STAFF SELECTION COMMISSION

SUB-INSPECTOR IN DELHI POLICE AND CENTRAL ARMED POLICE FORCES EXAMINATION (PAPER-I)

SOLVED PAPER

(5ᵗʰ October 2023: Shift-3)

**Time Allotted-** 2 hours   **Max marks-** 200

Important Instructions:-

- This paper contains 200 questions and divided into 4 sections and each section contains 50 questions.
  - General Intelligence and Reasoning
  - General Knowledge and General Awareness
  - Quantitative Aptitude
  - English Comprehension
- There will be 1 mark of each correct answer and also there will be negative marking of 0.25 for each wrong answer
- Each question is compulsory to attempt and there will be no negative marking for unattempted questions.

General Intelligence & Reasoning

**1.** A paper is folded and cut as shown. How will it appear when unfolded?
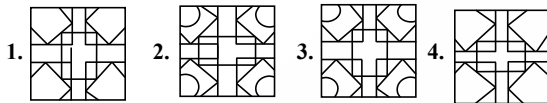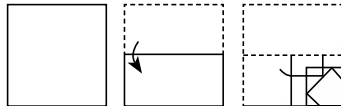
2. Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. e.g., 13- Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
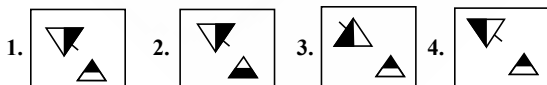
(53, 36, 25)
(71, 54, 43)

1. (41, 23, 18)   **2.** (99, 82, 71)
3. (66, 53, 41)   **4.** (32, 14, 7)

3. Six characters A, B, C, 1, 2 and 3 are written on different faces of a dice. Two positions of this dice are shown in the figure. Find the character on the face opposite to C.
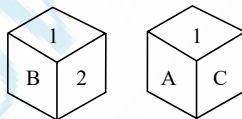
1. A   **2.** 2   **3.** 3   **4.** B

4. Select the figure that will come next in the following figure series.

5. Select the option that represents the letters that, when sequentially placed in the blanks below, will complete the letter-series.

a, b, a, b, b, _, a, b, a, b, _, a, a, b, a, b, b, _

1. b, a, b   **2.** a, b, a   **3.** b, b, b   **4.** a, a, a

6. Select the number from among the given options that can replace the question mark (?) in the following series.
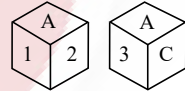
144, 171, 200, ?, 264

1. 240   **2.** 256   **3.** 225   **4.** 231

7. Which letter-cluster will replace the question mark (?) to complete the given series?

FOHV, CKER, ?, WCYJ, TYVF

1. XHBM   **2.** ZGBN   **3.** AFCP   **4.** AHCO

8. Six characters A, B, C, 1, 2 and 3 are written on different faces of a dice. Two positions of this dice are shown in the figure. Find the character on the face opposite to 3.
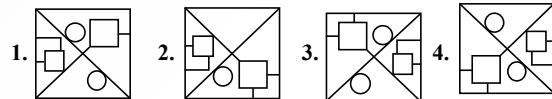

1. B   **2.** 1   **3.** 2   **4.** C

9. In a certain code language, 'BLOCK' is coded as LBCON and 'CABIN' is coded as ACIBQ. How will 'SUITE' be coded in the same language?

1. USTIH   **2.** UTSEH   **3.** ETHUS   **4.** USHTI

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

11. In a certain code language, 'MOBILE' is written as 'NQEMQK' and 'BISHOP' is written as 'CKVLTV'. How will 'CHARGE' be written in that language?

1. DJEVLJ   **2.** DJDWLK   **3.** DJDVLK   **4.** DJDVKL

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

1. Warehouse   **2.** Warden   **3.** Warship
4. Wardrobe   **5.** Warrant   **6.** Warfare

1. 4, 2, 1, 6, 5, 3   **2.** 2, 4, 1, 6, 5, 3
3. 2, 4, 6, 5, 1, 3   **4.** 2, 4, 1, 5, 6, 3

13. Select the Venn diagram that best illustrates the relationship between the following classes.

Clothes, Shoes, Shirts
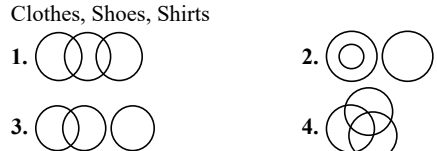
14. The sequence of folding a piece of paper and the manner in which the folded paper is cut is shown in the following figures. How would this paper look when unfolded?
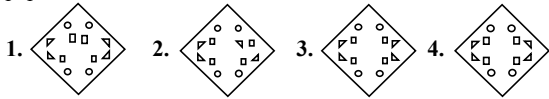
    1.   **2.**   **3.**   **4.**

15. If A denotes '+', B denotes '×', C denotes '−', and D denotes '÷', then what will be the value of the following equation?
    11 B 12 C 144 D 24 A 57 = ?
    1. 180   **2.** 183   **3.** 186   **4.** 160

16. Q + J means "Q is the Husband of J"
    Q – J means "Q is the Father of J"
    Q × J means "Q is the Mother of J"
    Q * J means "Q is the Daughter of J"
    If D * V + B × U, how is D related to U?
    1. Sister   **2.** Mother   **3.** Brother   **4.** Daughter

17. Q is to the east of S. E is to the south of S. P is to the north-east of Q and north of T. If T is to the south-east of Q, what is the position of S with respect to T? (All positions are arranged in GRID pattern)
    1. South-east   **2.** South-west   **3.** West   **4.** North-west

18. In a certain code language, 'SPAM' is coded as '36' and 'JUG' is coded as '27'. How will 'FROCK' be coded in that language?
    1. 72   **2.** 45   **3.** 90   **4.** 48

19. Select the option figure in which the given figure is embedded as its part (rotation is NOT allowed).

    1.   **2.**   **3.**   **4.**
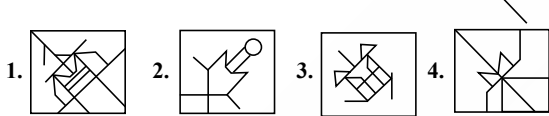
20. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the odd letter-cluster.
    1. SRWX   **2.** HGLM   **3.** POTU   **4.** DBGH

21. 'T + U' means 'T is the mother of U'.
    'T – U' means 'T is the father of U'.
    'T $ U' means 'T is the husband of U'.
    'T # U' means 'T is the daughter of U'.
    If A # C $ V + X, then how is A related to X?
    1. Brother   **2.** Sister   **3.** Father   **4.** Daughter

22. A paper is folded and cut as shown below. How will it appear when unfolded?

    1.   **2.**   **3.**   **4.**
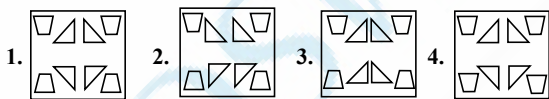
23. Select the set in which the numbers are related in the same way as are the numbers of the following sets.
    (NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. e.g., 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)
    (112, 327, 215), (98, 254, 156)
    1. (108, 209, 184)   **2.** (105, 347, 322)
    3. (126, 268, 142)   **4.** (281, 490,309)

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

    (NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/ subtracting/ multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is NOT allowed)
    (5, 4, 2)
    (9, 9, 3)
    1. (21,39,1)   **2.** (5,2,6)   **3.** (24,43,34)   **4.** (17,6,5)

25. Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only 2 people sit to the right of D. G is an immediate neighbour of D. Only 3 people sit between A and G. Only 2 people sit between B and C. E is not an immediate neighbour of C. F sits to the immediate right of G.
   Who sits to the immediate left of A?
    1. E   **2.** C   **3.** D   **4.** B

26. Select the option that represents the correct order of the given words as they would appear in an English dictionary?
    1. Brochure   **2.** Brine   **3.** Bright
    4. Brief   **5.** Brocade
    1. 1, 2, 3, 4, 5   **2.** 1, 2, 3, 5, 4
    3. 4, 3, 2, 5, 1   **4.** 3, 2, 5, 4, 1

27. If '+' means '−', '−' means '×', '×' means '÷' and '÷' means '+', what will come in place of '?' in the following equation?
    79 ÷ 64 × 8 −7 + 12 = ?
    1. 123   **2.** 117   **3.** 138   **4.** 147

28. Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.
    Statements:
    All keys are locks.
    No door is a lock.
    Conclusions:
      I. Some locks are doors.
     II. Some locks are keys.
    III. No key is a door.
    1. Both conclusions I and II follow.
    2. Conclusions I, II and III follow.
    3. Both conclusions II and III follow.
    4. Both conclusions I and III follow.

29. In a certain code language, 'Live long' is coded as 'mu ae', 'Road is long' is coded as 'ae si du' and 'Game is live' is coded as 'si mu zt'. What is the code for the word 'Game'?
    1. si   **2.** mu   **3.** zt   **4.** ae

30. Which two signs should be interchanged to make the given equation correct?
    42 ÷ 7 + 11 × 87 − 12 = 141
    1. ÷ and −   **2.** ÷ and +   **3.** × and +   **4.** − and ×

31. Select the option that is related to the third word in the same way as the second word is related to the first word.
    (The words must be considered as meaningful words and must not be related to each other based on the number of letters/ number of consonants/vowels in the word.)
    Pressure : Barometer :: Electricity : ?
    1. Cyclotron   **2.** Bolometer
    3. Audiometer   **4.** Multimeter

32. Which of the following numbers will replace the question mark (?) in the given series?
    270, 241, 212, ?, 154, 125
    1. 198   **2.** 186   **3.** 183   **4.** 192

33. Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.
25 : 18 :: 37 : ? :: 49 : 36
1. 29   **2.** 32   **3.** 30   **4.** 27

34. Six students Meera, Jigyasa, Tarun, Naina, Shambhavi and Avni are sitting around a circular table facing the centre (not necessarily in the same order). Shambhavi is an immediate neighbour of both Jigyasa and Avni. Tarun is sitting third to the left of Jigyasa. Meera is sitting second to the right of Avni. Who is sitting second to the left of Jigyasa?
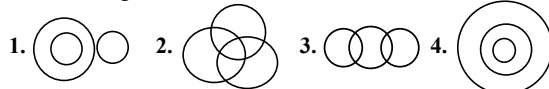**1.** Meera   **2.** Naina   **3.** Avni   **4.** Tarun

35. Which letter-cluster will replace the question mark (?) to complete the given series?
BRCQ, EPFO, ?, KLLK, NJOI
1. HINO   **2.** GNMI   **3.** HNIM   **4.** GINO
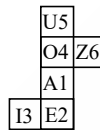
36. Select the Venn diagram that best illustrates the relationship between the following classes.
Animal, Jungle, Wild Animal

37. When the following figure is folded to form a cube, which letter-number will be on the face opposite to the face showing the letter-number 'A1'?
(The elements are shown to indicate the sides only.)

1. U5   **2.** O4   **3.** I3   **4.** E2

38. Which of the given figures when placed in the 5ᵗʰ position would continue the series that is established by the first four figures?
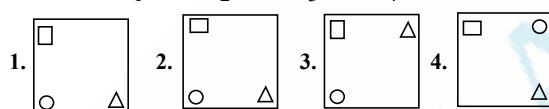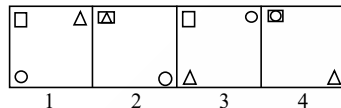
39. Select the option that is related to the third word in the same way as the second word is related to the first word.
(The words must be considered as meaningful words and must not be related to each other based on the number of letters/ number of consonants/vowels in the word.)
Centre : Focus :: Vicar : ?
1. Life   **2.** Priest   **3.** Building   **4.** Riddle

40. Three of the following four letter-clusters are alike in a certain way and one is different.
Pick the odd one out.
1. MOKN   **2.** SQUH   **3.** GIET   **4.** CEAX

41. Which two signs should be interchanged to make the given equation correct?
39 ÷ 3 − 11 + 57 × 29 = 171
1. − and ×   **2.** − and +   **3.** ÷ and +   **4.** ÷ and −

42. Stanley starts cycling from Point A. He cycles X km towards the west and then turns right and cycles 3 km. He again turns right and cycles for X + 1 km. He again turns right and cycles for 2X + 1 km. He takes a final right turn and cycles for 1 km to stop at Point B. Point B is 6 km south of Point A. What is the value of X?
1. 9   **2.** 3   **3.** 4   **4.** 5

43. In a certain code language, 'PIN' is coded as 9 and 'CHARGER' is coded as 49. How will 'CABLE' be coded in the same language?
1. 27   **2.** 25   **3.** 18   **4.** 36

44. Which of the following numbers will replace the question mark (?) in the given series?
5, 20, 60, 240, 720, ?
1. 2580   **2.** 2880   **3.** 2160   **4.** 2675

45. Two statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.
Statements:
All rivers are lakes.
Some seas are rivers.
Conclusion:
I. Some seas are lakes.
II. All lakes are rivers.
1. Neither Conclusion I nor II follows.
2. Only Conclusion II follows.
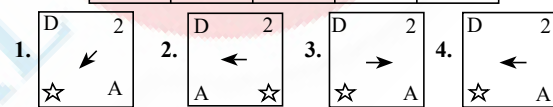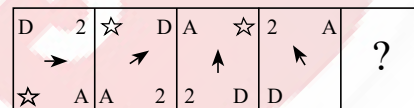**3.** Only Conclusion I follows
4. Both Conclusions I and II follow.

46. If '+' means '−', '−' means '×', '×' means '÷', '÷' means '+', then what will come in place of the question mark (?) in the following equation?
39 × 3 − 11 ÷ 57 + 29 = ?
1. 163   **2.** 190   **3.** 185   **4.** 171

47. Which figure from the given options would replace the question mark (?) if the following figures series were to be continued?

48. If M denotes '−', N denotes '÷', O denotes '×', and P denotes '+', then what will come in place of '?' in the following equation?
21 O 5 P 69 N 3 P $\sqrt{225}$ M 88 = ?
1. 61   **2.** 65   **3.** 55   **4.** 50

49. Which of the following numbers will replace the question mark (?) in the given series?
69, 65, 67, 63, ?, 61
1. 65   **2.** 60   **3.** 62   **4.** 64

50. Which two mathematical signs should be interchanged to make the given equation correct?
(45 × 2) ÷ 15 − (6 × 3) + 10 − (63 ÷ 21) = 17
1. ÷ and +   **2.** × and −   **3.** − and +   **4.** ÷ and ×

General Knowledge and General Awareness

51. Lavani is a traditional dance of which of the following states?
1. Uttar Pradesh   **2.** Maharashtra
3. Himachal Pradesh   **4.** Madhya Pradesh

52. Which of the following scientists provided the Law of Octaves?
1. Galileo Galilei   **2.** John Newlands
3. Michael Faraday   **4.** Marie Curie

53. Who among the following Bahmani sultan was noted for cruelty and hence got the title as 'Zalim'?
    1. Humayun
    2. Firuz Shah
    3. Mujahid Shah
    4. Ahmad Shah

54. According to the Koppen classification, which regions experience cold humid winter with short summers?
    1. Western Rajasthan
    2. Northern Madhya Pradesh
    3. South of Goa
    4. Arunachal Pradesh

55. The Rajpath was decided to be a permanent venue for the Republic Day parade from which of the following year onwards?
    1. 1959
    2. 1951
    3. 1955
    4. 1958

56. Which disease is caused by NOT having enough vitamin C in the diet for at least 3 months leading to weakness, anaemia, gum disease and skin problems?
    1. Pellagra
    2. Rickets
    3. Beriberi
    4. Scurvy

57. What do you call a Glycocalyx that is a loose sheath type?
    1. Mesosomes
    2. Capsule
    3. Tubules
    4. Slime layer

58. Assessment of the country's GDP growth, external balance and fiscal balance are presented in which part of the budget document?
    1. Medium-term Fiscal Policy Statement
    2. Appropriation bill
    3. Fiscal Policy Strategy Statement
    4. Macroeconomic Framework Statement

59. The seven years of war in the 18th century was fought between Britain and _____.
    1. Spain
    2. France
    3. Germany
    4. Portugal

60. At the time of launch of the Smart Cities Mission, how many cities were proposed to be covered under this scheme?
    1. 100
    2. 50
    3. 75
    4. 25

61. What is the standard weight of a hockey ball?
    1. 161 g - 156 g
    2. 162 g - 156 g
    3. 160 g - 156 g
    4. 163 g - 156 g

62. Choose the correct statement(s) related to 'continentality'.
    a. The sea exerts a moderating influence on climate.
    b. As the distance from the sea increases, the people experience extreme weather conditions.
    c. As one goes from the surface of the earth to higher altitudes, the atmosphere becomes less dense and temperature decreases.
    1. a and c
    2. Only c
    3. b and c
    4. a and b

63. The Arms Act was passed in _____ that prevented Indians from keeping arms without an appropriate license.
    1. 1909
    2. 1897
    3. 1878
    4. 1912

64. Who takes the salute during the Republic Day parade at New Delhi?
    1. Governor
    2. President
    3. Chief Justice
    4. Prime Minister

65. According to the Census of India 2011, which of the following states has the highest Hindu population percentage of total population?
    1. Madhya Pradesh
    2. Haryana
    3. Himachal Pradesh
    4. Uttar Pradesh

66. Which Article of the Indian Constitution mentions that all the authorities— civil and judicial— in the territory of India shall act in aid of the Supreme Court?
    1. Article 143
    2. Article 144
    3. Article 142
    4. Article 141

67. _____ river has the least storage capacity of usable water.
    1. Godavari
    2. Ganges
    3. Brahmaputra
    4. Krishna

68. Dihang and Lohit are rivers in which of the following regions?
    1. Sikkim and Manipur
    2. Punjab and Himachal
    3. Arunachal Pradesh and Assam
    4. Jammu and Kashmir

69. With which of the following dance forms is Thumri music associated?
    1. Sattriya
    2. Kathakali
    3. Kathak
    4. Bharatanatyam

70. Who among the following Mauryan king fasted to death and died at Shravanabelagola?
    1. Bindusara
    2. Dasharatha
    3. Chandragupta Maurya
    4. Ashoka

71. Shifting agriculture is known as _____ in the Western Ghats.
    1. kumari
    2. dahiya
    3. koman
    4. waltre

72. In which of the following states are Aus, Boro and Aman paddy crops grown in a year?
    1. Punjab
    2. Odisha
    3. Haryana
    4. Uttarakhand

73. The measure of the force that can cause an object to rotate about an axis is called:
    1. moment of inertia
    2. power
    3. torque
    4. centripetal force

74. Who among the following classical poets of the Sultanate period in India popularised Qawwali, a form of music which derived its name from the Arabic word 'qaul', meaning 'to speak'?
    1. Nizam al-Din Awliya
    2. Jalal al-Din Muhammad Rumi
    3. Amir Khusrau
    4. Shams al-Din Muhammad Hafiz

75. What is the name of the 1,3-isomer (or meta-isomer) of benzenediol with the chemical formula $C_6H_4(OH)_2$?
    1. m-Cresol
    2. Resorcinol
    3. Catechol
    4. Glycerol

76. Who was/were the founder(s) of the Theosophical Society?
    1. H P Blavatsky and Colonel Olcott
    2. Madam Bhikaji Cama
    3. Annie Besant
    4. Charles W Leadbeater and Emily Lutyens

77. Which Articles of the Indian Constitution describe Fundamental Rights?
    1. Articles 5 to 11
    2. Articles 12 to 35
    3. Articles 36 to 51
    4. Articles 52 to 62

78. Which of the following organisms belongs to phylum Apicomplexa?
    1. Sponge
    2. Physalia
    3. Hydra
    4. Plasmodium

79. Select the INCORRECT pair of a famous minaret and its construction year in India.
    1. Shaheed Minar–1828 CE
    2. Chand Minar–1435 CE
    3. Char Minar–1664 CE
    4. Jhulta Minar–1452 CE

80. In 1932, who discovered the positron, a particle described as 'carrying a positive charge but having a mass of the same order of magnitude as that normally possessed by a free negative electron'?
    1. Niels Bohr
    2. Paul Dirac
    3. Ernest Rutherford
    4. Carl Anderson

81. Which of the following rights forbids employment of children below the age of 14 years in dangerous jobs?
    1. Right to Equality
    2. Right to Constitutional Remedies
    3. Right against Exploitation
    4. Right to Freedom

82. Which of the following is NOT the manifestation of Iron-deficiency anaemia (IDA)?
1. Soft palate
2. Blindness
3. General pallor
4. Paleness of conjunctiva of eyes

83. Which of the following books is an autobiography of the Indian politician LK Advani?
1. Wings of Fire: An Autobiography
2. My Country My Life
3. My Times: An Autobiography
4. In Pursuit of Justice: An Autobiography

84. From which five-year plan did India start its journey of industrialisation?
1. Third Five-year Plan
2. Second Five-year Plan
3. Fifth Five-year Plan
4. Fourth Five-year Plan

85. Which of the following statements about green revolution is/are correct?
I. Green revolution began in the 1960s.
II. HYV of a seed made green revolution a success.
III. Extensive use of cattle was also one constituent of green revolution.
1. Only II and III
2. Only I and II
3. Only I
4. Only II

86. Ghanakanta Bora Borbayan has been conferred the Padma Shri award for his contribution to which of the following fields?
1. Bhortal
2. Bagurumba
3. Sattriya
4. Chhau

87. The masculine aspect of the Manipuri classical dance is known as:
1. Ras
2. Choloms
3. Pareng
4. Maiba

88. Which of the following Articles of the Constitution of India lays down the establishment of Public Service Commissions for the Union and for the States?
1. Article 315
2. Article 316
3. Article 317
4. Article 318

89. Which of the following is an indirect tax?
1. Death duty
2. Interest tax
3. Goods and services tax
4. Capital gains tax

90. The ball colour in the sport of Ball Badminton should be:
1. yellow
2. green
3. pink
4. red

91. What is the bicameral legislature of the Indian Constitution?
1. It is legislative body with three houses.
2. It is legislative body with two houses.
3. It is legislative body with one house.
4. It is legislative body with four houses.

92. Neeruswamy Pillai and Rajaratanam Pillai are exponents of which musical instrument?
1. Nadaswaran
2. Mandolin
3. Mridangam
4. Sarangi

93. Living organisms have been on Earth for how much percent of Earth's history?
1. 80%
2. 20%
3. 60%
4. 40%

94. According to the 2011 Census, which state recorded the lowest literacy rate?
1. Arunachal Pradesh
2. Bihar
3. Andhra Pradesh
4. Jharkhand

95. Which Article of the Indian Constitution refers to the Rights of Ministers with respect to the State Legislature?
1. Article 178
2. Article 177
3. Article 175
4. Article 176

96. In Ball Badminton, players change the ends in each game when a side first scores all of the following, EXCEPT:
1. 18
2. 9
3. 27
4. 11

97. In 1928, which equation was derived and combines quantum theory and special relativity to describe the behaviour of an electron moving at a relativistic speed?
1. Bernoulli's equation
2. Lorentz equation
3. Helmholtz equation
4. Dirac equation

98. The term 'Dribble' is generally associated with_____.
1. cricket
2. baseball
3. basketball
4. tennis

99. Which of the following Sultans of Delhi was appointed as Amir-i-Tuzuk (Master of Ceremonies) before becoming the Sultan?
1. Muhammad Bin Tughlaq
2. Alauddin Khilji
3. Balban
4. Iltutmish

100. Who is the author of the book 'The Soul of a Butterfly: Reflections on Life's Journey'?
1. Jake LaMotta
2. Eugene J Bullard
3. Roberto Duran
4. Muhammad Ali

Quantitative Aptitude

101. Find the fourth proportional of 22, 66 and 11.
1. 23
2. 33
3. 17
4. 39

102. An article is sold at a discount of 25% and an additional discount of 28% is allowed on cash payment. If Ramendra purchased the article by paying ₹10,800 in cash, then what was the marked price of the article?
1. ₹19,800
2. ₹20,800
3. ₹20,000
4. ₹18,000

103. A shopkeeper marked the price as ₹15,000 on an article, and a successive discount of 5%, 10% and 20% was allowed on it. What is the selling price?
1. ₹10,260
2. ₹13,520
3. ₹11,520
4. ₹9,850

104. The value of a washing machine depreciated from ₹40,960 to ₹21,970 in 3 years. Find the yearly rate of depreciation.
1. 25%
2. 16.25%
3. 18.75%
4. 20%

105. A and B are equally efficient, and each can individually complete a piece of work in 36 days, if none takes any holiday. A and B started working together on this piece of work, but A took a day off after every five days of work, while B took a day off after every seven days of work. If the duo had started work on 1 July 2021, on which date was the work completed?
1. 22 July 2021
2. 19 July 2021
3. 21 July 2021
4. 20 July 2021

106. The radius of a metallic spherical ball is 3 cm. If the metallic ball is melted and recast into x number of hemispheres of radius equal to half the radius of the metallic spherical ball, then find the value of x.
1. 15
2. 14
3. 16
4. 13

107. Some ice pieces, spherical in shape, of diameter 6 cm are dropped in a cylindrical container containing some juice and are fully submerged. If the diameter of the container is 18 cm and level of juice rises by 40 cm, then how many ice pieces are dropped in the container?
1. 95
2. 85
3. 80
4. 90

108. If the slant height of a cone is 29 cm and its height is 20 cm, find the ratio between the magnitudes of total surface area and the volume.
1. 5 : 14
2. 7 : 15
3. 3 : 7
4. 3 : 14

109. In ∆ABC with sides 8 cm, 9 cm and 12 cm, the angle bisector of the largest angle divides the opposite sides into two segments. What is the length of the shorter segment?
1. $5\frac{11}{17}$ cm
2. $4\frac{11}{17}$ cm
3. $6\frac{13}{17}$ cm
4. $3\frac{9}{17}$ cm

110. If $\cot^2\theta = 1 - e^2$, then the value of $\operatorname{cosec}\theta + \cot^3\theta \sec\theta$ is:
1. $(2-e^2)^{\frac{1}{2}}$
2. $(1-e^2)^{\frac{3}{2}}$
3. $(1-e^2)$
4. $(2-e^2)^{\frac{3}{2}}$

111. If $\dfrac{2\sin A - \cos A}{\sin A + \cos A} = 1$, then find the value of cot A.

1. 1   **2.** $\dfrac{1}{2}$ **3.** $\dfrac{1}{3}$ **4.** 2

112. A, B and C can do a piece of work in 11 days, 20 days and 55 days respectively. How soon can the work be done if A works with B on first day, A works with C on second day and so on?

1. $8\dfrac{1}{2}$ days   **2.** $9\dfrac{1}{2}$ days   **3.** 8 days   **4.** 9 days

113. Study the given table and answer the question that follows.

Number of children	Number of families
0	4
1	22
2	15
3	6
4	2

The average number of children per family is:

1. 1.47   **2.** 1.59   **3.** 1.23   **4.** 1.72

114. A fast local of Mumbai takes 45 minutes less than a slow local for a journey of 150 km. If the speed of the fast local is 10 km/h more than that of the slow local, find the speed (in km/h) of the slow local train.

1. 30   **2.** 35   **3.** 45   **4.** 40

115. In a school of 720 students, the ratio of boys to girls is 3 : 5. Find how many new boys may be allowed to the school if 18 new girls are admitted, so that the ratio of boys to girls changes to 2 : 3.

1. 42   **2.** 44   **3.** 50   **4.** 38

116. The given graph shows the income and expenditure of a family. Study the graph and answer the question that follows.
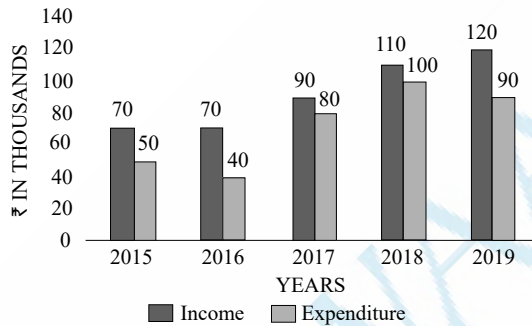
The expenditure of the family increased by _____ from 2017 to 2018.

1. 25%   **2.** 11%   **3.** 22%   **4.** 20%

117. Which of the following is the greatest four-digit number that is divisible by 15, 25, 40, and 75?

1. 9200   **2.** 9500   **3.** 9600   **4.** 9000

118. What is the average of the first six prime numbers?

1. $6\dfrac{1}{3}$ **2.** $6\dfrac{5}{6}$ **3.** $6\dfrac{2}{3}$ **4.** $6\dfrac{1}{6}$

119. Ayush spends 25% of an amount of money on an insurance policy, 26% on food, 23% on children's education and 19% on recreation. He deposits the remaining amount of ₹26,600 in the bank. What is the total amount (in ₹) that he spends on food and recreation together?

1. 1,95,000   **2.** 1,71,000   **3.** 1,62,000   **4.** 1,83,000

120. Study the given pie-chart carefully and answer the question that follows. Degree wise Break-up of Expenditure of a Family in a Month

Total Amount Spent in a Month = ₹56800.
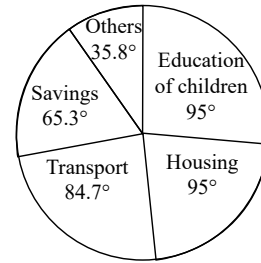
What is the amount spent by the family on housing?

1. ₹11,814   **2.** ₹6,248   **3.** ₹10,615   **4.** ₹12,496

121. The number of balls, each one is 4 cm in the diameter that can be made from a solid metallic sphere of diameter 32 cm is:

1. 256   **2.** 64   **3.** 512   **4.** 1024

122. Simplify the given expression.

$b + 2a - [(3b + a) - (2a + b) + 2a] - a$

1. $- a$ **2.** b **3.** $- b$ **4.** a

123. In a store, Arun has two options to buy a mobile phone, either he can pay the full amount of Rs.2,500 or he may buy at an instalment scheme, i.e. Rs.520 in down payment and four equal instalments, rate of interest being charged at 25% p.a. simple interest. Arun buys a mobile phone on the instalment scheme. What is the monthly instalment for Arun?

1. ₹ 510   **2.** ₹ 530   **3.** ₹ 550   **4.** ₹ 520

124. In a 1200 m race, Rakesh reaches the final point in 36 seconds and Rajesh reaches in 40 sec. By how much distance does Rakesh beat Rajesh?

1. 130 m   **2.** 120 m   **3.** 140 m   **4.** 150 m

125. Rakesh runs a coaching institute having 50 faculty members. The average monthly salary of 35 faculty members is ₹37,500. What will be the average monthly salary (in ₹) of the other 15 faculty members, if the average monthly salary of all the 50 faculty members is found to be ₹30,000?

**1.** 13,000   **2.** 13,500   **3.** 12,500   **4.** 12,000

126. If $\sin\theta + \cos\theta = \sqrt{2}\cos\theta$, then find $\dfrac{\sin\theta - \cos\theta}{\sin\theta}$:

1. $-\sqrt{2}$ **2.** -1 **3.** 1 **4.** $\sqrt{2}$

127. Ankita sold three toys. The first toy was sold for ₹1,500 at a profit of 25%; the second toy was sold for ₹2,800 at a loss of 50% and the third toy was sold for ₹3,500 at a profit of 25%. Find her total profit or loss percentage.

1. 15.25% loss   **2.** 15.25% profit
3. 18.75% profit   **4.** 18.75% loss

128. Study the given pie-chart and answer the question that follows. The pie-chart shows the expenditure of a family on different items and their savings throughout the year 2021.
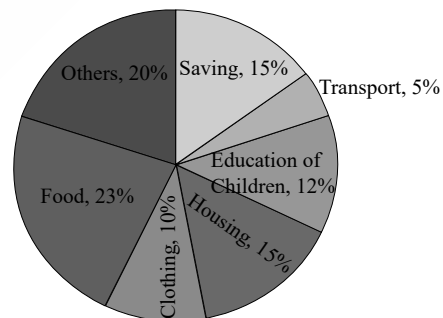
If the total income for the year was ₹1,00,000, then the difference in the expenses (in ₹) between housing and transport was:

1. 9,500   **2.** 10,500   **3.** 9,000   **4.** 10,000

129. Simplify the given expression.
$(x - 2y)(y - 3x) + (x + y)(x - y) + (x - 3y)(2x + y)$
1. $2y(x - 3y)$ **2.** $2y(x + 3y)$ **3.** $2x(x - 3y)$ **4.** $2x(x + 3y)$

130. The least number of five digits which is exactly divisible by 9, 12, 15, 25 and 27 is:
1. 10800 **2.** 10250 **3.** 10700 **4.** 10600

131. The LCM of two numbers is five times their HCF. If the product of the two numbers is 20480, then find their HCF and LCM, respectively.
1. 46 and 230 **2.** 48 and 240
3. 64 and 320 **4.** 56 and 280

132. Find the HCF of 125, 250 and 750.
1. 50 **2.** 25 **3.** 125 **4.** 75

133. The LCM of 8, 12 and 18 is:
1. 24 **2.** 80 **3.** 72 **4.** 36

134. Study the given table and answer the question that follows.
The table shows the number of employees in three organisations during three years.

Organization/Year	2018	2019	2020
P	75	69	85
Q	96	81	74
R	85	63	90

What is the respective ratio between total number of employees in organisations P and R together in 2019 and total number of employees in organisations Q and R together in 2020?
1. 23 : 41 **2.** 33 : 41 **3.** 41 : 31 **4.** 33 : 23

135. The ratio of monthly income and expenditure of a man is 7:3. If his expenditure is ₹5,400, find his monthly income.
1. ₹12,600 **2.** ₹13,300 **3.** ₹11,500 **4.** ₹10,400

136. If 30% of Ravi's income is equal to 40% of Suresh's income, then 50% of Ravi's income is equal to what percentage of Suresh's income?
1. $66\frac{1}{3}\%$ **2.** $33\frac{1}{3}\%$ **3.** $33\frac{2}{3}\%$ **4.** $66\frac{2}{3}\%$

137. If Arun can complete $\frac{2}{3}$rd of a work in 12 days, then in how many days can he complete $\frac{1}{6}$th of the same work?
1. 3 **2.** 4 **3.** 5 **4.** 2

138. The chord of a circle is equal to its radius. Find the difference between the angle subtended by this chord at the minor arc and major arc of the circle.
1. 30° **2.** 120° **3.** 60° **4.** 150°

139. The length of the common chord of two intersecting circles is 24 cm. If the diameter of the circles are 30 cm and 26 cm, then the distance between the centres (in cm) is:
1. 16 cm **2.** 14 cm **3.** 18 cm **4.** 12 cm

140. Study the given table and answer the question that follows.
The table shows the number of students in various courses in various cities A, B, C, D and E in India during the academic year 2022-2023.

City	MBA	Science	Engineering	Medicine	MCA	Total
A	1200	2560	4520	1100	960	10340
B	1350	2650	5100	1050	850	11000
C	1250	2640	4580	1120	750	10340
D	1960	1250	3500	1850	1600	10160
E	1200	2100	3500	960	540	8300

During the academic year 2022-2023, which city had the largest number of students?
1. C **2.** D **3.** A **4.** B

141. Study the given bar graph carefully and answer the question that follows. Increment of four employees (in ₹) in the months of May, June and July.
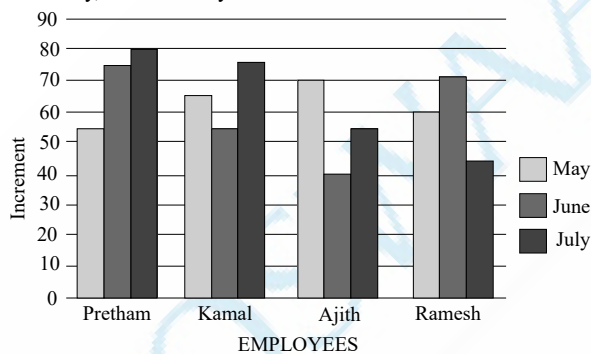
What is Kamal's overall average increment in three months?
1. ₹60 **2.** ₹70 **3.** ₹75 **4.** ₹65

142. A hollow cylindrical tube made of plastic is 3 cm thick. If the external diameter is 20 cm and length of the tube is 49 cm, find the volume of the plastic.
1. 7238 cm³ **2.** 7644 cm³ **3.** 7546 cm³ **4.** 7854 cm³

143. The value of $2 \tan^2 45° + \cos^2 30° - \sin^2 60°$ is:
1. 2 **2.** 1 **3.** −1 **4.** −2

144. A shopkeeper sells sugar at ₹40 per kg, which he purchased at ₹36 per kg. His weighing machine is faulty and it weighs only 800 gm while selling. His percentage profit (correct to 2 decimal places) is:
1. 37.58% **2.** 40% **3.** 39.28% **4.** 38.89%

145. ΔPQR is right angled at Q such that PQ = $(x - y)$, QR = x and PR = $(x + y)$. S is a point on QR such that QS = PQ. The ratio QS : SR for any values of x and y is:
1. 3 : 1 **2.** 2 : 1 **3.** 1 : 2 **4.** 1 : 3

146. The following table represents the number of scooters sold by 5 stores in 4 different months in the year 2022.

Month/Stores	A	B	C	D	E
January	212	168	173	182	190
February	312	250	212	175	182
March	280	275	265	255	245
April	270	280	290	305	275

Find the ratio between the total number of scooters sold by stores A and B together in January and the total number of scooters sold by stores D and E together in March?
1. 20 : 23 **2.** 18 : 23 **3.** 17 : 25 **4.** 19 : 25

147. A man covers a certain distance by bike. If he covers 25% of the distance at the speed of 25 km/h, 50% of the distance at the speed of 50 km/h and the remaining distance at the speed of 12.5 km/h, find his average speed over the whole journey.
1. 20 km/h **2.** 30 km/h **3.** 25 km/h **4.** 35 km/h

148. If the sum of two numbers is 60 and their HCF and LCM are 5 and 60, respectively, then the sum of the reciprocals of the numbers will be:
1. $\frac{1}{11}$ **2.** $\frac{1}{6}$ **3.** $\frac{1}{4}$ **4.** $\frac{1}{5}$

149. The following table gives the number of different types of batteries sold by a company over the years (numbers in hundreds).

Year/Type of battery	7AH	32AH	35AH	55AH
2018	20	30	40	50
2019	40	35	45	45
2020	50	40	40	40
2021	40	50	50	45
2022	45	45	35	55

What is the difference in the number of 7AH batteries sold in 2021 and 2022?

1. 200   **2.** 700   **3.** 300   **4.** 500

150. The HCF and LCM of two numbers are 9 and 126, respectively. Find the larger number, if the ratio between the numbers is 2 : 7.

1. 42   **2.** 63   **3.** 77   **4.** 21

English Comprehension

151. Select the most appropriate option that can substitute the underlined segment in the given sentence.
The concert was filled with rapt teenage listeners.
1. really fashionable   **2.** boldly dressed
3. truly energetic   **4.** fully attentive

152. Select the most appropriate ANTONYM of the given word.
Decline
1. Escape   **2.** Ascend
3. Demonstrate   **4.** Traverse

153. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'.
It was a quite afternoon, so Dan decided to take a nap.
1. an quiet   **2.** an quite
3. No substitution required   **4.** a quiet

154. Select the most appropriate option to fill in the blank.
This is not _____ exhaustive list of words.
1. many   **2.** an
3. a   **4.** No word required

155. Select the most appropriate meaning of the highlighted idiom in the given sentence.
She said she liked my hair, but it turned out to be a left handed compliment.
1. A joke   **2.** A flattery   **3.** An insult   **4.** A praise

156. Select the most appropriate ANTONYM of the given word.
Redemption
1. Salvation   **2.** Blasphemy
3. Corrugation   **4.** Conjunction

157. Parts of the following sentence have been underlined and given as options. Select the option that contains an error.
Have they been work in that particular shop for several years?
1. work   **2.** been   **3.** for   **4.** Have

158. Select the correct spelling of the incorrectly spelt word.
He had a round face made jovial by bright, almost boyish eyes and eyebrows ridiculusly small for a man his size.
1. ridicolusly   **2.** jouvial   **3.** juvial   **4.** ridiculously

159. Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully:
Unless you (do will not prepare) well you will not perform well.

1. would not prepare   **2.** prepare
3. will do not prepare   **4.** will prepare

160. Select the most appropriate meaning of the given idiom.
Bite the bullet
1. Decide to do what is good
2. To bite something very hard
3. Decide to do the inevitable which you were avoiding
4. Decide to take the easier way out

161. Select the most appropriate ANTONYM of the given word.
Resolute
1. Serious   **2.** Wavering   **3.** Steadfast   **4.** Brave

162. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.
Roger went / to an United Kingdom / with his wife / to celebrate Christmas.
1. Roger went   **2.** to an United Kingdom
3. to celebrate Christmas   **4.** with his wife

163. Some words in the following sentences have been underlined and given as options. Select the option that contains a spelling error.
Why is everyone so dressed up? What's the occaseon? Is it a wedding?
1. wedding   **2.** occaseon   **3.** everyone   **4.** dressed

164. Select the option that can be used as a one-word substitute for the given group of words.
To restrain or compel a person to do something by force.
1. Convoy   **2.** Consensus   **3.** Coerce   **4.** Casualty

165. Select the most appropriate option that can substitute the underlined segment in the given sentence.
Health insurance are important today since anyone can face a medical emergency without warning.
1. will be important   **2.** has been important
3. was important   **4.** is important

166. Select the most appropriate meaning of the given idiom.
Spill the beans
1. To make anything visible
2. To reveal secret information
3. To ruin someone's plan
4. To talk randomly

167. Select the option that will improve the underlined part of the given sentence.
People say different things at different times.
1. should say fanciful things at different times
2. says delectable things at different times
3. says whimsical things at different times
4. say diverse things at different times

168. Select the most appropriate ANTONYM of the given word.
Together
1. Apart   **2.** United   **3.** Freight   **4.** Engulf

169. Select the most appropriate ANTONYM of the given word.
Magnificent
1. Impressive   **2.** Peaceful   **3.** Quiet   **4.** Modest

170. Select the most appropriate idiom to fill in the blank.
I have all the technical and communication skills necessary to crack any interview; it will be _____.
1. a storm in a tea cup   **2.** a chip on my shoulder
3. a hard nut to crack   **4.** a piece of cake for me

171. Select the most appropriate idiom for the underlined word segment.
He seems to be undecided about whether to move to another city for better prospects.
1. Bouncing off the walls   **2.** Running out of steam
3. Sitting on the fence   **4.** Counting down the days

172. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

I have a dog and a cow. / A dog is black / but the cow is / black and white.

1. A dog is black　　2. black and white
3. but the cow is　　4. I have a dog and a cow

173. Select the most appropriate synonym of the underlined word.

Improved rail transport is <u>essential</u> for business.

1. Recommended　　2. Trivial
3. Crucial　　4. Technical

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

Desolate

1. Fortunate　2. Sturdy　3. Depressive　4. Hopeful

175. Select the option that can be used as a one-word substitute for the given group of words.

An act of exchanging information

1. Collaboration　　2. Communication
3. Touch　　4. Hold

176. Select the correct spelling of the incorrectly spelt word.

They were more often abnoxious than not, impatient with me because my services had been essentially imposed upon them.

1. obnoxious　2. impatint　3. servises　4. essentialy

177. Select the most appropriate ANTONYM of the underlined word in the given sentence.

All members of the association <u>adhere</u> to a strict code of practice.

1. observe　　2. cling　　3. flout　　4. comply

178. Select the most appropriate ANTONYM for the highlighted word.

She has a penchant for art and craft.

