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

# SOLVED PAPER

## (10th November 2022: Shift-1)

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

## General Intelligence and Reasoning

1. If A denotes '+', B denotes '×', C denotes '–' and D denotes '/', then what will be the value of the following expression?
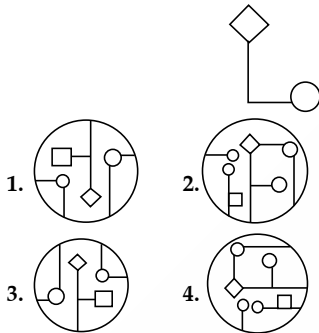
   144 C 8 B 20 A 81 D 3 = ?

   **1.** 23          **2.** 11          **3.** 45          **4.** 21

2. Select the combination of letters that when sequentially placed in the blanks of the given series, will complete the series.

   VW_ V _ _ VW _ _ WV

   **1.** VWVVV          **2.** WWWVW
   **3.** WVWWV          **4.** VWVWV

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



4. 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 English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.)

   Force : Newton :: Current : ?

   **1.** Volt          **2.** Ampere     **3.** Charge       **4.** Coulomb

5. Arrange the following planets in a logical and meaningful order.

   **1.** Earth     **2.** Venus     **3.** Mars     **4.** Saturn
   **5.** Jupiter

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

6. A # B means 'A is the brother of B'.

   A @ B means 'A is the son of B'.

   A & B means 'A is the father of B'.

   A % B means 'A is the mother of B'.

   If W # Q @ T & Y @ M % K % L, then how is K related to T?

   **1.** Daughter          **2.** Sister
   **3.** Daughter-in-law   **4.** Mother

7. 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.)

   (6, 12, 228)

   (8, 3, 515)

   **1.** (3, 28, 56)
   **2.** (13, 11, 172)
   **3.** (4, 18, 82)
   **4.** (9, 23, 119)

8. Select the option that represents the letters that when placed from left to right in the blanks below will complete the letter series.

   AA_D_F_AC_E_A _ _D_F_ACD_F

   **1.** CAFDFAACEE
   **2.** CEADFACEAE
   **3.** ACDAFACEAE
   **4.** CEAFDACEAC

9. Select the set in which the numbers are related in the same way as are the numbers of the given 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.)

   (17, 29, 46)

   (24, 36, 60)

   **1.** (36, 46, 81)   **2.** (29, 41, 64)   **3.** (21, 33, 54)   **4.** (48, 52, 98)

10. Diogo's house faces west. He steps out of his house and walks 22 m straight. He then turns to his left and walks 20 m. He takes another left turn and walks 25 m. Finally, he turns left once again and walks further for 24 m to reach his school. How far is the school from his house and in which direction with respect to his house?

    **1.** 5 m due north-east
    **2.** 7 m due north-east
    **3.** 5 m due north-west
    **4.** 25 m due south-east

11. Select the number from among the given options that can replace the question mark (?) in the following series.

    95, 73, 53, ?, 19, 5

    **1.** 42          **2.** 39          **3.** 35          **4.** 31

12. Select the figure that will replace the question mark (?) in the following figure series.
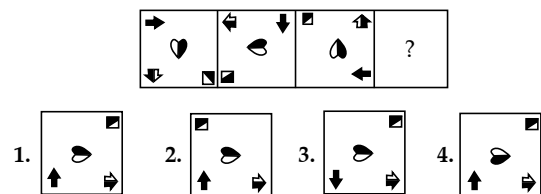
**13.** Which letter-cluster will replace the question mark (?) to complete the given series? GSAV, JPER, ?, PJMJ, SGQF, ?
**1.** MMJO **2.** MMIN **3.** MNIO **4.** MNIP

**14.** Anita starts from her house and cycles 6 km towards the south and then turns left and cycles 8 km. She again turns left and cycles for X km to reach her school. Point A is to the west of her school and also 3 km to the north of her house. What is the value of X?
**1.** 9 km **2.** 3 km **3.** 7 km **4.** 11 km

**15.** Two dimensions of the same dice are given. What letter will be on the face opposite to the face having the letter F?
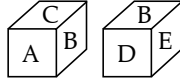


**1.** B **2.** D **3.** C **4.** A

**16.** If – means +, × means ÷,÷ means −, + means ×, what will come in place of the question mark (?)?
$76 × 4 + 13 ÷ 8 – 3 = ?$
**1.** 236 **2.** 212 **3.** 108 **4.** 242

**17.** Select the correct mirror image of the given figure when the mirror is placed at MN as shown.

R V 7 O C W @ 7



**1.**  **2.** 
**3.**  **4.** 

**18.** Which of the following numbers will replace the question mark (?) and complete the given number series?
600, 590, 575, 550, 510, ?
**1.** 460 **2.** 450 **3.** 440 **4.** 420

**19.** In a certain code language, 'SO' is written as '34' and 'BED' is written as '11'. How will 'MOAN' be written in that language?
**1.** 43 **2.** 99 **3.** 86 **4.** 23

**20.** Which of the following numbers will replace the question mark (?) in the given series?
98, 99, 107, ?, 198
**1.** 154 **2.** 148 **3.** 146 **4.** 134

**21.** If A denotes '+', B denotes '×', C denotes '−', and D denotes '÷', then what will be the value of the following expression?
35 A 68 D 34 C 16 B 1
**1.** 21 **2.** 41 **3.** 31 **4.** 51

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



**1.**  **2.**  **3.**  **4.** 
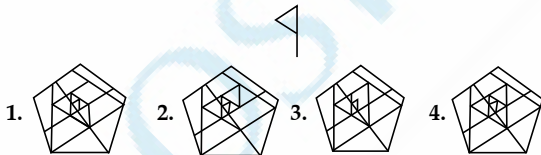
**23.** Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.
DUNE: BGSXLQCH :: NEED: LQCHCHBG :: KING: ?
**1.** GLLQEJIN **2.** NGLLQEJI
**3.** INGLLQEJ **4.** LLQEJING

**24.** Select the set in which the numbers are related in the same way as are the numbers of the given 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.)
(23, 25, 16)
(21, 17, 256)
**1.** (14, 19, 125) **2.** (27, 23, 64) **3.** (18, 15, 81) **4.** (11, 9, 12)

**25.** If I denotes '÷', J denotes '×', K denotes '-', and L denotes '+', then what will come in place of '?' in the following equation?
17 J 6 K 21 L 93 I 3 L 35 K 12 = ?
**1.** 135 **2.** 130 **3.** 140 **4.** 128

**26.** The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown below. Choose the figure that would most closely resemble the unfolded form of the paper.



**1.**  **2.**  **3.**  **4.** 
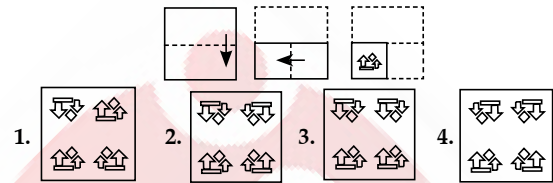
**27.** Six people are sitting in two parallel rows with 3 people each in such a way that there is equal distance between adjacent persons. S, T and U are seated in the same row facing south. X, Y and Z are seated in the same row facing north. U sits at the extreme right end of their row and is exactly opposite X. T is the immediate neighbour of U and sits exactly opposite Z. Who sits at the extreme right end of the row facing North?
**1.** Z **2.** Y **3.** U **4.** X

**28.** 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.
$$\left[\frac{1}{97}\right] : \left[\frac{1}{63}\right] :: \left[\frac{1}{114}\right] : ? :: \left[\frac{1}{89}\right]\left[\frac{1}{55}\right]$$
**1.** $\left[\frac{1}{80}\right]$ **2.** $\left[\frac{1}{77}\right]$ **3.** $\left[\frac{1}{86}\right]$ **4.** $\left[\frac{1}{83}\right]$

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



**1.**  **2.**  **3.**  **4.** 

**30.** Three 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.
**Statement :**
All backpacks are suitcase.
All suitcases are trolley.
Some Backpacks are Luggage.
**Conclusions:**
(I)   Some Suitcases are Luggage.
(II)   Some Backpacks are Trolley.
(III)  All Trolleys are Luggage.
**1.** Both Conclusions I and II follow.
**2.** Only Conclusion I follows.
**3.** Both Conclusions II and III follow.
**4.** Both Conclusions I and III follow.

**31.** Which of the following numbers will replace the question mark (?) and complete the given number series?

2, 12, 144, 2592, ?

**1.** 62108 **2.** 62208 **3.** 62204 **4.** 63408

**32.** Select the option that represents the correct order of the given words as they would appear in an English dictionary.

**1.** Interest **2.** Interdisciplinary

**3.** Interdict **4.** Interdependent

**5.** Intersect

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

**33.** Select the figure from among the given options that can replace the question mark (?) in the following series.
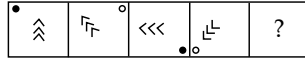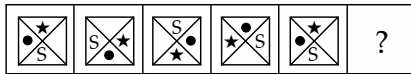


**34.** Select the Venn diagram that best illustrates the relationship between the following classes.
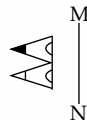
Spectacles, Lens, Mirror



**35.** Select the figure from among the given options that can replace the question mark (?) in the following series.



**36.** Select the correct mirror image of the given figure when the mirror is placed at line MN as shown.



**37.** The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown below. Choose the figure that would most closely resemble the unfolded form of the paper.



**38.** Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

**1.** XTZ **2.** IFK **3.** PLR **4.** GCI

**39.** Select the option that represents the letters that, when sequentially placed from left to right in the blanks, will complete the letter series.

w _ l l _ g _ w e _ l n _ k _ e _ l _ g k

**1.** e n k l g w k n **2.** e n k l g w l n

**3.** e n k l w g I n **4.** e n l k g w k n

**40.** In a certain code language, GOA is written as 7151 and DOG is written as 4157. How will MAN be written in that language?

**1.** 13114 **2.** 31114 **3.** 12113 **4.** 11113

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

Men, Fathers, Doctors



**42.** 'C @ D' means 'C is the father of D'.

'C * D' means 'C is the brother of D'.

'C × D' means 'D is the husband of C'.

'C # D' means 'C is the sister of D'.

'C $ D' means 'C is the son-in-law of D'.

'C = D' means 'C is the mother of D'.

How is A related to C in the following expression?

A @ L # F * E × G $ C

**1.** Husband **2.** Son **3.** Brother **4.** Father

**43.** Based on the position in the English alphabetical order, three of the following letter- clusters are alike in some manner and one is different. Select the odd letter-cluster.

**1.** LNSV **2.** FHMP **3.** BDIL **4.** JLPT

**44.** In a certain code language, 'CAKE' is written as '6' and 'JUICE' is written as '7'. How will 'JUG' be written in that language?

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

**45.** If A denotes '+', B denotes '×', C denotes '−', and D denotes '÷', then what will be the value of the following expression?

200 C 12 B 15 A 26 D 13

**1.** 22 **2.** 24 **3.** 23 **4.** 26

**46.** Eight people are sitting in two parallel rows with four people each in such a way that there is equal distance between adjacent persons. 5, 6, 7 and 8 are seated in the same row facing South. 1, 2, 3 and 4 are seated in the same row facing North. 4 and 2 do not sit at the extreme corners of their row. 7 sits at the extreme right end of their row and is exactly opposite 1. 3 sits exactly opposite 8.

Who sits at the extreme left end of the row of people sitting facing South?

**1.** 3 **2.** 8 **3.** 5 **4.** 6

**47.** If A denotes '+', B denotes '×', C denotes '-', and D denotes '÷', then what will come in place of '?' in the following equation?

34 A 15 B 3 C 11 B 2 A (51 D 17) = ?

**1.** 60 **2.** 58 **3.** 65 **4.** 53

**48.** In this question, three 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 follows/follow from the statements.

**Statements:**

All gowns are shirts.

Some shirts are coats.

All coats are clothes.

Conclusions:

I. Some gowns are clothes.

II. Some clothes are shirts.

**1.** Both conclusions I and II follow.

**2.** Neither conclusion I nor II follows.

**3.** Only conclusion II follows.

**4.** Only conclusion I follows.

**49.** In a certain code language, 'FRIDAY' is written as 'KTHACF' and 'MOSTLY' is written as 'UQOANV'. How will 'GINGER' be written in that language?

**1.** PKITFI  **2.** TGIOKI  **3.** PKITGI  **4.** PKIUHJ

**50.** If + means −, − means ×, × means ÷, and ÷ means +, what will be the value of the following expression?

24 − 20 × 12 + 18 ÷ 5

**1.** 17  **2.** 27  **3.** 480  **4.** 53

## General Knowledge and General Awareness

**51.** Whose autobiography is 'Playing it my way'?

**1.** Sachin Tendulkar  **2.** Yuvraj Singh
**3.** Sunil Gavaskar  **4.** Saina Nehwal

**52.** Which Part of the Indian Constitution is known as 'Magna Carta of India'?

**1.** Part III  **2.** Part II  **3.** Part VI  **4.** Part IV

**53.** Which of the following pair of plant disease – microorganism is correct?

I. Citrus canker – Virus
II. Rust of wheat – Fungi

**1.** Only II  **2.** Neither I nor II
**3.** Only I  **4.** Both I and II

**54.** What is an indicator of self-reliance?

**1.** Increase in imports of the goods which could be produced in the country.
**2.** Avoiding imports of the goods which could be produced in the country.
**3.** Increase in exports of the goods which could not be produced in the country.
**4.** Avoiding exports of the goods which could be produced in the country.

**55.** Which was the first city in the world to have hosted both, the summer and winter editions of the Olympic Games?

**1.** Tokyo  **2.** Sydney
**3.** New York  **4.** Beijing

**56.** Which of the following directs the State to provide 'Equal justice and free legal aid'?

**1.** Part VI of the Indian Constitution
**2.** Part V of the Indian Constitution
**3.** Part VII of the Indian Constitution
**4.** Part IV of the Indian Constitution

**57.** Which of the following is the main percussion instrument used in the performance of Mohiniyattam dance?

**1.** Sitar  **2.** Edakka  **3.** Dhumsa  **4.** Nagada

**58.** Which of the following pair type of nutrient – nutrient is correct?

I. Macronutrient – Iron
II. Micronutrient – Calcium

**1.** Only I  **2.** Both I and II
**3.** Neither I nor II  **4.** Only II

**59.** The Communist Party of India was founded at _____ in October 1920.

**1.** Calcutta  **2.** Britain  **3.** Lahore  **4.** Tashkent

**60.** Revolutionary hero Ashfaqulla Khan was sentenced to death for _____.

**1.** the murder of Saunders
**2.** burning of the Chauri Chaura police station
**3.** the Kakori Train Robbery
**4.** the Alipore Conspiracy Case

**61.** Which state/UT constructed 3,300 km of rural roads in 2020-21 under the Pradhan Mantri Gram Sadak Yojana?

**1.** Uttarakhand  **2.** Himachal Pradesh
**3.** Delhi  **4.** Jammu and Kashmir

**62.** Who among the following was the commander of Muhammad Ghori, and also founded the slave dynasty in India?

**1.** Iltutmish  **2.** Ghiyasud din Balban
**3.** Aram Shah II  **4.** Qutub-Din Aibak

**63.** Which is NOT correct about the President of India?

**1.** The President holds office for a period of five years.
**2.** He is a part of the Parliament.
**3.** Every bill passed by the Parliament goes to the President for his assent before it becomes a law.
**4.** He has veto power by which he can withhold or refuse to give assent to Bills including Money Bill passed by the Parliament.

