $[16 \div 8]^4 + \sqrt{135 - 14}$

$$[2]^4 + \sqrt{121}$$

$$16 + 11$$

$$27$$

S120. Ans.(a)

Sol. Area of rhombus = $\frac{1}{2} \times \text{Product of diagonals} = \frac{1}{2} \times 51 \times 52 = 1326 \text{cm}^2$



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