SSC CHSL 2025 Tier-1 (Held On: 21 Nov, 2025 Shift 1) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2025 • 100 questions • 60 minutes • Answer key and solutions

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ENGLISH LANGUAGE

Q1. Identify the incorrect sentence.

(a) Injured were taken to the hospital.
(b) The baby laughed on seeing itself in the mirror.
(c) Whose book is this?
(d) Shakespeare was the most prolific writer that time has ever seen.

Q2. Fill in the blank with the most appropriate preposition:
The solution is not compatible _____ older versions of the software.

(a) for
(b) to
(c) with
(d) at

Q3. Fill in the blank with the most appropriate phrasal verb:
She always _____ her failures to bad luck rather than taking ownership.

(a) puts down
(b) turns out
(c) breaks into
(d) boils down

Q4. Choose the correctly spelt word:

(a) Quarantine
(b) Quarentine
(c) Quaranteen
(d) Quarintine

Q5. Select the sentence containing the homonym of the highlighted word:
Their first date was at an art exhibition.

(a) I need to check the expiry date on this milk carton.
(b) They agreed to go on a second date after their coffee meeting.
(c) He invited her to a dinner date at his favorite restaurant.
(d) The movie was a great choice for a first date.

Q6. Select the most appropriate antonym of the word: Amplify

(a) Expand
(b) Magnify
(c) Reduce
(d) Increase

Q7. Choose the most suitable option to replace the highlighted part of the sentence:

My mother gave us some cake to eat it.

(a) to eat
(b) to eat it
(c) eating it
(d) eat it

Q8. Choose the correct indirect narration of the following statement from the given alternatives:

She said, "I can come here tomorrow morning if my mother does not want me to go for shopping."

(a) She said that she can go there the next morning if her mother did not want her to go for shopping.
(b) She said that she could go there the following morning if her mother did not want her to go for shopping.
(c) She said that she could go there the following morning if her mother does not want her to go for shopping.
(d) She said that she went there the following morning if her mother does not want her to go for shopping.

Q9. Choose the correct indirect narration of the following statement from the given alternatives:

The students said to the teacher, "What is the proper way to write a report when there is no details mentioned in the question?"

(a) The students asked the teacher what had been the proper way to write a report when there was no details mentioned in the question.
(b) The students asked the teacher what was the proper way to write a report when there was no details mentioned in the question.
(c) The students asked the teacher what had to be the proper way to write a report when there was no details mentioned in the question.
(d) The students asked the teacher what was being the proper way to write a report when there was no details mentioned in the question.

Q10. Change the following sentence into the Active form.

It has been determined that the ancient artifact is authentic.

(a) The ancient artifact is authentic.
(b) Experts have determined that the ancient artifact is authentic.
(c) It was determined that the ancient artifact is authentic.
(d) The authenticity of the ancient artifact has been determined.

Q11. Choose the option that is the most appropriate conversion of the following sentence into Direct Speech.

She exclaimed with disgust that the food tasted terrible.

(a) She said, "Alas! This food tastes terrible."
(b) She said, "Ugh! How terrible this food tastes!"
(c) She exclaimed, "Oh no! This food tastes terrible!"
(d) She exclaimed, "What terrible-tasting food?"

Q12. Fill in the blank with the correctly spelled word:

"Regular _____ of the company's complex machinery is essential to prevent costly breakdowns and ensure uninterrupted production."

(a) maintainance
(b) maintanence
(c) maintanance
(d) maintenance

Q13. Change the following sentence into the Active form.

Let no stone be left unturned in the search for the missing documents.

(a) Don't leave a stone unturned in the search for the missing documents.
(b) No stone should be left unturned in the search for the missing documents.
(c) Leave no stone unturned in the search for the missing documents.
(d) Leave every stone unturned in the search for the missing documents.

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Q14. Choose the incorrect spelling:

(a) Bureaucracy
(b) Garrulous
(c) Refridgerator
(d) Acquiesce

Q15. Which sentence contains a misspelled word?

(a) In order to advance within the company's hierarchy, employees must acquire new skills and take on greater responsibilities.
(b) She hoped to aquire the experience necessary to move up the strict corporate hierarchy.
(c) The team needed to acquire additional funding to navigate the complex hierarchy of approvals.
(d) He worked hard to acquire a high position in the organization's hierarchy.

Q16. Select the option that expresses the given sentence in direct voice.

My mother lovingly asked me if I was going to the party that night.

(a) My mother asked me, "Are you going to the party tonight?"
(b) My mother said to me, "Were you going to the party that night?"
(c) My mother said to me, Were you going to the party that night?
(d) My mother asked, " you going to the party that night?"

Q17. Select the option that expresses the given sentence in direct voice.

The coach told the athletes that they had been training hard all season and deserved a break.

(a) The coach said, "You were training hard all season and deserved a break."
(b) The coach told the athletes, "You had been training hard all season and deserved a break."
(c) The coach said to the athletes, "You have been training hard all season and deserved a break."
(d) The coach told the athletes, "They had been training hard all season and deserved a break."

Q18. Choose the correct passive voice transformation of the sentence:

The government is to launch an extensive investigation into the alleged financial irregularities.

(a) An extensive investigation is to be launched into the alleged financial irregularities by the government.
(b) The alleged financial irregularities are to be extensively investigated by the government.
(c) An extensive investigation will be launched into the alleged financial irregularities by the government.
(d) It is intended by the government to launch an extensive investigation into the alleged financial irregularities.

Directions

Read the passage and answer the following question:

The National Education Policy (NEP) 2020 is one of the most significant educational reforms introduced in India in recent decades. It aims to transform the education system to make it more holistic, flexible, multidisciplinary, and aligned with the needs of the 21st century. The policy replaces the 10+2 structure with a new 5 + 3 + 3 + 4 system, which focuses on the foundational stage and encourages critical thinking from an early age.

One of the key effects of the NEP is the emphasis on mother tongue or regional language as the medium of instruction at the primary level. This has generated both appreciation and concern. While experts believe it will strengthen children's roots and understanding, some worry about challenges in implementation and the impact on English language proficiency.

Furthermore, the NEP promotes vocational education, digital literacy, and interdisciplinary studies. It aims to reduce rote learning and exams-centric approaches by encouraging practical knowledge and creativity. If implemented effectively, the NEP could reshape India's educational landscape for generations to come.

Q19. Identify the sentence that contains a modal verb used to express possibility.

(a) The policy replaces the 10+2 structure with a new 5+3+3+4 system.
(b) It aims to reduce rote learning and exams-centric approaches.
(c) While experts believe it will strengthen children's roots and understanding.
(d) If implemented effectively, the NEP could reshape India's educational landscape.

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Q20. Which of the following words from the passage is a gerund?

(a) Reshape
(b) Learning
(c) 'Emphasis
(d) Replace

Q21. What is the meaning of the word "holistic" as used in the passage?

(a) Related to health and medicine
(b) Limited to academic learning only
(c) Considering all parts as interconnected and complete
(d) Focused only on one subject

Q22. Choose the correct antonym for the word "flexible" as used in the passage.

(a) Adjustable
(b) Rigid
(c) Easy
(d) Clear

Q23. Which is a key goal of the NEP according to the passage?

(a) To remove regional languages from schools
(b) To increase rote learning
(c) To encourage practical and creative learning
(d) To focus only on English

Q24. Which word can best replace sarcasm?

The stranger's eyes sparkled with a mixture of challenge and sarcasm.

(a) Kindness
(b) Mockery
(c) Encouragement
(d) Compliment

Q25. Which word refers to graceful and balanced behavior?

(a) Clumsy
(b) Poise
(c) Grit
(d) Frenzy

GENERAL INTELLIGENCE

Q26. You're giving a presentation, and a few students in the back are yawning, looking at the ceiling, and occasionally checking their phones.

What non-verbal cues are they sending, and what decision should you consider?

(a) They are deeply concentrating; continue as is.
(b) They are bored or disengaged; try to re-engage them with a question or interactive element.
(c) They are just tired; ignore their behavior.
(d) They are being disrespectful; stop the presentation and reprimand them.

Q27. A train traveling at a constant speed enters a 200-meter tunnel. It takes 10 seconds for the entire train to pass through the tunnel. If the train is 100 meters long, what is the speed of the train in meters per second?

(a) 10 m/s
(b) 20 m/s
(c) 30 m/s
(d) 40 m/s

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Q28. In a row, P is 7th from the left and Q is 12th from the right. If they interchange their positions, P becomes 22nd from the left. What is the total number of people in the row?

(a) 31
(b) 32
(c) 33
(d) 34

Q29. In a row of students, if A is 12th from the left and B is 15th from the right, and there are 7 students between them, find the maximum number of students in the row.

(a) 32
(b) 33
(c) 34
(d) 35

Q30. In a row of 30 students, if Sneha is 12th from the left and Priya is 15th from the right, how many students are between Sneha and Priya?

(a) 3
(b) 4
(c) 5
(d) 6

Q31. Read the following statement carefully and identify the conclusion that follows.

Statement:

All planets are stars.

All stars are galaxies.

Conclusions:

I. All planets are galaxies.

II. All galaxies are planets.

(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Either conclusion I or II follows.
(d) Neither conclusion I nor II follows.

Q32. Read the following statement carefully and identify the inference that follows.

Statement: The government has announced a new policy to reduce carbon emissions by 50% in the next 10 years.

Inference:

I. The government is taking steps to combat climate change.

II. The new policy will have no impact on the environment.

III. The government is not interested in reducing carbon emissions.

(a) If only I follows
(b) If only II follows
(c) If both I and II follow
(d) If both I and III follow

Q33. In this question some of the words sequence is given which follows some logical pattern of word find the next word that can be logically replace the ? In each sequence.

Seed, Sprout, Sapling, ?

(a) Tree
(b) Flower
(c) Root
(d) Leaf

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Q34. Directions: Choose the related word from the given alternatives

Odometer: Distance :: ?: Humidity

(a) Hygrometer
(b) Ammeter
(c) Gauge
(d) Scale

Q35. Directions: Choose the related word from the given alternatives

Spectrophotometer: ?:: Ammeter: Electric current

(a) Light intensity
(b) Wind direction
(c) Air pressure
(d) Wind speed

Q36. Directions: Pick the correct options from the given alternatives

PEN : QGQ :: INK : ?

(a) JPN
(b) PNJ
(c) NJP
(d) GQQ

Q37. Choose the odd one out from the given alternatives,

(a) Apple
(b) Nectarine
(c) Apricot
(d) Cherry

Q38. Directions: Select the related letter from the given alternatives

TOTAL : YSWCM :: MINUS :?

(a) RMQTW
(b) RMQVT
(c) RMQLW
(d) RMQWT

Q39. Directions: Pick the correct options from below.

1/2, 9/2,?, 49/2, 81/2

(a) 15/2
(b) 25/2
(c) 30/2
(d) 35/2

Q40. Directions: Pick the correct options from below.

27/2, 64/2, 125/2, 216/2, ?

(a) 250/2
(b) 275/2
(c) 300/2
(d) 343/2

Q41. Arrange the following words as per the order in the dictionary.

1. Wagnor
2. Wagged
3. Wabash
4. Waggon
5. Wackily

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(a) 35214
(b) 35142
(c) 32145
(d) 35241

Q42. Instructions: For the question below, analyse the given information and conditions. Based on your understanding of relative positions and rankings, determine the correct order or position and answer the question.

Scenario: In a row of students, Anil is 18th from the left end and 20th from the right end.

Question: What is the total number of students in the row?

(a) 37
(b) 38
(c) 39
(d) 36

Q43. Instructions: For the question below, analyse the given information and conditions. Based on your understanding of relative positions and rankings, determine the correct order or position and answer the question.

Scenario: In a column of 25 boys, Rakesh is 10th from the top.

Question: What is Rakesh's position from the bottom?

(a) 15th
(b) 16th
(c) 17th
(d) 18th

Q44. Instructions: For the question below, analyse the given information and conditions. Based on your understanding of relative positions and rankings, determine the correct order or position and answer the question.

Scenario: In a class, Sam's rank is 9th from the top and 38th from the bottom.

Question: How many students are there in the class?

(a) 45
(b) 46
(c) 47
(d) 48

Q45. Which of the following will come next to the series?

P, H, D, B, ?

(a) A
(b) ZY
(c) Y
(d) X

Q46. Instructions: Carefully examine the Reference Statement. Then, identify the single option among the four alternatives (a, b, c, d) that is an EXACT AND COMPLETE REPLICATION of the Reference Statement. Pay exceptionally close attention to every character, number, symbol, space, and punctuation mark.

Reference: Bengaluru: 15th Aug.ust, 2025

(a) Bengaluru: 15th Aug.ust, 2025
(b) Bengaluru: 15th August, 2025
(c) Bangaluru: 15th Aug.ust, 2025
(d) Bengaluru; 15th August, 2025

Q47. You're a judge and the accused is proven guilty but also mentally unstable. What's the appropriate verdict?

(a) Maximum sentence
(b) Immediate release
(c) Refer to psychiatric evaluation before sentencing
(d) Ignore mental state

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Q48. A government bans single-use plastic, claiming it will reduce ocean pollution. Which of the following, if true, best supports this decision?

(a) Most plastic waste in oceans comes from fishing nets and industrial waste.
(b) Citizens are unaware of recycling methods.
(c) A majority of coastal waste is composed of single-use plastic items.
(d) Plastic alternatives are more expensive and less durable.

Q49. Which of the following words can be formed using the letters of the word only once?

IDENTIFICATION

Word I: CONFIDENT

Word II: DICTATION

Word III: INACTION

(a) Only word I can be formed using the letters only once
(b) Only word I and II can be formed using the letters only once
(c) Only words I and III can be formed using the letters only once
(d) All the words can be formed using the letters only once.

Q50. 6 persons A, B, C, D, E and F are sitting in a row facing north (not necessarily in the same order). E is to the immediate left of B. C is the immediate neighbour of A and E. Some persons are to the right of F. D is not at any of the end of the row. Who is sitting second to the right of F?

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

QUANTITATIVE APTITUDE

Q51. Which of these fractions results in a non-terminating repeating decimal?

(a) 1/4
(b) 1/17
(c) 1/10
(d) 1/8

Q52. A man purchases a certain number of identical calculators at a rate of Rs. 1,200 per dozen. He sells them at Rs. 110 per piece. Find how many calculators he bought if his total profit is Rs. 360.

(a) 18
(b) 30
(c) 36
(d) 24

Q53. A metal sphere is dropped into a cylindrical container of diameter 20 cm partially filled with water. If the water rises by 1.5 cm, what is the radius of the sphere?

(a) 4.5 cm
(b) 5.1 cm
(c) 4.8 cm
(d) 5.7 cm

Q54. The marked price of a cupboard is Rs. 3,200, which is 25% above the cost price. It is sold at a discount of 10% on the marked price. Find the profit percentage.

(a) 10.5%
(b) 11.5%
(c) 12.5%
(d) 14.5%

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Q55. In a hostel, the average age of 30 students was 18 years. Later, 5 students left and 5 new students joined. The average age of the new group became 17.2 years. If the average age of the 5 students who left was 20.4 years, find the average age of the 5 students who joined.

(a) 14.8 years
(b) 15.6 years
(c) 16.2 years
(d) 17.4 years

Q56. A quality control officer tracks the defect rates in 4 different machines in a textile factory. The first machine produces fabrics with an average defect rate of 1.8%, the second with 2.4%, and the third with 1.6%. The fourth machine operated for 5 fewer hours than the average runtime of the first three, yet its total defective output was 0.92 units. If the total number of defective units from all four machines is 4.12, and each machine's total production was identical, find the defect percentage of the fourth machine.

(a) 1.52%
(b) 1.58%
(c) 1.67%
(d) 1.73%

Q57. In a digital learning centre, there are three types of online tests. The average score of a student in the first and second test is 82.6. The average score in the second and third test is 84.2. The average of the first and third test is 80.4. Find the marks obtained in the second test.

(a) 83.2
(b) 83.5
(c) 86.4
(d) 84

Q58. A, B, and C invest Rs. 20,000, