

DRDO CEPTAM-10 Memory Based Paper 1 (Held on 13 Nov 2022, Shift 1)

Q1. Select the correct pair from the following options.

- A. Object's resistance to change its state of motion-Gravitation
- B. Object's resistance to change its state of motion-Inertia
- C. Object's resistance to change its state of motion-Momentum
- D. Object's resistance to change its state of motion-Acceleration

Q2. Candela is the SI unit of which of the following base quantities?

- A. Length
- B. Mass
- C. Luminous intensity
- D. Temp

Q3. The refr

- A. the fr
- B. the di
- C. the sp
- D. the m

Q4. The prob corrected by

- A. a com
- B. a com
- C. a con
- D. a plai

Q5. An object is placed at a distance of 10 cm from a convex lens of focal length 15 cm. The magnification is

- A. 20
- B. $1/3$
- C. -20
- D. 3

Q6. An object is placed at a distance of 10 cm from a convex lens of focal length 15 cm. The image will be

- A. the focus
- B. the centre of curvature
- C. a point between the focus and the centre of curvature
- D. a point beyond the centre of curvature

?

Q7. The pH of human blood is between -

- A. 6.5-7
- B. 7.35-7.45
- C. 8-9
- D. 4.5-5

Q8. Which of the following is not the fungal disease of the plant?

- A. Citrus canker
 - B. Damping off seedling
 - C. Rust of wheat
 - D. Red Rot of sugarcane
-

Q9. Which of the following muscles regulates the exit of food from the stomach into the small intestine?

- A. Gastrocnemius
 - B. Pectoralis
 - C. Rectus
 - D. Sphincter
-

Q10. The Ficus tree is

- A. Baboos
 - B. Sal
 - C. Peepal
 - D. Neem
-

Q11. Galvanization is done to protect iron from rust.

- A. Copper
 - B. Zinc
 - C. Silver
 - D. Aluminium
-

Q12. Lactic acid is

- A. Two-carbon molecule
 - B. One-carbon molecule
 - C. Four-carbon molecule
 - D. Three-carbon molecule
-

Q13. Match the following.

Natural sources

i. Vinegar a. Oxalic acid

ii. Tomato b. Citric acid

iii. Orange c. Acetic acid

- A. i-c, ii-a, iii-b
- B. i-a, ii-b, iii-c
- C. i-c, ii-b, iii-a
- D. i-a, ii-c, iii-b

Q14. Which is a colourless, odourless gas of the alkane series of hydrocarbons with a chemical formula of C_3H_8 ?

- A. Propane
 - B. Pentane
 - C. Ethane
 - D. Butane
-

Q15. Which of the following groups of metals are so soft that they can be cut with a knife and have low densities and low melting points?

- A. Arsenic, Antimony, Bismuth
 - B. Beryllium, Calcium, Magnesium
 - C. Germanium, Cadmium, Indium
 - D. Lithium, Sodium, Potassium
-

Q16. ____ is

- A. Electronegativity
 - B. Electropositivity
 - C. Electronegativity
 - D. Electropositivity
-

Q17. Which of the following is not found away from the heart, except the lungs?

- A. Pulmonary artery
 - B. Aorta
 - C. Pulmonary vein
 - D. Vena cava
-

Q18. What is the linear velocity v of a particle, if the particle takes time t to go once around a circular path of radius r ?

- A. $v = \pi r/t$
 - B. $v = 2\pi r/t$
 - C. $v = 0$
 - D. $v = \pi r^2/t$
-

Q19. Which of the following are Mechanical waves?

- A. X rays
 - B. Radio waves
 - C. Microwaves
 - D. Sound waves
-

Q20. Which one is NOT true with electromagnets?

- A. It is a temporary magnet.

-
- B. Its strength varies with the air gap between its poles.
 - C. Polarity cannot be changed
 - D. Its strength can be changed.

o

Q21. Which of the following correctly expresses the relationship between power, force, time and distance?

- A. $P = F/d \times t$
- B. $P = F \times t/d$
- C. $P = F \times d \times t$
- D. $P = F \times d/t$

Q22. What is the position of the image formed by a concave mirror when the object is placed at the centre of curvature of the mirror?

- A. At infinity
- B. Between the pole and the focus
- C. At the focus
- D. At the pole

Q23. Rays of light from a distant object are incident on a concave mirror. The object is placed so that the image is formed at the focus of the mirror. The size of the image will be

- A. 60 cm
- B. Between 30 cm and 60 cm
- C. More than 60 cm
- D. 30 cm

Q24. Two resistors of 4 Ω and 6 Ω are connected in series. The total resistance is

- A. $1/2$ Ω
- B. 1 Ω
- C. 4 Ω
- D. 2 Ω

Q25. In which country is the largest forest area?

- A. India
- B. South Korea
- C. Thailand
- D. Indonesia

Q26. What critical issue does the Global Forest Vision 2025 highlight regarding global deforestation trends in 2023?

- A. Only 10 governments have pledged to reduce deforestation by 2030
 - B. Deforestation was completely halted worldwide in 2023
 - C. Despite commitments, 6.37 million hectares of forests were lost in 2023
 - D. Forest loss in 2023 was solely due to natural disasters
-

Q27. Which countries are members of BIMSTEC?

- A. Bangladesh, Bhutan, India, Pakistan, Nepal, Sri Lanka, Thailand
 - B. Bangladesh, Bhutan, India, Myanmar, Maldives, Sri Lanka, Thailand
 - C. Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, Thailand
 - D. Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
-

Q28. What is the new role of Amitabh Kant after stepping down from his position as India's G20 Sherpa?

- A. CEO of NITI Aayog
 - B. Senior Adviser at Fairfax Financial Holdings
 - C. Chief Economic Adviser to the Government of India
 - D. Director at the World Bank
-

Q29. Which is

- A. Peros
 - B. Diego
 - C. Eagle
 - D. Nelson
-

Q30. In which

- A. Opera
 - B. Opera
 - C. Missi
 - D. Missi
-

Q31. Who to

- A. Arif M
 - B. T. Rav
 - C. Rajen
 - D. Anan
-

Q32. Which

- A. Arch
 - B. INTA
 - C. Minis
 - D. WWF-India
-

Q33. Which team won the Laureus World Team of the Year award at the 2025 Laureus World Sports Awards?

- A. Argentina National Football Team
 - B. Manchester City
 - C. Real Madrid
 - D. South Africa Rugby Team
-

Q34. The India-UK Joint Military Exercise 'AJEYA WARRIOR-25' began on which date in 2025?

- A. 15 November 2025
- B. 17 November 2025

-
- C. 20 November 2025
 - D. 30 November 2025
-

Q35. Which facility was virtually inaugurated by Prime Minister Narendra Modi on 26 November 2025 as India's first global aircraft engine MRO centre built by Safran?

- A. Skyroot Infinity Campus
 - B. Vikram-I Launch Complex
 - C. SAESI at GMR Aerospace & Industrial Park
 - D. HAL Engine Overhaul Centre, Bengaluru
-

Q36. Which satellite will be launched by India's first commercially built PSLV (PSLV-N1) in 2026?

- A. Cartosat
 - B. Ocean
 - C. RISAT
 - D. GSAT
-

Q37. The fam

- A. King
 - B. King
 - C. King
 - D. King
-

Q38. The pair _____ to which of the follow

- A. Maur
 - B. Mauk
 - C. Chola
 - D. Gupta
-

Q39. The _____ kingdom as a major naval power in the vijaya nagar empire

- A. peasa
 - B. trade
 - C. milita
 - D. craft
-

Q40. Which of the following is NOT a key role or duty of the Chief Justice of India (CJI)?

- A. Appointing Officers and Servants of the Supreme Court under Article 146
 - B. Acting as Chairperson of the Search-cum-Selection-Committee for statutory bodies
 - C. Exercising the power of 'Master of the Roster' to allocate cases to benches
 - D. Declaring laws unconstitutional directly through an executive order
-

Q41. Which of the following statements is correct?

- A. The Speaker of the Lok Sabha presides over a joint sitting of the two Houses of Parliament.
 - B. The Prime Minister presides over a joint sitting of the two Houses of Parliament.
 - C. The Chairman of the Rajya Sabha presides over a joint sitting of the two Houses of Parliament.
 - D. The Home Minister presides over a joint sitting of the two Houses of Parliament.
-

Q42. Which of the following articles of the Indian Constitution empowers each House of the Parliament to make rules for regulations, subject to the provisions of this Constitution, its procedure and the conduct of its business?

- A. Article 118(1)
 - B. Article 118(2)
 - C. Article 118(4)
 - D. Article 118(3)
-

Q43. According to Article 151 of the Indian Constitution, where are the audit reports of the Comptroller and Auditor General (CAG) submitted?

- A. Union audit reports are submitted to the Prime Minister, and State audit reports are submitted to the Chief Minister
 - B. Union audit reports are submitted to the President, and State audit reports are submitted to the Governor
 - C. Union audit reports are submitted to the President, and State audit reports are submitted to the Chief Minister
 - D. Union audit reports are submitted to the Prime Minister, and State audit reports are submitted to the Chief Minister
-

Q44. Which of the following is not a function of the Labour Department?

- A. Home
 - B. People
 - C. People
 - D. Work
-

Q45. Direct Tax is a tax which is levied on the income of an individual. Which of the following is not a direct tax?

- A. Tarap
 - B. Dutt
 - C. Naras
 - D. Kelka
-

Q46. ____ is

- A. Pedol
 - B. Ecol
 - C. Serology
 - D. Oenology
-

Q47. Kumudini Rajnikant Lakhia, awarded the Padma Vibhushan in 2025, belongs to which Indian state?

- A. Tamil Nadu
 - B. Karnataka
 - C. Haryana
 - D. Gujarat
-

Q48. India signed a Rs 7,995 crore follow-on support deal with the United States in November 2025 for which naval helicopter fleet?

-
- A. Ka-31 Helix
 - B. MH-60R Seahawk
 - C. Sea King Mk-42B
 - D. ALH Dhruv Mk-III
-

Q49. Select the most appropriate option to fill in the blank.
Dushasana is notorious ____ his bad deeds.

- A. of
 - B. for
 - C. about
 - D. over
-

Q50. Select the most appropriate option to fill in the blank.
While his interest in the subject was at its peak, it soon

- A. waned
 - B. veined
 - C. wained
 - D. vained
-

Q51. Choose the most appropriate option to fill in the blank.

- A. Negligent
 - B. Thorough
 - C. Precise
 - D. Careful
-

Q52. Choose the most appropriate option to fill in the blank.

- A. Repliable
 - B. Copyable
 - C. Innovative
 - D. Echoable
-

Q53. Select the most appropriate option to fill in the blank.
Flexible

- A. Obstinate
 - B. Snobbish
 - C. Hysterical
 - D. Staunch
-

Q54. Which of the following has the correct spelling?

- A. Connisseeur
 - B. Conoisseeur
 - C. Connoisseur
 - D. Connoissur
-

Q55. Select the option that can be used as a one-word substitute for the highlighted group of words.
Manoj wants to learn the analysis of handwriting when he grows up.

-
- A. lithography
 - B. etiology
 - C. calligraphy
 - D. graphology
-

Q56. Select the correct passive voice of the given sentence.

The vendor is selling onions on a cart.

- A. Onions were being sold by the vendor on a cart.
 - B. Onions are sold by the vendor on a cart.
 - C. Onions are being sold by the vendor on a cart.
 - D. Onions are selling by the vendor on a cart.
-

Q57. Select the correct sentence.
Sagarika said,

- A. Sagarika said,
 - B. Sagarika said,
 - C. Sagarika said,
 - D. Sagarika said,
-

Q58. Select the correct sentence.

You are requested to accept the nomination.

- A. Please accept the nomination.
 - B. Please accept the nomination.
 - C. Please accept the nomination.
 - D. Please accept the nomination.
-

Q59. Select the correct sentence.

Old hat

- A. A super person
 - B. A crazy person
 - C. An angry person
 - D. An old person
-

Q60. Select the correct sentence.

- A. Asser
 - B. Assembly
 - C. Asemmbly
 - D. Assemmbly
-

Q61. Select the INCORRECTLY spelt word.

- A. Referred
 - B. Occurrence
 - C. Acknowledgment
 - D. Acomodation
-

Q62. Select the most appropriate phrasal verb to fill in the blank.

The firemen had to _____ the door to get into the burning house.

- A. break out
 - B. break in
 - C. break down
 - D. break away
-

Q63. Select the correct direct narration of the given sentence.

The doctor said that he would not be able to make any home visits during that week.

- A. The doctor said, "He will not be able to make any home visits during this week."
 - B. The doctor said, "I will not be able to make any home visits during that week."
 - C. The doctor said, "I would not be able to make any home visits during that week."
 - D. The doctor said, "I will not be able to make any home visits during this week."
-

Q64. Select the correct indirect narration.

He can afford to buy a new car.

- A. A new car
 - B. A new car
 - C. A new car
 - D. A new car
-

Q65. Select the correct indirect narration.

- A. Accept
 - B. Like
 - C. Hate
 - D. Love
-

Q66. Select the correct indirect narration.

Pallavi said, "I will bake a sponge cake tomorrow."

- A. Pallavi said that she would bake a sponge cake the next day.
 - B. Pallavi said that she would bake a sponge cake tomorrow.
 - C. Pallavi said that she is going to bake a sponge cake tomorrow.
 - D. Pallavi said that she was going to bake a sponge cake the next day.
-

Q67. Select the correct indirect narration.

She is found to be cunning.

- A. cunning
 - B. appreciative
 - C. critical
 - D. sarcastic
-

Q68. In the given passage, 'when words fail' means:

Read the given passage and answer the questions that follow.

'War is what happens when words fail' says Margaret Atwood. After war what remains is only unimaginable damage. The innocent lives, livestock and property of citizens will be lost filling every spot with bloodshed and misery. It takes decades to normalise the psychological terrors of the victims of war. The consequences, in one form or the other, will bring bitterness even to the rest of the world. So, it is the responsibility of a nation's leader to protect his/her own people from the bitter wars. Impactful leadership, commitment to provide peace

and comfort to the citizens, diplomatic strength and awareness of happenings around the world and neighbourhood are essential to any nation's leader. Nowadays, one who wins the battlefield is not the winner, in fact he is the first loser. One who endeavours to prevent war is a real hero. The nations of the modern world are in need of real heroes. So, the words 'bravery', 'tactics', and 'generalship' should be used for those who sacrifice anything for protecting his nation, other nations and mother earth from devastating results of war.

- A. when a leader's English skills are not good
 - B. when discussions are not fruitful
 - C. if a leader failed in a language paper during his education
 - D. when severe words are not used in the argument
-

Q69. Which of the following summarises the passage?

Read the given passage and answer the questions that follow.

'War is what happens when words fail' says Margaret Atwood. After war what remains is only unimaginable damage. The innocent lives, livestock and property of citizens will be lost filling every spot with bloodshed and misery. It takes decades to normalise the psychological terrors of the victims of war. The consequences, in one form or the other, will bring bitterness even to the rest of the world. So, it is the responsibility of a nation's leader to provide peace and comfort to his nation and neighbourhood. The nations of the modern world are in need of real heroes who sacrifice anything for protecting his nation, other nations and mother earth from devastating results of war.

- A. Leaders should be brave.
 - B. Weapons should be used.
 - C. Physical strength is a real fear.
 - D. A war is a real fear.
-

Q70. Select the correct answer.

Read the given passage and answer the questions that follow.

'War is what happens when words fail' says Margaret Atwood. After war what remains is only unimaginable damage. The innocent lives, livestock and property of citizens will be lost filling every spot with bloodshed and misery. It takes decades to normalise the psychological terrors of the victims of war. The consequences, in one form or the other, will bring bitterness even to the rest of the world. So, it is the responsibility of a nation's leader to provide peace and comfort to his nation and neighbourhood. The nations of the modern world are in need of real heroes who sacrifice anything for protecting his nation, other nations and mother earth from devastating results of war.

- A. Idleness
 - B. Readiness
 - C. Selflessness
 - D. Effort
-

Q71. According to the passage, a nation's hero is one who:

Read the given passage and answer the questions that follow.

'War is what happens when words fail' says Margaret Atwood. After war what remains is only unimaginable damage. The innocent lives, livestock and property of citizens will be lost filling every spot with bloodshed and misery. It takes decades to normalise the psychological terrors of the victims of war. The consequences, in one form or the other, will bring bitterness even to the rest of the world. So, it is the responsibility of a nation's

leader to protect his/her own people from the bitter wars. Impactful leadership, commitment to provide peace and comfort to the citizens, diplomatic strength and awareness of happenings around the world and neighbourhood are essential to any nation's leader. Nowadays, one who wins the battlefield is not the winner, in fact he is the first loser. One who endeavours to prevent war is a real hero. The nations of the modern world are in need of real heroes. So, the words 'bravery', 'tactics', and 'generalship' should be used for those who sacrifice anything for protecting his nation, other nations and mother earth from devastating results of war.

- A. prevents war
- B. uses battlefield tactics
- C. shows warriorship in war
- D. is the winner of war

Q72. Which of the following is NOT expressed by the writer in the passage?

Read the given passage and answer the questions that follow.

'War is what happens when words fail' says Margaret Atwood. After war what remains is only unimaginable damage. The bloodshed and misery. It takes lives, in one form or the other. A nation's leader to provide peace and comfort to the people and neighbourhood. The winner, in fact he is the first loser. The modern world are in need of real heroes, and those who sacrifice anything for protecting his nation, other nations and mother earth from devastating results of war.

- A. People
- B. The nation
- C. Some
- D. War

Q73. Aryan takes 16 hours to complete a work. He and Arman together can complete it in 12 hours. How long will Arman take to complete the work?

- A. 16 hours
- B. 16 hours
- C. 16 hours
- D. 16 hours

Q74. If A is an acute angle, then

is equal to:

- A. $\sec^2 A$
- B. $\tan^2 A$
- C. $\sin^2 A$
- D. $\cos^2 A$

Q75. The distance between the points (0, 3) and (-3, 0) is :

- A. 3 units
- B. $3\sqrt{2}$ units
- C. 6 units
- D. $2\sqrt{3}$ units

Q76.

of 40% of a number is equal to

$$\frac{1}{3}$$

$$\frac{1}{5}$$

of 30% of another number. What is the respective ratio of the first number to the second number?

- A. 4 : 9
- B. 4 : 15
- C. 9 : 20
- D. 3 : 5

Q77. The length of the hypotenuse of a right-angled triangle is 10 cm. The area of the triangle is

- A. 15
- B. 9
- C. 18
- D. 12

Q78. What is the value of $2y^2 - 7y + 3$ when $y = 2$?

- A. 3
- B. -3
- C. 3
- D. -3

Q79. Evaluate $\sin 45^\circ \cos 30^\circ + \sin 60^\circ \cos 45^\circ$

- A. $\frac{1}{2}$
- B. 2
- C. 0
- D. 1

Q80. A card is drawn from the set of 52 cards. Find the probability of getting a queen card.

- A. $\frac{1}{26}$
- B. $\frac{1}{13}$
- C. $\frac{4}{53}$
- D. $\frac{4}{13}$

Q81. Two dice are thrown. The probability of getting the sum more than 10 is –

- A. $\frac{1}{18}$
- B. $\frac{1}{12}$
- C. $\frac{1}{6}$
- D. $\frac{1}{4}$

Q82. ABC is a right-angled triangle. If the lengths of two sides containing the right angle are 4 cm and 3 cm, the radius of its incircle is:



-
- A. 4 cm
 - B. 2 cm
 - C. 1 cm
 - D. 3 cm
-

Q83. The ratio of sugar and salt in a mixture is 5 : 6. After addition of 500 grams sugar the ratio changes to 7 : 8. What is the quantity of salt in the new mixture?

- A. 12.5 kg
 - B. 10 kg
 - C. 10.5 kg
 - D. 12 kg
-

Q84. In a collection of 100 old coins are added to the collection. The total number of coins is now 150. What is the number of coins added to the collection?

- A. 80
- B. 60
- C. 100
- D. 48

Q85. The roots of the equation $x^2 - 12x + 36 = 0$ are

- A. 2,16
- B. 12,21
- C. -12,-21
- D. -2,-16

Q86. In a certain sum, the rate of interest is 10% per annum. What is the rate of interest in the same sum for 2 years?

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

Q87. If the sum of two numbers is 15 and one of the numbers is 7, then the other number is

- A. 6
- B. 4
- C. 5
- D. 8

Q88. Evaluate: $41 - [21 - \{11 - (16 - 4 \div 2 \times 3)\}]$

- A. 21
 - B. 16
 - C. 18
 - D. 23
-

Q89. A man sold a pen for Rs 1526 at a loss of 30 percent. If he wants to make a profit of 40 percent, at what price should he sell the pen?

- A. Rs.3052

-
- B. Rs 3268
 - C. Rs 3100
 - D. Rs 3066

Q90. The average of the first 10 odd prime numbers is:

- A. 13.8
 - B. 17
 - C. 12.9
 - D. 15.8
-

Q91. 8 years ago, the age of father was 27 years more than twice his son's age. After how many years, from now, will he be twice his son's age?

- A. 16
 - B. 19
 - C. 18
 - D. 15
-

Q92. In a school, there were 150 students in a session. The ratio of boys to girls was 3:2. How many more boys were there than girls?

- A. 10
- B. 12
- C. 02
- D. 08

Q93. A 60 m train is moving with a speed of 72 km/hour. It crosses a platform of length 120 m. How long will it take for the train to entirely cross the platform?

- A. 30 sec
- B. 31 sec
- C. 32 sec
- D. 33 sec

Q94. In a division sum, the divisor is 4 times the quotient and 7 times the remainder. If the remainder is 34, then the dividend is:

- A. 4063
- B. 4080
- C. 4097
- D. 4114

Q95. In which quadrant a point (-4, -5) is located.

- A. second
- B. fourth
- C. third
- D. first

Q96. A man is walking at a speed of 14 km/h. After every km, he takes rest for 7 minutes. How much time will he take to cover a distance of 7 km?

- A. $1\frac{1}{5}$ hours
- B. $2\frac{1}{3}$ hours

-
- C. $1\frac{1}{3}$ hours
D. $4\frac{1}{5}$ hours

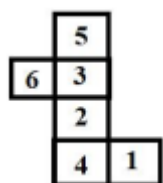
Q97. There are five friends U, V, W, X, and Y, sitting in a row facing North. U is to the left of V and W is to the right of X. X is sitting on the right of Y and he is the second person from the left. Who is the first from the right?

- A. W
B. Y
C. U
D. V

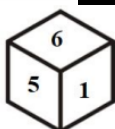
Q98. In a code language, 'TURTLE' is coded as SVUFMU and 'SPIDER' is coded as JQTSFE. How will 'PIGEON' be coded in the same language?

- A. QJQP
B. HKRC
C. HTQF
D. HJQO

Q99. Which of the following is not a possible arrangement of a dice?



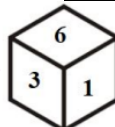
A.



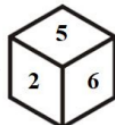
B.



C.



D.



Q100. Find the missing number in the series:

3, 8, 15, 24, __

- A. 30
B. 35
C. 36
D. 34

Q101. In a certain code language,
A + B means 'A is the daughter of B',
A – B means 'A is the wife of B',
A × B means 'A is the father of B' and
A ÷ B means 'A is the brother of B'.
How is A related to S if 'A + E – F × N ÷ S'?

- A. Father's sister
- B. Mother's mother
- C. Father's mother
- D. Sister

Q102. What is the next term in the given series?

3, 2, 9, 8, 15, 14, ____

- A. 20
- B. 13
- C. 21
- D. 19

Q103. When

- A. 4:30
- B. 1:30
- C. 7:30
- D. 3:30

Q104. Select the operation related to the same way as the first set is related to the second set. (NOTE: Operations on whole numbers, such as adding/deleting, are performed. Breaking down into its constituent digits is not performed.)

(31, 59, 40)

(56, 83, 39)

- A. (41, 75, 62)
- B. (38, 81, 54)
- C. (45, 92, 73)
- D. (29, 78, 46)

Q105. Find the angle between the hands of a clock at 3:30 n

- A. 120°
- B. 90°
- C. 75°
- D. 105°

Q106. If North - East becomes North, then what will East Become?

- A. South - West
- B. South - East
- C. North - East
- D. North - West

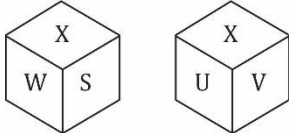
Q107. If the time in the mirror image of a 12-hour clock is 3:25, what is the actual time?

- A. 9:35
- B. 8:35
- C. 8:45
- D. 7:45

Q108. Five students - P, Q, R, S and T - are sitting in a circle facing the center. P is to the immediate right of Q. R is between P and S. Who is sitting to the immediate left of T?

- A. Q
- B. R
- C. S
- D. P

Q109. Six letters S, T, U, V, W and X are written on different faces of a dice. Two positions of this dice are shown in the given figures. Find the letter on the face opposite to V.



- A. W
- B. X
- C. S
- D. U

Q110. Pointing to a photograph of a woman, a man said, "She is the daughter of my father's only son." Whom is he pointing at?

- A. Nephew
- B. Friend
- C. Cousin
- D. Niece

Q111. Read the following statements and conclusions carefully. Assuming that the statements are true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All bottles are ludo.
2. All ludo are dance.

Conclusions:

- I. Some dance are ludo.
- II. All bottles are dance.

- A. Both I and II follow.
- B. Neither I nor II follows.
- C. Only I follows.
- D. Only II follows.

Q112. 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 conclusion(s) logically follow(s) from the statements:

Statements:

- All pistons are rubbers.
- Some rubbers are nuts.
- All nuts are callipers.

Conclusions:

- I. Some callipers are rubbers.
- II. All pistons are nuts.

- A. Only conclusion I follows.

- B. Both conclusions I and II follow.
- C. Only conclusion II follows.
- D. Neither conclusion I nor II follows.

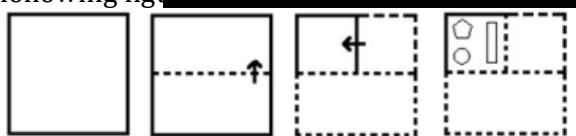
Q113. In a system, if west becomes north-west, then what will north become?

- A. South
- B. North-east
- C. East
- D. North - west

Q114. BEH, DGJ, (?), EJO, GLQ, INS,

- A. FLR
- B. FIS
- C. FKO
- D. FIL

Q115. The sequence of figures shown in the following figure is shown in the

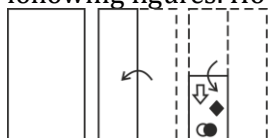


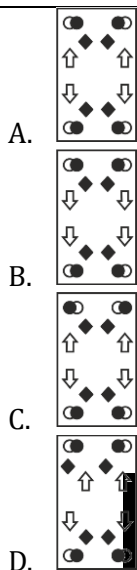
- A.
- B.
- C.
- D.

Q116. 'Amme

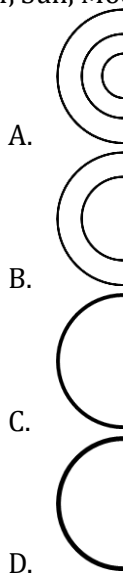
- A. Wind Speed
- B. Voltage
- C. Light
- D. Blood Pressure

Q117. The sequence of folding a paper and the manner in which the folded paper is cut is shown in the following figures. How would this paper look when unfolded?





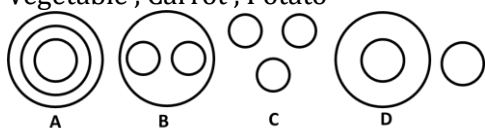
Q118. Which
Star, Sun, Mo



Q119. Select
the first num
5 : 125 :: 8 : ?

- A. 343
- B. 612
- C. 512
- D. 725

Q120. Select the Venn diagram that best represents the relationship between the following classes:
Vegetable , Carrot , Potato



- A. A
- B. B

- C. D
D. C

Solutions

1. Ans.(b)

Sol. Correct Answer: B) Object's resistance to change its state of motion - Inertia

Explanation:

An object's resistance to change its state of motion (whether at rest or in uniform motion) is known as inertia. This property is inherent in all matter due to its mass. The concept of inertia is fundamental to Newton's First Law of Motion, which states that an object will remain at rest or continue to move in a straight line with constant velocity unless acted upon by an external force.

Information Booster:

- Inertia is directly proportional to the mass of an object.
 - Newton's First Law of Motion is based on the concept of inertia.
 - Gravitation is the force of attraction between two objects.
 - Momentum is the product of mass and velocity.
 - Acceleration is the rate of change of velocity.
- ☐ Gravity is the force that causes objects to fall towards the Earth. It is a resistance to motion.
- ☐ Momentum is a measure of an object's motion, taking into account its mass and velocity.
- ☐ Acceleration is the rate of change of velocity.

2. Ans.(c)

Sol. The correct answer is (c) Candela.

Explanation:

- Candela (cd) is the SI base unit of luminous intensity, which measures the power of light in a particular direction.
- It is one of the seven base units of the International System of Units (SI).
- Definition: Candela is the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540×10^{12} Hz and has a radiant intensity of $(\frac{1}{683})$ watt per steradian.

Information Booster:

- SI base units include metre (length), kilogram (mass), second (time), ampere (electric current), kelvin (temperature), mole (amount of substance), and candela (luminous intensity).
- Candela helps in quantifying the brightness of light sources.
- Luminous intensity is a measure of the power of light in a specific direction.
- The concept of candela is used in various fields, including lighting design, photography, and vision science.

3. Ans.(c)

Sol. The correct answer is (C) the speed of propagation of light in two different media.

Explanation:

The refractive index (n) of a medium is defined as the ratio of the speed of light in vacuum (c) to the speed of light in the medium (v).

$$n = \frac{c}{v}$$

Information Booster:

- ☐ Refractive index determines how much light bends when it enters a new medium.
- ☐ Light travels fastest in vacuum, and its speed reduces in denser media, increasing the refractive index.

- Refractive index is dimensionless and always ≥ 1 .
- A higher refractive index means slower light speed in the medium.
- Common example: Refractive index of water ≈ 1.33 , glass ≈ 1.5 , diamond ≈ 2.42 .

4. Ans.(c)

Sol. The correct answer is (a) A concave lens of suitable power

Explanation:

- Myopia (Nearsightedness) is a vision defect where a person can see nearby objects clearly but has difficulty seeing distant objects.
- This occurs because the eyeball is too long, or the cornea is too curved, causing light rays to focus in front of the retina instead of directly on it.
- A concave lens is used to diverge the light rays before they enter the eye, shifting the focus back onto the retina, thereby correcting the defect.

Information Box
Other Common

Eye Defect

Myopia (Near

Hypermetropia
(Farsightedness)

Presbyopia

Astigmatism

5. Ans.(b)

Sol. The correct

Explanation:

The magnification



Height of Object

Given:

- Height of the object = 30 cm
- Height of the image = 10 cm

Substitute these values into the magnification formula:

$$M = \frac{10}{30} = \frac{1}{3}$$

Thus, the magnification produced by the concave lens is $1/3$.

Information Booster:

- A positive magnification means the image is upright, while a negative magnification means the image is inverted.

- Concave lenses produce virtual, diminished, and upright images.
- The magnification also relates to the object and image distances via the formula

$$M = \frac{v}{u}$$

, where v is the image distance and u is the object distance.

- In this case, since the magnification is positive, the image formed by the concave lens is virtual and upright.

6. Ans.(d)

Sol. The correct answer is (d) a point beyond the centre of curvature

Explanation:

- For a concave mirror:
 - Object at infinity $\rightarrow$ image at focus (real, inverted, diminished).
 - Object at C (centre of curvature) $\rightarrow$ image at C (real, inverted, same size).

So, when the

Information B

- Conca
- Rule o
 - o
 - o
 - o

- Image
- Concave mirror

7. Ans.(b)

Sol. The corre

The pH of human blood is maintained within a narrow range of 7.35 to 7.45, which is slightly basic. Here are some key points:

- Blood pH is primarily regulated by the respiratory and urinary systems, which work together to maintain the pH within its optimal range.
- Important pH-related concepts: Maintaining the pH balance is crucial for various biological processes in the body.
- Regulation of pH: The body uses various mechanisms, including buffers, to regulate pH levels.

8. Ans.(a)

- Sol:**
- Citrus canker is not a fungal disease; instead, it is caused by bacteria.
- Red rot is a fungal disease caused by the fungus *Colletotrichum falcatum*. It affects sugarcane plants, causing characteristic red discoloration of the internal vascular tissues. It can lead to stunted growth, reduced sugar content, and even death of the affected plants.
- Wheat rust is a fungal disease caused by various species of the *Puccinia* genus. It manifests as orange or reddish-brown pustules on the leaves, stems, and spikes of wheat plants, eventually leading to reduced yield and quality.
- Damping off is a fungal disease that affects seedlings, particularly those grown in damp and poorly ventilated conditions. It causes the seedlings to rot at the soil line, leading to their collapse and death.

9. Ans.(d)

Sol. The correct answer is (d) Sphincter.

The sphincter muscle that regulates the exit of food from the stomach into the small intestine is specifically called the pyloric sphincter. This is a ring-shaped muscle located at the junction of the stomach and the duodenum (the first part of the small intestine).

- ❑ After the food is partially digested in the stomach, it is converted into a semi-liquid substance called chyme.
- ❑ The pyloric sphincter controls the release of chyme into the small intestine in a regulated manner to allow for efficient digestion and nutrient absorption.
- ❑ It also prevents the backflow of intestinal contents into the stomach, ensuring a one-way flow of food.

Information Booster

- ❑ Function of the Pyloric Sphincter:
 - Regulates the flow of partially digested food from the stomach to the small intestine.
 - Prevents backflow of intestinal contents into the stomach.
- ❑ Types of Sphincters in the Digestive System:
 - Lower esophageal sphincter (LES): Prevents acid reflux into the esophagus.

- ❑ Disorders:
 - ...omiting and

Additional Info

- ❑ Gastro:
 - ...s of the leg a
- ❑ Pector:
 - ...vements of the arm
- ❑ Rectu:
 - ...ing : a
 - ...no spine but has no role in regula

- ❑ 10. An
- ❑ Sol:
- ❑ The co answer is: (C) Peepal
- ❑ Expla
 - Ficus religiosa
 - It is com
 - The Peep
 - It releases oxygen even during the night. It can absorb up to 100,000 mg of formaldehyde (CAM)-like activity.
 - The tree is often found near temples, monasteries, and public spaces due to its cultural and religious significance.
- ❑ Information Booster:
 - The Peepal tree is also known as the Sacred Fig.
 - Gautama Buddha is believed to have attained enlightenment under a Peepal tree (Bodhi tree) in Bodh Gaya.
 - In Ayurveda, its bark, leaves, and roots are used for treating asthma, diabetes, and skin disorders.
 - Ficus religiosa belongs to the Moraceae (mulberry) family.
 - Other common trees: Babool (Acacia nilotica), Sal (Shorea robusta), Neem (Azadirachta indica)—all distinct from Peepal.

11. Ans.(b)

Q Sol:

Q

Galvanisation is a method of protecting iron from rusting by coating it with a thin layer of Zinc. Zinc is more reactive than iron. This means it corrodes more easily than iron when exposed to oxygen and moisture (the culprits behind rust). The zinc coating acts as a physical barrier between the iron and the environment, preventing oxygen and moisture from reaching the iron surface. Even if the zinc coating gets scratched or damaged, it offers sacrificial protection. Zinc corrodes first, preventing the iron underneath from rusting. This is because zinc acts as a sacrificial anode, giving up electrons to the iron (cathode) and corroding preferentially.

12. Ans.(d)

Q Sol:

Q The correct answer is (d) Three-carbon molecule.

- Lactic acid is a three-carbon molecule found in many food products like yogurt and cheese.
- The chemical formula for lactic acid is $\text{C}_3\text{H}_5\text{O}_2$.
- It has a hydroxyl group and a carboxylic acid group.
- Lactic acid is a weak acid.
- Two-carbon molecules include acetic acid ($\text{C}_2\text{H}_4\text{O}_2$).
- One-carbon molecules include formic acid ($\text{C}_1\text{H}_2\text{O}_2$).
- Four-carbon molecules include butyric acid ($\text{C}_4\text{H}_8\text{O}_2$).

13. Answer: A

Sol. Sol: The correct answer is A.

Key points:

- Q Vinegar is a common household item used as a preservative. It is made through the fermentation of ethanol.
- Q Tomato, spinach, and rhubarb are rich in citric acid. Citric acid is a three-carbon molecule.
- Q Orange juice contains citric acid, which is used as a natural preservative. It is essential in the Citric Acid Cycle, a key component in cellular respiration (energy production). It is also responsible for the sour taste of citrus fruits.

14. Ans.(a)

Sol. The correct answer is a.

- Propane is a colorless and odorless gas.
- Its chemical formula is C_3H_8 .
- It is commonly used as a fuel for heating and cooking.

Additional Information:

- Propane is part of the family of saturated hydrocarbons known as alkanes, which are characterized by single bonds between carbon atoms. It is often stored and transported in a liquid state under pressure.
- Propane is found in natural gas and can also be produced through the refining of crude oil. It is commonly used in portable stoves, gas grills, and as a fuel for heating.

Other Options:

- Pentane: The chemical formula for pentane is C_5H_{12} , meaning it contains five carbon atoms and twelve hydrogen atoms. It is a liquid at room temperature and is not colorless and odorless in the same way propane is.
- Ethane: Ethane has the chemical formula C_2H_6 , containing two carbon atoms and six hydrogen atoms. While it is also colorless and odorless, it does not match the formula provided in the question.
- Butane: Butane, with the chemical formula C_4H_{10} , consists of four carbon atoms and ten hydrogen atoms. Like propane, it is also colorless and odorless, but it does not correspond to the formula C_3H_8 .

15. Ans.(d)

Sol. The correct answer is: (D) Lithium, Sodium, Potassium

Explanation:

- ❑ Lithium, Sodium, and Potassium are alkali metals found in Group 1 of the periodic table.
- ❑ These metals are extremely soft and can be easily cut with a knife.
- ❑ They have low densities (especially Lithium and Sodium) and low melting points compared to most other metals.

Information Booster:

- ❑ Alkali metals are highly reactive, especially with water.
- ❑ Stored under oil or kerosene to prevent reaction with air or moisture.
- ❑ Reactivity increases from Lithium → Potassium down the group.
- ❑ These metals form strong alkaline hydroxides in water.
- ❑ Common

Additional Info:

- ❑ Arsenic
- ❑ Beryllium

Germanium, Cobalt, and Nickel are transition metals.

16. Ans.(d)

Sol. The correct answer is: (D) Fluorine

Explanation:

- Electronegativity is the ability of an atom to attract shared electrons in a covalent bond. Fluorine has the highest electronegativity (4.0) among all elements.
- Halogens (like Fluorine, Chlorine, Bromine, and Iodine) have high electronegativity due to their high nuclear charge and small atomic size.
- Among halogens, Fluorine is the most electronegative element in the periodic table.

Information Booster:

- Electronegativity increases across a period and decreases down a group.
- The most electronegative element is Fluorine, followed by Oxygen and Nitrogen.
- Electronegativity is a relative property; it is measured on a scale from 1 to 4.
- High electronegativity results in polar covalent bonds.
- Elements with high electronegativity (like Fluorine) tend to lose electrons in chemical reactions.
- Elements with low electronegativity (like Sodium) tend to gain electrons in chemical reactions.

Additional Knowledge:

- Electron affinity
- Electrophilicity
- Electrochemistry

17. Ans.(b)

Sol. The Correct Answer Is: (B) Aorta

Explanation:

The aorta is the largest artery in the human body and is responsible for carrying oxygenated blood away from the heart to various organs of the body, except the lungs.

It arises from the left ventricle of the heart and branches out to supply blood to all parts of the body through systemic circulation.

The aorta ensures that oxygen-rich blood reaches the brain, muscles, and other organs for their proper functioning. However, it does not carry blood to the lungs. Instead, the pulmonary artery carries deoxygenated blood to the lungs for oxygenation.

Information Booster:

- ❑ Arteries carry blood away from the heart, while veins carry blood toward the heart.

- ❑ The aorta originates from the left ventricle and supplies oxygenated blood to the body.
- ❑ The pulmonary artery is the only artery that carries deoxygenated blood, transporting it from the right ventricle to the lungs.
- ❑ The pulmonary vein is the only vein that carries oxygenated blood, bringing it from the lungs to the left atrium.
- ❑ The vena cava (superior and inferior) brings deoxygenated blood from the body back to the heart.

Additional Knowledge:

- ❑ Pulmonary Artery: Unlike other arteries, the pulmonary artery carries deoxygenated blood from the right ventricle to the lungs for oxygenation.
- ❑ Pulmonary Vein : This is the only vein that carries oxygenated blood. It brings oxygen-rich blood from the lungs to the left atrium of the heart.
- ❑ Vena Cava : The vena cava (superior and inferior) is a vein that brings deoxygenated blood from the body to the right atrium of the heart.

18. Ans.(a)

Sol. The corre

Explanation:

To find the speed of the wave, we use the following approach:

The total distance travelled by the wave is the circumference of the circle. By the formula:

$$C = 2\pi r$$

1. The speed of the wave is the distance travelled divided by the time taken. It is:

$$v = \frac{\text{Distance}}{\text{Time}}$$

- ❑ The speed of the wave is the distance travelled divided by the time taken.
- ❑ The frequency of the wave is the number of waves passing a point per second.
- ❑ The wavelength of the wave is the distance between two consecutive crests or troughs.

19. Ans.(d)

Sol. The correct answer is (D). Sound waves

Explanation:

- Mechanical waves require a medium to travel through.
- Sound waves are mechanical waves.
- In contrast, electromagnetic waves can travel through vacuum.

Information Booster:

- Examples of mechanical waves: sound waves, water waves, seismic waves.
- Examples of electromagnetic waves: radio, microwave, infrared, visible light, ultraviolet, X-rays, gamma rays.
- Mechanical waves are classified into:
 - ❑ Longitudinal waves (particles vibrate parallel to wave direction, e.g., sound).
 - ❑ Transverse waves (particles vibrate perpendicular to wave direction, e.g., water waves).

Additional Knowledge:

- Speed of sound in air at 25°C $\approx$ 343 m/s, while light (EM waves) travels at $\approx 3 \times 10^8$ m/s in vacuum.
- Sound cannot travel in vacuum; hence space is silent.
- Earthquakes produce seismic mechanical waves (P-waves = longitudinal, S-waves = transverse).
- EM waves transfer energy through oscillating electric and magnetic fields, while mechanical waves transfer energy through particle vibrations.

20. Ans.(c)

Sol. The correct answer is (C) Polarity cannot be changed.

Explanation

- ❑ An electromagnet's polarity can be easily changed by reversing the direction of the electric current flowing through its coil.
- ❑ This property makes electromagnets highly versatile and useful in various applications like motors and relays where switching magnetic poles is necessary.

Information Booster

- ❑ The direction of the magnetic field (and thus the poles) of a solenoid can be determined using the Right-Hand Rule: if you curl the fingers of your right hand in the direction of the current flow through the coil, your thumb will point towards the North pole.
- ❑ Reversing the direction of the current reverses the direction of the magnetic field and consequently the polarity.

Additional Knowledge

A. It is a temporary magnet.

- ❑ Electromagnets are created when an electric current flows through a wire. This creates a magnetic field around the wire.
- ❑ When the current is turned off, the magnetic field disappears, and the magnetism might disappear.

B. Its strength can be controlled.

- ❑ The strength of an electromagnet can be controlled by the air gap between the poles. A larger gap generally leads to a weaker magnetic field.
- ❑ Air has a high magnetic reluctance, which means it resists the flow of magnetic flux. This can weaken the magnetic field.

D. Its strength can be varied.

- ❑ The strength of an electromagnet can be controlled and varied by changing the current flowing through the coil.

Using a ferron core

21. Ans.(d)

Sol. The correct answer is (d) $P = F \times d / t$

Explanation:

The formula for power is $P = W / t$, where P is power, W is work done, and t is time taken. Work done is $W = F \times d$, where F is force and d is distance.

$P = \text{Work} / \text{Time}$

This matches

Information Booster

- ❑ Power is measured in Watts (W), where 1 Watt = 1 Joule per second.
- ❑ Work is the product of force and distance: $W = F \times d$.
- ❑ The unit of force is Newton (N), and the unit of distance is meter (m).
- ❑ The formula $P = F \times d / t$ represents how much energy is transferred over time.
- ❑ Power is a measure of the rate of doing work or transferring energy.
- ❑ Mechanical power applies to machines, engines, and systems that involve force and motion.

22. Ans.(d)

Sol. Correct Answer: (D) At the centre of curvature

Explanation:

- A concave mirror has a centre of curvature (C) and a focus (F).
- When an object is placed at the centre of curvature (C):

- o The image is formed at the centre of curvature (C) itself.
- o The image is real, inverted, and of the same size as the object.

Information Booster:

- Mirror Formula: $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$
 - o f = focal length, u = object distance, v = image distance
 - Special Cases:
 - o Object at infinity $\rightarrow$ Image at focus (very small)
 - o Object beyond C $\rightarrow$ Image between F and C
 - o Object at F $\rightarrow$ Image at infinity
 - o Object between F and C $\rightarrow$ Image beyond C, enlarged
- This is a fundamental property of concave mirrors in optics.

23. Ans.(a)

Sol. The correct answer is (a).

Explanation:

- 1 The question asks for the nature of the image formed by a concave mirror when the object is placed at the centre of curvature (C).
- 2 When an object is placed at the centre of curvature (C) of a concave mirror, the image is formed at the same point (C) on the opposite side of the mirror.
- 3 To get a real, inverted, and of the same size as the object, the object must be placed at the centre of curvature (C).
- 4 The focal length of the mirror is given as 10 cm. The centre of curvature (C) is at a distance of $2f$ from the mirror, i.e., 20 cm.
- 5 There is a real, inverted, and of the same size as the object.

Information Booster:

- 1 In a concave mirror, the image is formed at $2f$ from the focal point (F) when the object is placed at $2f$ from the mirror.
- 2 The image is real, inverted, and of the same size as the object.
- 3 The mirror formula is $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$.

$\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$ where f is the focal length, v is the image distance, and u is the object distance.

24. Ans.(b)

Sol. The correct answer is (b) 1 A.

Explanation:

When two resistors are connected in series, the total resistance is the sum of the individual resistances.

Given:

- 1 Resistance of each resistor = 2Ω
- 2 Battery voltage = 4 V
- 3 Current flowing through the circuit = ?

$$R_{\text{total}} = 2\Omega + 2\Omega = 4\Omega$$

Now, we can calculate the current using Ohm's Law:

$$I = \frac{V}{R}$$

Where:

- 1 I is the current in amperes,
- 2 V is the voltage (4 V),
- 3 R is the total resistance (4 Ω).

Substituting the values:

$$I = \frac{4V}{4\Omega} = 1A$$

So, the current flowing through the resistors is 1 Ampere.

Information Booster:

Series Connection: In a series connection, the current is the same through all components, and the total resistance is the sum of the individual resistances.

Ohm's Law: Ohm's Law states that the current (I) flowing through a conductor between two points is directly proportional to the voltage (V) across the two points and inversely proportional to the resistance (R) of the conductor.

$$I = \frac{V}{R}$$

25. Ans.(c)

Sol. Correct Answer is (c)

The 2025 Paris Agreement

Information Booster:

- India topped the list
- 27-member group
- Total events: 10
- India won a total of 10 medals

26. Ans.(c)

Sol. Ans. (c)

The Global Forest

deforestation

between inter

expansion, ille

This alarming

mechanisms a

urgent correct

increasing clim

accountability

Therefore, op

commitments

Information B

• Over 6.37 m

• More than 1

• Major driver

• Forest loss continues in Brazil, Congo Basin, Southeast Asia, etc.

• Current efforts are off track to meet 2030 zero-deforestation goals.

• Calls for urgent global cooperation and policy enforcement.

Additional Knowledge

(a) Only 10 governments have pledged to reduce deforestation by 2030 – Incorrect. Over 140 countries, representing over 90% of global forest cover, committed to end forest loss under declarations like the Glasgow Leaders' Declaration (2021).

(b) Deforestation was completely halted worldwide in 2023 – Incorrect. Far from being halted, forest loss remains high, with the 2023 figure of 6.37 million hectares demonstrating significant ongoing degradation, particularly in tropical regions.

(c) Despite commitments, 6.37 million hectares of forests were lost in 2023 – Correct. This is the verified estimate released by the Forest Declaration Assessment, highlighting a failure to translate pledges into effective actions.

(d) Forest loss in 2023 was solely due to natural disasters – Incorrect. While wildfires and climate events contributed in some regions, the majority of deforestation is still human-driven, especially for agriculture, logging, and infrastructure development.

27. Ans.(c)

Sol. The correct answer is: (c) Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, Thailand.

Explanation:

- BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) is a regional organization comprising countries from South Asia and Southeast Asia.
- It includes Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand. These seven countries collaborate on various sectors such as trade, technology, and environmental sustainability.

Information Booster:

- Pakistan and Maldives: Neither Pakistan nor Maldives is a member of BIMSTEC.
- BIMSTEC's P... on among
- member coun...
- Additional Kno...
- BIMSTEC wa...

28. Ans.(b)

Sol. The correct answer is: (b) His new investment strategy, focusing on sustainable infrastructure, and strengthening ties with the private sector.

2 Amita... the Senior
Advis... Canadian inv...
2 His ne... term investm... ing with the
count... on, focusing on... structure, and
sustai...

Additional Fac...

- 2 Fairfa... investment firm, known... einsurance,
- and in...
- 2 Kant's... strengthen
- Fairfa... as...
2 His de... and government policy will art... idge
between... and government initiatives...

29. Ans...

Sol:

- 2 The co...
- 2 Expla...
- 2 Diego... kilometers.
- It is a... es a major
US military base, which plays a major role in operations across the Indian Ocean and beyond. The island's size and military infrastructure make it the focal point of the archipelago in geopolitical terms.

2 Information Booster

- Diego Garcia is the largest island in the Chagos Archipelago.
- It covers around 30 sq. km.
- It hosts a strategic US military base.
- It is the most southerly island in the group.
- The island is under a 99-year lease agreement between Mauritius and the UK/US.

2 Additional Knowledge

- (a) Peros Banhos: Another island group within the Chagos Archipelago, smaller than Diego Garcia.
- (b) Diego Garcia: The largest and most strategically important island, central to military operations in the Indian Ocean.
- (c) Eagle Islands: Smaller islands within the archipelago, not as significant in size or strategic value.

(d) Nelson Island: Part of the Chagos Archipelago but smaller and less prominent than Diego Garcia.

30. Ans.(b)

Sol:

The correct answer is (b) Operation Samudra Setu.

Explanation:

Operation Samudra Setu was launched by the Indian Navy in May 2020 to repatriate Indian citizens stranded abroad due to the COVID-19 pandemic.

• INS Jalashwa and INS Magar were deployed to bring back citizens from Maldives and other locations.

• The first phase of the operation commenced on 8 May 2020.

• The operation was part of the broader "Vande Bharat Mission" initiated by the Government of India.

• Over 3,000 citizens were brought back through this operation by sea routes.

Information Booster:

• "Samudra Setu" means "Sea Bridge" in Sanskrit, signifying a maritime connection for humanitarian assistance.

• The ship *INS Jalashwa* was deployed for screening and relief to citizens on board.

Additional:

(b) Op

• Con

Madag

(c) Mi

• Lau

like M

(d) M

• Con

31. Ans.(c)

Sol. Sol. Rajendra Viswanath was born in as the first Governor of Kerala.

Correct Answer:

Key Points:

• Rajendra Viswanath was born in Kerala, India.

• Location of Office: Raj Bhavan, Thiruvananthapuram.

• Administering: Chief Justice of Kerala High Court, Justice Niti M.

Predecessor: Justice Mohammed Khair (Transferred to Bihar)

32. Ans.(b)

Sol. Correct Answer:

Explanation:

The Intangible Cultural Heritage (ICH) Division, under the Ministry of Culture, launched Project Gaja-Lok at its headquarters in New Delhi.

Information Booster:

Launch Events:

o Public Exhibition – 19 to 25 November 2025

o Roundtable – 20 November 2025

Organised by: INTACH's Intangible Cultural Heritage (ICH) Division

Focus:

o Human–elephant interactions

o Ecological challenges

o Ethical coexistence

o Cross-border heritage collaboration

Exhibition Showcased: Indus Valley seals, Bharhut railings, Konark Temple statues.

33. Ans.(c)

Sol:

Ans. (c)

Real Madrid was awarded the Laureus World Team of the Year at the 2025 Laureus World Sports Awards held in Madrid. This prestigious honor recognized the club's remarkable 2023–24 season, during which they achieved tremendous success, including winning both the UEFA Champions League and the Spanish La Liga. Their consistent dominance in European football, star-studded roster, and tactical brilliance underlined their selection for this elite accolade.

The award was presented by Spanish tennis legend Rafael Nadal, adding emotional and national significance to the ceremony, which took place in Madrid—the home of the winning club. Real Madrid's success symbolized excellence in teamwork, strategy, and sportsmanship, reinforcing their reputation as one of the most successful and respected football clubs in history.

This win marks yet another recognition of Real Madrid's sustained excellence on the global football stage, highlighting their influence on the world of sporting Information

- Award: Laureus World Team of the Year
- Winner: Real Madrid
- Achievement: Winning the UEFA Champions League and the Spanish La Liga
- Event Venue: Laureus World Sports Awards, Madrid
- Presenter: Rafael Nadal
- Legacy: Reinforcing Real Madrid's status as one of the most successful football clubs in history

- Additional Knowledge:
- (a) Argentina won the FIFA World Cup in 2022, not the Team of the Year award in 2025.
 - (b) Manchester City had an excellent season and won the treble in the 2022–23 season, but they did not win the 2025 award.
 - (c) Real Madrid's victory in both the UEFA Champions League and the Spanish La Liga in the 2023–24 season earned them the Team of the Year award in 2025.
 - (d) South Korea and Japan won the 2002 FIFA World Cup, but they did not win the Team of the Year award in 2025.

34. Ans.

Sol:

The correct answer is (b) 17 November 2025

- 'AJEYA WARRIOR-23' was held in the UK, not India.

- It is the first time.

- Conducted by the Indian Army.

Information

- Venue – Foreign Training Area, Manajau, Haryana (near Jharkhand).
- Edition – 8th (held biennially since 2011).
- Duration – 17 to 30 November 2025.
- Total Troops – 240 soldiers (120 each) from India and UK.
- Indian Troops represented by Sikh Regiment.

Additional Knowledge:

- Focus – Counter-terror operations in semi-urban environments.
- Exercise aims to enhance interoperability & peacekeeping training under UN.
- Previous edition – AJEYA WARRIOR-23 was held in the UK.
- Supports India's role in global peacekeeping & Indo-Pacific security strategy.
- Similar exercises – Yudh Abhyas (US), Shakti (France), Garuda Shakti (Indonesia).

35. Ans.(c)

Sol. Correct Answer: (c) SAESI at GMR Aerospace Park

Explanation:

- ❑ Safran Aircraft Engine Services India (SAESI) at GMR Aerospace & Industrial Park, Hyderabad is India's first global MRO centre built by French engine manufacturer Safran S.A.
- ❑ PM Modi virtually inaugurated the facility on 26 November 2025.

Information Booster:

- ❑ Budget: ₹1,300 crore (USD 145M)
- ❑ Services: LEAP engines used in A320neo & Boeing 737 MAX
- ❑ Capacity: 300 engines/year by 2035
- ❑ Importance: First OEM-built MRO → boosts Aatmanirbhar Bharat & reduces foreign maintenance costs

About Telangana:

- ❑ Chief Minister (CM) – A Revanth Reddy
- ❑ Governor – Jishnu Dev Varma
- ❑ Capital – Hyderabad
- ❑ Wildlife – Nagarjuna Sagar Wildlife Sanctuary

36. Ans.(b)

Sol. Correct Answer: (b) ISRO

Explanation:

- ❑ ISRO is the national space agency of India, responsible for the development and execution of India's first commercial space program, Gaganyaan.

Information Booster:

- ❑ Announced at the International Space Week (ISW) 2025 in Hyderabad.
- ❑ Commissioned by the Department of Space (DOS) & ISRO.
- ❑ India's first commercial space program, aiming to develop 100% of the program.
- ❑ Contracted by ISRO to build five PSLV-XL rockets for the Gaganyaan mission.
- ❑ ISRO's first commercial mission, mission clearance, and launch.
- ❑ India's first commercial space program, aiming to develop 100% of the program.
- ❑ Alignment with the Indian Space Policy 2023.

About PSLV:

- ❑ Type: Medium-Lift Vehicle (MLV) + Heavy-Lift Vehicle (HLV)
- ❑ PSLV-XL is the most powerful version, equipped with 6 extended solid rocket boosters for higher payload capacity.

About Indian Space Research Organisation (ISRO):

Headquarters: Bengaluru, Karnataka

Established – 1969

37. Ans.(d)

Sol. The correct answer is (d) Konark Sun Temple.

- The Konark Sun Temple was built in the 13th century by King Narasimha Deva Varman II of the Eastern Ganga dynasty.
- The temple is located in Konark, Odisha, and is dedicated to the Sun God, Surya.
- It is designed in the shape of a colossal chariot with intricately carved stone wheels, pillars, and walls, symbolizing the Sun God's chariot.
- The temple is a UNESCO World Heritage Site and is renowned for its architectural grandeur and historical significance.
- The Konark Sun Temple is also known as the "Black Pagoda" due to its dark color and was used as a navigational landmark by sailors in ancient times.

Information Booster:

King Rajaraja Chola:

- Rajaraja Chola I was a great Chola ruler from Tamil Nadu, known for constructing the Brihadeeswarar Temple in Thanjavur, but he is not associated with the Konark Sun Temple.

King Raghunath Singha:

- King Raghunath Singha was a ruler from the Bengal region but has no connection to the Konark Sun Temple.

King Ashoka:

- King Ashoka was a Mauryan emperor known for spreading Buddhism and constructing stupas and pillars across India. He has no direct connection to the Konark Sun Temple.

38. Ans.(d)

Sol. The correct answer is (d) Gupta.

- The Bagh Caves are renowned for their exquisite murals and paintings, which are a significant example of ancient Indian art.
- These caves are situated in Madhya Pradesh, India, and their paintings belong to the Gupta period, which is often regarded as the Golden Age of India.
- The Gupta period (approximately 4th to 6th century CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- The painting in Cave 3 and Cave 4 (remnants of Cave 2) are particularly notable for their spiritualistic themes.
- Information Book: The Gupta period (approximately 4th to 6th century CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- Maurya: The Maurya period (approximately 3rd century BCE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- Maukhari: The Maukhari period (approximately 2nd century CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- Chola: The Chola period (approximately 10th to 13th century CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- The Chola period is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.

39. Ans.(c)

Sol. The correct answer is (c) Vijayanagara.

- Amara-nayaka: The Amara-nayaka period (approximately 14th to 16th century CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- They played a significant role in the development of the Vijayanagara Empire.
- Information Book: The Vijayanagara Empire (approximately 1336 to 1646 CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- Vijayanagara: The Vijayanagara Empire (approximately 1336 to 1646 CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- The empire was founded by Harihar and Bukka of Sangama dynasty.
- Amara-nayaka: The Amara-nayaka period (approximately 14th to 16th century CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- They maintained a system of revenue assignments, not hereditary property.
- They were successful in maintaining a strong and stable empire.
- Additional Knowledge: The Vijayanagara Empire (approximately 1336 to 1646 CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- Major dynasties: The Vijayanagara Empire (approximately 1336 to 1646 CE) is known for its advancements in art, architecture, and culture. The paintings in the Bagh Caves are a prime example of Gupta art.
- Krishna Dev Raya (1509-1565) was the greatest ruler of Vijayanagara.
- Nayaka system later evolved into small Nayaka kingdoms.
- Amara lands were revenue assignments, not hereditary property.

40. Ans.(d)

Sol. The correct answer is option (d) Declaring laws unconstitutional directly through an executive order

Explanation

The Chief Justice of India (CJI) holds several crucial constitutional, administrative, and judicial responsibilities. Some of these include the appointment of officers and servants of the Supreme Court as per Article 146, acting as Chairperson of Search-cum-Selection Committees for key statutory authorities like the National Company Law Appellate Tribunal (NCLAT), and exercising the exclusive power of 'Master of the Roster', where the CJI decides on the allocation of cases to various benches. This power is laid down in the Handbook of Practice and Procedure and Office Procedure, 2017, ensuring the smooth functioning of the Supreme Court's judicial business.

Additionally, the CJI has other roles such as administering the oath to the President of India, recommending ad hoc judges under Article 127, requesting retired judges to act as judges, and deciding the seat of the Supreme Court. However, the CJI does not have the power to declare laws unconstitutional through an executive order. This can only be done through a judicial process where the bench delivers a verdict after hearing the concerned parties. The CJI cannot bypass this due process of law.

Information Booster

- Article 146: Appointments of Officers and Servants of the SC are made by the CJI.
- Master of the Roster: CJI allocates cases to benches.
- Search-cum-Selection Committee: CJI heads appointments to bodies like NCLAT.
- Other powers: Administers President's oath, appoints ad hoc judges, decides SC seat.
- Cannot declare laws unconstitutional through executive orders; must follow judicial process.

Additional Knowledge

- (a) Appointing Officers and Servants of the Supreme Court under Article 146: Under Article 146 of the Indian Constitution, the President appoints and removes the Judges of the Supreme Court. The President also appoints and removes the Officers and Servants of the Supreme Court.
- (b) Acting as Chairperson of the National Commission for the Backward Classes (NCBC): The CJI acts as the Chairperson of the NCBC, which is a constitutional body. The NCBC is responsible for recommending the list of backward classes for reservation in educational institutions and public employment. The CJI also ensures that the NCBC's recommendations are implemented.
- (c) Exercising the power of Prerogative of Pardon: The CJI exercises the power of Prerogative of Pardon on behalf of the President. This power is used to grant pardon, commute, or remit the sentence of any person convicted of an offence. The CJI also exercises the power of Prerogative of Pardon on behalf of the President in cases of death sentences.
- (d) Declaring laws unconstitutional: The CJI has the power to declare laws unconstitutional. This power is exercised by the Supreme Court as a whole, but the CJI plays a key role in the process. The CJI can declare a law unconstitutional if it finds that the law is in violation of the provisions of the Indian Constitution. The CJI can also declare a law unconstitutional if it finds that the law is in violation of the principles of natural justice.

41. Ans.(a)

Sol. The correct answer is (a) Speaker of Lok Sabha presides over a joint sitting of the two Houses of Parliament.

Explanation:

- Article 108 of the Constitution provides that the Speaker of Lok Sabha presides over a joint sitting of the two Houses of Parliament (Lok Sabha & Rajya Sabha).
- A joint sitting of the two Houses of Parliament is held under Article 108 when both Houses are unable to agree on a bill.
- If the bill is passed by a majority of the members present and voting in the joint sitting, it is deemed to have been passed by both Houses.
- If both Houses pass the bill, it is deemed to have been passed by both Houses.
- The CJI presides over the Supreme Court.

Purpose of Joint sittings:

Used only for ordinary bills and financial bills (not for money bills or constitutional amendment bills).

Information Booster:

- Joint sittings have been held only three times in Indian history:
 1. Dowry Prohibition Act, 1961
 2. Banking Service Commission (Repeal) Bill, 1978
 3. Prevention of Terrorism Bill, 2002 (POTA)
- Chairman of Rajya Sabha (Vice President): Presides *only* over Rajya Sabha, not joint sittings.
- Prime Minister/Home Minister do not preside over any House.

42. Ans.(a)

Sol. The correct answer is: A) Article 118(1)

Explanation:

- Article 118(1) of the Indian Constitution empowers each House of Parliament (Lok Sabha & Rajya Sabha) to make rules for regulating its procedure and conduct of business, subject to the provisions of the Constitution. This ensures that both Houses function independently in matters of their internal working.

Information Booster:

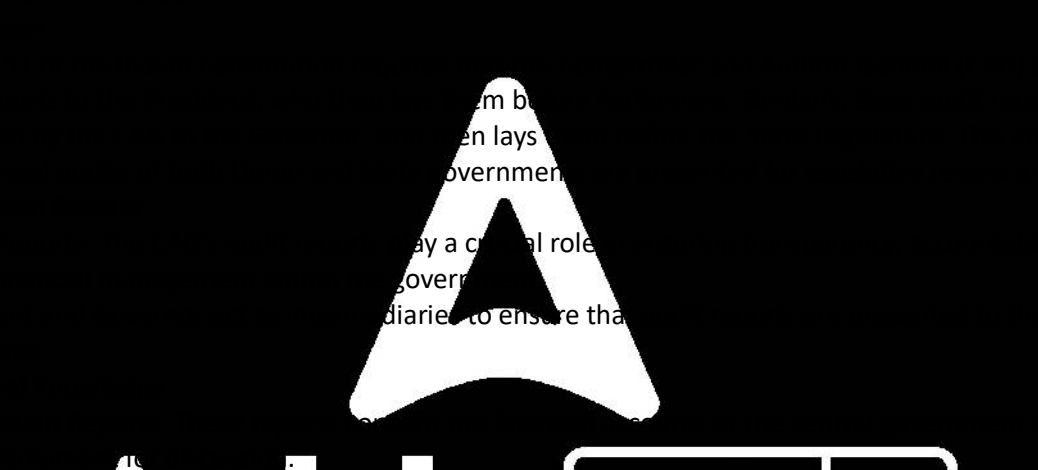
- ❑ Article 118 belongs to Chapter II – Parliament of the Constitution.
- ❑ It provides the framework for rule-making by both Houses.
- ❑ Rules made must be consistent with constitutional provisions.
- ❑ Presiding officers (Speaker of Lok Sabha / Chairman of Rajya Sabha) enforce these rules.
- ❑ Similar power exists for State Legislatures under Article 208.

Additional Knowledge:

- ❓ Article 118(2): Empowers the Rajya Sabha to make rules regarding joint sittings with Lok Sabha.
- ❓ Article 118(3): Relates to rules regarding committees of Parliament.
- ❓ Article 118(4): Provides that until rules are made, the President can make rules for regulating the procedure.

43. Answer:

[?] Sol:

- 

44. An

[?] Sol:

- People with large debts are typically the most affected because inflation decreases the real value of the money they owe.
- Fixed debts remain the same in nominal terms, but the money to repay them becomes cheaper.

Information Booster:

- Inflation reduces the real burden of fixed debts, benefiting borrowers.
- People with large debts see their debt load decrease in real terms.
- Homeowners with fixed-rate mortgages are less affected than those with variable rates.
- Inflation can be advantageous to borrowers, especially in a rising interest rate environment.
- People with high fixed-interest debts are particularly vulnerable when inflation unexpectedly increases.

Additional Knowledge:

- Option (a) Homeowners – Homeowners are generally less hurt if they have fixed-rate mortgages because inflation can increase the value of their property.

❑ • Option (c) People with large retirement savings held in savings accounts – Inflation erodes the purchasing power of savings, but this group is more affected in the long term rather than immediately.

❑ • Option (d) Workers with cost-of-living adjustments in their labour contracts – Workers with such adjustments are better protected against inflation as their wages increase with inflation.

❑ **45. Ans.(d)**

❑ Sol:

❑ The correct answer is: (D) Kelkar Committee

❑ Explanation:

• The Kelkar Committee (2002), headed by Dr. Vijay Kelkar, recommended simplification of direct taxes in post-liberalisation India.

• It focused on widening the tax base, reducing exemptions, and making taxation more transparent and efficient.

❑ Information Booster:

• Formally known as the Task Force on Direct and Indirect Taxes.

• Suggest

• Support

• Propose

• Influence

❑ Addit

• Option

• Option

• Option

❑ **46. Ans**

❑ Sol:

❑ The co

Explanation

• Pedology is the study of soil as a natural body. It is a branch of geology. It is a scientific classification, structure and properties of soil.

• It is an interdisciplinary subject that examines physical, chemical and biological processes in soil.

• It helps

❑ Inform

• Derived from the Greek word 'pedon' meaning soil.

• Deals with soil formation, classification and management.

• Important in agriculture, forestry and land management.

• Studies soil horizons and composition.

• Related

❑ Addit

• Ecology

• Serology

• Oenology, study of wine and winemaking.

❑ **47. Ans.(d)**

❑ Sol:

❑ The correct answer is (d) Gujarat

Explanation:

• Kumudini Lakhia is a renowned Kathak dancer from Gujarat.

• She was honored with the Padma Vibhushan in 2025 for her contribution to Indian classical dance.

• She revolutionized Kathak by introducing group choreography.

• She is the founder of Kadamb Centre for Dance in Ahmedabad.

• Her work has influenced generations of dancers.

Information Booster:

• She has earlier received Padma Shri and Padma Bhushan.

• Known for modernizing traditional Kathak performances.

Additional Knowledge:

Tamil Nadu (Option a)

. Known for Bharatanatyam dancers, not Kathak stalwarts like Lakhia.

Karnataka (Option b)

. State known for classical music and dance, but not Lakhia's origin.

Haryana (Option c)

. No major association of Lakhia with Haryana.

48. Ans.(b)

Sol:

The correct answer is (b) MH-60R Seahawk.

• The Ministry of Defence signed a ₹7,995 crore, 5-year follow-on support contract under the US Foreign Military Sales (FMS) programme for India's 24 MH-60R helicopters.

• India originally signed the procurement deal in February 2020, and the first three helicopters were delivered in 2021.

• The new helicopters will be used for high speed operations in the Indian Ocean region.

Information:

• Manufa

• Roles: A

• India wi

• Enhance

• Support

Additional

• MH-60R

• Globally

• MH-60R

• FMS rou

• MoD lea

49. Ans

Sol:

The correct option to fill in the blank is (a) for. The word 'Notorious' is a negative connotation used to express the reason for someone's bad reputation. Here, the man is infamous because he has had deeds. Notorious means famous (negative). for here conveyance/transportation (के लिए/के कारण).

Example:

Explain w

• (a) of: sh

• (c) about

• (d) over: indicates control/superiority or dispute (के ऊपर/पर विजय); incorrect with *notorious*.

Information booster:

• Use famous/renowned/well-known for (positive) vs notorious/infamous for (negative).

• Pattern: *be notorious for + noun/gerund* → *She is notorious for breaking rules.*

50. Ans.(a)

Sol:

The correct option to fill in the blank is (a) wane.

Explanation: Wane means to decrease, diminish, or become weaker over time—exactly matching “began to _____” as interests fade (घट जाना/कम होना/क्षीण होना). The sentence contrasts a fading interest with a growing passion, so the collocation “begin to wane” is semantically precise.

Example: *Her enthusiasm for video games began to wane as her interest in robotics increased.*

Why the other options are incorrect:

- (b) vein — a blood vessel; figuratively, a manner or style (शिरा/रग; शैली), not “decrease.”
- (c) wain — archaic word for a wagon or load (बैलगाड़ी/गाड़ा), unrelated to the context.
- (d) vain — conceited; also “futile/useless” (घमंडी; व्यर्थ), not about declining intensity.

51. **Ans.(a)**

Sol:

The correct antonym of the given word is (a) Negligent.

Given word — ‘Meticulous’:

- Meaning: Extremely careful and exact; paying close attention to every detail and following procedures with scrupulous accuracy. A meticulous person is methodical, painstaking, and thorough. (Hindi: अत्यंत सूक्ष्म/बारीकियों पर ध्यान देने वाला, बेहद सावधान)

· Example: The researcher kept meticulous records of every trial.

Correct answer word — ‘Negligent’:

- Meaning: Careless or inattentive; characterized by inattention.

· Example:

Synonyms

Antonyms

Meanings

- (b) Thorough: Completely or anyth

- (c) Precise: Accurate or टिका/निर्दि

- (d) Careful: Attentive or सावधान, (Hindi: सावधान)

All three (b), (c), and (d) are synonyms of meticulous, not

52. **Ans.**

Sol:

The correct antonym of the given word is (c) Innovate.

Given word — ‘Imitate’: To copy someone’s style/m

rather than creating original patterns

Example: He imitated their teachers by copying a unique style.

Correct antonym — Innovate: To create something new, introduce new ideas/methods/practices, the opposite

of mimicking. (Hindi: नकल करने के विपरीत, नया/मूल बना लेना)

Example: Companies that innovate often disrupt traditional markets.

Synonyms: Imitate, emulate, copy, and

Antonyms

Meanings

- (a) Repl

- (b) Copy: To reproduce the same work/behavior. (Hindi: नकल करना)

- (d) Echo: To repeat or reverberate; to closely parrot an idea/phrase. (Hindi: प्रतिध्वनित करना/दोहराना)

53. **Ans.(a)**

Sol:

The correct antonym of the given word is (a) Obstinate.

Flexible: capable of bending or adapting easily in attitude or form; accommodating and adjustable. (Hindi: लचीला, अनुकूलनीय)

Example: Good teachers are flexible and adapt their methods to students’ needs.

Obstinate (Antonym): stubbornly refusing to change one’s opinion or chosen course of action; rigid and unyielding. (Hindi: हठी, जिद्दी)

Example: He remained obstinate, ignoring every sensible suggestion.

Synonyms (Flexible): pliable, supple, adaptable, malleable.

Antonyms (Flexible): rigid, inflexible, stubborn, unyielding.

Meanings of all the other given options:

- (b) Snobbish: having or showing the attitude of people who think they are better than others; arrogant. (Hindi: घमंडी, नकचढ़ा)
- (c) Hysterical: wildly emotional or exaggerated; out of control with fear or laughter. (Hindi: उन्मत्त, अति-उत्तेजित)
- (d) Staunch: very loyal and committed in attitude; firm and steadfast. (Hindi: दृढ़, वफादार)

54. Ans.(c)

☐ Sol:

☐ The correct spelling is Connoisseur.

☐ Explanation (English): "Connoisseur" means an expert judge in matters of taste, especially in fine arts or food. The correct spelling has double "n" and double "s" in the middle.

☐ Expla "s" आते हैं।

55. Ans.(d)

Sol. The corre

Explanation: C स्तलेख-
विश्लेषण/लिपि- cators.

Example: She cana

Meanings of t

- (a) lithograph metal plate
- (b) etiology (s/eve) (रोग-व
- (c) calligraph सुलेख, लेखन क

56. Ans.(c)

Sol. The corre tence is are bel

Active and Pas

In voice, active ws t per g t vne past ve s b s the s b eiving the
action.

Explanation:

- The sentence the present continuous tense is selling.
- In passive voice present continuous is formed as am/is/are + being + past continl
- Structure:
- Active: Subje
- Passive: Obj
- Example: He

57. Ans.(d)

Sol. Direct and Indirect Speech:

Direct speech reports the exact words spoken, whereas indirect speech reports the meaning of what was said without quoting the exact words.

Rule for Conversion (Direct to Indirect Speech):

1. If the reporting verb (here, *said*) is in the past tense, the tense in the reported speech usually changes.
2. Present Perfect Tense (*have passed*) changes to Past Perfect Tense (*had passed*).
3. Pronoun "I" changes to "she" because it refers to Sagarika.
4. No conjunction like *if* or *whether* is needed here because it's a statement, not a question.

Correct Answer:

(d) Sagarika said that she had passed her examination.

Explanation:

- *have passed* → *had passed* (Present Perfect → Past Perfect).
- *I* changes to *she* according to the subject (Sagarika).
- Sentence becomes a simple reported statement without quotation marks.

Example:

Direct: He said, "I have completed the work."

Indirect: He said that he had completed the work.

58. Ans.(b)

Sol. The correct active voice of the given sentence is (b) Please leave your phones at the reception.

Active and Passive Voice:

In voice, active voice shows the subject performing the action, while passive voice shows the subject receiving the action.

Explanation:

In passive voice, the subject receives the action.

Structure:

Passive: You are

Active: Please

Example:

Passive: You are

Active: Please

Incorrect option

- (a), (c), and (d) are in the correct verb form.

59. Ans.(d)

Sol. Option (d) is the idiom.

Given Idiom → *Out of fashion*, out of date, or no longer in vogue.

done many times. It is a phrase that describes ideas, fashions, or methods that are no longer used.

Example: *That style is out of fashion.*

Other related

- Out of fashion: not popular or in style.

- Behind the times: keeping with modern ideas.

- Passé: no longer in vogue.

- Dated: old-fashioned in style.

60. Ans.(a)

Sol. Option (a)

Correct spelling

legislative session. (सभा, सम्मेलन)

Example: The school held an assembly to discuss the annual day celebrations.

61. Ans.(d)

Sol. Option (d) is the incorrectly spelt word.

Correct spelling: "Accommodation" — meaning a place to stay or live temporarily. (रहने की व्यवस्था)

Example: We booked comfortable accommodation near the beach.

Parts of Speech: *Noun*

Meanings of all the given options:

- (a) Referred: Mentioned or directed attention to. (उल्लेख किया हुआ)
- (b) Occurrence: An event or happening. (घटना)
- (c) Acknowledgment: Recognition or acceptance of truth or fact. (स्वीकारोक्ति)

· (d) Accommodation: A place where someone can stay. (आवास)

62. Ans.(c)

Sol. The correct option to fill in the blank is (c) break down.

Break down (a door) means to force it open by applying strength (दरवाज़ा तोड़ देना/धक्का देकर खोलना). It best fits the emergency action described.

Example: The rescuers broke down the door to reach the trapped family.

Explain why other options are incorrect:

- (a) break out: to escape or to start suddenly (फूट पड़ना/भाग निकलना); not used with forcing a door.
- (b) break in: to enter a place illegally or interrupt (जबरन घुसना/टोकना); without an object it doesn't convey forcing the door open; with an object it means "to wear in" (e.g., shoes).
- (d) break away: to separate or detach (अलग हो जाना/छूट जाना); contextually wrong.

63. Ans.(d)

Sol. The correct

Direct and Indirect

Direct speech

without quotation

Rule:

When converting

· Use first-person

· 'Would' in indirect

· 'That week' becomes

Structure:

Indirect: He said

Direct: He said

64. Ans.(a)

Sol. The correct

Active voice: The

Passive voice: The

Explanation:

The sentence

can + be + pas

Structure Use

• Active: Subj

• Passive: Obj

Example:

Active: She can complete the task.

Passive: The task can be completed by her.

65. Ans.(c)

Sol. The correct synonym of the given word is (c) Hate.

Loathe: Deeply dislike; to feel intense aversion or disgust towards someone/something; strong emotional repulsion.

Hindi: घृणा करना/बहुत नापसंद करना.

Example (given word): Many people loathe dishonesty in public life.

Hate (correct answer): Intense or passionate dislike; a strong negative feeling often involving hostility or repugnance.

Hindi: घृणा/द्वेष करना.

Example (correct answer word): I hate wasting food when so many people go hungry.

Synonyms: detest, abhor, despise, hate.

Antonyms: love, like, admire, relish.

Meanings of all the other given options:

- Accept: to receive/agree to something willingly; Hindi: स्वीकार करना.
- Like: to find agreeable/pleasing; Hindi: पसंद करना.
- Love: deep affection or great liking; Hindi: प्रेम/अत्यधिक पसंद करना.

66. Ans.(d)

Sol. The correct indirect speech is (d) Pallavi said that she was going to bake a sponge cake the next day.

Direct and Indirect Speech:

Direct speech reports the exact words spoken, whereas indirect speech reports the meaning of what was said without quoting the exact words.

Explanation:

- "Am going to"
- "Tomorrow"
- "I" changes

Rules of conversion:

- Present continuous
- Time indicator

Example: Direct speech: "I am going to bake a sponge cake tomorrow."

67. Ans.(b)

Sol. The correct answer is option (b) The teacher's appreciative feedback motivated the team.

Given word — *disparaging* (that disparages, belittles, or demeans someone; intended to look down on someone) (Hindi: तुच्छतापूर्ण)

Example (given in the passage): The teacher's *disparaging* feedback demotivated the team.

Correct answer — *appreciative* (can damage a learner's confidence; recognition. (Hindi: सराहनापूर्ण)

Example (answer): The teacher's *appreciative* feedback motivated the team.

Synonyms (disparaging): disparaging, demeaning, belittling, pejorative.

Antonyms (disparaging): appreciative, complimentary, laudatory, respectful.

Meanings of all the other given options:

- (a) cunning: being crafty or sly.
- (b) appreciative: showing appreciation or gratitude.
- (c) critical: expressing disapproval or criticism.
- (d) sarcastic: using irony/mockery to convey contempt. (Hindi: व्यंग्यपूर्ण, (लोचपूर्ण)

68. Ans.(b)

Sol. The correct answer is option (b).

The phrase "when words fail" in the passage means when peaceful dialogue or diplomacy no longer works, and as a result, war begins. It emphasizes that war is a consequence of failed communication or diplomacy between nations.

Other options are incorrect because:

- (a) Incorrect – English skills of the leader are not the context
- (c) Incorrect – Passage talks about diplomatic failure, not academics
- (d) Incorrect – Use of severe words is irrelevant to the main idea

69. Ans.(d)

Sol. The correct answer is option (d).

The passage emphasizes that war causes destruction, trauma, and long-lasting suffering. A true hero is someone who avoids war through diplomacy and leadership. Hence, the summary is: "A warless world is peaceful."

Other options are incorrect:

- (a) Incorrect – Leadership is praised not during war but by avoiding it
- (b) Incorrect – The passage promotes peace, not weaponry
- (c) Incorrect – Passage highlights both psychological and physical losses, not comparison

70. Ans.(a)

Sol. The correct antonym of the given word is (a) Idleness.

Endeavour: to try hard to achieve something; make an effort. (कोशिश करना / प्रयास करना)

Example: He endeavoured to complete the project on time.

Idleness: the state of being inactive or lazy, not making any effort. (आलस्य / निष्क्रियता)

Example: His idleness kept him from achieving anything.

Synonyms: effort

Antonyms: idleness

Meanings of options

- (b) Readiness
- (c) Selflessness
- (d) Effort – स

71. Ans.(a)

Sol. The correct

The passage describes leaders who are the ones who win on the battlefield. It is a leader who is not violent.

Other options

- (b) – battlefield as heroic
- (c) – valor is
- (d) – passage

72. Ans.(c)

Sol. The correct is (c).

The passage states that war is not essential; rather, it is a failure of words and a destructive force. The writer is arguing that war is

Other options

- (a) – Innocence
- (b) – Real hero
- (d) – War da

73. Ans.(b)

Sol. Given:

Aryan alone = 12 hours

Aryan + Armaan together = 7 hours

Find: Time taken by Armaan alone (using LCM method)

Formula Used:

Efficiency = Work / Time

Solution:

Total work = LCM(12, 7) = 84 units

Aryan's efficiency =

$$\frac{84}{12}$$

= 7 units/hour

Aryan + Armaan efficiency =

$$\frac{84}{7}$$

= 12 units/hour

So,

Armaan's efficiency = $12 - 7 = 5$ units/hour

Time taken by Armaan = $\frac{84}{5} = 16.8$ hours

= 16 hours 48 min.

74. Ans.(b)

Sol. Given:

A is an acute angle. We are asked to simplify the expression:

Formula Used

We know the

Solution:

75. Ans.(b)

Sol. Given:

The points (0,

Formula Used

Solution:

D =

D =

D =

units

76. Ans.(c)

Sol. Given :

$$\frac{1}{3} \times$$

40% of first number =

$$\frac{1}{5} \times$$

30% of second number

Solution :

Let first number = A, second number = B.

$$\frac{1}{3} \times \frac{40}{100} A = \frac{1}{5} \times \frac{30}{100} B$$

$$\frac{40}{300} A = \frac{30}{500} B$$

$$\frac{2}{15} A = \frac{3}{50} B$$

$$2 \times 50 A = 3 \times 15 B$$

$$100A = 45B$$

Thus, option (C)

77. Ans.(d)

Sol. Given:

Two equal sides

Base of the triangle

Formula Used

Area of triangle

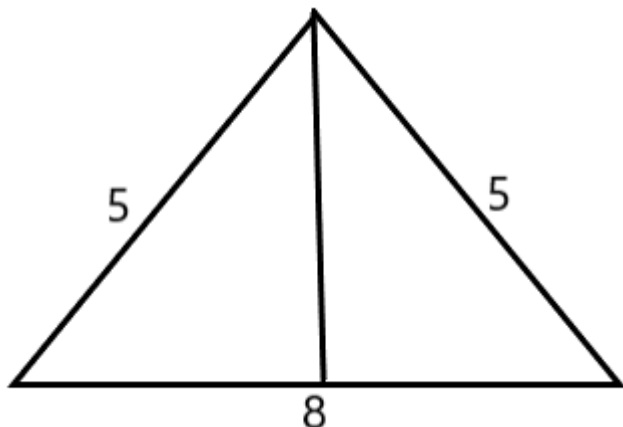
base

height

By Pythagoras theorem:

height =

Solution:



$$h = \sqrt{5^2 - \left(\frac{8}{2}\right)^2} = \sqrt{25 - 16} = \sqrt{9} = 3 \text{ cm} \quad A = \frac{1}{2} \times \text{Base} \times \text{Height} = \frac{1}{2} \times 8 \times 3 = 12 \text{ cm}^2$$

78. Ans.(c)

Sol. Given:

Equation: $2y^2 - 6y - 7 = 0$

Formula Used:

For a quadratic equation $ay^2 + by + c = 0$,

Sum of roots =

$$\frac{-b}{a}$$

Solution:

Here, $a = 2$, $b = -6$

Sum of roots =

= 3

The sum of the

79. Ans.(b)

Sol. Given:

$\tan 45^\circ = 1$, $\cot 45^\circ = 1$

Solution:

$2 \tan^2 45^\circ + \cot^2 45^\circ$

$2(1)^2 + (\sqrt{3}/2)^2$

80. Ans.(b)

Sol. Given:

A standard deck of 52 cards.

There are 4 quadrants (one from each suit: hearts, diamonds, clubs, and spades).

Formula Used:

Solution:

Queen =

$$\frac{4}{52} = \frac{1}{13}$$

$$\boxed{\frac{1}{13}}$$

81. Ans.(b)

Sol. Given:

Two fair six-faced dice are thrown.

Formula Used:

Probability =

$$\frac{\text{favourable outcomes}}{\text{total outcomes}}$$

Solution:

Total outcomes with two dice =

$$6 \times 6 = 36.$$

Sums greater than 10 are (11) and (12).

For (11): ((5,6), (6,5)) → 2 outcomes.

For (12): (6, 6) → 1 outcome.

Favourable outcomes = 2 + 1 = 3

P(

82. Ans.(c)

Sol. Given:

ABC is a right-

Length of two perpendicular sides are 3 cm and 4 cm

Formula Used:

Area of triangle

base

height

Area of triangle

s (where 'r' is the radius and 's' is the semi-perimeter)

Pythagorean theorem: hypotenuse² = base² + perpendicular²

Semi-perimeter

Solution:

$$\text{Hypotenuse}^2 = 3^2 + 4^2 = 9 + 16 = 25$$

$$\text{Hypotenuse} = 5 \text{ cm}$$

Semi-perimeter =

$$\frac{(3 + 4 + 5)}{2} = \frac{12}{2} =$$

6 cm

Area =

$$\frac{1}{2} \times$$

base

×

height =

$$\frac{1}{2}$$

$$\times$$

3

$$\times$$

$$4 = 6 \text{ sq cm}$$

$$\text{Area} = r$$

$$\times$$

s

$$6 = r$$

$$\times$$

6

$$r = 1 \text{ cm}$$

The radius of

83. Ans.(d)

Sol. Given:

Initial ratio of

After adding 5

Solution:

Let the initial

After adding 5

$$8(5x + 500) =$$

$$40x + 4000 = 4$$

$$42x - 40x = 40$$

$$2x = 4000$$

$$x = 2000$$

$$\text{Salt in new mixture} = x = 2000 \times 2 = 4000 \text{ g} = 4 \text{ kg}$$

84. Ans.(a)

Sol. Given:

The ratio of gold

20 more gold

Concept Used

Let the number of gold coins be x .

The number of non-gold coins is $4x$.

After adding 20 gold coins, the number of gold coins becomes $x+20$, and the number of non-gold coins remains $4x$.

The new ratio of gold to non-gold coins is given as 2:3.

Solution:

Using the ratio

$$\frac{x + 20}{4x} = \frac{2}{3}$$

$$3x + 60 = 8x$$

$$x = 12$$

The number of gold coins $x = 12$ and the number of non-gold coins $= 4x = 48$

after adding 20 gold coins, the total number of gold coins becomes $12 + 20 = 32$ and the total number of non-gold coins remains 40.

The total number of coins in the collection now is $32 + 48 = 80$

85. Ans.(d)

Sol. Given:

The equation is 9(

$$(x + 9)^2 = 441$$

Solution:

$$9(x + 9)^2 = 441$$

(

(x

Take the squa

$$x + 9 =$$

$$x + 9 =$$

For $x + 9 = 7$,

$$x = 7 - 9 = -2$$

For $x + 9 = -7$,

$$x = -7 - 9 = -16$$

The roots of the equation are $x = -2$ and $x = -16$.

86. Ans.(a)

Sol. Given:

A sum becom

Same duration

Find the new

Formula Used

SI =

$$\frac{P \times T \times R}{100}$$

Solution:

From first condition (4 times at 10%):

$$4P = P + SI \Rightarrow SI = 3P$$

Now,

$$3P = \frac{P \cdot T \cdot 10}{100} \Rightarrow 3 = \frac{10T}{100} \Rightarrow T = 30 \text{ years}$$

Now for second condition (7 times):

$$7P = P + SI \Rightarrow SI = 6P$$

Now,

$$6P = \frac{P \times 30 \times R}{100} \Rightarrow 6 = \frac{30R}{100}$$

$$R = 20\%$$

87. Ans.(c)

Sol. Given:

Sum of the squares

Square root of

Solution:

Let the first number

Given

then, $x = 49$

Let the second number

Given $x^2 + y^2 = 2426$

$49^2 + y^2 = 2426$

$y^2 = 2426 - 2401$

$y = 5$

88. Ans.(a)

Sol. Given:

$41 - [21 - \{11 - (3 + 2)\}]$

Concept Used

Operation precedence

Brackets

Orders, of x (power), $\sqrt{}$ (root), of

Division $\div$

Multiplication $\times$

Addition $+$



Subtraction -

Solution:

$$\begin{aligned} & 41 - [21 - \{11 - (16 - 4 \div 2 \times 3)\}] \\ &= 41 - [21 - \{11 - (16 - 2 \times 3)\}] \\ &= 41 - [21 - \{11 - (16 - 6)\}] \\ &= 41 - [21 - \{11 - (10)\}] \\ &= 41 - [21 - \{11\}] \\ &= 41 - [10] \\ &= 21 \end{aligned}$$

89. Ans.(a)

Sol. Given:

Selling Price at

Target: 40% p

Solution:

CP =

$$= 2180$$

Selling Price for

New SP = 2180

$$= 2180 \times$$

$$= ₹3052$$

90. Ans.(d)

Sol. Given:

The first 10 odd

3, 5, 7, 11, 13,

Formula Used

Average =

Solution:

Average =

$$\frac{3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 + 31}{10}$$

=

$$\frac{158}{10}$$

$$= 15.8$$

Thus, the average of the first 10 odd prime numbers is 15.8



Number of numbers

91. Ans.(b)

Sol. Given:

Father's present age = F

Son's present age = S

8 years ago: father's age = F - 8

8 years ago: son's age = S - 8

Given: (F - 8 = 2(S - 8) + 27)

Required: Years after which father will be twice the son's age

Solution:

Past condition:

$$F - 8 = 2(S - 8) + 27$$

$$F - 8 = 2S - 16 + 27$$

$$F = 2S + 19$$

Future condition:

$$F + t = 2(S + t)$$

Substitute (F = 2S + 19)

$$2S + 19 + t = 2(S + t)$$

$$19 + t = 2t$$

$$t = 19$$

Thus, After 19 years

92. Ans.(d)

Sol. Given:

The number of boys = 7

After adding 8 more boys

Solution:

Let the number of boys = x

The number of girls = 5x

After 8 more boys are added

It is given that the number of boys is equal to the number of girls. So, the equation is:

$$7x = 5x + 8$$

$$7x - 5x = 8$$

$$2x = 8$$

$$x = 4$$

Thus, the initial number of boys was 4 and the initial number of girls was $7x = 28$.

The difference between the number of boys and girls is

$$28 - 20 = 8.$$

93. Ans.(d)

Sol. Given:

Length of train:

$$L_{\text{train}}$$

$$= 60 \text{ m}$$

Speed of train: $v = 72 \text{ km/h}$

Length of platform:

$$L_{\text{platform}}$$

$$= 600 \text{ m}$$

Need to find: Time elapsed to entirely clear the platform

Formula Used:

Time =

$$\frac{\text{Distance}}{\text{Speed}}$$

Solution:

Speed into m/s:

$$v = 72 \text{ km/h} =$$

$$72 \times \frac{5}{18}$$

$$= 20 \text{ m/s}$$

For the train to entirely clear the platform, it must travel from the moment its front enters until its rear end exits.

$$\text{Total distance} = 60 + 600 = 660 \text{ m}$$

Time =

$$\frac{660}{20}$$

$$= 33 \text{ seconds}$$

Therefore, the

94. Ans.(b)

Sol. Given :

$$\text{Divisor } D = 14$$

$$\text{Divisor } D = 7R$$

$$\text{Remainder } R = 3$$

Find the dividend

Formula Used

$$\text{Dividend} = \text{Divisor} \times \text{Quotient} + \text{Remainder}$$

$$\text{Quotient (Q) = ?}$$

Solution :

From

$$D = 7R =$$

$$38$$

Now,

$$D = 14Q$$

$$238 = 14Q$$

$$Q =$$

$$= 17$$

$$\text{Dividend} = 238 \times 17 + 3$$

$$4$$

$$= 4046 + 34 = 4080$$

95. Ans.(c)

Sol. Given:

Quadrant a point $(-4, -5)$ is located.

Solution:

To determine the quadrant of the point $(-4, -5)$, we consider the signs of the coordinates:

The x-coordinate is -4 , which is negative.

The y-coordinate is -5 , which is also negative.

In the coordinate plane:



The first quadrant has both positive x and y coordinates.
 The second quadrant has negative x and positive y coordinates.
 The third quadrant has both negative x and y coordinates.
 The fourth quadrant has positive x and negative y coordinates.
 So, Since both coordinates are negative, the point $(-4, -5)$ lies in the third quadrant.
 Thus, the correct answer is (c).

96. Ans.(a)

Sol. Given:

Speed of man = 14 km/h

Total distance to cover = 7 km

Formula Used:

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

Solution:

If the man doesn't stop to rest:

Time taken to complete the distance of 7 km = $\frac{7}{14} = \frac{1}{2}$ hours = 30 minutes

Total rest time = $7 \times 6 = 42$ minutes

Total time to cover the distance = $30 + 42 = 72$ minute = $1\frac{1}{5}$ hours

97. Ans.(d)

Sol. Given:

U is to the left

X is sitting on the right of the person who is sitting to the left of V.

According to the given information, the arrangement is as follows:



So, V is the first person from the right end.

Thus, the correct answer is (d).

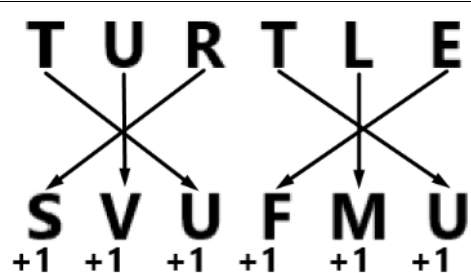
98. Ans.(d)

Sol. Given:

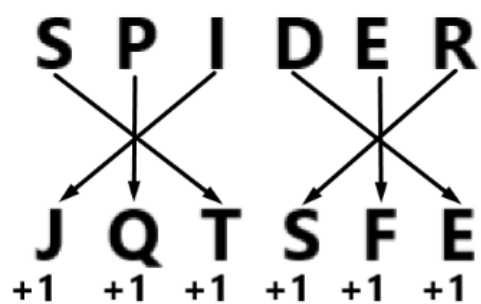
In a code language

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

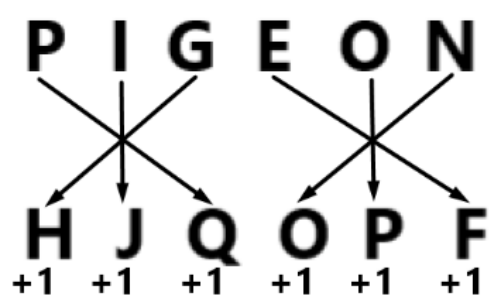
For, TURTLE - SVUFMU



For, SPIDER - JQTSFE

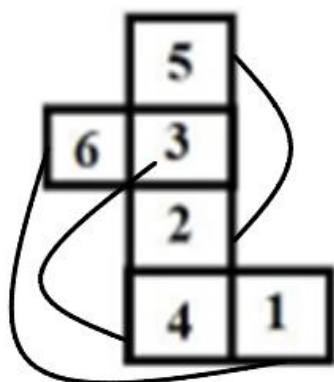


Similarly,
PIGEON - ?

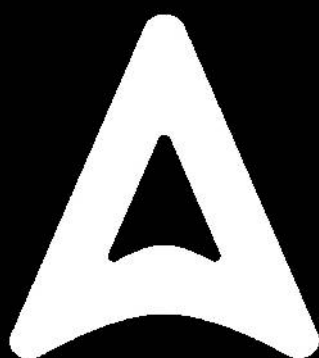


So, PIGEON is
Thus, correct

99. Ans.(b)
Sol. Given:



The opposites will be:



Adda247

5	6	4
2	1	3

So, the correct formation will be:



Thus, the correct

100. Ans.(b)

Sol. Given:

3, 8, 15, 24, ?

Logic:

Each term = n

Explanation:

$$2^2 - 1 = 3$$

$$3^2 - 1 = 8$$

$$4^2 - 1 = 15$$

$$5^2 - 1 = 24$$

$$6^2 - 1 = 35$$

Thus, correct answer is 35.

101. Ans.(d)

Sol. Given: A means 'A is the daughter of B'

Sign +

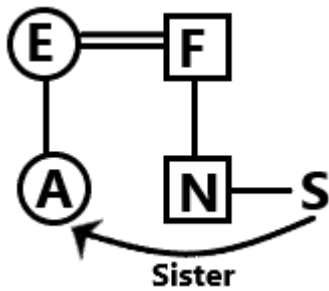
Relationship Daughter Wife Father Brother

Expression: 'A + E - F × N ÷ S'?

According to the given information, family tree diagram of expression will be:



Symbol in Diagram	Meaning
- / ○	Female
+ / □	Male
==	Married Couple
—	Siblings
	Difference Of Generation



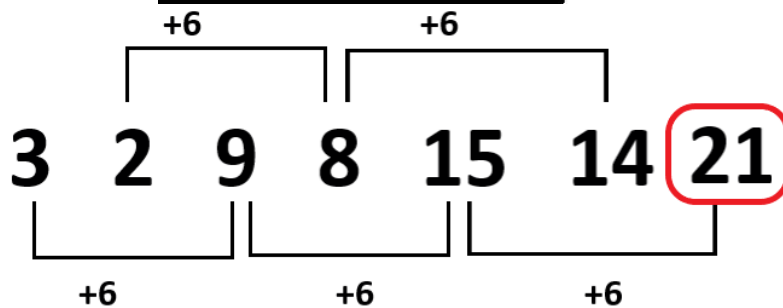
As per the diagram
Thus, the correct

102. Ans.(c)

Sol. Given:

3, 2, 9, 8, 15, 14

Let's check the



So, the next term

Thus, the correct

103. Ans.(d)

Sol. Given: When seen through a mirror, a clock shows 8:30 as the time.

For a mirror (left-right) image the rule is: real time = 11:60 - shown time.

$11:60 - 8:30 = 3:30$

The correct time is: 3:30

Thus, correct option is (d).

104. Ans.(a)

Sol. Given:

(31, 59, 40)

(56, 83, 39)

Logic: Third number = (Second number - First number) + 12

Set 31, 59, 40

$$59 - 31 = 28$$

$$28 + 12 = 40$$

Set 56, 83, 39

$$83 - 56 = 27$$

$$27 + 12 = 39$$

Now check options:

Option A: (41, 74, 45) → Pattern follow.

$$74 - 41 = 33$$

$$33 + 12 = 45$$

Option B: (38, 89, 42)

$$89 - 38 = 51$$

$$51 + 12 = 63 \neq 42$$

Option C: (45, 90, 47)

$$90 - 45 = 45$$

$$45 + 12 = 57 \neq 47$$

Option D: (29, 71, 42)

$$71 - 29 = 42$$

$$42 + 12 = 54 \neq 42$$

Only option A follows the pattern.

Thus, the correct answer is A.

105. Ans.(c)

Sol. As we know,

$$\text{Angle} = |H \times 3|$$

Require angle

$$= |90 - 165|$$

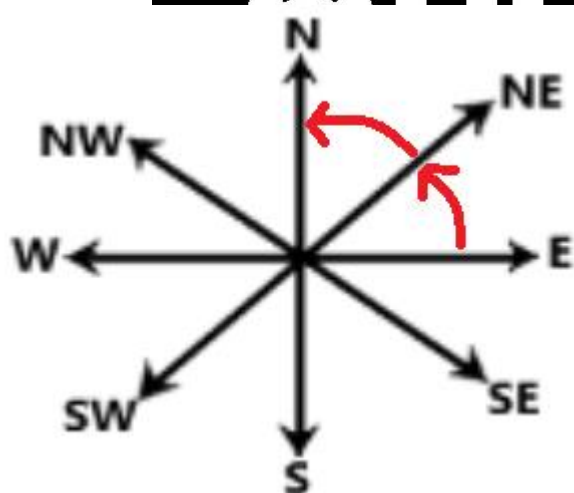
$$= |-75|$$

$$= 75^\circ$$

Correct answer is (c).

106. Ans.(c)

Sol. Given: If East becomes North.



East become North-East.

Thus, correct option is (c).

107. Ans.(b)

Sol. Given:

The mirror image of a 12-hour clock is 3:25,

Formula

$11:60 - \text{hh:mm}$

(h

hour, m

minute)

$11:60 - 3:25 = 8:35$,

Thus, the actual time of 3:25 will be 8:25

Thus, the correct option is (b) 8:25

108. Ans.(c)

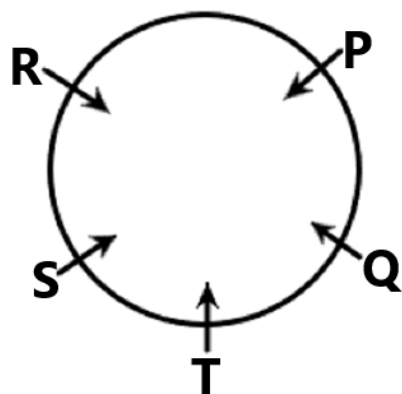
Sol. Given:

Five students

P is to the imr

R is between

From the give



S is sitting to the immediate left of T.

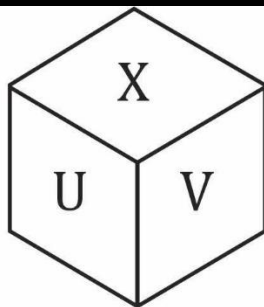
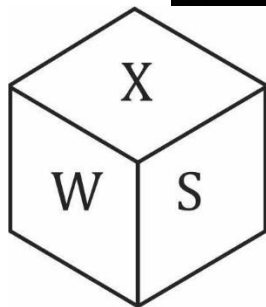
Thus, correct option is (c).

109. Ans.(c)

Sol. Logic: If two

are known as

wise letter



$X \rightarrow S \rightarrow W$

$X \rightarrow V \rightarrow U$

So, the opposite of V is S.

Thus, correct option is (c).

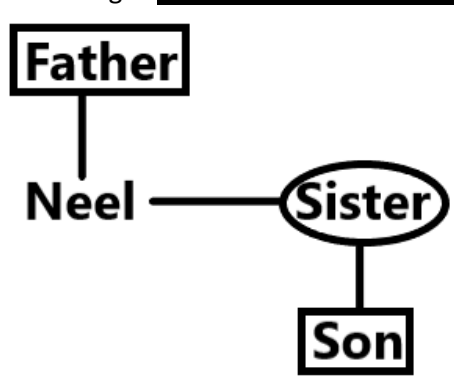
110. Ans.(a)

Sol. Given:

Pointing to a photograph, Neel says he is the son of the only daughter of the father of my sister.

Symbol in Diagram	Meaning
- / 0	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

From the given



Neel is pointing

Thus, correct

111. Ans.(a)

Sol. Statement

1. All bottles are dancers.
2. All ludo are dancers.

From the given



Conclusions:

I. Some dancers are ludo. (True, all ludo are dancer, so that means some dancers are ludo).

II. All bottles are dancers. (True, all bottles are ludo and all ludo are dancers, so that means all bottles are dancer).

So, Both conclusions I and II follow.

Thus, correct option is (a).

112. Ans.(a)

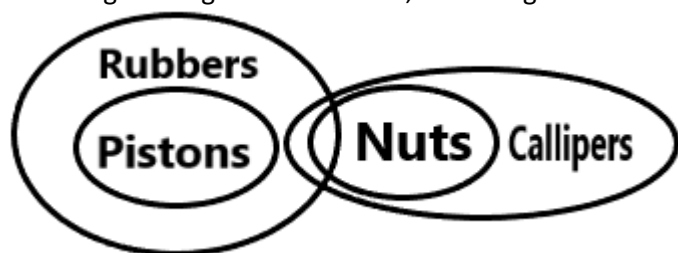
Sol. Statements:

All pistons are rubbers.

Some rubbers are nuts.

All nuts are callipers.

According to the given statements, Venn diagram will be:



Analyse the conclusions:

Conclusions:

I. Some callipers are rubbers. → True

Since, some rubbers are nuts and all nuts are callipers, some callipers are rubbers. → True.

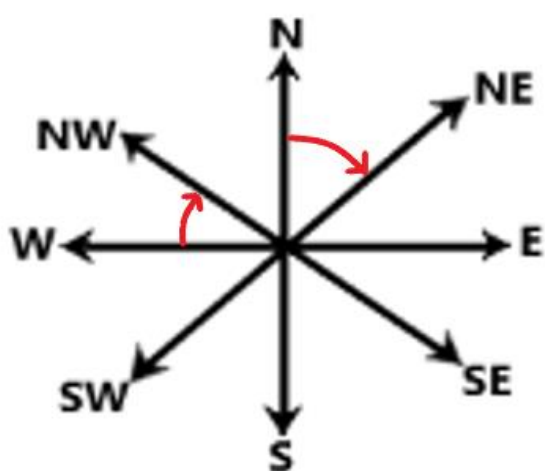
II. All pistons are callipers.

Since, some rubbers are nuts

Thus, the correct

113. Ans.(b)

Sol. Given: In



North becomes

Thus, correct

114. Ans.(d)

Sol. Given:

BEH, DGJ, (?), EJO, GLQ, INS,

Logic: Each letter + 2

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

1st letters:

$B + 2 = D$, $D + 2 = F$, $F - 1 = E$, $E + 2 = G$, $G + 2 = I$

2nd letters:

$E + 2 = G$, $G + 2 = I$, $I - 1 = J$, $J + 1 = L$, $L + 1 = N$

3rd letters:

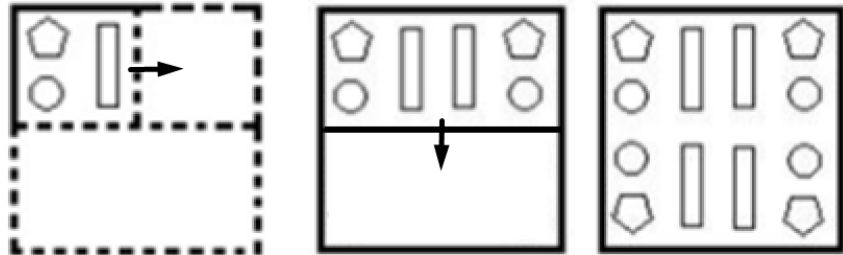
$H + 2 = J$, $J + 2 = L$, $L + 1 = O$, $O + 1 = Q$, $Q + 1 = S$

So, missing group is: F I L

Thus, correct option is (d).

115. Ans.(b)

Sol. After unfolding the given figure following cuts will be shown as given below.



Correct option

116. Ans.(a)

Sol. Given: An

Logic: The first

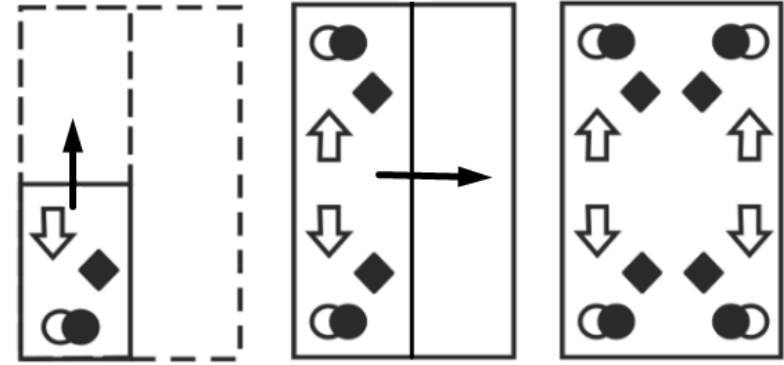
Ammeter mea

Anemometer

Thus, correct

117. Ans.(a)

Sol. After unfolding the given figure following cuts will be shown as given below.



Thus, the correct

118. Ans.(b)

Sol. Sun is a star, meaning it should be a subset of "Star."

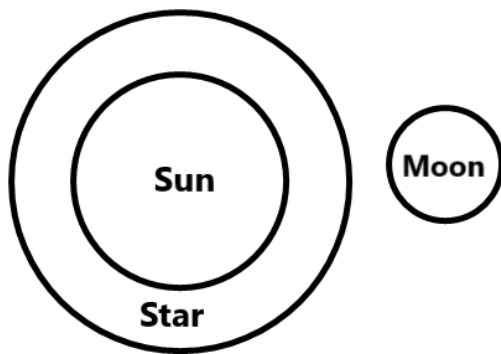
Moon is neither a star nor the Sun, meaning it is a separate entity.

Venn Diagram Representation:

A big circle for Stars.

Inside the Stars circle, a smaller circle for the Sun (since the Sun is a star).

A separate circle for the Moon (since it is not a star and not related to the Sun directly).



Correct answer is (b).

119. Ans.(c)

Sol. Given: 5 :

Logic: (1st num

$$5^3 = 5 \times 5 \times 5 = 125$$

Now apply the

$$8^3 = 8 \times 8 \times 8 = 512$$

Thus, the cor

120. Ans.(b)

Sol. Given:

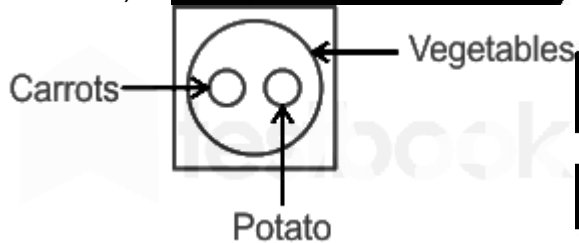
Venn diagram

Logic:

All carrots are

All Potato are

Therefore, the relationship follows:



Hence, the an