1. anxiety　　2. hatred　　3. fear　　4. joy

179. Select the most appropriate option that can substitute the underlined segment in the given sentence.

The team leader tried <u>to remain positive or optimistic</u> in the situation, even though they were facing tough competition and limited resources.

1. to put a strong hand forward
2. to put on a strong exterior
3. to put a strong desire in front of
4. to put a brave face on

180. Select the most appropriate ANTONYM of the given word.

Superb

1. Infallible　　2. Incorrigible　3. Inferior　　4. Splendid

181. Choose the most appropriate meaning of the underlined phrase.

He was <u>carried off his feet</u> when he was declared to have won the prize.

1. Was wild with excitement　　2. Was dizzy
3. Became delirious　　4. Danced on his toes

182. Select the most appropriate phrasal verb to fill in the blank.

It took seven years for Harish to _____ his migraine.

1. shake down　2. shake up　　3. shake out　4. shake off

183. Select the most appropriate meaning of the underlined idiom that can be substituted in the following sentence.

The new routine will suit you <u>to a T</u>.

1. nicely　　2. a little bit　3. exactly　　4. very poorly

184. Select the most appropriate meaning of the given idiom.

Spill the beans

1. Sound familiar　　2. Fail to make an impact
3. To be very expensive　　4. Give away a secret

185. Replace the underlined segment with the most appropriate idiom/phrase from the following options.

This is the <u>critical point of the issue</u>. One should always be focused on it.

1. Chip off the old block　　2. A black sheep
3. The crux of the matter　　4. Don't cry over spilt milk

186. Select the most appropriate option that can substitute the underlined segment in the given sentence.

I like all games <u>instead of</u> cricket.

1. rather　　2. exclude　　3. object　　4. except

187. Select the option that can be used as a one-word substitute for the given group of words.

Requiring exceptional skill or caution in performance or handling

1. Blunt　　2. Tricky　　3. Sustainable　　4. Abstract

188. The following sentence has been divided into parts. One of them may contain an error.

Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.

(1) He could / (2) be pass his exams / (3) if he studied harder. / (4) No error

1. 2　　2. 1　　3. 3　　4. 4

189. Select the most appropriate option that can substitute the underlined word which has been incorrectly spelt.

They have begun to study in <u>sepparate</u> rooms.

1. saperate　　2. separate　　3. seprate　　4. saparate

190. Select the sentence that has a spelling error.

A. One has to understand the rudimentery fact that intelligence and intellect are at two opposite poles.

B. An intellectual person may have all the knowledge of the world but won't know how to give it a shape.

C. Knowledge will plague the individual if he does not have the intelligence to express it.

D. Without basic intelligence, an individual is trapped within himself manifesting conflicts and ignorance in the external world.

1. Without basic intelligence, an individual is trapped within himself, manifesting conflicts and ignorance in the external world.

2. An intellectual person may have all the knowledge of the world but won't know how to give it a shape.

3. Knowledge will plague the individual if he does not have the intelligence to express it.

4. One has to understand the rudimentery fact that intelligence and intellect are at two opposite poles.

In the following passage some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Rabindranath Tagore founded a small school at Santiniketan in 1901 and Kala Bhavan, an art school, in 1919 which (1)_____ became a part of the Visvabharati University founded in 1921. Located in an (2)_____ village some distance from the city of Calcutta, Kala Bhavan presented an alternative methodology of art training, in which studio based practice was (3)_____ in favour of learning through observation and living as a part of nature. The natural surroundings with the (4)_____ of bare red earth dotted with trees, the colours of the changing seasons, the animals and birds (5)_____ inspiration to students.

191. Select the most appropriate option to fill in blank no. 1.

1. better　　2. later　　3. faster　　4. slower

192. Select the most appropriate option to fill in blank no. 2.

1. normal　　2. magical　　3. reliable　　4. idyllic

193. Select the most appropriate option to fill in blank no. 3.
    1. accepted   **2.** rejected
    3. investigated   **4.** aspired
194. Select the most appropriate option to fill in blank no. 4.
    1. vistas   **2.** murk   **3.** haze   **4.** band
195. Select the most appropriate option to fill in blank no. 5.
    1. groomed   **2.** refused   **3.** provided   **4.** agreed

Read the given passage carefully and answer the questions that follow.

Mountains occupy about a quarter of the Earth's land, harbour most of its biodiversity hotspots and supply fresh water to an estimated half of humanity. Present on every continent, mountains include a multitude of ecosystems holding many unique species such as snow leopards and mountain gorillas. They are also home to great cultural diversity among people adapted to the challenges of mountain life. Their special traditions and breath-taking scenery attract ever-growing numbers of tourists.

Mountain regions are particularly sensitive to degradation from both human pressures and climate change. Steep slopes mean the clearing of forest for farming, settlements or infrastructure can cause serious soil erosion as well as the loss of habitat. Erosion and pollution harm the quality of water

flowing downstream. Climate change threatens the quantity and timing of water supplies to farms, cities, industry and power stations. Fast-rising temperatures are forcing mountain species, ecosystems and the people that depend on them to adapt or migrate.

196. What is the ANTONYM for the word 'diversity' from the passage?
    1. Block   **2.** Dilemma
    3. Uniformity   **4.** Heritage
197. What is the ANTONYM for the word 'migrate' from the passage?
    1. Stay   **2.** Run   **3.** Die   **4.** Assume
198. Which is the best description of the tone of the passage?
    1. Laudatory   **2.** Emotional
    3. Biased   **4.** Humanistic
199. Which of the following represents the structure of the passage?
    1. Chronological   **2.**   Definition
    3. Compare and contrast   **4.** Cause-effect
200. Which of the following most accurately states the central idea of the passage?
    1. Pollution   **2.** Mountain ecosystem
    3. Biodegradation   **4.** Climate change

Answer Key

| 1.	(4)	2.	(2)	3.	(2)	4.	(2)	5.	(2)	6.	(4)	7.	(2)	8.	(2)	9.	(1)	10.	(3)
11.	(3)	12.	(2)	13.	(2)	14.	(4)	15.	(2)	16.	(1)	17.	(4)	18.	(2)	19.	(1)	20.	(4)
21.	(2)	22.	(1)	23.	(3)	24.	(1)	25.	(2)	26.	(3)	27.	(1)	28.	(3)	29.	(3)	30.	(3)
31.	(4)	32.	(3)	33.	(4)	34.	(1)	35.	(3)	36.	(1)	37.	(1)	38.	(3)	39.	(2)	40.	(2)
41.	(1)	42.	(3)	43.	(2)	44.	(2)	45.	(3)	46.	(4)	47.	(4)	48.	(3)	49.	(1)	50.	(3)
51.	(2)	52.	(2)	53.	(1)	54.	(4)	55.	(3)	56.	(4)	57.	(4)	58.	(4)	59.	(2)	60.	(1)
61.	(4)	62.	(4)	63.	(3)	64.	(2)	65.	(3)	66.	(2)	67.	(3)	68.	(3)	69.	(3)	70.	(3)
71.	(1)	72.	(2)	73.	(3)	74.	(3)	75.	(2)	76.	(1)	77.	(2)	78.	(4)	79.	(3)	80.	(4)
81.	(3)	82.	(2)	83.	(2)	84.	(2)	85.	(2)	86.	(3)	87.	(2)	88.	(1)	89.	(3)	90.	(1)
91.	(2)	92.	(1)	93.	(1)	94.	(2)	95.	(2)	96.	(4)	97.	(4)	98.	(3)	99.	(2)	100.	(4)
101.	(2)	102.	(3)	103.	(1)	104.	(3)	105.	(3)	106.	(3)	107.	(4)	108.	(1)	109.	(1)	110.	(4)
111.	(2)	112.	(3)	113.	(2)	114.	(4)	115.	(1)	116.	(1)	117.	(3)	118.	(2)	119.	(2)	120.	(4)
121.	(3)	122.	(3)	123.	(4)	124.	(2)	125.	(3)	126.	(1)	127.	(4)	128.	(4)	129.	(1)	130.	(1)
131.	(3)	132.	(3)	133.	(3)	134.	(2)	135.	(1)	136.	(4)	137.	(1)	138.	(2)	139.	(2)	140.	(4)
141.	(4)	142.	(4)	143.	(1)	144.	(4)	145.	(1)	146.	(4)	147.	(3)	148.	(4)	149.	(4)	150.	(2)
151.	(4)	152.	(2)	153.	(4)	154.	(2)	155.	(3)	156.	(2)	157.	(1)	158.	(4)	159.	(2)	160.	(3)
161.	(2)	162.	(2)	163.	(2)	164.	(3)	165.	(4)	166.	(2)	167.	(4)	168.	(1)	169.	(4)	170.	(4)
171.	(3)	172.	(1)	173.	(3)	174.	(3)	175.	(2)	176.	(1)	177.	(3)	178.	(2)	179.	(4)	180.	(3)
181.	(1)	182.	(4)	183.	(3)	184.	(4)	185.	(3)	186.	(4)	187.	(2)	188.	(1)	189.	(2)	190.	(4)
191.	(2)	192.	(4)	193.	(2)	194.	(1)	195.	(3)	196.	(3)	197.	(1)	198.	(4)	199.	(4)	200.	(2)

Answers with Explanations

1. Option (4) is correct.
Given figure:
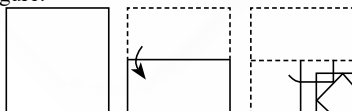
After unfolding the paper as shown, the following image will be formed:
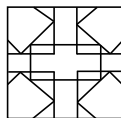
2. **Option (2) is correct.**
Given sets:
(53, 36, 25)
(71, 54, 43)
The pattern followed here is:
1st term – 17 = 2nd term and
2nd term – 11 = 3rd term
So, for (53, 36, 25)
53 – 17 = 36 and
36 – 11 = 25

And, for (71, 54, 43)

71 – 17 = 54 and
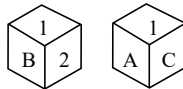
54 – 11 = 43

Similarly, upon checking option 2, we get

99 – 17 = 82 and

82 – 11 = 71

Hence (99, 82, 71) is the correct answer.

3. Option (2) is correct.

From 1 move in a clockwise direction in both dice
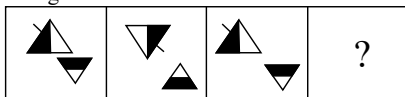
1-2-B

1-C-A

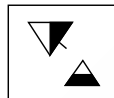Therefore, opposite pairs are

2-C, B-A, 1-3.

Hence, 2 is opposite to C.

4. Option (2) is correct.

Given image:

As per the pattern followed and symmetry, the required answer figure is:

5. Option (2) is correct.

Given series:

a, b, a, b, b, _, a, b, a, b, _, a, a, b, a, b, b, _

Upon checking option 2 and inserting the letters sequentially, we get

a, b, a, b, b, a̲, a, b, a, b, b̲, a, a, b, a, b, b, a̲

Here, the continuous cluster is repeating which is b , a, b, b, a, a.

Hence, it forms a logical series.

6. Option (4) is correct.

Given series:

144, 171, 200, ?, 264

The pattern followed here is:

144 + 27 = 171

171 + 29 = 200

200 + 31 = 231

231 + 33 = 264

Hence, 231 is the correct answer.

7. Option (2) is correct.

Given series:

FOHV, CKER, ?, WCYJ, TYVF

The pattern followed here is:

Hence, ZGBN is the correct answer.

8. Option (2) is correct.

Given figures:

As shown in figures, 1, 2, 3, C are adjacent to A clockwise. So, the opposite characters are so follows:

1 – 3

2 – C

A – B

Hence, 1 is the face opposite to 3.
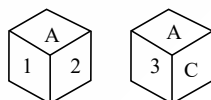
9. Option (1) is correct.

Given that:

BLOCK is coded as LBCON.

The pattern followed here is:
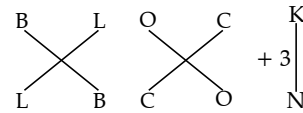
And, CABIN is coded as ACIBQ.
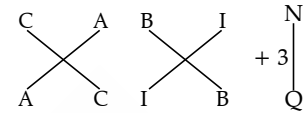
Similarly, for SUITE:

Hence, SUITE is coded as USTIH.

10. Option (3) is correct.

Given figure:

The given figure is embedded in option 3 as highlighted and shown below:
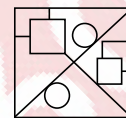
11. Option (3) is correct.

Given that:

MOBILE is coded as NQEMQK.

The pattern followed here is:
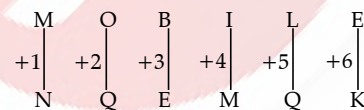
And, BISHOP is coded as CKVLTV
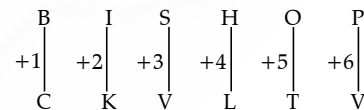
Similarly, CHARGE will be coded as:
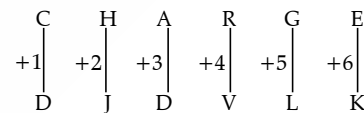
Hence, CHARGE will be coded as DJDVLK.

12. Option (2) is correct.

The correct order of the given words will be:

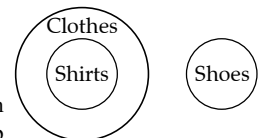| 2. Warden |
| --- |
| 4. Wardrobe |
| 1. Warehouse |
| 6. Warfare |
| 5. Warrant |
| 3. Warship |

Hence, 2, 4, 1, 6, 5, 3 is the correct answer.
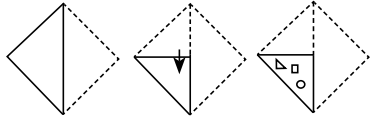
13. Option (2) is correct.

Given words:

Clothes, Shoes, Shirts

The following Venn diagram best represents the relationship of the given words:
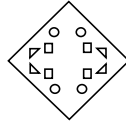
14. Option (4) is correct.

Given figure:

After unfolding the paper, the result image is as follows:

15. Option (2) is correct.

Given equation:

11 B 12 C 144 D 24 A 57 = ?

After putting the signs as per question, we get

$11 \times 12 - 144 \div 24 + 57$

According to BODMAS rule,

$\Rightarrow 11 \times 12 - 6 + 57$
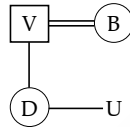
$\Rightarrow 132 - 6 + 57$

$\Rightarrow 189 - 6 = 183$

Hence, 183 is the correct answer.

16. Option (1) is correct.

Given expression:

$D * V + B \times U$

As per the question, following family tree can be made:

Hence, D is the sister of U.

17. Option (4) is correct.

As per the question, following GRID pattern can be made:

Hence, S is the North-West direction of T.

18. Option (2) is correct.

Given that:

SPAM is coded as '36'

The pattern followed here is:

Number of letters in the word × 9

So, for SPAM

$\Rightarrow 4 \times 9 = 36$

And, for JUG

$\Rightarrow 3 \times 9 = 27$

Similarly, for FROCK

$\Rightarrow 5 \times 9 = 45$

Hence, 45 is the correct answer.

19. Option (1) is correct.

Given image:

The given image is embedded in option 1 as highlighted below:

20. Option (4) is correct.

The pattern followed here is:

Option-1 $S \xrightarrow{-1} R \xrightarrow{+5} W \xrightarrow{+1} X$

Option-2 $H \xrightarrow{-1} G \xrightarrow{+5} L \xrightarrow{+1} M$

Option-3 $P \xrightarrow{-1} O \xrightarrow{+5} T \xrightarrow{+1} U$

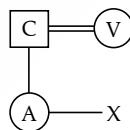Option-4 $D \xrightarrow{-2} B \xrightarrow{+5} G \xrightarrow{+1} H$

Hence, DBGH is the odd letter-cluster.

21. Option (2) is correct.

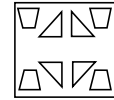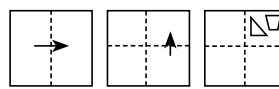Given expression:

A # C $ V + X

As per the question, following family tree can be made:

Hence, A is the sister of X.

22. Option (1) is correct.

Given image:

After unfolding the paper, the resultant answer image is:

23. Option (3) is correct.

Given sets:

(112, 327, 215)

(98, 254, 156)

The pattern followed here is:

1st term + 3rd term = 2nd term

So, for 1st set:

$112 + 215 = 327$

$\Rightarrow 327 = 327$

And, for 2nd set:

$98 + 156 = 254$

$\Rightarrow 254 = 254$

Similarly, upon checking option 3, we get

$126 + 142 = 268$

$\Rightarrow 268 = 268$

Hence, (126, 268, 142) follows the same pattern.

24. Option (1) is correct.

Given sets:

(5, 4, 2)

(9, 9, 3)

The pattern followed here is:

$(1^{st}$ term × 2) – $(3^{rd}$ term × 3) = 2nd term.

So, for (5, 4, 2)

$(5 \times 2) - (2 \times 3)$

$\Rightarrow 10 - 6 = 4$

And, for (9, 9, 3)

$(9 \times 2) - (3 \times 3)$

$\Rightarrow 18 - 9 = 9$

Similarly, upon checking option (1), we gt

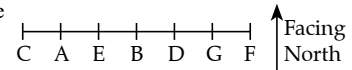$(21 \times 2) - (1 \times 3)$

$\Rightarrow 42 - 3 = 39$

Hence, it is the correct option.

25. Option (2) is correct.

Given that:

Seven people are sitting in a straight row facing north.

As per the statements in the question, following sitting arrangement can be made:

Hence, C sits to the immediate left of A.

26. Option (3) is correct.

The correct order of the given words is as follows:

| 4. Brief |
| 3. Bright |
| 2. Brine |
| 5. Brocade |
| 1. Brochure |

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

27. Option (1) is correct.

Given equation:

$79 \div 64 \times 8 - 7 + 12 = ?$

After interchanging the signs as per question, we get

$79 + 64 \div 8 \times 7 - 12 = ?$

According to BODMAS rule

$\Rightarrow 79 + 8 \times 7 - 12$

$\Rightarrow 79 + 56 - 12$

$\Rightarrow 135 - 12 = 123$

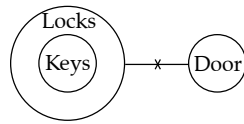Hence, 123 is the correct answer.

28. Option (3) is correct.

As per the given statements, following Venn diagram can be made:

Conclusion I- Some locks are doors → False

Conclusion II- Some locks are keys → True

Conclusion III- No key is a door → True

Hence, both conclusions II and III follows.

29. Option (3) is correct.

Given that:

Words and there codes:

Live(long) ⟶ **mu** (ae)

Road [is] (long) ⟶ (ae) [si] *du*

(Game) [is] **live** ⟶ [Si] **mu** (zt)

Hence, Game is coded as 'zt'.

30. Option (3) is correct.

Given equation:

$42 \div 7 + 11 \times 87 - 12 = 141$

Upon checking option 3 and interchanging × and +, we get

$42 \div 7 \times 11 + 87 - 12 = 141$

$\Rightarrow 6 \times 11 + 87 - 12 = 141$

$\Rightarrow 66 + 87 - 12 = 141$

$\Rightarrow 153 - 12 = 141$

$\Rightarrow 141 = 141$

LHS = RHS

Hence, it is the correct option.

31. Option (4) is correct.

Given that:

Pressure : Barometer :: Electricity : ?

Here, a barometer is an instrument which is used to measure pressure.

Similarly, multimeter is an instrument which is used to measure electricity.

Hence, multimeter is the correct answer.

32. Option (3) is correct.

Given series:

270, 241, 212, ?, 154, 125

The pattern followed here is:

$270 - 29 = 241$

$241 - 29 = 212$

$212 - 29 = 183$

$183 - 29 = 154$

$154 - 29 = 125$

Hence, 183 is the missing number.

33. Option (4) is correct.

Given pairs:

25 : 18 :: 37 : ? :: 49 : 36

The pattern followed here is:

1st term – sum of numbers in 1st term = 2nd term

So, for (25 : 18)

$25 - (2 + 5)$

$\Rightarrow 25 - 7 = 18$

And, for (49 : 36)

$49 - (4 + 9)$

$\Rightarrow 49 - 13 = 36$

Similarly, for (37 : ?)

$37 - (3 + 7)$

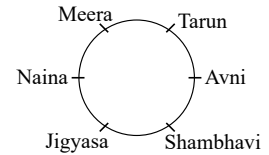$\Rightarrow 37 - 10 = 27$

Hence, 27 is the correct answer.

34. Option (1) is correct.

Given that:

Six students are sitting around a circular table facing the centre.

As per the questions, following sitting arrangement can be made:

Hence, Meera is sitting second to the left of Jigyasa.

35. Option (3) is correct.

Given series:

BRCQ, EPFO, ?, KLLK, NJOI
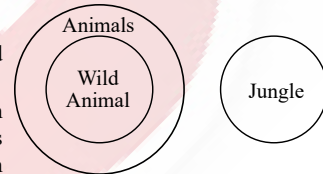
The pattern followed here is:

Hence, HNIM is the correct answer.

36. Option (1) is correct.

Given words:

Animal, Jungle, Wild Animal

The following Venn diagram best represents the relationship between the words.

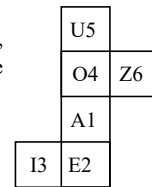**37. Option (1) is correct.**

Given sheet:

After forming a cube from the above sheet, the following pairs of letter-number will be opposite:
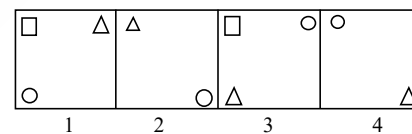
U5 – A1

04 – E2

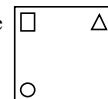I3 – Z6

Hence, U5 is the face opposite to A1.

38. Option (3) is correct.

Given figure:

As per the pattern followed and the symmetry, the 5th figure to continue the series is:

39. Option (2) is correct.

Given pairs:

Centre : Focus :: Vicar : ?

Here, focus is a central point of concentration or attention.

Similarly, a vicer is a clergyman who is in charge of a particular church or parish. The central figure or point of focus

in a religious context for a vicar would be a 'Priest'.
Hence, Priest is the correct answer.

40. Option (2) is correct.

The pattern followed here is:

Option-1:   M $\xrightarrow{+2}$ O $\xrightarrow{-4}$ K $\xrightarrow{+3}$ N

Option-2:   S $\xrightarrow{-2}$ Q $\xrightarrow{+4}$ U $\xrightarrow{-13}$ H

Option-3:   G $\xrightarrow{+2}$ I $\xrightarrow{-4}$ E $\xrightarrow{-11}$ T

Option-4:   C $\xrightarrow{+2}$ E $\xrightarrow{-4}$ A $\xrightarrow{-3}$ X

Hence, upon considering first three letters of all the clusters, SQUH is the odd one out.

41. Option (1) is correct.

Given equation:
$39 \div 3 - 11 + 57 \times 29 = 171$
Upon checking option 1 and interchanging – and ×, we get
$39 \div 3 \times 11 + 57 - 29 = 171$
$\Rightarrow 13 \times 11 + 57 - 29 = 171$
$\Rightarrow 143 + 57 - 29 = 171$
$\Rightarrow 200 - 29 = 171$
$\Rightarrow 171 = 171$
LHS = RHS
Hence, it is the correct option.

42. Option (3) is correct.

As per the question, following direction chart can be made:
Since, AB = 6 km
CD = 3 km
and EF = (2x + 1)km
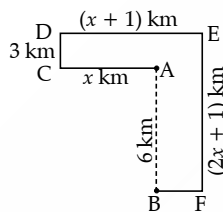As we can see, the distance between E and F is similar to the distance between D and B vertically. So,
DC + AB = EF
$\Rightarrow 3 + 6 = 2x + 1$
$\Rightarrow 9 = 2x + 1$
$\Rightarrow 2x = 8$
$\Rightarrow x = 4$
Hence, 4 is the correct answer.

43. Option (2) is correct.

Given that:
PIN is coded as 9
The pattern followed here is:
(Number of letters in the word)^2
So, for PIN
Number of letters = 3
$\Rightarrow (3)^2 = 9$
And, for CHARGER
Number of letter = 7
$\Rightarrow (7)^2 = 49$
Similarly, for CABLE
Number of letters = 5
$\Rightarrow (5)^2 = 25$
Hence, 25 is the correct answer.

44. Option (2) is correct.

Given series:
5, 20, 60, 240, 720, ?
The pattern followed here is:
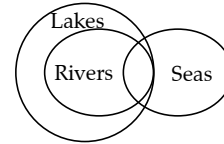$5 \times 4 = 20$
$20 \times 3 = 60$
$60 \times 4 = 240$
$240 \times 3 = 720$
$720 \times 4 = 2880$

Hence, 2880 is the correct answer.

45. Option (3) is correct.

As per the statements, following Venn diagram can be made:

Conclusion I- Some seas are lakes → True
Conclusion II- All lakes are river → It is possible but not definite. So, false.
Hence, only conclusion I follows.

46. Option (4) is correct.

Given equation:
$39 \times 3 - 11 \div 57 + 29 = ?$
After interchanging sings as per question, we get
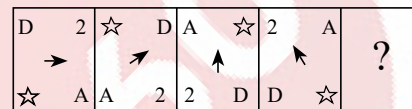$38 \div 3 \times 11 + 57 - 29 = ?$
According to BODMAS rule,
$\Rightarrow 13 \times 11 + 57 - 29$
$\Rightarrow 143 + 57 - 29$
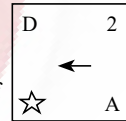$\Rightarrow 200 - 29 = 171$

47. Option (4) is correct.

Given figure:

Here, each letter, number, or shape which is in the corners in shifting one step forward in clockwise direction.
And, the arrow in the middle is shifting half step backward in anti-clockwise direction.
Hence, the required answer figure is:

48. Option (3) is correct.

Given equation:
21 O 5 P 69 N 3 P $\sqrt{225}$ M 88 = ?
After putting the signs, we get
$21 \times 5 + 69 \div 3 + \sqrt{225} - 88 = ?$
According to BODMAS rule,
$\Rightarrow 21 \times 5 + 23 + 15 - 88$
$\Rightarrow 105 + 23 + 15 - 88$
$\Rightarrow 143 - 88 = 55$
Hence, 55 is the correct answer.

49. Option (1) is correct.

Given series:
69, 65, 67, 63, ?, 61
The pattern followed here is:
$69 - 4 = 65$
$65 + 2 = 67$
$67 - 4 = 63$
$63 + 2 = 65$
$65 - 4 = 61$
Hence, 65 is the missing number.

50. Option (3) is correct.

Given equation:
$(45 \times 2) \div 15 - (6 \times 3) + 10 - (63 \div 21) = 17$
Upon checking option 3 and interchanging – and +, we get
$(45 \times 2) \div 15 + (6 \times 3) - 10 + (63 \div 21) = 17$
According to BODMAS rule,
$\Rightarrow \quad 90 \div 15 + 18 - 10 + 3 = 17$

$\Rightarrow \quad 6 + 18 - 10 + 3 = 17$

$\Rightarrow \quad 27 - 10 = 17$

$\Rightarrow \quad 17 = 17$

    LHS = RHS

Hence, it is the correct option.

51. Option (2) is correct.

Lavani is a popular and vibrant dance form that originated in the state of Maharashtra in India. It is known for its energetic and rhythmic movements and is often performed on various festive occasions and celebrations.

52. Option (2) is correct.

John Newlands was a British chemist who proposed the Law of Octaves in the 1860s. According to the Law of Octaves, every eighth element in the sequence of elements exhibited similar properties. While this law had limitations and was not as comprehensive as the modern periodic table, it was an important early step in understanding the organization of chemical elements.

53. Option (1) is correct.

Alauddin Humayun Shah Bahmani, who ruled the Bahmani Sultanate from 1458 to 1461, is famously known as Humayun Shah Zalim, which translates to Humayun Shah the cruel. His reign is marked by a reputation for extreme cruelty, as he was notorious for subjecting individuals to agonizing and torturous executions.

54. Option (4) is correct.

Arunachal Pradesh, located in northeastern India, has a climate that features a subtropical highland climate in its higher elevations, where it can experience cold winters and relatively short summers. The Koppen classification may not precisely align with the climate of specific regions, as it's a more generalized system.

55. Option (3) is correct.

In 1955, the authorities officially designated Rajpath, a ceremonial avenue in New Delhi, as the enduring location for the Republic Day parade. This choice was made to acknowledge the historical and symbolic importance of Rajpath for this significant national event.

56. Option (4) is correct.

Scurvy results from a prolonged deficiency of vitamin C (ascorbic acid) in one's diet. Insufficient vitamin C intake for a minimum of 3 months can give rise to various symptoms, encompassing weakness, anemia, gum issues like gingivitis, and skin problems. Key indicators of scurvy include bleeding gums, bruising, fatigue, and assorted health-related complications.

57. Option (4) is correct.

Glycocalyx is a gel-like substance around bacterial cell membranes. It has two main forms: capsule (dense and firm) and slime layer (loose). The loose type, is the slime layer. Mesosomes and tubules are unrelated internal structures in bacterial cells.

58. Option (4) is correct.

The Macroeconomic Framework Statement is submitted to Parliament in accordance with Section 3(5) of the Fiscal Responsibility and Budget Management Act, 2003. This statement includes an evaluation of the economic growth outlook and outlines the precise underlying assumptions on which these assessments are based.

59. Option (2) is correct.

The Seven Years' War, which took place from 1756 to 1763, was a global conflict involving many countries. Nevertheless, a significant battleground in this war was North America, where the principal adversaries were the British and the French. This conflict held profound colonial and imperial significance and is frequently seen as a pivotal component of the broader competition for global supremacy among European powers in the 18th century.

60. Option (1) is correct.

The Smart Cities Mission, launched by the Government of India, aimed to develop, and transform 100 cities across the country into smart cities. These smart cities were intended to have improved infrastructure, sustainability, and technology integration to enhance the quality of life for their residents and to promote economic development.

61. Option (4) is correct.

The standard weight of a hockey ball typically falls within the specified range, which is 163 grams to 156 grams. This range ensures that the hockey ball meets the required standards for the sport and is used in various field hockey competitions.

62. Option (4) is correct.

The correct statement related with continentality is option a and b.

63. Option (3) is correct.

The Arms Act that prevented Indians from keeping arms without an appropriate license was passed in 1878. This law was enacted during the British colonial period and imposed restrictions on the possession of firearms in India.

64. Option (2) is correct.

The President of India is the chief guest and the highest-ranking dignitary during the Republic Day parade. The President takes the salute as the Commander-in-Chief of the Indian Armed Forces. This tradition is an important part of the Republic Day celebrations in India. The other officials mentioned (Governor, Chief Justice, Prime Minister) do not typically take the salute during the Republic Day parade; it is the President's prerogative.

65. Option (3) is correct.

According to the Census of India 2011, Himachal Pradesh had the highest Hindu population percentage of the total population among the states mentioned in the question. It has a significant Hindu population compared to its other religious communities.

66. Option (2) is correct.

Article 144 of the Indian Constitution states that all authorities, including civil and judicial authorities, in the territory of India shall act in aid of the Supreme Court. This means they must obey and follow the orders and decisions of the Supreme Court. This rule is very important for making sure the Supreme Court is respected and its decisions are followed in India.

67. Option (3) is correct.

The Brahmaputra basin, despite its substantial annual water flow, has the smallest storage capacity for usable water.

68. Option (3) is correct.

The Dihang River, also known as the Siang River, and the Lohit River can be found in the northeastern part of India. They flow through Arunachal Pradesh and extend into Assam. These rivers are crucial tributaries of the Brahmaputra River and play a significant role in shaping the geography of the Arunachal Pradesh and Assam regions.

69. Option (3) is correct.

Thumri is a genre of North Indian classical music and is closely associated with the Kathak dance form. Thumri music is often performed alongside Kathak dance to express various emotions and stories through a combination of music and

dance. Although Thumri can be adapted to other dance styles and musical situations, it has a particularly strong connection to Kathak.

70. Option (3) is correct.

Chandragupta Maurya, the founder of the Mauryan Empire, is known for renouncing his throne and worldly life. He embraced Jainism and undertook a prolonged fast, ultimately leading to his death at Shravanabelagola in Karnataka, India. This event marked his withdrawal from political power and is a significant episode in ancient Indian history. Ashoka, his grandson, later became one of the most famous Mauryan rulers.

71. Option (1) is correct.

Kumari is the term used for shifting agriculture in the Western Ghats, a mountain range in western India known for its rich biodiversity and unique ecosystems. It is a type of farming where people clear a piece of land, plant crops, then leave it alone for a while to heal. While it's resting, they work on another piece of land. It's an old way of farming, especially in hilly and forested areas, like some parts of the Western Ghats. This helps the land recover, and it's sometimes called slash-and-burn farming.

72. Option (2) is correct.

In Odisha, a state in eastern India, they grow three different kinds of rice called Aus, Boro, and Aman. These types of rice are good for the weather and how they farm in Odisha. But in places like Punjab, Haryana, and Uttarakhand, they grow different crops and have their own farming ways.

73. Option (3) is correct.

Torque is the term used to describe the force that can make an object spin around an axis or a point where it rotates. This twisting force is measured in units like newton-meters (Nm) or foot-pounds (ft-lb).

74. Option (3) is correct.

Amir Khusrau, a celebrated classical poet during the Sultanate era in India, is known for popularizing Qawwali, a music form named after the Arabic word qaul, meaning to speak. He was not just a prolific poet but also a talented musician and a follower of the Sufi saint Nizam al-Din Awliya. Amir Khusrau's creative contributions in both music and poetry greatly shaped the emergence of Qawwali as a unique and influential musical style. While the other mentioned poets have their own merits, it was Amir Khusrau who played a central role in the development of Qawwali in the Indian subcontinent.

75. Option (2) is correct.

Resorcinol, also known as resorcin, is a phenolic compound with the chemical formula $C_6H_4(OH)_2$. It is classified as one of the three isomeric benzenediols, specifically the 1,3-isomer, often referred to as the meta-isomer. Resorcinol appears as colorless needle-like crystals when it crystallizes from benzene. It is highly soluble in water, alcohol, and ether, but it does not dissolve in chloroform and carbon disulfide.

76. Option (1) is correct.

The Theosophical Society was established in 1875 in New York by its founders, Helena Petrovna Blavatsky (H. P. Blavatsky) and Henry Steel Olcott (Colonel Olcott). Their influential ideas shaped the early development of the society. While Annie Besant and others played key roles later on, the founders were H. P. Blavatsky and Colonel Olcott. Charles W. Leadbeater and Emily Lutyens were connected to the society but not its founders. Madam Bhikaji Cama was a renowned

Indian independence activist but not part of the Theosophical Society's founding team.

77. Option (2) is correct.

Fundamental Rights in the Indian Constitution are primarily described in Articles 12 to 35. These articles lay down the provisions and protections of various fundamental rights that are granted to Indian citizens. Articles 5 to 11 deal with the citizenship of India, while Articles 36 to 51 relate to the Directive Principles of State Policy. Articles 52 to 62 pertain to the President of India and the executive powers. Therefore, the articles relevant to Fundamental Rights are primarily found in the range of Articles 12 to 35.

78. Option (4) is correct.

Plasmodium is an organism that belongs to the phylum Apicomplexa. This phylum includes a diverse group of parasitic protozoa that are responsible for causing diseases such as malaria. The other options, Sponge, Physalia, and Hydra, do not belong to the phylum Apicomplexa and are different organisms with distinct characteristics.

79. Option (3) is correct.

The Char Minar, located in Hyderabad, Telangana, was constructed in 1591 CE, not 1664 CE.

80. Option (4) is correct.

In 1932, Carl D. Anderson discovered the positron, the antimatter counterpart of the electron, while studying cosmic rays. This was a significant contribution to particle physics.

81. Option (3) is correct.

The Right against Exploitation within the Fundamental Rights of the Indian Constitution prohibits the employment of children below the age of 14 in hazardous occupations. This right is designed to safeguard children from exploitative labor practices and ensure their well-being. It is distinct from other rights like the Right to Equality, Right to Constitutional Remedies, and Right to Freedom, each serving unique purposes in the Constitution.

82. Option (2) is correct.

Iron-deficiency anemia (IDA) primarily manifests because of lack of iron in the body, which impairs the body's ability to produce hemoglobin and, in turn, affects the oxygen-carrying capacity of red blood cells. Common manifestations of IDA include general pallor (pale skin), paleness of the conjunctiva of the eyes, and a pale or whitish appearance of the soft palate. However, blindness is not a direct manifestation of IDA. While severe anemia can lead to various health complications, blindness is typically not one of them.

83. Option (2) is correct.

My Country My Life is the autobiography of Indian politician L.K. Advani, offering a glimpse into his political journey and key moments in Indian politics. The other options mentioned, including Wings of Fire: An Autobiography by A.P.J. Abdul Kalam, My Times: An Autobiography by Jyotiraditya Scindia, and In Pursuit of Justice: An Autobiography by Rajinder Sachar, are autobiographies of different notable figures in India.

84. Option (2) is correct.

India's industrialization journey began during the Second Five-Year Plan, which ran from 1956 to 1961. This plan played a crucial role in boosting industrial growth and self-sufficiency across various sectors. Its primary objective was to reduce reliance on imports and foster domestic industrial development.

85. Option (2) is correct.

The green revolution focused on the introduction and use of technology and High Yielding Variety (HYV) seeds for

improving the yield of crops. It also saw the increased use of fertilizers and pesticides etc. for a better output.

86.   Option (3) is correct.

Ghanakanta Bora Borbayan was honored with the Padma Shri in 2013 by the Government of India for his exceptional contributions to the field of Sattriya Dance.

87.   Option (2) is correct.

The masculine aspect of the Manipuri classical dance is known as Choloms.

88.   Option (1) is correct.

Article 315 of the Constitution of India deals with the establishment of Public Service Commissions for the Union and for the States. It empowers the President to establish a Public Service Commission for the Union and the Governor of each state to establish a Public Service Commission for the respective state. These commissions are responsible for conducting examinations and recruitment for civil services and various government posts, ensuring transparency and fairness in the selection process.

Article 316 deals with the appointment and term of office of members of Public Service Commissions.

Article 317 deals with the removal and suspension of members of Public Service Commissions.

Article 318 deals with the power of the President to make regulations with respect to the conditions of service of members and staff of the Public Service Commission.

89.   Option (3) is correct.

Death duty, also called estate tax or inheritance tax, is typically a direct tax imposed when property is transferred after an individual's death.

Interest tax is a direct tax on interest income earned by individuals or businesses.

Goods and services tax (GST) is an indirect tax, imposed on the supply of goods and services. It is typically passed on to the final consumer through pricing.

Capital gains tax is a direct tax imposed on the profits made from selling assets like stocks, real estate, or other investments.

90.   Option (1) is correct.

The ball colour in the sport of Ball Badminton should be Yellow in colour.

91.   Option (2) is correct.

The bicameral legislature of the Indian Constitution consists of two houses.

The Rajya Sabha (Council of States): This represents the states and union territories of India. Members are not directly elected by the public but are elected by the members of the State Legislative Assemblies.

The Lok Sabha (House of the People): This represents the people of India. Members are directly elected by the citizens through general elections.

So, the correct option is 2. It is a legislative body with two houses.

92.   Option (1) is correct.

Neeruswamy Pillai and Rajaratanam Pillai are renowned musicians known for their mastery of the Nadaswaram, a traditional South Indian wind instrument. The Nadaswaram, similar to the North Indian Shehnai, holds a significant role in various South Indian classical music and religious performances.

93.   Option (1) is correct.

Living organisms have been on Earth for nearly 80% of Earth's history.

94.   Option (2) is correct.

In the 2011 Census, Bihar had the lowest recorded literacy rate among the options given. The literacy rate is a statistical measure representing the percentage of individuals aged 7 and above who can read and write with comprehension. During the 2011 Census, Bihar exhibited one of the lowest literacy rates in India.

95.   Option (2) is correct.

Article 177 of the Indian Constitution refers to the Rights of Ministers with respect to the State Legislature. It specifies that every Minister and the Advocate General of a State shall have the right to speak in, and otherwise to take part in the proceedings of, the Legislative Assembly of the State or, in the case of a State having a Legislative Council, both Houses, and to speak in, and otherwise to take part in, any committee of the Legislature of which he may be named a member, but shall not have a right to vote.

96.   Option (4) is correct.

In Ball Badminton, players change ends when a side first scores 11 points in each game, not 18, 27, or 9.

97.   Option (4) is correct.

In 1928, physicist Paul Dirac introduced the Dirac equation, a pivotal scientific formula that merges quantum mechanics and special relativity to portray how an electron behaves when traveling at speeds close to the speed of light. This equation holds immense importance in the realm of quantum physics, providing essential insights into the behavior of particles in the quantum world.

98.   Option (3) is correct.

The term 'Dribble' is commonly linked to the sport of basketball. In basketball, dribbling entails the continuous bouncing of the ball while a player moves on the court. It serves as a fundamental skill that enables players to maneuver with the ball, avoid defenders, and create scoring opportunities.

99.   Option (2) is correct.

Alauddin Khilji, a notable ruler of the Khilji dynasty in the Delhi Sultanate, began his career as the Amir-i-Tuzuk, which translates to the Master of Ceremonies or Master of Protocol. This position was one of great influence and responsibility in the royal court. Alauddin Khilji's appointment as Amir-i-Tuzuk demonstrated his competence and loyalty, which later paved the way for his ascension to the throne as Sultan of Delhi.

100. Option (4) is correct.

Muhammad Ali authored the book 'The Soul of a Butterfly: Reflections on Life's Journey.' This book offers a unique perspective on his life, experiences, and personal philosophy. It reflects his extraordinary journey as a celebrated boxer and global figure, sharing valuable wisdom and insights that extend beyond the world of boxing. In this book, Muhammad Ali reflects on topics such as personal growth, spirituality, and the core values that shaped his remarkable life.

101. Option (2) is correct.

Given numbers are 22, 66 and 11.

Let the fourth proportion of given numbers is x.

So, $\dfrac{22}{66} = \dfrac{11}{x}$

$22x = 11 \times 66$

$x = \dfrac{11 \times 66}{22} = 33$

102. Option (3) is correct.

Let the marked price of the article is Rs. x.

According to the question:

$$x \times \frac{(100-25)}{100} \times \frac{(100-28)}{100} = 10800$$

$$x \times \frac{75}{100} \times \frac{72}{100} = 10800$$

$$x = 10800 \times \frac{100}{75} \times \frac{100}{72}$$

$$x = 20000$$

So, the marked price of the article = Rs. 20000

103. Option (1) is correct.

Given that the marked price of the article = Rs. 15000

Let the selling price = Rs. x

According to the question:

$$x = 15000 \times \frac{100-5}{100} \times \frac{100-10}{100} \times \frac{100-20}{100}$$

$$x = 15000 \times \frac{95}{100} \times \frac{90}{100} \times \frac{80}{100}$$

$$x = 10260$$

So, the selling price = Rs. 10260

104. Option (3) is correct.

Given that the value of a washing machine depreciated from ₹40,960 to ₹21,970 in 3 years.

Let the rate of depreciation = r% per annum

According to the question:

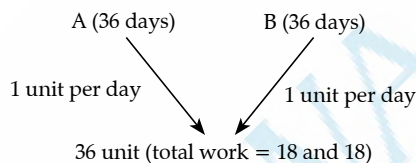$$21970 = 40970 \times \left(1 - \frac{r}{100}\right)^3$$

$$\Rightarrow \frac{21970}{40960} = \left(1 - \frac{r}{100}\right)^3$$

$$\Rightarrow \frac{13}{16} = 1 - \frac{r}{100}$$

$$\Rightarrow \frac{r}{100} = 1 - \frac{13}{16}$$

$$\Rightarrow r = \frac{3}{16} \times 100 = 18.75\%$$

105. Option (3) is correct.

A (36 days)   B (36 days)

1 unit per day   1 unit per day

36 unit (total work = 18 and 18)

So, A and B per day work = 1 + 1 = 2 unit

So, work done on each day = 2 + 2 + 2 + 2 + 2 + 1 + 2 + 1 + 2 + 2 + 2 + 1 + 2 + 2 + 2 + 1 + 2 + 1 + 2 + 2 + 1 = 36 units

So, the work will be completed at 21st July.

106. Option (3) is correct.

Volume of a sphere which radius is 3 cm $= \frac{4}{3}\pi r^3 = \frac{4}{3}\pi 3^3$

Volume of a hemisphere which radius is $\frac{3}{2}$ cm $= \frac{2}{3}\pi r^3$

$$= \frac{2}{3}\pi\left(\frac{3}{2}\right)^3$$

$$= \frac{9}{4}\pi \text{ cm}^3$$

So, the total number of hemispheres $= \frac{36\pi}{\frac{9}{4}\pi} = 16$

107. Option (4) is correct.

Volume of ice cubes which radius is 3 cm $= \frac{4}{3}\pi r^3 = \frac{4}{3}\pi 3^3$

$$= 26\pi \text{ cm}^3$$

Volume of container which is increased by ice cubes $= \pi r^2 h$

$$= \pi \times 9^2 \times 40 = 3240\pi \text{ cm}^3$$

So, the required number of cubes $= \frac{3240\pi}{36\pi} = 90$

108. Option (1) is correct.

Given that:

Slant height of cone = 29 cm

Height of cone = 20 cm

So, radius of cone $= \sqrt{29^2 - 20^2} = \sqrt{841-400} = 21$ cm

Total surface area of cone $= \pi l(r + l) = \frac{22}{7} \times 21(21+29) = 3300$

Volume of cone $= \frac{1}{3}\pi r^2 h = \frac{1}{3} \times \frac{22}{7} \times 21 \times 21 \times 20 = 9240$

So, the required ratio $= \frac{3300}{9240} = \frac{5}{14}$

109. Option (1) is correct.

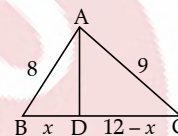By the angle bisector theorem,

$$\frac{BD}{DC} = \frac{AB}{AC}$$

$$\Rightarrow \frac{x}{12-x} = \frac{8}{9}$$

$$\Rightarrow 9x = 96 - 8x$$

$$\Rightarrow 17x = 96$$

$$\Rightarrow x = \frac{96}{17}$$

So, the required length $= \frac{96}{17} = 5\frac{11}{17}$ cm

110. Option (4) is correct.

Given that: $\cot^2\theta = 1 - e^2$

$$\Rightarrow \text{cosec}^2\theta - 1 = 1 - e^2$$

$$\Rightarrow \text{cosec}^2\theta = 2 - e^2$$

$$\Rightarrow \text{cosec}\theta = (2 - e^2)^{1/2}$$

So, $\text{cosec}\theta + \cot^3\theta \cdot \sec\theta = \text{cosec}\theta + \cot^2\theta \cdot \text{cosec}\theta$

$$= \text{cosec}\theta (1 + \cot^2\theta)$$

$$= (2 - e^2)^{1/2}(2 - e^2)$$

$$= (2 - e^2)^{3/2}$$

111. Option (2) is correct.

Given that: $\dfrac{2\sin A - \cos A}{\sin A + \cos A} = 1$

$$\Rightarrow \frac{2 - \dfrac{\cos A}{\sin A}}{1 + \dfrac{\cos A}{\sin A}} = 1$$

$$\Rightarrow \frac{2 - \cot A}{1 + \cot A} = 1$$

$$\Rightarrow 2 - \cot A = 1 + \cot A$$

$$\Rightarrow \cot A = \frac{1}{2}$$

112. Option (3) is correct.

Let the total work = LCM (11, 20, 55) = 220 unit

So, A's efficiency $= \frac{220}{11} = 20$ unit per day

B's efficiency $= \frac{220}{20} = 11$ unit per day

C's efficiency = $\dfrac{220}{55} = 4$ unit per day

According to the question:
1st day work = 20 + 11 = 31 unit
2nd day work = 20 + 4 = 24 unit
So, total work done in two days = 55 unit

So, the total time taken to finish the work = $\dfrac{220}{55} \times 2 = 8$ days

113. Option (2) is correct.

According to the question:
The average number of children per family

$= \dfrac{4 \times 0 + 22 \times 1 + 15 \times 2 + 6 \times 3 + 4 \times 2}{4 + 22 + 15 + 6 + 2}$

$= \dfrac{0 + 22 + 30 + 18 + 8}{49} = \dfrac{78}{49} = 1.59$

114. Option (4) is correct.

Given that the distance = 150 km
Let the speed of slow local = x kmph
And the speed of fast local = $(x + 10)$ kmph

We have, time = $\dfrac{\text{distance}}{\text{speed}}$

According to the question:

$\Rightarrow \dfrac{150}{x} - \dfrac{150}{x+10} = \dfrac{45}{60}$

$\Rightarrow \dfrac{150(x+10-10)}{x(x+10)} = \dfrac{3}{4}$

$\Rightarrow 200 = x(x + 10)$

$\Rightarrow x = 40$

So, the speed of slow local = 40 kmph

115. Option (1) is correct.

Total number of students = 720
The ratio of boys to girls = 3 : 5

So, number of boys = $720 \times \dfrac{3}{8} = 270$

And number of girls = 720 − 270 = 450
According to the question:

$\Rightarrow \dfrac{280 + x}{450 + 18} = \dfrac{2}{3}$

$\Rightarrow 810 + 3x = 936$

$\Rightarrow 3x = 126$

$\Rightarrow x = 42$

116. Option (1) is correct.

According to the given graph:
Expenditure in 2017 = Rs. 80000
Expenditure in 2018 = Rs. 100000

So, the required percentage = $\dfrac{100000 - 80000}{80000} \times 100 = 25\%$

117. Option (3) is correct.

The lowest number which is divisible by 15, 25, 40 and 75 =
LCM (15, 25, 40, 75) = 600
Now, Largest 4 digits number is 9999.
When 9999 is divided by 600, the remainder will be 399.
So, the required number is = 9999 − 399 = 9600

118. Option (2) is correct.

First six prime numbers = 2, 3, 5, 7, 11, 13

Required average = $\dfrac{2+3+5+7+11+13}{6} = 6\dfrac{5}{6}$

119. Option (2) is correct.

Let total income of Ayush = Rs. x

According to the question:
(100% − (25% + 26% + 23% + 19%)) of x = 26600
$\Rightarrow$ 7% of x = 26600

$\Rightarrow x = 26600 \times \dfrac{100}{7} = 380000$

So, the required amount = $38000 \times \dfrac{26+19}{100}$ = Rs. 171000

120. Option (4) is correct.

According to the given pi chart:

The amount spent by family on housing = $\dfrac{79.2}{360} \times 56800$

= Rs. 12496

121. Option (3) is correct.

The volume of big metallic sphere = $\dfrac{4}{3}\pi r^3 = \dfrac{4}{3}\pi \times 16^3$ cm³

The volume of small metallic sphere = $\dfrac{4}{3}\pi r^3 = \dfrac{4}{3}\pi \times 2^3$ cm³

So, the required number of cubes = $\dfrac{\left(\dfrac{4}{3}\pi \times 16^3\right)}{\dfrac{4}{3}\pi \times 2^3} = 512$

122. Option (3) is correct.

Given expression: $b + 2a - [(3b + a) - (2a + b) + 2a] - a$
$= b + 2a - [(3b + a) - b] - a$
$= b + 2a - [2b + a] - a$
$= b + 2a - 2b - a - a$
$= -b$

123. Option (4) is correct.

Remaining amount after payment of Rs. 520 = 2500 − 520 = Rs. 1980
Total payable amount after 4 months

$= 1980 + 1980 \times \left(\dfrac{25}{100} \times \dfrac{1}{3}\right) = 1980 \times \dfrac{13}{12}$

Rate of interest = $\dfrac{25}{100}$ yearly = $\dfrac{1}{4} \times \dfrac{1}{12} = \dfrac{1}{48}$ monthly

Let Emi instalment = 48 units
So, 48 → I st
48 + 3 → II nd
48 + 2 → III rd
48 + 1 → IV th
Total = 198 units

According to question, 198 units = $1980 \times \dfrac{13}{12}$

$\therefore$ 1 unit = $\dfrac{130}{12}$

$\therefore$ Emi instalment = $\dfrac{130}{12} \times 48 = 520$

124. Option (2) is correct.

Given that:
The race track length = 1200m

Speed of Rakesh = $\dfrac{1200}{40} = 30$ m/s

So, the distance travelled by Rakesh in 36 s = 30 × 36 = 1080 m
Hence, the required distance = 1200 − 1080 = 120m

125. Option (3) is correct.

According to the question:
Total salary of 50 faculties = 50000 × 30 = 1500000
Total salary of 35 faculties = 35 × 37500 = 1312500

So, the average salary of 15 faculties = $\dfrac{1500000 - 1312500}{15}$

= 12500

126. Option (1) is correct.

Given that: $\sin\theta + \cos\theta = \sqrt{2}\cos\theta$

$\Rightarrow$ divide both sides by $\sin \theta$.

$1 + \dfrac{\cos \theta}{\sin \theta} = \sqrt{2} \dfrac{\cos \theta}{\sin \theta}$

$\Rightarrow 1 + \cot \theta = \sqrt{2} \cot \theta$

$\Rightarrow \cot \theta = -\dfrac{1}{(1-\sqrt{2})} = \dfrac{1}{(\sqrt{2}-1)}$

So, the value of $\dfrac{\sin \theta - \cos \theta}{\sin \theta} = 1 - \cot \theta$

$= 1 - \dfrac{1}{\sqrt{2}-1} = \dfrac{\sqrt{2}-1-1}{(\sqrt{2}-1)}$

$= \dfrac{\sqrt{2} - 2(\sqrt{2}+1)}{(\sqrt{2}-1)(\sqrt{2}+1)} = \dfrac{2 - 2\sqrt{2} + \sqrt{2} - 2}{2-1} = -\sqrt{2}$

127. Option (4) is correct.

Cost price of 1st toy $= 1500 \times \dfrac{100}{125} = 1200$

Cost price of 2nd toy $= 2800 \times \dfrac{100}{50} = 5600$

Cost price of 3rd toy $= 3500 \times \dfrac{100}{125} = 2800$

So, total cost price of all toys $= 1200 + 5600 + 2800 = 9600$

And total selling price of all toys $= 7800$

So, the loss percentage $= \dfrac{9600 - 7800}{9600} \times 100 = 18.75\%$

128. Option (4) is correct.

Given that the total income = Rs. 100000

So, required difference $= \dfrac{15-5}{100} \times 100000 = 10000$

129. Option (1) is correct.

$(x - 2y)(y - 3x) + (x + y)(x - y) + (x - 3y)(2x + y)$

$= xy - 2y^2 - 3x^2 + 6xy + x^2 - y^2 + 2x^2 - 6xy + xy - 3y^2$

$= 2xy - 6y^2 = 2y(x - 3y)$

130. Option (1) is correct.

The least number which is divisible by 9, 12, 15, 25 and 27 = LCM (9, 12, 15, 25, 27) = 1350

Least number of five digits = 10000

The quotient when 10000 is divided by 1350 is 7 and the remainder is 550.

So, the least number of five digits = $1350 \times 8 = 10800$

131. Option (3) is correct.

Let the HCF of both numbers = x

Then the LCM = $5x$

Using, LCM × HCF = Multiplication of both numbers

$5x \times x = 20480$

$\Rightarrow x = 64$

So, the HCF of both numbers = 64

Then the LCM = $5 \times 64 = 320$

132. Option (3) is correct.

We have

$125 = 5 \times 5 \times 5$

$250 = 2 \times 5 \times 5 \times 5$

$750 = 2 \times 3 \times 5 \times 5 \times 5$

So, HCF (125, 250, 750) = $5 \times 5 \times 5 = 125$

133. Option (3) is correct.

We have,

$8 = 2 \times 2 \times 2$

$12 = 2 \times 2 \times 3$

$18 = 2 \times 3 \times 3$

So, LCM (8, 12, 18) = $2 \times 2 \times 2 \times 3 \times 3 = 72$

134. Option (2) is correct.

Total employees in organization P and R in 2019 = 69 + 63 = 132

Total employees in organizations Q and R in 2020 = 74 + 90 = 164

So, the required ratio $= \dfrac{132}{164} = \dfrac{33}{41}$

135. Option (1) is correct.

Given that the expenditure = Rs. 5400

Ratio of income and expenditure = 7 : 3

According to the question:

$3x = 5400$

$x = 1800$

So, the total income = $7 \times 1800 =$ Rs. 12600

136. Option (4) is correct.

Let Ravi's income = R

And Suresh's income = S

According to the question:

$\Rightarrow \dfrac{30}{100} \times R = \dfrac{40}{100} \times S$

$\Rightarrow 3R = 4S$

$\Rightarrow R = \dfrac{4}{3} \times S$

Now $\dfrac{50}{100} \times R = \dfrac{50}{100} \times \dfrac{4}{3} \times S$

$= \dfrac{2}{3} \times S$ or $\left(\dfrac{2}{3} \times 100\right)\%$ of $S = 66\dfrac{2}{3}\%$ of S

137. Option (1) is correct.

Given that Arun can complete $\dfrac{2}{3}$rd of a work in = 12 days

So, Arun can complete whole work in $= 12 \times \dfrac{3}{2} = 18$ days

Hence, Arun can complete $\dfrac{1}{6}$th of the work in $= 18 \times \dfrac{1}{6} = 3$ days

138. Option (2) is correct.

The chord of circle = the radius of circle.

OA and OB are the two radii of the circle.

Since, AB = OA = OB

So, $\angle$OAB is an equilateral triangle.

Which implies AOC = 60°

And, $\angle$ACB = 1/2 $\angle$AOB

So, $\angle$ACB = 1/2 × 60 = 30°

Now, ACBD is a cyclic quadrilateral,

$\angle$ADB + $\angle$ACB = 180° (Since they are the opposite angles of a cyclic quadrilateral)

So, $\angle$ADB = 180 – 30 = 150°

Hence, the difference between the angle subtended by the chord at the minor arc and major arc of the circle = 150° – 30° = 120°

139. Option (2) is correct.

In $\triangle$AOB, using pythagoras,

$OB^2 = AB^2 - DA^2 = 15^2 - 12^2$

$OB^2 = 225 - 144$

OB = 9 cm
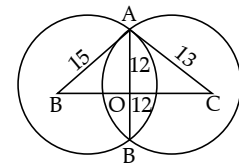
In $\triangle$AOC, using pythagoras,

$OC^2 = AC^2 - OA^2 = 13^2 - 12^2$

$OC^2 = 169 - 144$

OC = 5 cm

∴ Required distance = 9 + 5 = 14 cm

140. Option (4) is correct.

According to the given table, city B had the largest number of students among the given cities.
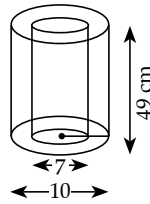
141. Option (4) is correct.

According to the given graph,

Average increment of Kamal in three months $= \dfrac{65 + 55 + 75}{3}$

$= 65$

142. Option (4) is correct.

Using volume of hollow cylinder,

$= \pi(r_1^2 - r_2^2)h$

$= \dfrac{22}{7}(10^2 - 7^2) \times 49$

$= 22 \times 7 \times 51 = 7854 \text{ cm}^3.$
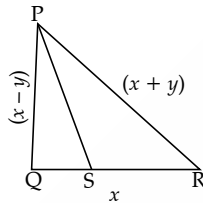
143. Option (1) is correct.

$2\tan^2 45° + \cos^2 30° - \sin^2 60$

$= 2 \times (1)^2 + \left(\dfrac{\sqrt{3}}{2}\right)^2 - \left(\dfrac{\sqrt{3}}{2}\right)^2$

$= 2 + \dfrac{3}{4} - \dfrac{3}{4} = 2$

144. Option (4) is correct.

Cost price of sugar = ₹ 36/kg

So, the price of 800 gm sugar $= \dfrac{36}{1000} \times 800 = ₹ 38.8$

According to the question, selling price of 800 gm sugar = ₹ 40

So, the profit percentage $= \dfrac{40 - 28.8}{28.8} \times 100 = 38.89\%$

145. Option (1) is correct.

Given that QS = QP = $x - y$

∴ SR = QR – QS

$\Rightarrow x - (x - y) = y$

In ΔPQR, using pythagoras,

$(x + y)^2 = (x - y)^2 + x^2$

$\Rightarrow x^2 + y^2 + 2xy = x^2 + y^2 - 2xy + x^2$

$\Rightarrow x = 4y$

So, required ratio $= \dfrac{QS}{SR} = \dfrac{x-y}{y} = \dfrac{4y-y}{y}$

$= \dfrac{3}{1} = 3:1$

146. Option (4) is correct.

Total number of scooters sold by store A and B together in jan

= 212 + 168 = 380

Total number of scooters sold by store D and E together in mar = 255 + 245 = 500

Required ratio $= \dfrac{380}{500} = \dfrac{19}{25}$

147. Option (3) is correct.

Let the total distance covered be 100 km.

He covers 25% distance at the speed of 25 km/h.

i.e. $100 \times \dfrac{25}{100} = 25$ km at the speed of 25 km/h.

∴ Time $= \dfrac{25}{25} = 1$ h.

He covers 50% distance at the speed of 50 km/h.

i.e. $100 \times \dfrac{50}{100} = 50$ km at the speed of 50 km/h.

∴ Time $= \dfrac{50}{50} = 1$ h.

He covers remaining distance at the speed of 12.5 km/h.

i.e. 100 – 75 km = 25 km. at the speed of 12 km/h.

∴ Time $= \dfrac{25}{12.5} = 2$ h.

So,

Average speed $= \dfrac{\text{Total distance}}{\text{Total time taken}}$

$= \dfrac{100}{(1+1+2)} = \dfrac{100}{4} = 25$ km/h.

148. Option (4) is correct.

Let the numbers are x and y.

According to the question,

$x + y = 60$ (1)

As we know, LCM × HCF = product of number

$\Rightarrow x \cdot y = 5 \times 60 = 300$ (2)

By eq. (1)/(2),

$\Rightarrow \dfrac{1}{x} + \dfrac{1}{y} = \dfrac{60}{300} = \dfrac{1}{5}$

149. Option (4) is correct.

According to the given graph,

Required difference = (45 – 40) × 100 = 500

150. Option (2) is correct.

Let the numbers are $2x$ and $7x$.

According to the question,

X = 9

So, the highest number = 7 × 9 = 63

151. Option (4) is correct.

The concert was filled with fully attentive teenage listeners. The word 'rapt' means 'showing complete delight or interest.' Here, the teenagers were extremely interested or fascinated by the performances in the concert.

152. Option (2) is correct.

The word 'decline' means to 'slope downward'. Therefore, the antonym will be 'ascend', which means 'go up or climb.' 'Demonstrate' means to 'show'; while 'traverse' implies navigate.

153. Option (4) is correct.

It was a quiet afternoon, so Dan decided to take a nap. Here, 'a quite' will be replaced by 'a quiet'. The word 'quite' is an adverb used to refer to the degree, that means "totally" or "completely", while the word 'quiet' is most commonly used as an adjective to describe things that aren't making noise.

154. Option (2) is correct.

This is not an exhaustive list of words. We use 'an' before nouns that begin with a vowel sound to indicate any non-specific noun.

155. Option (3) is correct.

The idiom 'a left handed compliment' implies an insult in the guise of an expression of praise or an ambiguous compliment. Example: My opponent remarked that I made a good player, and only need to work on my ability to hold the racquet. This was indeed a left handed compliment.

156. Option (2) is correct.

'Redemption' means 'the action of saving or being saved from sin, error, or evil.' Therefore, the antonym is blasphemy, meaning 'great disrespect shown to God or to something holy'. Salvation refers to 'the act of saving or protecting from harm'. Corrugation is the act of shaping into parallel ridges and grooves.

157. Option (1) is correct.

Have they been working in that particular shop for several years? Here, 'work' will be replaced by 'working' because the sentence is suggestive of present continuous tense, which takes -ing after the main verb.

158. Option (4) is correct.

He had a round face made jovial by bright, almost boyish eyes and eyebrows ridiculously small for a man his size. The spelling 'ridiculusly' is incorrect, and the correct one is 'ridiculously'.

159. Option (2) is correct.

Unless you prepare well you will not perform well. Here, 'do will not prepare' will be replaced by 'prepare'. In this conditional sentence, 'unless' means 'if not', so there is no need of putting another negative. The sentence must take the format: simple present tense + future tense.

160. Option (3) is correct.

'Bite the bullet' means "to do something unpleasant or painful because it is necessary even though you would like to avoid". Example: Given the miserable condition of the company, I had to bite the bullet by retaining my job at a low pay. The correct answer is : Decide to do the inevitable which you were avoiding.

161. Option (2) is correct.

Resolute means 'firm/steadfast'. Thus, the antonym is 'wavering' (uncertain).

162. Option (2) is correct.

Roger went to the United Kingdom with his wife to celebrate Christmas. Here, 'to an United Kingdom' will be replaced by 'to the United Kingdom'. The definite article 'the' is used when referring to countries with names that incorporate words like kingdom, state, or republic.

163. Option (2) is correct.

Why is everyone so dressed up? What's the occasion? Is it a wedding? The incorrectly spelt word is 'occaseon'. It must be 'occasion'.

164. Option (3) is correct.

To restrain or compel a person to do something by force is 'coerce'. 'Convoy' means 'a group of ships or vehicles travelling together'. The word 'consensus' means 'a general agreement.'

165. Option (4) is correct.

Health insurance is important today since anyone can face a medical emergency without warning. Here, 'are important' is incorrect and hence will be substituted by 'is important'. This is because the subject is singular (health), so the associated verb will also be singular (is). Moreover, the tense used in the second clause of the sentence is present, so the first part will also have the same tense.

166. Option (2) is correct.

'Spill the beans' means 'to let secret information become known'. Example: My younger brother spilled the beans before my parents about their surprise anniversary party.

167. Option (4) is correct.

People say diverse things at different times. The words 'whimsical' and 'fanciful' means the same. While 'delectable' means delicious. But 'diverse' implies 'different'.

168. Option (1) is correct.

'Together' means 'united', so the antonym is 'apart'.

169. Option (4) is correct.

'Magnificent' means 'extremely beautiful'. 'Impressive' is a synonym; while 'modest' is an antonym, meaning average.

170. Option (4) is correct.

I have all the technical and communication skills necessary to crack any interview; it will be a piece of cake for me. This idiom means 'something that is very easy to do'. 'A storm in a tea cup' is a situation in which people are very angry or upset about something that is not important. While, 'A chip on my shoulder' means to have an angry or unpleasant attitude or way of behaving caused by a belief that one has been treated; 'a hard nut to crack' means 'a difficult problem or an opponent that is hard to beat.'

171. Option (3) is correct.

He seems to be sitting on the fence about whether to move to another city for better prospects. The idiom 'sitting on the fence' means 'undecided'.

172. Option (1) is correct.

I have a dog and a cow. The dog is black but the cow is black and white. Here, 'the dog is black' will replace 'a dog is black' because the indefinite article 'a' is used for something non-specific, but the definite article is used for something specific and here, the dog and the cow have been introduced earlier.

173. Option (3) is correct.

Improved rail transport is crucial for business. The word 'essential' means vital/ crucial.

174. Option (3) is correct.

'Desolate' means 'make (a place) appear bleakly empty.' The synonym will also be a negative word, hence 'depressive' (gloomy) is correct.

175. Option (2) is correct.

An act of exchanging information is also called communication.

176. Option (1) is correct.

They were more often obnoxious than not, impatient with me because my services had been essentially imposed upon them. The word 'abnoxious' is incorrectly spelled, it is 'obnoxious' (intolerable).

177. Option (3) is correct.

The word 'adhere' means 'to hold fast or stick'. Therefore, the antonym is 'flout', meaning 'openly disregard'.

178. Option (2) is correct.

In the sentence 'She has a penchant for art and craft', 'penchant' means 'liking'. So, the antonym is 'hatred'.

179. Option (4) is correct.

The team leader tried to put a brave face on in the situation, even though they were facing tough competition and limited resources. The phrase 'to remain positive or optimistic' will be replaced by 'to put a brave face on' because 'try not to show how disappointed or upset you are about the situation.'

180. Option (3) is correct.

'Superb' implies 'excellent'. While infallible' means reliable; 'incorrigible' means 'impossible to change or improve'. So, the antonym is 'inferior'.

181. Option (1) is correct.

In the sentence, 'He was carried off his feet when he was declared to have won the prize'. Here, 'carried off his feet' means 'to flourish in doing or attaining something difficult'. So, 'was wild with excitement' is the correct answer.

182. Option (4) is correct.

It took seven years for Harish to shake off his migraine. The phrase 'shake off' means 'getting rid of what is unpleasant, undesirable, or unwanted.'

183. Option (3) is correct.

The new routine will suit you to a T. The idiom 'to a T' implies 'exactly; to perfection.'

184. Option (4) is correct.

The idiom 'spill the beans' means 'to tell people secret information'. Example: The elder brother warned his sibling from spilling the beans to their parents about his wrongdoings.

185. Option (3) is correct.

'The critical point of the issue' means 'a crisis situation in time when a critical decision must be made.' So, 'the crux of the matter' is the correct answer.

186. Option (4) is correct.

I like all games except cricket. The word 'instead of' means 'except'.

187. Option (2) is correct.

'Requiring exceptional skill or caution in performance or handling' can be referred as 'tricky'. While 'sustainable' means 'able to continue over a period of time'. Whereas 'abstract' means 'existing only in the mind'.

188. Option (1) is correct.

He could pass his exams if he studied harder. Here, 'be pass' will be replaced by 'pass'. The use of auxiliary verb 'be' is incorrect. The verb 'pass' does not require another auxiliary other than 'could'. Hence part (2) has the error.

189. Option (2) is correct.

They have begun to study in separate rooms. Here, 'sepparate' is incorrectly spelt. Hence it will be written as 'separate.'

190. Option (4) is correct.

One has to understand the rudimentary fact that intelligence and intellect are at two opposite poles. Here. 'rudimentery' is incorrectly spelt, it will be spelt as 'rudimentary' (elementary).

191. Option (2) is correct.

Rabindranath Tagore founded a small school at Santiniketan in 1901 and Kala Bhavan, an art school, in 1919 which later became a part of the Visvabharati University founded in 1921. The word 'later' is appropriate for the blank referring to future. This implies that initially Kala Bhavan, an art school, later became a part of the Visvabharati University.

192. Option (4) is correct.

Located in an idyllic village some distance from the city of Calcutta, Kala Bhavan presented an alternative methodology of art training. The most appropriate clue is that the blank is preceded by the article 'an', which is used only before words with vowel sound as in 'idyllic', which means peaceful.

193. Option (2) is correct.

Kala Bhavan presented an alternative methodology of art training, in which studio based practice was rejected in favour of learning through observation and living as a part of nature. 'Rejected' means 'forbidden' and thus, it is appropriate for the blank.

194. Option (1) is correct.

The natural surroundings with the vistas of bare red earth dotted with trees. The word 'vistas' means 'a pleasing view.' The view, here, is that of bare red earth dotted with trees, the colours of the changing seasons, the animals and birds.

195. Option (3) is correct.

The colours of the changing seasons, the animals and birds provided inspiration to students. Other options do not justify the context.

196. Option (3) is correct.

In the sentence, 'They are also home to great cultural diversity among people adapted to the challenges of mountain life', here, 'diversity' connotes 'the state of being diverse; variety.' Thus, the antonym is 'uniformity'; (consistency).

197. Option (1) is correct.

In the sentence, 'Fast-rising temperatures are forcing mountain species, ecosystems and the people that depend on them to adapt or migrate', 'migrate' is 'move from one part of something to another.' The need to move from one part of something to another arises owing to fast- rising temperatures. Thus, the antonym is 'stay'.

198. Option (4) is correct.

A humanistic tone of the passage represents the author's sentiment or attitude towards the subject. The author speaks of the significance of mountains and the adversities that they face and the need for preserving them- 'Mountain regions are particularly sensitive to degradation', 'Fast-rising temperatures are forcing mountain species, ecosystems and the people that depend on them to adapt or migrate. Thus, a humanistic approach is adopted by the author. There is no indication of a biased or laudatory (admiring) or emotional tone.

199. Option (4) is correct.

The passage starts with the significance of mountains in the life of humans and the preservation of biodiversity. It moves on to the causes behind its degradation- human pressures and climate change, which results in mountain species, ecosystems and the people that depend on them to adapt or migrate. Therefore, the structure of cause-effect can be established.

200. Option (2) is correct.

The passage is about the significance of mountains in the life of humans and the preservation of biodiversity and the impact of human pressures and climate change on them and the consequences. Therefore, 'Mountain ecosystem' most accurately states the central idea of the passage. ●●●