**64.** Which chemical element with atomic number is 31?

**1.** Aluminium  **2.** Gallium  **3.** Indium  **4.** Thallium

**65.** Which of the following classical dances is referred to as the dance of the storytellers?

**1.** Kathak  **2.** Odissi  **3.** Kuchipudi  **4.** Kathakali

**66.** Which of the following dams is correctly paired with the state in which it is located?

**1.** Tehri dam – Uttar Pradesh
**2.** Hirakud dam – Odisha
**3.** Bhakra Nangal dam – Tamil Nadu
**4.** Nagarjuna dam – Rajasthan

**67.** In which of the following years was the decision taken during the IOC Executive Board meeting held in Lausanne to include 4 × 400m mixed relay event at the Tokyo 2020 Olympics?

**1.** 2018  **2.** 2020  **3.** 2016  **4.** 2019

**68.** In which of the following places were the 2021 World Artistic Gymnastics Championships held?

**1.** Liverpool, Great Britain  **2.** Stuttgart, Germany
**3.** Doha, Qatar  **4.** Kitakyushu, Japan

**69.** Which of the following options best describes the meaning of Nritta in the Kuchipudi dance form?

**1.** Abstract Narrative Dancing
**2.** Non-Narrative and Abstract Dancing
**3.** Interpretative Dancing
**4.** Narrative Dancing

**70.** Which of the following festivals is observed by the tribal people of Jharkhand?

**1.** Nongkrem  **2.** Losar
**3.** Suata  **4.** Sarhul

**71.** El-Nino is a complex weather system that appears once every three to _____ years, bringing drought, floods and other weather extremes to different parts of the world.

**1.** Seven  **2.** Nine  **3.** Four  **4.** Six

**72.** Which of the following Articles establishes the provision of the Right to Education?

**1.** Article 22 (3)  **2.** Article 21A
**3.** Article 20 (1)  **4.** Article 23

**73.** "The liverworts grow usually in moist, shady habitats such as banks of streams, marshy ground, damp soil, bark of trees and deep in the woods. The plant body of a liverwort is thalloid, e.g., Marchantia. The thallus is dorsiventral and closely appressed to the substrate. The leafy members have tiny leaf-like appendages in two rows on the stem-like structures."

The above statement signifies which of the following Bryophyta?

**1.** Selaginella  **2.** Salvinia
**3.** Liverworts  **4.** Sphagnum

**74.** Which festival is celebrated in the month of February by the Angami tribe of Nagaland?

**1.** Sekrenyi festival  **2.** Losoong festival
**3.** Hornbill festival  **4.** Majuli festival

**75.** Which of the following is NOT correct about the power of the Speaker of the state Legislative Assembly?
   1. He maintains order and decorum of the House.
   2. He decides whether a Bill is a Money Bill or not.
   3. He calls for a joint session of the Assembly and Council to resolve the deadlock between the two Houses over an ordinary Bill.
   4. He adjourns the Assembly or suspends the meeting in the absence of a quorum.

**76.** The All-India Khilafat Conference in November 1919 took place at:
   1. Lucknow     2. Delhi     3. Bombay     4. Lahore

**77.** Which of the following pair of position of object – position of image – size of image, of image is NOT correct for concave mirror?
   1. At F – At infinity – Highly enlarged
   2. Between C and F – Beyond C – Enlarged
   3. Beyond C – Between F and C – Diminished
   4. At infinity – At C – Highly diminished

**78.** Which hill is NOT a part of the Meghalaya Plateau?
   1. Palamu Hills        2. Jaintia Hills
   3. Khasi Hills         4. Garo Hills

**79.** Which series of satellite carrying Very High-Resolution Radiometer (VHRR) provides valuable observations of temperature, cloud cover, wind and related weather phenomena?
   1. IRS series          2. GSAT series
   3. INSAT series        4. SROSS series

**80.** The objective of removal of poverty and attainment of self-reliance was associated with the _____ Five-Year Plan.
   1. Fourth      2. Fifth      3. Seventh      4. Sixth

**81.** The Tripartite Struggle, also known as the Kannauj Triangle Wars, took place in the 8th and 9th centuries, between which of these three great Indian dynasties?
   1. The Paramars, The Chauhans The Gahadavalas
   2. The Palas, The Pratiharas and The Rashtrakutas
   3. The Pandayas, The Pratiharas and The Rashtrakutas
   4. The Cholas, The Pratiharas and The Rashtrakutas

**82.** Which of following Articles of the Constitution, gives the right to consult a legal practitioner of one's choice?
   1. Article 19     2. Article 21   3. Article 22   4. Article 20

**83.** A project for purveying microcredit by linking Self-Help Groups (SHGs) with banks was launched by _____ in 1992.
   1. NABARD     2. SIDBI     3. RRB     4. IRMA

**84.** Which of the following is NOT a factor which should be kept in mind when planning meals for a family?
   1. Environment         2. Nutritional need
   3. Economic factor     4. Season

**85.** According to LERMS policy, what percentage of foreign exchange earnings was required to exchange at the official exchange rate as determined by the RBI?
   1. 20%        2. 60%        3. 30%        4. 40%

**86.** 'The Test of My Life' is an autobiography of which of the following cricketer?
   1. MS Dhoni            2. Yuvraj Singh
   3. Mohammad Kaif       4. Sachin Tendulkar

**87.** The Sattriya dance form was introduced in 15th century AD by _____.
   1. Govindacharya              2. Vallabhacharya
   3. Mahapurusha Sankaradeva  4. Chaitanya Mahaprabhu

**88.** Which of the following is a temperate marine climate with substantial rainfall in all seasons?
   1. Am        2. BSh        3. BSk        4. Cfb

**89.** Who among the following discovered the concept of expanding universe?
   1. Edwin Hubble         2. Carl Edward Sagan
   3. Charles Messier      4. Tycho Brahe

**90.** Which of the following statements is/are true about the communication development in India?
   A. TV services began in India before Independence.
   B. TV was delinked from All India Radio.
   C. Doordarshan got a separate identity in 1976.
   1. Only C              2. Both A and B
   3. Both A and C        4. Both B and C

**91.** Who among the following repealed the Vernacular Press Act of 1878?
   1. Lord Ripon          2. Lord Northbrook
   3. Lord Lytton         4. Lord Dufferin

**92.** The formal British rule in India is understood to have commenced in 1757, after the Battle of _____.
   1. The Battle of Plassey     2. The Battle of Wandiwash
   3. The Battle of Buxer       4. The battle of Cuddalore

**93.** Scurvy is caused by not having enough _____, resulting in general weakness, anaemia, gum disease and skin bleeding.
   1. Cyanocobalamin      2. Ascorbic acid
   3. Niacin              4. Thiamine

**94.** Who among the following holds the authority of transferring judges from one High Court to another after consulting with the Chief Justice of India?
   1. The Attorney General    2. The Vice President
   3. The President           4. The Prime Minister

**95.** 'Dollar Bahu' is written by whom among the following Indian authors?
   1. Kiran Desai         2. Arundhati Roy
   3. Sudha Murty         4. Khushwant Singh

**96.** Which of the following countries will host the Men's FIH Hockey World Cup – 2023?
   1. Pakistan     2. Australia   3. Germany   4. India

**97.** Which of the following is NOT a neutral oxide?
   1. $N_2O$        2. $Na_2O$        3. NO          4. CO

**98.** The Prime Minister 'Gati Shakti' scheme is launched by the Government of India for which type of infrastructure development from the following?
   1. Schools and education    2. Hospitals
   3. Agricultural production  4. Transport

**99.** 'Kalbelia' is a folk-dance of which of the following states of India?
   1. Himachal Pradesh    2. Rajasthan
   3. Tamil Nadu          4. Assam

**100.** Which of the following statements is NOT correct about the decline of wildlife in India?
   1. Incidence of forest fire is not a reason of declining wildlife
   2. Agriculture and human settlement
   3. Grazing by domestic cattle
   4. Industrial and technological advancement

## Quantitative Aptitude

**101.** The ratio of the number of boys to that of girls in a school is 5 : 2. If 87% of the boys and 80% of the girls passed in the annual exams, then find the percentage of students who failed in the annual exams.
   1. 18%        2. 16%        3. 15%        4. 17%

**102.** Aarush and Maahi together can do a piece of work in 10 days. If Aarush alone can do the same work in 15 days, then how many days Maahi alone will take to do the same work?

**1.** 25      **2.** 15      **3.** 30      **4.** 20

**103.** Swati sold a bag to Ankita at a gain of 15%. Aashi bought this bag from Ankita for Rs.24,840. Ankita earned a profit of 20%. At what price would Swati have bought the bag?

     **1.** Rs.18,500    **2.** Rs.18,000   **3.** Rs.16,000   **4.** Rs.20,000

**104.** The population of four villages in 4 years is presented in the following table.

| Village/Year | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| A | 12381 | 12800 | 13045 | 13256 |
| B | 10089 | 11478 | 11502 | 11931 |
| C | 7896 | 7942 | 8069 | 8275 |
| D | 5152 | 5320 | 5346 | 5500 |

What is the average population of village D during all the 4 years?

     **1.** 5295      **2.** 5300      **3.** 5307      **4.** 5315

**105.** The following table shows different types of geysers sold by a company over 6 years (numbers in thousands)

| Year | Types | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| 2007 | 75 | 122 | 103 | 98 | 95 |
| 2008 | 100 | 102 | 103 | 112 | 102 |
| 2009 | 105 | 108 | 112 | 109 | 108 |
| 2010 | 100 | 189 | 123 | 102 | 122 |
| 2011 | 95 | 123 | 102 | 124 | 124 |
| 2012 | 85 | 145 | 134 | 134 | 145 |

Answer the following question based on the table:

The total sales of all the six years are the minimum for which geyser?

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

**106.** The percentage distribution of Anil's expenditure is presented in the given pie chart.
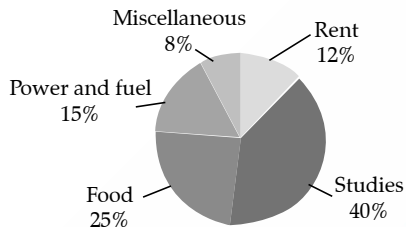


If Anil's monthly expenditure is ₹65,000, how much money does he spend on Food and Rent?

     **1.** ₹24,050    **2.** ₹25,040    **3.** ₹24,500    **4.** ₹25,400

**107.** Geeta runs 5/2 times as fast as Babita. In a race, if Geeta gives a lead of 40 m to Babita, find the distance from the starting point where both of them will meet (correct up to two decimal places).

     **1.** 66.67 m    **2.** 65 m      **3.** 65.33 m    **4.** 66 m

**108.** In a showroom the price of a washing machine is ₹ 65,000. The customer gets cash discount of ₹ 2,000, and gets a scratch card promising percentage discount of 10% to 15%. Determine the difference between the least and the maximum selling prices of the washing machine.
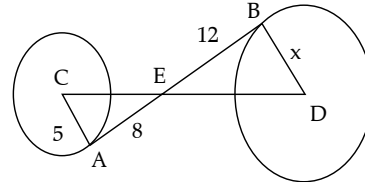
**1.** ₹3,150      **2.** ₹3,570      **3.** ₹3,200      **4.** ₹3,650

**109.** AB is a common tangent to both the circles in the given figure. Find the distance (correct to two decimal places) between the centre of the two circles.



     **1.** 18.98 units   **2.** 23.58 units **3.** 26.59 units **4.** 21.62 units

**110.** Two trains, running between Bangalore and Chennai, start at the same time from their respective locations and proceed towards each other at the speed of 80km/h and 95km/h. When they meet, it is found that one train has travelled 180km more than the other. The distance between Bangalore and Chennai is _____.

     **1.** 1200 km    **2.** 2100 km    **3.** 345 km     **4.** 400 km

**111.** The simplified form of $(7x + 4y)^2 + (7x - 4y)^2$ is:

     **1.** $98x^2 + 32y^2$          **2.** $98x^2 + 32y^2 - 5xy$

     **3.** $32x^2 + 98y^2$          **4.** $98x^2 - 32y^2$

**112.** A man bought two bicycles for ₹3,000 each. If he sells one bicycle at a profit of 10%, then for how much percentage profit should he sell the other bicycle so that he makes a profit of 20% on the whole?

     **1.** 15 Percent    **2.** 25 Percent    **3.** 30 Percent    **4.** 10 Percent

**113.** Which of the following is the smallest ratio?

     **1.** 41 : 92      **2.** 33 : 41      **3.** 42 : 49      **4.** 35 : 47

**114.** If a car covers 75.5 km in 3.5 litres of petrol, how much distance (in km) will it cover in 28 litres of petrol?

     **1.** 603      **2.** 602      **3.** 604      **4.** 600

**115.** Find the effective discount for the scheme – Buy 5 get 3 free.

     **1.** 36.5%      **2.** 37.5%      **3.** 36%      **4.** 37%

**116.** What is the simplified value of (0.00243) (0.2)?

     **1.** 0.3      **2.** 0.03      **3.** 0.003      **4.** 0.0003

**117.** A car travels with a speed of 21 m/sec in the first 10 minutes, 9.0 km in the next 10 minutes and 10 km in the last 10 minutes of its journey. What is the average speed of the car in km/h during its entire journey?

     **1.** 60.0 km/h   **2.** 63.2 km/h   **3.** 62.0 km/h   **4.** 65.3 km/h

**118.** The number 150328 is divisible by 23. If the digits are rearranged in descending order and five times of 13 is subtracted from the new number thus formed, then the resultant number will be divisible by:

     **1.** 3      **2.** 5      **3.** 11      **4.** 2

**119.** What are the values of $x$ and $y$, respectively, from the following equations?

$6x + 7y = 5xy$

$10y - 4x = 4xy$

     **1.** 3 and 4    **2.** 4 and 5    **3.** 2 and 4    **4.** 2 and 5

**120.** The value of the expression $\cos^2 45° + \cos^2 135° + \cos^2 225° + \cos^2 315°$ is:

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

**121.** The average marks of students in five subjects in class X in a school is given in the table.

| Year | History (Out of 200 marks) | Geography (Out of 100 marks) | Mathematics (Out of 200 marks) | Science (Out of 200 marks) | English (Out of 150 marks) |
|---|---|---|---|---|---|
| 1984 | 88 | 46 | 94 | 98 | 60 |
| 1985 | 90 | 35 | 88 | 120 | 90 |
| 1986 | 100 | 45 | 112 | 102 | 66 |
| 1987 | 120 | 38 | 96 | 112 | 45 |
| 1988 | 124 | 54 | 80 | 96 | 57 |

The average percentage marks of which of the following pairs of subjects was the same in 1985?

     **1.** Geography, Mathematics    **2.** Science, Geography      **3.** Science, English      **4.** English, Mathematics

**122.** As shown in the given figure, inside the large semicircle, three semicircles (with equal radii) are drawn so that their diameters all sit on the large semicircle's diameter. What is the ratio between the red and blue areas?



  **1.** 4 : 3      **2.** 1 : 2      **3.** 2 : 1      **4.** 3 : 4

**123.** A car covered the first 100 km at a speed of 50 km/h. It covered next 140 km at a speed of 70 km/h. What is its average speed?

  **1.** 60 km/h    **2.** 62 km/h    **3.** 58 km/h    **4.** 64 km/h

**124.** What is the length of the longest pole that can fit itself in a hall 60 feet long, 30 feet broad and 20 feet high?

  **1.** 50 feet     **2.** 70 feet     **3.** 30 feet     **4.** 20 feet

**125.** Numbers of books issues by a library for 6 months has been represented in the following bar graph.
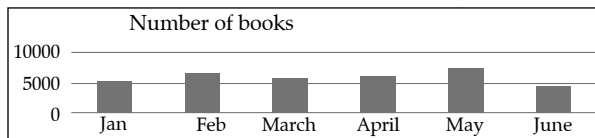


In which month the maximum number of books were issued?

  **1.** Jan      **2.** April      **3.** May      **4.** February

**126.** How many metallic spheres, each of diameter 6 cm can be melted to mould into a solid cylinder of diameter 8 cm and height of 18 cm?

  **1.** 6       **2.** 12       **3.** 8       **4.** 10

**127.** Find the HCF of 238 and 832.

  **1.** 16      **2.** 8       **3.** 2       **4.** 14

**128.** The volume of a wall, six times as high as its breadth and half as long as its height, is 23958 cm³. What is the breadth of the wall?

  **1.** 21 cm    **2.** 15 cm    **3.** 11 cm    **4.** 18 cm

**129.** If Ram's income exceeds Shyam's income by 70% and Shyam's income is less than Sohan's income by 30%, then find the ratio of the incomes of Ram and Sohan.

  **1.** 119 : 100   **2.** 121 : 102   **3.** 120 : 101   **4.** 118 : 99

**130.** What are the values of R and M, respectively, if the given number is perfectly divisible by 16 and 11?

34R05030M6

  **1.** 4 and 6    **2.** 7 and 5    **3.** 5 and 5    **4.** 5 and 7

**131.** If a 4 digit number $x58y$ is exactly divisible by 9, then the least value of $(x + y)$ is:

  **1.** 4       **2.** 5       **3.** 3       **4.** 2

**132.** The value of $\dfrac{2\cos^2\theta - \cos\theta}{\sin\theta - 2\sin^2\theta}$ is:

  **1.** $\sec\theta$    **2.** $\sin\theta$    **3.** $\cot\theta$    **4.** $\tan\theta$

**133.** A sphere is of radius 5 cm. What is the surface area of the sphere?

  **1.** $100\,\pi$ cm²   **2.** $150\,\pi$ cm²   **3.** $200\,\pi$ cm²   **4.** $120\,\pi$ cm²

**134.** The HCF and LCM of two numbers are 126 and 9, respectively. If one of the numbers is 18, then what is the other number?

  **1.** 63      **2.** 36      **3.** 84      **4.** 24

**135.** The given table represents the population of different villages.

| Name of the Village | Number of males | Numbers of females |
|---|---|---|
| A | 1500 | 1220 |
| B | 1460 | 1320 |
| C | 1105 | 1180 |
| D | 1305 | 1170 |

J: denotes the average number of males in villages A, B and C.

K: denotes the average number of females in villages B, C and D.

What is the average of J and K?

  **1.** 1289.17    **2.** 1279.62    **3.** 1278.36    **4.** 1288.62

**136.** If there are 30 million people below 36 years, then the number of people (in millions) in the age group (56–65) is: (consider up to two decimals)

The table shows the percentage of total population of a city in different age groups. Study the table and answer the question.

| Age group | Percentage |
|---|---|
| Up to 15 | 15.00 |
| 16–25 | 20.25 |
| 26–35 | 16.75 |
| 36–45 | 26.25 |
| 46–55 | 15.00 |
| 56–65 | 5.50 |
| 66 and above | 1.25 |

  **1.** 1.16 million    **2.** 3.17 million
  **3.** 1.87 million    **4.** 2.17 million

**137.** If $x + y = 10$, $2xy = 48$ and $x > y$, then find $2x - y$.

  **1.** 6       **2.** 8       **3.** 4       **4.** 3

**138.** Two stations are 120 km apart on a straight line. A train starts from station A at 8 a.m. and moves towards station B at 20 km/h, and another train starts from station B at 9 a.m. and travels towards station A at a speed of 30 km/h. At what time will they meet?

  **1.** 10:30 a.m.   **2.** 10:00 a.m.   **3.** 11:00 a.m.   **4.** 11:30 a.m.

**139.** The sides of a triangular field are 62 m, 186 m and 279 m. Find the greatest length of tape that would be able to exactly measure each of them without any fractions.

  **1.** 62 m     **2.** 93 m     **3.** 31 m     **4.** 30 m

**140.** The simplified value of $(0.2)^3 \times 400 \div 2000$ of $(0.2)^2$ is:

  **1.** $\dfrac{1}{25}$    **2.** $\dfrac{3}{25}$    **3.** $\dfrac{2}{25}$    **4.** $\dfrac{1}{50}$

**141.** The ratio of the total number of students scoring marks less than 50% to that of scoring marks exactly 50% of B is:

| School | Number of students scoring marks less than 50% | Percentage of students scoring marks more than 50% | Number of students appeared |
|---|---|---|---|
| A | 270 | 55 | 600 |
| B | 120 | 40 | 400 |
| C | 300 | 20 | 375 |
| D | 220 | 10 | 350 |
| E | 200 | 25 | 300 |

Study the above table and answer the question.

  **1.** 111 : 12    **2.** 111 : 24    **3.** 101 : 24    **4.** 101 : 12

**142.** What is the total surface area of a cuboid whose length, breadth and height are 7 cm, 5 cm and 9 cm, respectively?

  **1.** 190 cm²   **2.** 403 cm²   **3.** 286 cm²   **4.** 386 cm²

**143.** The curved surface area and circumference at the base of a solid right circular cylinder are 2200 cm² and 110 cm, respectively. Find the height of the cylinder.

  **1.** 24 cm     **2.** 22 cm     **3.** 20 cm     **4.** 18 cm

144. The least common multiple of 48 and 64 is _____ times the highest common factor of 12 and 18.
  **1.** 28     **2.** 32     **3.** 24     **4.** 16

145. If $\cos 48° = \dfrac{m}{n}$, then $\sec 48° - \cot 42°$ is equal to:

  **1.** $\dfrac{m-\sqrt{n^2-m^2}}{m}$     **2.** $\dfrac{m-\sqrt{n^2-m^2}}{n}$

  **3.** $\dfrac{n-\sqrt{n^2-m^2}}{n}$     **4.** $\dfrac{n-\sqrt{n^2-m^2}}{m}$

146. At a construction site, Raju can paint a wall in 36 hours, while Angad can do the same work in 18 hours. Sumit can paint the same wall in 24 hours. In how much time can they paint the wall if they all work together?
  **1.** 9 hours    **2.** 12 hours   **3.** 6 hours    **4.** 8 hours

147. Solve the following equation.

  $\sec^2 \theta \left( \sqrt{1 - \sin^2 \theta} \right) = $ _____ .

  **1.** $\tan \theta$    **2.** $\csc \theta$    **3.** $\sec \theta$    **4.** 1

148. In an election, a candidate secures 42% of the votes polled but is defeated by his only opponent by a majority of 3080 votes, because of 1400 invalid votes. The percentage of invalid votes is _____ .
  **1.** 5%    **2.** 3%    **3.** 4%    **4.** 6%

149. A man borrowed ₹50,000 from a bank at 10% per annum, compounded annually. At the end of every year, he pays ₹15,000 as part payment of the loan and interest. How much does he still owe to the bank after three such installments?
  **1.** ₹16,900    **2.** ₹15,800    **3.** ₹15,200    **4.** ₹16,200

150. Annual production of four different types of cold drinks has been tabulated below. Which of these cold-drinks has encountered maximum percentage increment in production?

| Cold drink | 2020 (units) | 2021 (units) |
|---|---|---|
| Sprite | 5400 | 5800 |
| Coca-cola | 5300 | 5600 |
| Pepsi | 6000 | 6800 |
| Fanta | 1800 | 2700 |

  **1.** Coca-Cola    **2.** Pepsi    **3.** Fanta    **4.** Sprite

## English Comprehension

151. Select the option that expresses the given sentence in passive voice.
  Jack played hide and seek.
  **1.** Hide and seek was played by Jack.
  **2.** Hide and seek had been played by Jack.
  **3.** Hide and seek will be played by Jack.
  **4.** Hide and seek is played by Jack.

152. Select the most appropriate synonym of the given word.
  Progress
  **1.** Development     **2.** Diminishment
  **3.** Halt     **4.** Stagnation

153. Select the most appropriate ANTONYM of the underlined word.
  My teacher asked me to compress the file.
  **1.** Search    **2.** Trace    **3.** Enlarge    **4.** Turn

154. Select the most appropriate ANTONYM of the given word.
  Novel
  **1.** Formal    **2.** Ancient    **3.** Traditional    **4.** Customary

155. Select the most appropriate meaning of the underlined idiom.
  Some colleagues at a workplace are really hard nuts to crack.
  **1.** Hardcore traditions in a family
  **2.** An inflexible person who is hard to convince
  **3.** Someone showing extra concern over little things
  **4.** An easy-goer who can be easily convinced

156. Select the most appropriate meaning of the underlined idiom.
  He was beaming from ear to ear.
  **1.** Playing     **2.** Smiling broadly
  **3.** Criticising bitterly     **4.** Working

157. Select the most appropriate option that can substitute the underlined segment in the given sentence.
  He is a weak student and somehow pulled over the exams.
  **1.** Pulled through     **2.** Pulled down
  **3.** Pulled up     **4.** Pulled together

158. Select the most appropriate ANTONYM of the given word.
  Rife
  **1.** Scarce    **2.** Ripe    **3.** Popular    **4.** Serene

159. Select the INCORRECTLY spelt word.
  **1.** Pried    **2.** Prophet    **3.** Prodigy    **4.** Proteg

160. Select the option that substitutes the bracketed word-segment correctly and completes the sentence meaningfully.
  Manthan and Pranav (sang together in a concert).
  **1.** chanted together in a show
  **2.** enunciated together in a show
  **3.** enjoined together in a show
  **4.** articulated together in a show

161. Select the most appropriate meaning of the given idiom.
  At sea
  **1.** To overcome     **2.** Obsolete
  **3.** At a loss or perplexed     **4.** To blunder

162. Select the sentence that uses the idiom correctly.
  **1.** Flowers bloom under the weather.
  **2.** Trees shed their leaves under the weather.
  **3.** She missed the exam as she felt under the weather.
  **4.** Reena was walking on the lawn under the weather.

163. Select the INCORRECTLY spelt word.
  **1.** Impoverish    **2.** Ostacise    **3.** Necessitate    **4.** Grandeur

164. Select the most appropriate option that can substitute the underlined segment in the given sentence.
  The story did not go by well enough.
  **1.** go through    **2.** go down    **3.** go off    **4.** go into

165. Select the most appropriate idiom that can substitute the italicised words in the given sentence.
  You get a **good and comprehensive idea** of the town from the clock tower situated in the centre of the town.
  **1.** blind date     **2.** body and soul
  **3.** bird's eye view     **4.** blind alley

166. Select the most appropriate option that can substitute the given group of words.
  The action or offence of speaking sacrilegiously about God or sacred things
  **1.** Contamination     **2.** Irreverence
  **3.** Blasphemy     **4.** Renunciation

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

Jason was sent to school in England, where he excelled academically and developed an interest in theatre and writing.

1. Accomplished      2. Pursued
3. Continued      4. Failed

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

Treat with a vaccine, usually by injection to promote immunity against a disease

1. Innuendo      2. Inoculate
3. Innumerate      4. Innovate

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

One who knows all things

1. Omniscient      2. Omnipotent
3. Oligarchy      4. Ostracise

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

Lethal

1. Drowsy    2. Noisy    3. Slimy    4. Deadly

171. Select the most appropriate option to fill in the blank.

After a tiring day, the workers decided to _____ to restore their energy.

1. have an axe to grind      2. put a spoke in the wheel
3. bring to book      4. hit the sack

172. Select the option that expresses the given sentence in active voice.

The villain of the play was hated by the audience.

1. The audience hated the villain of the play.
2. The villain hated the audience of the play.
3. The audience had hated the villain of the play.
4. The audience was hating the villain of the play.

173. Select the most appropriate meaning of the underlined idiom.

Even when the child accused the relative of inappropriate behaviour, the parents continued to play perfect hosts at the party instead of addressing the elephant in the room.

1. Ignoring someone who seeks attention through false stories
2. Punishing someone for inappropriate behaviour
3. Revealing the secrets
4. A big problem everyone is ignoring or afraid to talk about

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

A group of worshippers

1. Posse      2. Caravan
3. Constellation      4. Congregation

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

To stand one's ground

1. To maintain one's position
2. To fight for the same position
3. To stand up
4. To stand in one's own land

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

Their vision was very clear: if Indians were to play a meaningful role in the community of nations, they must be second to none in the application of advanced technologies to their real-life problems.

1. Mistreatment      2. Implementation
3. Corruption      4. Misuse

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

Someone who is reserved and shy

1. Social      2. Extrovert   3. Recessive   4. Introvert

178. 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.

His cellphone is / different and costlier / than mine.

1. No error      2. Than mine
3. His cellphone is      4. Different and costlier

179. Select the most appropriate synonym of the highlighted word.

He **imputes** his ability to play great football to an inspirational coach.

1. Validates      2. Contributes
3. Attributes      4. Amputates

180. Select the most appropriate synonym of the underlined word in the following sentence.

Ideas are present in the consciousness, which when released and given scope to grow and take shape, can lead to successful events.

1. ignorance      2. thoughtlessness
3. awareness      4. negligence

181. Select the INCORRECTLY spelt word in the following sentence.

Rajib is not only an extremely reputed conoisseur of art but also a successful entrepreneur.

1. Conoisseur      2. Reputed
3. Entrepreneur      4. Successful

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

Addicted

1. Disinclined      2. Unaccustomed
3. Inclined      4. Averse

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

The discovery of treasure under the Bermuda Triangle is probably a hoax.

1. Analogy    2. Bonanza   3. Delusion   4. Trick

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

You can ask Mr. Dinakar for anything; he would give you the shirt off his back.

1. is willing to do anything to help another person
2. is a person who makes the decisions
3. is a person who is selfish
4. is a person who is arrogant

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

The ship sank because the engineer has not called for help.

1. was not call for help      2. did not call for help
3. will not call for help      4. did not called for help

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

Fascinating

1. Unforgettable      2. Tempting
3. Seductive      4. Repulsive

187. Select the INCORRECTLY spelt word.

1. Aquatic      2. Notorious
3. Centinarian      4. Mercenary

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

A happy development or happening of events by chance.

1. Incident      2. Suddenly
3. Serendipity      4. Occurrence

**189.** Select the INCORRECTLY spelt word.
1. Extacted                    2. Expected
3. Extracted                   4. Acceptable

**190.** Select the most appropriate option to fill in the blank.

James Bernard was undoubtedly one of the greatest elocutionists of the world. Everyone agreed that he possessed the _____.
1. Yellow press                2. Fourth estate
3. Curtain lecture             4. Gift of the gab

**Comprehension:**

Read the given passage and answer the questions that follow. It is not an exaggeration to say that the question of where and when the Black Death, the deadliest pandemic ever, originated is one of the biggest mysteries in human history. After all, the Black Death was the first wave of the second plague pandemic of the 14th to early 19th centuries. It killed some 50-60% of the population in Europe, the Middle East and North Africa and an unaccountable number of people in Central Asia.

Different proposals, based on competing theories, have been put forward. But in 2017, I came across some records describing an intriguing medieval cemetery in Kara-Djigach, Chüy Valley, northern Kyrgyzstan, which I suspected may hold the key. As part of a multidisciplinary team co-led by Maria Spyrou at University of Tubingen, we have now investigated several specimens from individuals buried at that site – and come up with an answer.

The idea that the Black Death originated in the east – territories overlapping, roughly speaking, Central Asia, Mongolia and China – dates back to the contemporaries of the pandemic in Europe and the Islamic world. The modern, academic Chinese origin theory dates back to at least to in 1756-8 and a publication about the history of Central Asia by French scholar Joseph de Guignes.

**191.** What is the tone of the speaker?
1. Humorous                    2. Explanatory
3. Pessimistic                 4. Informal

**192.** What is the theme of the passage?
1. Pitfall of Black Death      2. Impact of Black Death
3. Origin of Black Death       4. History of Black Death

**193.** How does the passage describe Black Death?
1. The first wave of the second plague pandemic
2. The worst specimen of human created tragedy
3. The specimen of human evolution and its evidence
4. The initiator of all the future pandemics

**194.** Select the suitable word given in the passage which means 'areas of land under the jurisdiction of a ruler or state'.
1. Territories                 2. Contemporaries
3. Population                  4. Mysteries

**195.** Which of the following may be the probable origin of Black Death, according to the passage?
1. Kyrgyzstan  2. India        3. Mongolia  4. China

**Comprehension:**

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

All elephants (1)_____ several distinctive features, the most notable of which is a long trunk or proboscis, used for many (2)_____, particularly breathing, lifting water and grasping objects. Their incisors grow (3)_____ tusks, which can serve as weapons and as tools for moving objects and digging. Elephants' large ear flaps help to control their body temperature. Their pillar-like legs (4)_____ carry their great weight. African elephants have larger ears and concave backs while Asian elephants have smaller ears and convex or level backs. One of the biggest threats to elephant populations is the ivory trade, as the animals are poached for their ivory tusks. Other threats to (5)_____ elephants include habitat destruction and conflicts with local people. Elephants are used as working animals in Asia. In the past they were used in war; today, they are often put on display in zoos and circuses.

**196.** Select the most appropriate option to fill in blank number 1.
1. have        2. will have  3. had        4. has

**197.** Select the most appropriate option to fill in blank number 2.
1. schemes     2. means      3. capacities  4. purposes

**198.** Select the most appropriate option to fill in blank number 3.
1. for         2. too        3. into        4. towards

**199.** Select the most appropriate option to fill in blank number 4.
1. can         2. should     3. would       4. could

**200.** Select the most appropriate option to fill in blank number 5.
1. wild        2. tame       3. dangerous  4. elegant

## Answer Key

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

## Answers with Explanations

**1. Option (2) is correct.**

Given expression:
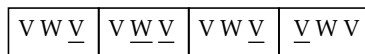
144 C 8 B 20 A 81 D 3 = ?

After putting the signs, we get:

$144 - 8 \times 20 + 81 \div 3 = ?$

$144 - 160 + 27 = ?$

$11 = ?$

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

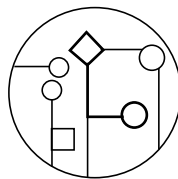The pattern of the series is as follows:

| V W V̲ | V̲ W̲ V̲ | V W V̲ | V̲ W V |
|---|---|---|---|

Therefore, VWVVV will complete the series.

**3. Option (2) is correct.**
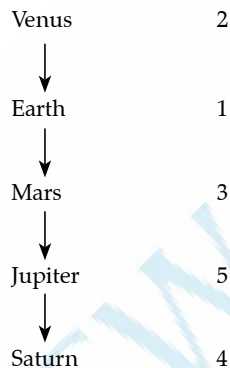
Option figure (2) in which the given figure is embedded.

**4. Option (2) is correct.**

As we know, force is measured in Newton. Similarly, current is measured in Ampere.

**5. Option (3) is correct.**

The logical and meaningful order of the given words is as follows:

| Venus | 2 |
|---|---|
| Earth | 1 |
| Mars | 3 |
| Jupiter | 5 |
| Saturn | 4 |

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

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

The blood relationship tree is as follows:
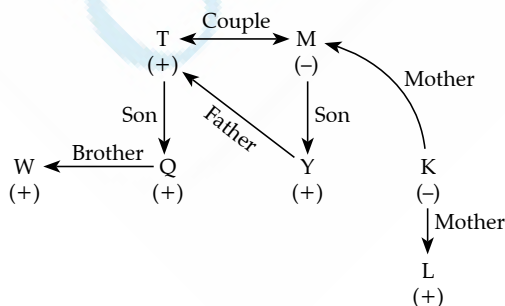
From the above diagram, K is the daughter to T.

**7. Option (3) is correct.**

Given set: (6, 12, 228)

$6^3 = 216 + 12 = 228$

And, (8, 3, 515)    $8^3 = 512 + 3 = 515$

Similarly, for option (3)

(4, 18, 82)    $4^3 = 64 + 18 = 82$

**8. Option (2) is correct.**

The pattern of the series is as follows:

| A A C̲ D E F | A̲ A C D E̲ F | A A C̲ D E F | A̲ A C D E F |
|---|---|---|---|
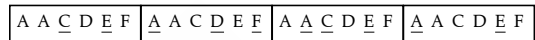
Therefore, CEADFACEAE will complete the series.

**9. Option (3) is correct.**

Given set: (17, 29, 46)

$17 + 29 = 46$

And, (24, 36, 60)

$24 + 36 = 60$

Similarly, for option (3) (21, 33, 54)

$21 + 33 = 54$

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

The diagram for the given problem is as follows:
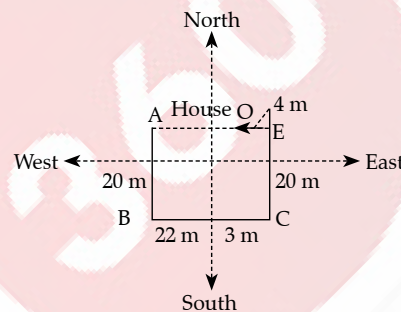
According to the given figure,

The school is to the north-east of Diogo's house.

Using Pythogoras' theorem:

$OD^2 = OE^2 + DE^2$

$OD^2 = 3^2 + 4^2$

$OD^2 = 9 + 16$

$OD = \sqrt{25} \Rightarrow OD = 5 \text{ m}$

Hence, the correct answer is 5m due north-east.

**11. Option (3) is correct.**

The pattern of the series is as follows:

95, 73, 53, ?, 19, 5

$95 - 22 = 73$

$73 - 20 = 53$

$53 - 18 = \mathbf{35}$

$35 - 16 = 19$

$19 - 14 = 5$

Therefore, 35 will complete the series.

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

Option figure (1) will complete the figure series.
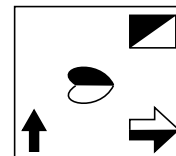
This can be done bye elimination method.

**13. Option (2) is correct.**

The pattern of the series is as follows:
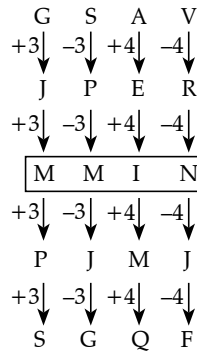


Therefore, MMIN will complete the series.

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

The direction diagram of Anita is as follows:
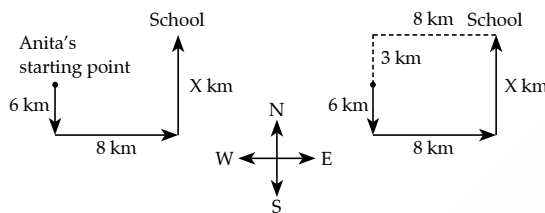


Here, X = 6 km + 3 km = 9 km.

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

From figure 1: B – A – C

From figure 2: B – E – D

Now, A is opposite to E, C is opposite to D, and B is opposite to F. Therefore, B will be on the face opposite to the F.

**16. Option (4) is correct.**

Given expression:

$76 \times 4 + 13 \div 8 - 3 = ?$

After putting the signs, we get:

$76 \div 4 \times 13 - 8 + 3 = ?$

$19 \times 13 - 5 = ?$

$247 - 5 = ? \Rightarrow 242 = ?$

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

The correct mirror image is as follows:
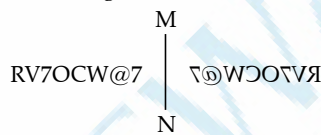


**18. Option (2) is correct.**

The pattern of the series is as follows:
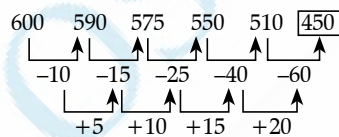


Therefore, 450 will complete the series.

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

Given that: SO is written as 34
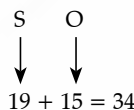


Here, the given letters are directly related to the English alphabetical order of the respective letter and all the respective numbers of the letters added, and we get the result.

And, BED is written as 11
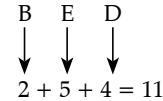


Similarly, MOAN is written in the same way
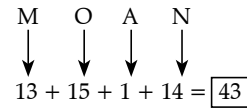


**20. Option (4) is correct.**

The pattern of the series is as follows:
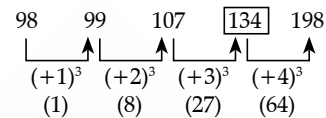


Therefore, 134 will complete the series.

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

Given expression:

35 A 68 D 34 C 16 B 1

After putting the signs, we get:

$35 + 68 \div 34 - 16 \times 1$

$= 35 + 2 - 16 = 37 - 16 = 21$

**22. Option (4) is correct.**

Option figure (4) in which the given figure is embedded.



**23. Option (3) is correct.**

Given that: DUNE : BGSXLQCH
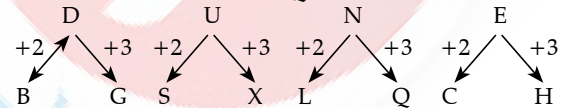


Here, each letter is first increased by 2, then increased by 3 to get the main letter.

And, NEED : LQCHCHBG
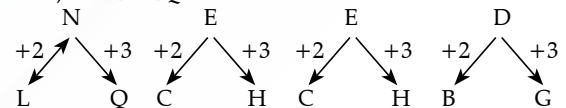


Similarly, for KING : INGLLQEJ
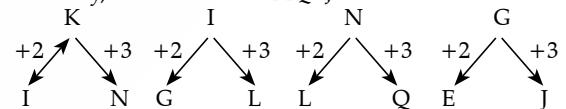


**24. Option (3) is correct.**

Given set: (23, 25, 16)

$25 - 23 = 2, 2^4 = 16$

And, (21, 17, 256)

$21 - 17 = 4, 4^4 = 256$

Similarly, for option (3),

(18, 15, 81)

$18 - 15 = 3, 3^4 = 81$

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

Given expression: 17 J 6 K 21 L 93 I 3 L 35 K 12 = ?
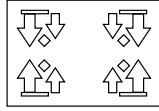
After putting the signs, we get:

$17 \times 6 - 21 + 93 \div 3 + 35 - 12 = ?$
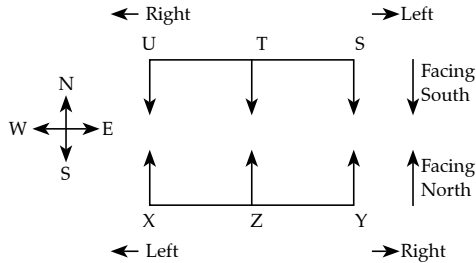
$102 - 21 + 31 + 23 = ?$

$135 = ?$

**26. Option (2) is correct.**

After unfolding the paper, option (2) figure resembles the same.



**27. Option (2) is correct.**

The sitting arrangement of six people is as follows:



From the above arrangement, Y sits at the extreme right end of the row facing north.

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

Given that:

$$\left[\frac{1}{97}\right]:\left[\frac{1}{63}\right]$$

$97 - 63 = 34$

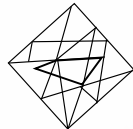And,

$$\left[\frac{1}{89}\right]:\left[\frac{1}{55}\right]$$

$89 - 55 = 34$

Similarly, for

$$\left[\frac{1}{114}\right]:?$$

$114 - 80 = 34$

**29. Option (2) is correct.**

Option figure (2) in which the given figure is embedded.



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

The best-suited Venn diagram of the given statements is as follows:
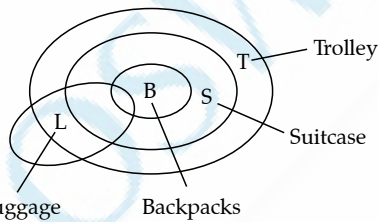


From conclusion I: Some suitcases are luggages is true.
From conclusion II: Some backpacks are trolleys is true.
From conclusion III: All trolleys are luggages is false.
Therefore, both conclusions I and II follow.

**31. Option (2) is correct.**

The pattern of the series is as follows:



Therefore, 62208 will complete the series.

**32. Option (2) is correct.**

The correct order of the given words as they would appear in an English dictionary is as follows:

Interdependent 4

Interdict 3

Interdisciplinary 2

**Interest** 1

Intersect 5
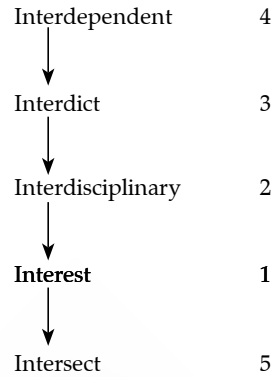
Therefore, 43215 is the correct order.
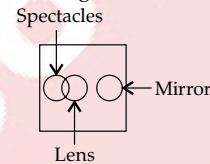
**33. Option (4) is correct.**

The pattern of the figure series is as follows:
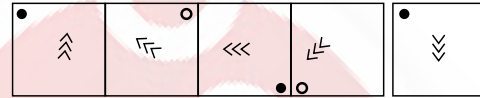


The circle is shaded and unshaded alternately as it moves clockwise, while the other element (the arrow) moves anticlockwise.
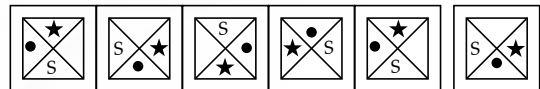
**34. Option (3) is correct.**

The Venn diagram of the given condition is as follows:



As we know, the lens is used for spectacles, while the mirror is different from the lens.
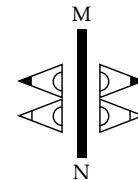
**35. Option (1) is correct.**

The pattern of the figure series is as follows:



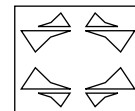Here, the star moves clockwise while the black dot and S moves anticlockwise.

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

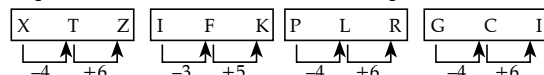The mirror image of the given figure is as follows:



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

After unfolding the paper, it will appear as follows:
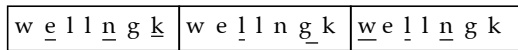


**38. Option (2) is correct.**

Except for IFK, all others have the same pattern.

Therefore, IFK is the odd one out.
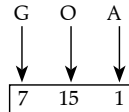
**39. Option (2) is correct.**
The pattern of the series is as follows:

| w e̲ l l n̲ g k̲ | w e l̲ l n g̲ k | w e̲ l l̲ n̲ g k |

Therefore, enklgwln will complete the series.

**40. Option (1) is correct.**
Given that: GOA is written as 7151

$$G \quad O \quad A$$
$$\downarrow \quad \downarrow \quad \downarrow$$
$$\boxed{7 \quad 15 \quad 1}$$
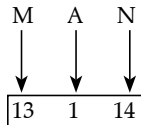
Here, the given letters are directly related to the English alphabetical order of the respective letter.
DOG is written as 4157

$$D \quad O \quad G$$
$$\downarrow \quad \downarrow \quad \downarrow$$
$$\boxed{4 \quad 15 \quad 7}$$

Similarly, for MAN

$$M \quad A \quad N$$
$$\downarrow \quad \downarrow \quad \downarrow$$
$$\boxed{13 \quad 1 \quad 14}$$
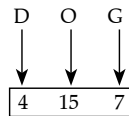
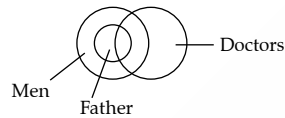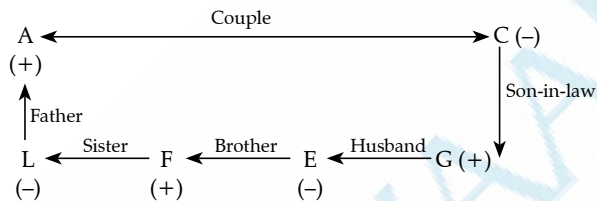**41. Option (4) is correct.**
The Venn diagram of the given condition is as follows:



Here, all fathers are men, but all men cannot be doctors.
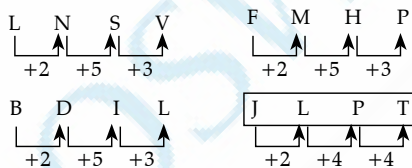
**42. Option (1) is correct.**
The blood relationship tree is as follows:



From the above diagram, A is husband to C.

**43. Option (4) is correct.**
Except for JLPT, all others have the same pattern.



Therefore, JLPT is the odd one out.

**44. Option (2) is correct.**
Given that: CAKE is written as 6.
Here, the total number of letters in the word "CAKE" is 4, and after adding 2 to 4, we get the answer. That is, 4 + 2 = 6
And, JUICE is written as 7
So, the total number of letters in the word "JUICE" is 5, and after adding 2 to 5, we get the answer. That is,
5 + 2 = 7
Similarly, for JUG, the total number of letters is 3, and after adding 2 to 3, we get the answer. That is,
3 + 2 = 5

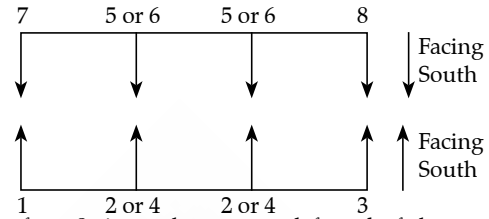Therefore, JUG is written as 5.

**45. Option (1) is correct.**
Given expression: 200 C 12 B 15 A 26 D 13
After putting the signs, we get:
200 – 12 × 15 + 26 ÷ 13
= 200 – 180 + 2 = 22

**46. Option (2) is correct.**
The sitting arrangement of eight people is as follows:



Therefore, 8 sits at the extreme left end of the row of people sitting facing south.
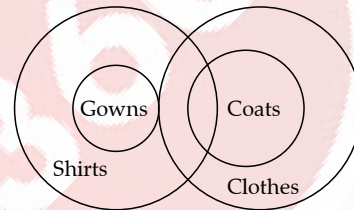
**47. Option (1) is correct.**
Given expression: 34 A 15 B 3 C 11 B 2 A (51 D 17) = ?
After putting sign, we get:
= 34 + 15 × 3 – 11 × 2 + (51 ÷ 17)
= 34 + 45 – 22 + 3 = 60

**48. Option (3) is correct.**
The best-suited Venn diagram of the given statements is as follows:



From conclusion I: All gowns are shirts is false.
From conclusion II: Some shirts are coats is true.
From conclusion III: All coats are clothes is false.
Therefore, only conclusion II follows.

**49. Option (3) is correct.**
Given that: FRIDAY is written as KTHACF
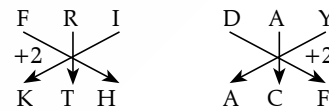


The given word's letters are divided into two parts of three letters each, and their positions are switched, increasing by two for each letter.
And, MOSTLY is written as UQOANV
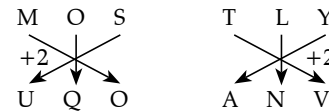


Similarly, GINGER is written in the same way



Therefore, GINGER is written as PKITGI.

**50. Option (2) is correct.**
Given expression: 24 – 20 × 12 + 18 ÷ 5
After interchanging the signs, we get:
24 × 20 ÷ 12 – 18 + 5 = 40 – 18 + 5 = 27

**51. Option (1) is correct.**
Former Indian cricketer Sachin Tendulkar's autobiography is titled "Playing It My Way". It was unveiled on November 5, 2014, in Mumbai. The book summarises Tendulkar's childhood, his 24-year international career, and aspects of his life that have not previously been made public.

**52. Option (1) is correct.**
Part III of The Indian Constitution contains Fundamental Rights (Articles 12–35), which is also referred to as the Magna Carta of India. Important Points King John of England issued the Charter of Rights known as the Magna Carta. It is the first written document on citizens' fundamental rights. Part III of the Indian Constitution contains the Fundamental Rights. Articles 12-35 comprise it. They are based on the Bill of Rights of the United States of America. Part III includes a lengthy and exhaustive list of justiciable Fundamental Rights. These are more ornate than anywhere else on the planet. As a result, Part 3 of the Indian Constitution is known as the Magna Carta of India.

**53. Option (1) is correct.**
A variety of microorganisms cause plant diseases (wheat, sugarcane, rice, potato, apple, orange, and others). Wheat rust is a fungi-caused plant disease. Crop yield is reduced by the wheat rust disease. Their means of transmission are air and seeds. Chemicals that kill microbes can be used to control them. Wheat rust is a destructive fungal disease caused by a fungus that infects wheat (such as Puccinia graminis). The pathogen is harmful to winter wheat because it overwinters in temperate zones. Infections can reduce yield by up to 20%, which is exacerbated by dying leaves that feed the fungus.

**54. Option (2) is correct.**
If a country or group is self-sufficient, it can produce or make everything that it needs. Avoiding imports of goods that could be produced in the country will maximize the use of domestic resources and reduce the need to borrow from outside sources. As a result, it is a sign of self-sufficiency. Increased imports of goods that could be produced in the country will increase the country's need to borrow from other countries. As a result, it is not a sign of self-sufficiency. Increased exports of goods that cannot be produced in the country will place additional strain on the country's economy. As a result, it is not an indicator of self-reliance. Avoiding exports of goods that could be produced in the country means passing up an opportunity to strengthen the country's economy.

**55. Option (4) is correct.**
Beijing defeated Almaty, Kazakhstan, in a 44-to-40 vote for the 2022 Winter Olympics. This makes Beijing was the first city to host both the summer and winter Olympics. A panda named Bing Dwen Dwen has been revealed as the mascot for the Beijing Winter Olympics 2022. The Olympics is a multi-sport international competition. It takes place every four years. It includes selected players from several countries. The Olympic logo consists of five rings and one icon representing the venue. The Olympic logo rings are colored in the following order: blue, yellow, black, green, and red. Asia, Africa, America, Australia, and Europe are all represented.

**56. Option (4) is correct.**
Part IV of the Indian Constitution directs the State to provide 'Equal justice and free legal aid'. Article 39A is a part of the State Policy Directive Principles (DPSP). It was mentioned in Part IV of the Indian Constitution (Article 36 - 51) and was borrowed from the Irish Constitution. Article 51A is related to Part IVA's Fundamental Duties and borrows from USSAR (Russia). Article 14 is concerned with the equal protection of the laws. Article 15 is concerned with the prohibition of discrimination.

**57. Option (2) is correct.**
Mridangam or Madhalam (barrel drum), Idakka (hourglass drum), flute, Veena, and Kuzhitalam are the most common musical instruments used in Mohiniyattam (cymbals). Mohiniyattam is based on the lasya style of Natya Shastra. Mohiniyattam, along with Kathakali, is one of the classical dance forms that originated in Kerala. Mohiniyattam gets its name from the word "Mohini", the feminine form of Lord Vishnu, the word means dance of Mohini. The dance focuses heavily on facial expressions and hand gestures. Dr. Sunanda Nair was the first person in India to earn a Master's degree in Mohiniyattam. Sunanda Nair, Kalamandalam Kalyanikutty Amma, Jayaprabha Menon, Pallavi Krishnan, Gopika Varma, Vijayalakshmi, Radha Dutta, and Rema Shrikant are notable Mohiniyattam dancers.

**58. Option (4) is correct.**
Plants require nutrients to function properly. Nutrients are classified as macronutrients or micronutrients. Iron is classified as a micronutrient because plants require less iron than macronutrients. Hence I pair is incorrect. Calcium is a macronutrient that is essential for plants. The element serves both structural and physiological purposes. As a result, the II pair is incorrect. Macronutrients such as carbon, hydrogen, oxygen, nitrogen, phosphorous, sulfur, potassium, calcium, and magnesium are abundant in plant tissue. Iron, manganese, copper, molybdenum, zinc, boron, chlorine, and nickel are examples of micronutrients, which are trace elements that are required in very small amounts.

**59. Option (4) is correct.**
The Indian Communist Conference was held in Kanpur in 1925, and M.N. Roy founded the Communist Party of India (CPI) in December 1925. The Communist Party of India (CPI) was founded in Tashkent in 1920 by M.N. Roy, Abani Mukherjee, and others. (As it was in India, but it was formed officially in India only in 1925 by the same founders). The Communist Party of India (CPI) is one of eight national parties in India. The Communist Party of India (Marxist) is a national party that split from the CPI in 1964 due to an ideological schism. India's recognized national parties include the Bahujan Samaj Party, the Bharatiya Janata Party, and the Congress Party. TMC, Indian National Congress, Nationalist Congress Party, and Communist Party of India (Marxist).

**60. Option (3) is correct.**
The Kakori Train Conspiracy was a political robbery and incident that occurred on August 9, 1925, in the small town of Kakori. The Hindustan Republic Association (HRA), led by Ram Prasad Bismil and supported by Ashfaqulla Khan, Roshan Singh, Chandrashekhar Azad, and many others, organized this robbery to steal British government funds. Ram Prasad Bismil, Ashfaqulla Khan, and Roshan Singh were hanged on December 19, 1927, for their roles in the Kakori Train Conspiracy.

**61. Option (4) is correct.**
Under the Pradhan Mantri Gram Sadak Yojana, Jammu and Kashmir will build 3,300 kilometers of rural roads between 2020 and 2021. The Ministry of Rural Development launched the Pradhan Mantri Gram Sadak Yojana scheme. It was introduced in 2000 by then-Indian Prime Minister Late Atal Bihari Vajpayee. The Government of India launched the Pradhan Mantri Gram Sadak Yojana (PMGSY) to connect unconnected villages.

**62. Option (4) is correct.**
After the death of Mohammad Ghori in 1206 AD, Qutubuddin Aibak became the ruler of India. Because of his generosity, he was known as Lakh Baksh and founded the Slave Dynasty in India. He died while playing Chaugan or Polo in 1210 AD.

**63. Option (4) is correct.**

The President of India has complete executive authority. The President appoints the Prime Minister, who also appoints other ministers on the Prime Minister's advice. The President of India is known as the Nominal Head because he is the figurehead; all decisions are made in his name, but the Prime Minister has real power. He is obligated to follow the advice of the ministerial council. The President's power is also not absolute. The president can only declare a state of emergency on the advice of the cabinet.

**64. Option (2) is correct.**

The atomic number of an element is determined by the number of protons in it. An element's atomic number is equal to the number of protons in the nucleus of that element's atom. It's used to distinguish one element from another. Each element has a distinct atomic number. The elements in the modern periodic table are arranged in increasing atomic number order.

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

Kathak is a classical dance form that originated in Northern India's Uttar Pradesh, where Kathakars or storytellers portray epic tales from Hindu scriptures such as the Mahabharata and Ramayana. Kathakars use rhythmic foot movements, hand gestures, facial expressions, and eye work to tell stories. This performing art, which incorporates legends from ancient mythology and great Indian epics, particularly from Lord Krishna's life, grew in popularity in the courts of North Indian kingdoms. The Jaipur Gharana, the Benaras Gharana, and the Lucknow Gharana are the more well-known forms of this genre, which differ primarily in the emphasis placed on footwork versus acting.

**66. Option (2) is correct.**

The Hirakud Dam Project is a multipurpose project that will control flooding, provide irrigation, and generate electricity. In the state of Odisha, a dam is being built across the Mahanadi River. This is one of India's oldest hydropower projects, as it was the country's first major multi-purpose river valley project after independence. To address the issue of floods in the Mahanadi delta, Sir M. Visveswararya proposed a thorough investigation into storage reservoirs in the Mahanadi basin following the destructive floods of 1936.

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

The International Olympic Committee has introduced several new events for the 2020 Tokyo Olympics. The IOC's executive board meeting in Lausanne, Switzerland, in 2018, decided to add the new events. The main reason for adding these new events is to demonstrate the IOC's commitment to gender equality and to appeal to young people. A mixed 4 x 400m race is among the 14 new events, which also include 3-on-3 basketball, the mixed relay, mixed swimming, mixed team archery, and so on. The International Olympic Association was established on June 23, 1894, in Paris, France. Thomas Bach is the current president, and the headquarters are in Lausanne, Switzerland.

**68. Option (4) is correct.**

The competition was set to take place in Copenhagen, Denmark, until the Danish Gymnastics Federation backed out in July 2020, and Kitakyushu was announced as the new host city. China wins the most medals, with five gold, one silver, and two bronze. The championships were held for the first time in 1903.

**69. Option (2) is correct.**

Kuchipudi dance can be divided into three categories based on its mode of performance and usage: Nritta, Nritya, and Natya. Nritta means "pure dance," a presentation of rhythm through graceful body movement. It always reflects the mood, Bhava, and Rasa underlying the dance compositions. The fundamental concepts of nritta are tala and laya. "Nrittm talalayasritam," as given in Dasarupaka, emphasizes the fundamental concepts of nritta. Footwork is highlighted in this.

**70. Option (4) is correct.**

Sarhul festival, the most popular tribal celebration in Jharkhand, was held on April 4, 2022. Sarhul means to worship trees. It is observed by tribal communities of the local Sarna religion, particularly the Munda, Ho, and Oraon tribes. Every year at the beginning of spring in the first month of the Hindu calendar, on the third day of the moon or the fortnight of 'Chaitra,' it is celebrated.

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

El Nino is a term used to describe the unusual warming of the central and east-central equatorial Pacific Ocean, which has an impact on global weather. The warmer waters of the Pacific Ocean cause winds to reverse in various regions, such as the trade winds that blow toward India. It is a complex weather system that appears every three to seven years and brings drought, floods, and other weather extremes to various parts of the world. Over India, El Nino has typically been associated with drought and La Nina with rain.

**72. Option (2) is correct.**

The Constitution (Eighty-sixth Amendment) Act of 2002 inserted Article 21-A into the Indian Constitution, making free and compulsory education for all children aged six to fourteen years a Fundamental Right.

**73. Option (3) is correct.**

Liverworts, like the species mentioned above, are a type of non-vascular plant, the majority of which are terrestrial. The name "liverworts" comes from the ancient belief that these shops could cure liver conditions. Plantae includes liverworts in the division of the Marchantiophyta. While the shops are small and often overlooked, liverworts can be established encyclopedically anywhere shops can grow.

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

The Angami's main festival is Sekrenyi. It is a ten-days festival that represents purification and sanctification (before going to war). Firewood is collected two days before the main festival. Animals are hunted the next day in preparation for the meal. The main celebration begins the following day. Zukhophe, the males clean the wells outside the village at night in preparation for the first day. Only young and pure bachelor boys are permitted to perform this task. Thekra hie is the most intriguing aspect of the festival. Thekra is a festival component in which young people from the village sit together and sing traditional songs throughout the day.

**75. Option (3) is correct.**

The Speaker of the Legislative Assembly conducts internal business and determines whether a bill is a money bill or not. He maintains house discipline and decorum and has the authority to suspend a member for disruptive behavior. His official role is to moderate the debate, make procedural rulings, and announce the results of votes. He decides who may speak and has the authority to discipline members who violate chamber or house procedures. He determines whether or not a bill is a money bill. There is no provision in the constitution for a joint session of the state legislative assembly if the two houses cannot agree on an ordinary bill.

**76. Option (2) is correct.**
The Muslim League President Fazl-ul-Haq convened the All-India Khilafat Conference, a joint conference of Muslims and Hindus, in Delhi. This conference was presided over by Gandhiji. The Khilafat movement in India was started by Indian Muslims to restore the Khalifa's position.

**77. Option (4) is correct.**
Spherical Mirrors: A spherical mirror is a mirror carved from a spherical surface. Spherical mirrors are classified into two types: concave and convex. Concave has an inwardly curved reflection surface, whereas convex has an outwardly curved reflection surface.

**78. Option (1) is correct.**
The Palamu Hills are not part of the Meghalaya Plateau. Palamu is a district in the state of Jharkhand. The Khasi and Jaintia Hills is a mountainous region in the Indian states of Assam and Meghalaya. East of the Garo Hills is the Khasi Hills. The East Khasi hills are the wettest place on the planet.

**79. Option (3) is correct.**
India is the world's first developing country to have its satellites for communications, remote sensing, and meteorology. The INSAT-1 series of satellites built by Ford Aerospace & Communications Corporation to Indian specifications had the unique distinction of providing communications and meteorological services from a single platform. These services are now being provided with enhanced capabilities via the INSAT-2 series of satellites developed in-house. The design, development, and qualification of the Very High-Resolution Radiometer (VHRR) from INSAT-2 for imaging the earth disc in the visible and thermal infrared bands for meteorological applications are described in this paper.

**80. Option (2) is correct.**
The Fifth Five-Year Plan emphasized the abolition of poverty and the attainment of self-sufficiency. The fifth Five Year Plan lasted from 1974 to 1978. Garibi Hatao, employment, justice, agricultural production, and defense were all prioritized in this plan. The newly elected Moraji Desai government scrapped this plan in 1978. In 1975, the Electricity Supply Act was amended, a Twenty-Point Program (MNP) was launched, and the Indian National Highway System was established.

**81. Option (2) is correct.**
After Harsha's empire fell apart in the seventh century, several large states arose in North India, the Deccan, and South India. Among them were the Palas, the Pratiharas, and the Rashtrakutas. The Tripartite Struggle, also known as the Kannauj Triangle Wars, was a struggle for control of northern India between the Pratihara, Pala, and Rashtrakuta Empires in the eighth and ninth centuries.

**82. Option (3) is correct.**
Persons in punitive detention have specific rights under the first part of Article 22. Punitive detention is the detention of a person following his trial and conviction to punish him for an offense he committed. These are the rights: The right to be informed of the reasons for an arrest. The right to consult with and be represented by a lawyer. To appear in front of the nearest magistrate within 24 hours of arrest (excluding the holidays and time taken during the journey). Furthermore, the period of detention cannot exceed what the magistrate has authorized.

**83. Option (1) is correct.**
SHGs originated in India with the formation of the Self-Employed Women's Association (SEWA) in 1972. Previously, there were small sweats at tone-organizing.

For example, in 1954, the Textile Labour Association (TLA) of Ahmedabad established a women's sect to train women from shop worker families in skills such as sewing, knitting, and so on. Ela Bhatt, the founder of SEWA, organized poor and self-employed women workers in the unorganized sector, similar to needlewomen, potters, peddlers, and others. NABARD established the SHG Bank relationship design in 1992, which is now the world's largest microfinance design.

**84. Option (1) is correct.**
When planning meals for a family, it is not necessary to consider the environment. The study of the relationships between living organisms, including humans, and their physical environment is known as the environment. It seeks to comprehend the vital connections that exist between plants and animals and their surroundings. It also discusses the benefits of ecosystems and how we can best utilize Earth's resources.

**85. Option (4) is correct.**
LERMS (Liberalized Exchange Rate Management System) was a new system for managing exchange rates. The Reserve Bank of India (RBI) purchased 40% of the proceeds of exports and remittances at the sanctioned exchange rate for use under this scheme. The Liberalized Exchange Rate Management System (LERMS) with the binary exchange rate was implemented in response to the recommendations of the C. Rangarajan Committee. It became effective on March 1, 1993.

**86. Option (2) is correct.**
Yuvraj Singh's autobiography is titled The Test of My Life. In his debut book, 'The Test of My Life,' he describes how, while suffering from insomnia, coughing fits that caused him to vomit blood, and an inability to eat, he struck a deal with God. Yuvraj Singh is a cancer survivor and former Indian cricketer. In 2011, he was named ICC World Cup Player of the Tournament. Sachin Tendulkar's autobiography, 'Playing It My Way,' was published in 2008.

**87. Option (3) is correct.**
The great Vaishnava saint and reformer of Assam introduced the Sattriya dance form in the 15th century A.D. Later on, the dance form evolved and expanded as a distinct style of dance. Sattriya is an apt name for this dance style because of its religious nature and association with the Sattras.

**88. Option (4) is correct.**
The Koppen climate classification Cfb is known as the Marine West Coast Climate because it is found along the western beachfront of mainlands all over the world. It is most distinguished by its high moisture content. Surprisingly, Summer is short and dry in comparison to the offseason, which, while mild in temperature, is generally veritably wet. Cfb = Temperate oceanic climate or tropical upland climate; coldest month with temperatures above 0 °C(32 °F)(or 3 °C(27 °F)), all months with temperatures below 22 °C(71.6 °F), and at least four months with temperatures above 10 °C(50 °F). There is no discernible seasonal rush difference (nor the abovementioned set of conditions fulfilled).

**89. Option (1) is correct.**
Cosmic Expansion' Edwin Hubble was the first American astronomer to demonstrate that the universe is expanding. The universe is currently expanding, according to the Expanding Universe theory. Hubble demonstrated that the speeds of distant galaxies are proportional to their distances from Earth. Hubble's Law is the name given to this phenomenon.

**90. Option (4) is correct.**
Terrestrial television in India began on September 15, 1959, with an experimental telecast from Delhi using

a small transmitter and a makeshift studio. As a result, option A is incorrect. TV was always a part of the national broadcaster, All India Radio. On April 1, 1976, television became a separate Department within the Ministry of Information and Broadcasting, though it was still served by All India Radio, particularly for news. As a result, statement C is correct. On April 1, 1976, television service was separated from radio service. The management of All India Radio and Doordarshan was delegated to separate Directors-General in New Delhi.

**91. Option (1) is correct.**
Lord Ripon repealed the Vernacular Press Act of 1878 (1880-1884). Lord Ripon's administration saw the passage of the First Factory Act (1880-1884). The first Factory Act was passed in 1881. According to the Act, children under the age of seven should not be employed by factories, and children's working hours should be reduced. It required that dangerous machines be properly fenced to avoid any untoward incidents. Local self-government resolution was passed during Lord Ripon's tenure. In 1882, the government issued a resolution rather than an Act. Lord Ripon continued the financial liberalization begun by Lord Mayo (1869-1872).

**92. Option (1) is correct.**
The first British Governor of the Bengal Presidency was Major-General Robert Clive. He began his career as a writer for the East India Company (EIC), which established the EIC's military and political dominance by winning a decisive victory at the Battle of Plassey in Bengal. On June 23, 1757, the Battle of Plassey was fought in north-eastern India. The forces of Siraj-ud-Daulah, the last Nawab of Bengal, and his French allies were met by troops of the British East India Company led by Robert Clive. The main reason for "The Battle of Plassey" was because the Nawab of Bengal, Siraj-ud-Daulah, did not approve of the East India Company's officials' uncontrolled use of privileges. Also, the company's employees stopped paying taxes, which contributed to the Battle of Plassey.

**93. Option (2) is correct.**
Ascorbic acid (vitamin C) Vitamin C is another name for ascorbic acid. It has antioxidant properties. It is a necessary nutrient for the body because it aids in tissue repair and enzyme-related functions. Scurvy is a disease caused by a lack of vitamin C. Citrus fruits, such as lemon, orange, and guava, are high in ascorbic acid, or Vitamin C. $C_6H_8O_6$ is its chemical formula.

**94. Option (3) is correct.**
The President has the authority to transfer judges from one High Court to another. He executes this order after consulting with India's Chief Justice. Article 222 of the Constitution allows a Judge (including the Chief Justice) to be transferred from one High Court to another. The Chief Justice of India, whose opinion is decisive in this matter, should initiate the proposal for the transfer of a Judge.

**95. Option (3) is correct.**
Dollar Bahu, one of Sudha Murti's seventeen other books, was originally written in Kannada as Dollar Sose (Sose being the Kannada word for a daughter-in-law) and later translated into English. It became so popular that the Indian television giant Zee TV aired it as a television series in 2001. Sudha Murty is the well-known chairperson of the Infosys Foundation and the wise founder of India's software behemoth Infosys.

**96. Option (4) is correct.**
From the 13th to the 29th of January 2023, India will host the Men's Hockey World Cup. For the fourth time in history, India will host this tournament. Every four years, the world cup is held. In November 2019, India was confirmed to host the tournament in January 2023.

**97. Option (2) is correct.**
Neutral oxides are oxides that do not exhibit any acid or base properties. Neutral oxide is an oxide that does not react with acids or bases. Let us look at some other neutral oxides, such as CO $N_2O$ NO $MnO_2$ $H_2O$. Important Considerations A metal oxide is sodium oxide, which has the chemical formula $Na_2O$. Because it contains two sodium atoms and one oxygen atom, it is also known as an alkali metal oxide. Acidic Oxide is said that when oxides react with water molecules, they produce acids. Basic Oxide: It is said that when oxides react with water molecules, they produce bases. Amphoteric Oxide: It is one of the oxides that can react as both an acid and a base.

**98. Option (4) is correct.**
The National Master Plan for Multimodal Connectivity is another name for the Gati Shakti initiative. It was created by the Indian government. It aims to reduce logistics costs through coordinated infrastructure planning and execution. The Gati Shakti scheme would absorb the National Infrastructure Pipeline, which was introduced in 2019 and costs Rs 110 lakh crore. The program also aims to reduce port turnaround times and increase cargo handling capacity to boost trade. It also intends to build two new defense corridors, one in Tamil Nadu and the other in Uttar Pradesh, as well as 11 industrial corridors. Another goal is to provide 4G service in every town. The gas pipeline network will be expanded by 17,000 kilometers.

**99. Option (2) is correct.**
Kalbelia is a Rajasthani folk dance that is primarily performed by the Kalbelia Community. It is also known as the 'Sapera Dance' or the 'Snake Charmer Dance'. It was added to UNESCO's representative list of Humanity's Intangible Cultural Heritage in 2010. Males play various traditional instruments and females from the Kalbelia Community dance Kalbelia dance. Kalbelia dance is one of the most sensual Rajasthani dances.

**100. Option (1) is correct.**
Reasons for India's wildlife decline: Forest resource exploitation has increased as a result of industrial and technological advancement. More and more land was cleared for agriculture, habitation, highways, mining, reservoirs, and other purposes. Locals' lopping for fodder and fuelwood, as well as the removal of small timber, put additional strain on the forests. Domestic cattle grazing is harmful to wildlife and its habitat. Commercial poaching is now commonplace. The possibility of forest fires. Because forest fires are one of the causes of declining wildlife, this option is incorrect.

**101. Option (3) is correct.**
Let Number of boys are 500 and Number of girls are 200.

Then total number of students passed $= \dfrac{87}{100} \times 500$

$+ \dfrac{80}{100} \times 200 = 435 + 160 = 595.$

Total number of students failed $= 700 - 595 = 105$

Therefore, percentage of failed students $= \dfrac{105}{700} \times 100$

$= 15\%$

Hence, 15% is the correct answer.

**102. Option (3) is correct.**

A + M → 10 ⟶ 3    Efficiency of A + M.
         30 ⟶ (Total Work)
A → 15 ⟶ 2    Efficiency of A.

So, Efficiency of M = 3 – 2 = 1

Number of days taken by Mahi $= \dfrac{30}{1} = 30$

Hence, 30 is the correct answer.

**103. Option (2) is correct.**

The price at which it was bought $= 24840 \times \dfrac{100}{115} \times \dfrac{100}{120}$

$= 18000$

Hence, 18000 is the correct Answer.

**104. Option (3) is correct.**

The average population of

$D = \dfrac{5152 + 5230 + 5346 + 5500}{4} = \dfrac{21228}{4} = 5307$

Hence, 5307 is the correct Answer.

**105. Option (2) is correct.**

Total sales for D = 98 + 112 + 109 + 102 + 124 + 134 = 679
Total Sales for A = 75 + 100 + 105 + 100 + 95 + 85 = 560
Total Sales for C = 103 + 103 + 112 + 123 + 102 + 134 = 677
Total sales for B = 122 + 102 + 108 + 189 + 123 + 145 = 789
So, from the above numbers, 560 is smallest and is the value of A.

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

The percentage of expenditure on Food and Rent
= 25 + 12 = 37%

$= \dfrac{37}{100} \times 65000 = 24050$

Hence, 24050 is the correct Answer.

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

The Ratio of Speeds of Geeta : Babita = 5 : 2
Now, Geeta gives a lead of 40 m to Babita $3 \rightarrow 40$

$5 \rightarrow \dfrac{40}{3} \times 5 = 66.67$

Hence, 66.67 is the correct Answer.

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

Initial price = 65000
Price after Discount = 63000

Now price after scratch card $= 63000 \times \dfrac{85}{100} = 53550$

And price after minimum discount $= 63000 \times \dfrac{90}{100}$

$= 56700$

Required difference = 56700 – 53550 = 3150
Hence, ₹ 3150 is the correct answer.

**109. Option (2) is correct.**

We know that $\angle CAE = 90°$ and $\angle DBE = 90°$.
We also know that $\angle AEC = \angle BED$ (Vertically Opposite Angles.)

$\Rightarrow \dfrac{CA}{AE} = \dfrac{DB}{BE} \Rightarrow \dfrac{5}{8} = \dfrac{x}{12} \Rightarrow x = \dfrac{60}{8}$

$\Rightarrow x = 7.5$

In triangles ACE,
$CE^2 = 5^2 + 8^2 \Rightarrow CE^2 = 25 + 64 \Rightarrow CE^2 = 89$
$\Rightarrow CE = 9.43$
In triangle BDE,
$DE^2 = BE^2 + BD^2$
$\Rightarrow DE^2 = 144 + 56.25 \Rightarrow DE = 200.25$
$\Rightarrow DE = 14.15$
Distance = DE + CE = 9.43 + 14.15 = 23.58
Hence, 23.58 is the correct Answer.

**110. Option (2) is correct.**

Given that speed of train 1 = 80 km/h
and speed of train 2 = 95 km/h
difference of their speeds = 95 – 80 = 15 km/hr

Time taken for meeting $= \dfrac{180}{15} = 12$ h

Relative speed of trains = 80 + 95 = 175 km/hr
So, distance between Bangalore and
Chennai = 175 × 12 = 2100 km
Hence, 2100 is correct answer.

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

$(7x + 4y)^2 + (7x – 4y)^2$
$= 49x^2 + 16y^2 + 2 \times 7x \times 4y + 49x^2 + 16y^2 – 2 \times 7x \times 4y$
$= 98x^2 + 32y^2$
Hence, $98x^2 + 32y^2$ is the correct Answer.

**112. Option (3) is correct.**

Total Cost Price = 6000

Profit after 20% $= 6000 \times \dfrac{120}{100} = 7200$

Total SP $= 3000 \times \dfrac{110}{100} + 3000 \times \dfrac{100 + x}{100} = 7200$

$\Rightarrow 3300 + (100 + x)30 = 7200$

$\Rightarrow (100 + x) = \dfrac{3900}{30}$

$\Rightarrow (100 + x) = 130 \Rightarrow x = 30$
Hence, 30% is the correct Answer.

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

$\dfrac{41}{92} = 0.44 \Rightarrow \dfrac{33}{41} = 0.80 \Rightarrow \dfrac{42}{49} = 0.85$

$\dfrac{35}{47} = 0.74$

Hence, $\dfrac{41}{92}$ is the correct Answer.

**114. Option (3) is correct.**

Given that Car covers 75.5 km in 3.5 litres.
$3.5 \rightarrow 75.5$km.

$28 \rightarrow \dfrac{75.5}{3.5} \times 28 = 604$

Hence, 604 is the correct answer.

**115. Option (2) is correct.**

He is buying total 8 and 3 he is getting free. So the discount will be

$\dfrac{3}{8} \times 100 = 37.5\%$

Hence, 37.5% is the correct Answer.

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

The value of $(0.00243)^{0.2}$

$= (0.00243)^{\frac{1}{5}} = (0.3)^{5 \times \frac{1}{5}} = 0.3$

Hence, 0.3 is the correct Answer.

**117. Option (2) is correct.**

We know that Average Speed $= \dfrac{\text{Total Distance}}{\text{Total time}}$

Distance = 21 × 10 × 60 = 12.6 km
Total Distance = 12.6 km + 9 + 10 = 31.6 km

Total Time = 10 + 10 + 10 = 30 minutes $= \dfrac{1}{2}$ hour

Average Speed $= \dfrac{31.6}{\frac{1}{2}} = 63.2$ km/hr

Hence, 63.2 km/hr is the correct Answer.

**118. Option (2) is correct.**

Given 150328.

Now Number after descending order = 853210

When 5 times 13 is subtracted we get 853210 – 65 = 853145

Hence, 853145 is divisible by 5 as it ends with 5 and is correct Answer.

**119. Option (3) is correct.**

Given, $6x + 7y = 5xy \Rightarrow 10y - 4x = 4xy$

Using options: assume the value of $x = 2$ and $y = 4$

Then $6(2) + 7(4) = 28 + 12 = 40$

LHS = 40

Now, RHS = $5xy$

$5 \times 2 \times 4 = 40$

LHS = RHS

Hence, the value of $x = 2$ and $y = 4$ is the correct Answer.

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

$\cos 45° = \dfrac{1}{\sqrt{2}}$

$\sin 45° = \dfrac{1}{\sqrt{2}}$

$\cos (90° + \theta) = -\sin \theta$

$\Rightarrow \cos^2 45° + \cos^2 135° + \cos^2 225 + \cos^2 315°$

$= \dfrac{1}{2} + \dfrac{1}{2} + \dfrac{1}{2} + \dfrac{1}{2} = 2$

Hence, 2 is the correct Answer.

**121. Option (3) is correct.**

Geography in 1985 $= \dfrac{35}{100} \times 100 = 35$

Mathematics in 1985 $= \dfrac{88}{200} \times 100 = 44\%$

Science in 1985 $= \dfrac{120}{200} \times 100 = 60\%$

English in 1985 $= \dfrac{90}{150} \times 100 = 60\%$

Therefore, marks in English = marks in science.

Hence, science, English is the correct Answer.

**122. Option (2) is correct.**

Area of small semicircle $= \dfrac{\pi r^2}{2}$

Area of large semicircle $= \dfrac{\pi (3r)^2}{2} = \dfrac{9\pi r^2}{2}$

Red area $= \dfrac{3\pi r^2}{2}$

Blue area = Area of large semicircle – Red Area

$= \dfrac{9\pi r^2}{2} - \dfrac{3\pi r^2}{2} = \dfrac{6\pi r^2}{2} = 3\pi r^2$

Now $= \dfrac{\text{Red Area}}{\text{Blue Area}} = \dfrac{\frac{3\pi r^2}{2}}{3\pi r^2} = 1 : 2$

Hence, 1 : 2 is the correct Answer.

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

Average Speed $= \dfrac{\text{Total Distance}}{\text{Total Time}}$

$= \dfrac{240}{100/50 + 140/70} = 60$ km/hr

Hence, 60 km/hr is the correct Answer.

**124. Option (2) is correct.**

Given Length = 60 and Breadth = 30 and height = 20

The longest pole that can fit will be diagonal of the hall.

Diagonal $= \sqrt{l^2 + b^2 + h^2} = \sqrt{60^2 + 30^2 + 20^2}$

$= \sqrt{4900} = 70$

Hence, 70 is the correct Answer.

**125. Option (3) is correct.**

It is clearly shown that the graph line reaches highest in the month of May.

Hence, May is the correct Answer.

**126. Option (3) is correct.**

Volume of Cylinder $= \pi r^2 \times h = 4^2 \times 18 \times \pi = 288\pi$

Volume of sphere $= \dfrac{4}{3}\pi 3^3 = 36\pi$

Number of spheres will be $= \dfrac{288\pi}{36\pi} = 8$

Hence, 8 is the correct Answer.

**127. Option (3) is correct.**

HCF of 238 and 832 is 2.

Therefore 2 is the only numbers among options which can divide both the above numbers.

**128. Option (3) is correct.**

Let Breadth $= x$ and then height $= 6x$ and length $= 3x$

Then, Volume $= x \times 6x \times 3x = 23958$

$\Rightarrow 18x^3 = 23958$

$\Rightarrow x^3 = \dfrac{23958}{18} = 1331 \Rightarrow x = 11$

Hence, 11 is the correct Answer

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

Let Shyam's income=70 and Ram's $= \dfrac{170}{100} \times 70 = 119$,

Sohan's income = 100.

Ram : Sohan = 119 : 100

Hence, 119 : 100 is the correct Answer.

**130. Option (3) is correct.**

Given number 34R05030M6 is divisible by 16 and 11.

If the number is divisible by 16 then last three digits has to be divisible by 16. If the number is divisible by 11, then the difference of the sum of alternate digits will be 0.

$[(3 + R + 5 + 3 + M) - (4 + 0 + 0 + 0 + 6)] \% 11 = 0$

$11 + R + M - 10\% 11 = 0$

$1 + R + M$ must be a Multiple of 11

$R + M = 10$

Now using options If M = 6 as 66 is not divisible by 16.

As 2nd option 7 + 5 = 12 Not 10

Only option is 5 + 5

Hence, M = 5 and R = 5 is correct Answer.

**131. Option (2) is correct.**

Given Number $= x58y$ and is divisible by 9.

If the number is divisible by 9 then the sum of digits should also be divisible by 9.

Then we have $x + 5 + 8 + y = x + y + 13$

$x + y + 13 = 18 \Rightarrow x + y = 5$

Hence, 5 is the correct Answer.

**132. Option (3) is correct.**

Given, $\dfrac{2\cos^2\theta - \cos\theta}{\sin\theta - 2\sin^2\theta}$

$= \dfrac{\cos\theta(2\cos^2\theta - 1)}{\sin\theta(1 - 2\sin^2\theta)} = \dfrac{\cos\theta[2(1 - \sin^2\theta) - 1]}{\sin\theta(1 - 2\sin^2\theta)}$

$= \dfrac{\cos\theta[(2 - 2\sin^2\theta) - 1]}{\sin\theta(1 - 2\sin^2\theta)} = \dfrac{\cos\theta(2 - 2\sin^2\theta - 1)}{\sin\theta(1 - 2\sin^2\theta)}$

$= \dfrac{\cos\theta(1 - 2\sin^2\theta)}{\sin\theta(1 - 2\sin^2\theta)} = \cot\theta$

Hence, $\cot\theta$ is the correct Answer.

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

Surface Area of Sphere $= 4\pi r^2$

$= 4 \times \pi \times r^2 = 4 \times \pi \times 5^2 = 100\pi$

Hence, $100\pi$ is the correct Answer.

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

We know that LCM × HCF = product of two numbers

$126 \times 9 = 18 \times x$

$\Rightarrow x = \dfrac{126 \times 9}{18} \Rightarrow x = 63$

Hence, 63 is the correct Answer.

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

J average Males in A, B, C $= \dfrac{1500 + 1460 + 1105}{3} = 1355$

K Average of B, C, D $= \dfrac{1320 + 1180 + 1170}{3} = 1223.33$

Now the average of J and K $\dfrac{1355 + 1223.33}{2} = 1289.17$

Hence, 1289.17 is the correct Answer.

**136. Option (2) is correct.**

Percentage of people below 36 years = 52%

Therefore 52% = 30

$5.50 \to \dfrac{30}{52} \times 5.50$ = 3.17 million.

Hence, 3.17 million is the correct Answer.

**137. Option (2) is correct.**

$x + y = 10$ and $2xy = 48$

$\Rightarrow xy = 24$

We know $x + y = 10$

By Putting the value $1 + 9 = 10$ but $9 \times 1 = 9$, put $x = 2$ then $8 \times 2 = 16$

Similarly, $6 + 4 = 10$ and $x > y$ it means $x = 6$ and $y = 4$

Now, $2(x) - y = 2(6) - 4 = 8$

Hence, 8 is the correct Answer.

**138. Option (3) is correct.**

Relative Speed = 20 + 30 = 50 km/hr

Distance covered by A in 1 hour = 20 km

Remaining distance is covered by A and B in $\dfrac{100}{50}$

= 2 hrs

Therefore, they will meet at 9 a.m + 2 hours = 11 a.m

Hence, 11 a.m is the correct Answer.

**139. Option (3) is correct.**

The greatest length of tape will be the HCF of 62, 186, 279.

The HCF is 31.

Hence, 31 is the correct Answer.

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

$(0.2)^3 \times \dfrac{400}{2000} \times (0.2)^2 = 0.008 \times \dfrac{400}{80} = 0.04 = \dfrac{1}{25}$

Hence, $\dfrac{1}{25}$ is the correct Answer.

**141. Option (2) is correct.**

Number of students scoring marks less than 50% = 1110
and Number of students scoring more than 50% = 150

Number of students scoring exactly 50% = 2025 – (1110 + 150) = 765

Number of students scoring exactly 50% of B = 240

Therefore, the ratio is 1110 : 240 = 111 : 24

**142. Option (3) is correct.**

Total surface area of Cuboid will be $2(lb + bh + lh)$

$= 2(7 \times 5 + 7 \times 9 + 5 \times 9) = 286$ cm²

Hence, 286 cm² is the correct Answer.

**143. Option (3) is correct.**

We know that curved surface area of the cylinder $= 2\pi rh = 400$

$\Rightarrow h = \dfrac{42200}{110} = 20$ cm

Hence, 20 cm is the correct Answer.

**144. Option (2) is correct.**

LCM of 48 and 64 = 48 = 6 × 8 and 64 = 8 × 8

LCM = 8 × 8 × 3 = 192

HCF of 12 and 18 is 6.

And $\dfrac{192}{6} = 32$

Hence, 32 is the correct Answer.

**145. Option (4) is correct.**

Given $\cos 48° = \dfrac{m}{n}$, $\cos\theta = \dfrac{b}{h}$

$\sec\theta = \dfrac{h}{b}$, $\tan\theta = \dfrac{p}{b}$

$\cot(90 - \theta) = \tan\theta$

$h^2 = b^2 + p^2$

$n^2 = p^2 + m^2$

$p = \sqrt{n^2 - m^2}$

$\cot(90° - 48°) = \tan 48°$.

$\tan 48° = \dfrac{p}{b} = \dfrac{\sqrt{(n^2 - m^2)}}{m}$

$\sec 48° - \cot 42° = \sec 48° - \tan 48°$.

$\Rightarrow \dfrac{n}{m} - \dfrac{\sqrt{(n^2 - m^2)}}{m} \Rightarrow \dfrac{n - \sqrt{(n^2 - m^2)}}{m}$

Hence, $\dfrac{n - \sqrt{(n^2 - m^2)}}{m}$ is the correct Answer.

**146. Option (4) is correct.**

Raju → 36
        2

Angad → 18                    72 Total Work
         3

Sumit → 24
         4

Total efficiency of all = 2 + 4 + 3 = 9

Therefore they will take $\dfrac{72}{9} = 8$ days

Hence, 8 is the correct Answer.

**147. Option (3) is correct.**

Given, $\sec^2\theta\left(\sqrt{1 - \sin^2\theta}\right)$

$= \sec^2\theta\left(\sqrt{\cos^2\theta}\right)$

$= \sec^2\theta \times \cos\theta$

$= \dfrac{1}{\cos^2\theta} \times \cos\theta = \dfrac{1}{\cos\theta}$

$= \sec\theta$

Hence, $\sec\theta$ is the correct Answer.

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

One candidate got 42% and 100% – 42% = 58%.

58% – 42% – 1400 = 3080

16% = 4480

$100\% = \dfrac{4480}{16} \times 100 = 28000$

Percentage of Invalid Votes $= \dfrac{1400}{28000} \times 100 = 5\%$

Hence, 5% is the correct Answer.

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

The amount he owes at the end of one year

$= 50000 \times \dfrac{110}{100} - 15000 = 40000$

Amount he owned after 2$^{nd}$ year $= 40000 \times \dfrac{110}{100} - 15000$

$= 29000$

Amount he owned after 3$^{rd}$ year $= 29000 \times \dfrac{110}{100} - 15000$

$= 16900$

Hence, 16900 is the correct Answer.

**150. Option (3) is correct.**

Percentage increase in Sprite $= \dfrac{5800 - 5400}{5400} \times 100$

$= 7.40$

Percentage increase in Coca-Cola $= \dfrac{5600 - 5300}{5300} \times 100$

$= 5.66$

Percentage increase in Pepsi $= \dfrac{6800 - 6000}{6000} \times 100$

$= 13.33$

Percentage increase in Fanta $= \dfrac{2700 - 1800}{1800} \times 100$

$= 50\%$

Therefore, maximum increase is in Fanta.

Hence, Fanta is the correct Answer.

**151. Option (3) is correct.**

When the subject performs the action, it is in active voice, and when the subject receives the action, it is in passive voice. The subject of the verb in the active voice (they) becomes the object in passive voice sentences. It is a thumb rule that passive voice phrases, as a rule, always use the third form of the verb, also known as the past participle form of the verb. The structure of a simple past sentence in passive voice is: subject + be + past participle + by + object. The passive voice of the given sentence is: Hide and seek was played by Jack.

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

This question tests a student's vocabulary. Progress means development towards an improved or more advanced condition. Example: "We are making progress towards equal rights." Development is the synonym of

progress. Stagnation means a lack of activity, growth, or development. Diminishment means the act or process of decreasing something in size, quantity, or quality. Halt means bring or come to an abrupt stop.

**153. Option (3) is correct.**

This question tests a student's vocabulary. Compress means to press something into a smaller space, to make information, a piece of writing, etc. Example: "The skirt can be folded and compressed into a relatively small bag." The antonym of compress is enlarged.

**154. Option (3) is correct.**

This question tests a student's vocabulary. Novel means fresh, new, and original. Example: This led to the adoption of a novel method of identifying the best candidates. The antonym of novel is traditional. Traditional means customs, beliefs, or methods that have existed for a long time without changing.

**155. Option (2) is correct.**

This question tests a student's understanding of idioms and phrases. A "hard nut to crack means a problem that is difficult to solve or a person that is difficult to deal with. Example: She's such a tough nut to crack. Nobody seems to be able to get through to her.

**156. Option (2) is correct.**

This question tests a student's understanding of idioms and phrases. Beaming from ear to ear means to have a broad, enthusiastic smile. Tim was grinning from ear to ear when his bosses praised him during the ceremony.

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

This question tests a student's understanding of idioms and phrasal verbs. Pulled over means to stop by the side of the road. Example: The police officer pulled me over because one of my tail lights was out. Pull through means to succeed in a very difficult situation, or to help someone do this. Example: He said the support of his fans had pulled him through. Pull together means to calm oneself down and begin to think or act appropriately. Example: I know you're stressed out, but you need to pull yourself together and get this report done! To pull someone up means to tell someone that one has done something wrong. Pull up means to come to a halt. In the given context, the correct idiom is pull through.

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

This question tests a student's vocabulary. Rife means (especially of something undesirable) of common occurrence; widespread. Example: "Male chauvinism was rife in medicine." Scarce means insufficient for the demand. Example: As raw materials became scarce, synthetics were developed." The antonym of rife is scare. Ripeness is having arrived at the fitting stage or time for a particular action or purpose. Serene means calm, peaceful, and untroubled; tranquil.

**159. Option (4) is correct.**

This question tests a student's vocabulary. The wrongly spelled word is proteg. Portage means carrying (a boat or its cargo) between navigable waters. Pride is a feeling of deep pleasure or satisfaction derived from one's own achievements. Prodigy means a young person with exceptional qualities or abilities. Prophet means a person regarded as an inspired teacher or proclaimer of the will of God.

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

Chanted means to say or shout repeatedly in a sing-song tone. Enunciated means to say or pronounce clearly. Enjoined means to instruct or urge (someone) to do something. Articulated means (of an idea or feeling) expressed; put into words. The given sentence states that the two boys sang together. The best replacement of the bracketed words will be chanted together in a show.

**161. Option (3) is correct.**

This question tests a student's understanding of idioms and phrasal verbs. At sea means confused or unable to decide what to do. Example: "He feels at sea with economics."

**162. Option (3) is correct.**

Under the weather means slightly unwell or in low spirits. The idiom is correctly used in statement 3.

**163. Option (2) is correct.**

This question tests a student's vocabulary. The wrongly spelled word is ostacise. It should be "ostracised," which means to outcast or outlaw someone. Impoverish means to make (a person or area) poor, exhaust their strength or vitality. Grandeur means splendour and impressiveness, especially in appearance or style.

**164. Option (2) is correct.**

This question tests a student's understanding of idioms and phrasal verbs. "Go by" means to physically pass by someone or something. Example: Have you seen Liz go by here? She's not in her office. Go through means to undergo a difficult period or experience; search through. Example: "The country is going through a period of economic instability." Go down means to be defeated in a contest; sink. Example: "He saw eleven B-17s go down." Go off means to explode or fire; to become suddenly angry; to lose one's temper. In the context, the story did not go well, so the correct idiomatic expression is "go down."

**165. Option (3) is correct.**

This question tests a student's understanding of idioms and phrasal verbs. A "blind date" is a social engagement between two people who have not previously met, usually arranged by a mutual acquaintance. A "blind alley" means an alley or road that is closed at one end. Body and soul means involving every aspect of a person; completely. Bird's eye view means a general view from above. We need to replace the phrase "good and comprehensive idea". The correct replacement of the phrase is "bird's eye view."

**166. Option (3) is correct.**

This question tests a student's vocabulary. Contamination means the action or state of making or being made impure by polluting or poisoning. Irreverence means a lack of respect for people or things that are generally taken seriously. Renunciation means the formal rejection of something, typically a belief, claim, or course of action. Blasphemy means the action or offence of speaking sacrilegiously about God or sacred things; profane talk. The one-word substitution for the question statement is blasphemy.

**167. Option (4) is correct.**

This question tests a student's vocabulary. Excelled means to perform exceptionally well or to accomplish something. The antonym of excelled is failed.

**168. Option (2) is correct.**

Treating with a vaccine, usually by injection, to promote immunity against a disease is known as inoculating. An allusive or oblique remark or hint, typically a suggestive or disparaging one, is known as innuendo. Without a basic knowledge of mathematics and arithmetic, one is called innumerate.

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

One who knows all things is called omniscient. One who is all-powerful is called omnipotent. An oligarchy is a small group of people who have control over a country or organisation.

**170. Option (4) is correct.**

This question tests a student's vocabulary. The meaning of lethal is deadly.

**171. Option (4) is correct.**

This question tests a student's understanding of idioms and phrasal verbs. To have an axe to grind means to have a personal motivation or selfish reason for saying or doing something. "Put a spoke in the wheel" means to make it difficult for someone to achieve something they had planned to do. The idiom "bring someone to book" is used when referring to holding someone accountable for something they have done. Hit the sack means to go to bed. In the given sentence, after a tiring day, one would like to go to bed. Hence, the correct answer is "hit the sack."

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

When the subject performs the action, it is in active voice, and when the subject receives the action, it is in passive voice. The subject of the verb in the active voice (they) becomes the object in the passive voice sentences, and vice versa.

**173. Option (4) is correct.**

This question tests a student's understanding of idioms and phrasal verbs. An elephant in the room means that an obvious problem is being ignored.

**174. Option (4) is correct.**

This question tests a student's vocabulary. A "posse" is a group of people who have come together for the same purpose. A caravan is a wheeled vehicle for living or travelling in, especially for holidays, that contains beds and cooking equipment and can be pulled by a car. A constellation is the name given to a group of stars in the sky that make up a certain pattern. Sometimes this pattern is imaginary. A group of worshippers is called a congregation.

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

To stand one's ground, to hold to one's position; to refuse to give in. The battalion stood its ground in the face of repeated attacks.

**176. Option (2) is correct.**

The sentence asserts that the Indians must be second to none in using advanced technologies. So, the correct substitution for "application" will be implementation.

**177. Option (4) is correct.**

This question tests a student's vocabulary. Someone who is reserved and shy is called an introvert.

**178. Option (4) is correct.**

There is an error in the phrase: "different and costlier than". In the given sentence, only one preposition is used for both the adjectives "different" and "costlier", which is incorrect. A single preposition is used for two adjectives when both the adjectives agree to that one preposition. The word "different" is followed by the preposition "from." So, the correct version should be "different from and costlier than."

**179. Option (3) is correct.**

This question tests a student's vocabulary. The word impute means to represent (something, especially something undesirable) as being done or possessed by someone; attribute. Example: "Christ's righteousness has been imputed to us." The synonym of impute is attribute.

**180. Option (3) is correct.**

This question tests a student's vocabulary. Consciousness is the state of being aware of and responsive to one's surroundings. Example: "She failed to regain consciousness and died two days later." Thus, the synonym of consciousness is aware.

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

The incorrectly spelled word is conoisseur. It should be connoisseurship. Connoisseur means an expert judge in matters of taste.

**182. Option (3) is correct.**

This question tests a student's vocabulary. Addicted means enthusiastically devoted to a particular thing or activity, inclined.

**183. Option (4) is correct.**

This question tests a student's vocabulary. Hoax means to trick or deceive (someone). Example: "The evidence had been planted as part of an elaborate hoax."

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

This question tests a student's knowledge of idioms and phrases. The shirt off his back means anything or everything one owns or has to offer. The correct substitute for this idiom is one is willing to do anything to help another person.

**185. Option (2) is correct.**

The former part of the sentence is in simple past tense; thus, the latter part will also be in past tense. Thus, the correct sentence will be: "The ship sank because the engineer did not call for help."

**186. Option (4) is correct.**

This question tests a student's vocabulary. Fascinating means extremely interesting. Example: The book offers a fascinating glimpse into the lives of the rich and famous. The antonym of fascinating is repulsive. Repulsive means disgusting.

**187. Option (3) is correct.**

This question tests a student's vocabulary. The incorrectly spelled word is "centinarian." It should be "centenarian." A "centenarian" is a person who has reached the age of 100 years. Aquatic means relating to water. Notorious means famous or well known, typically for some bad quality or deed. Mercenary means primarily concerned with making money at the expense of ethics.

**188. Option (3) is correct.**

This question tests a student's vocabulary. A happy development or the happening of events by chance is called serendipity.

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

This question tests a student's vocabulary. The incorrectly spelled word is Extacted. It should be "extracted."

**190. Option (4) is correct.**

The blank requires a word that is used for someone who is a great elocutionist. The correct idiomatic expression to express it is to have the gift of gab. Yellow press or yellow journalism are terms for journalism and associated newspapers that present little or no legitimate, well-researched news while instead using eye-catching headlines for increased sales. The term "fourth estate" or fourth power refers to the press and news media, both in their explicit capacity for advocacy and their implicit ability to frame political issues. Curtain lecture means an instance of a wife reprimanding her husband in private.

**191. Option (2) is correct.**

The meanings of the given words are:

Humorous: having or showing a sense of humour

Explanatory: serving to explain something

Pessimistic: tending to see the worst aspects of things or believing that the worst will happen

Informal: It is a style of speech that is less formal than that seen in a traditional office or academic setting.

In the passage, the author tries to explore the origin of "the black death." Hence, the tone of the passage is explanatory.

**192. Option (3) is correct.**

From the first line of the passage, it is clear that the author is trying to explore the origin of the "black death."

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

Refer to the line: After all, the Black Death was the first wave of the second plague pandemic of the 14th to early 19th centuries.

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

Areas of land under the jurisdiction of a ruler or state are called territories. Contemporaries are living or occurring at the same time.

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

Refer to the line: I came across some records describing an intriguing mediaeval cemetery in Kara-Djigach, Chüy Valley, northern Kyrgyzstan, which I suspected may hold the key. From this line, we can deduce that the author believes that the origin of the black death was in Kyrgyzstan.

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

The blank requires a plural verb because the subject of the sentence, "all elephants," is plural. Hence, option 4 is ruled out. The sentence is a fact, and to state a fact, we use the simple present tense. So, the correct verb is "have."

**197. Option (4) is correct.**

The sentence mentions a feature of elephants and furthers it by mentioning their use. So, the correct word is "purposes" i.e., the long trunk or proboscis is used for many purposes.

**198. Option (3) is correct.**

The blank can be filled with "into" to bridge the gap between the incisors and tusk. The sentence is: Their incisors grow into tusks.

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

Before the blank, there is a description of the elephants' legs, and after the blank, the sentence states they carry their great weight. So, the blank requires a word that can connect these two; the best word that can fill the blank is "can."

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

The blank requires a word that describes the quality of elephants. Since the previous sentence mentions threats to elephant populations, So, the best word is "wild elephants".

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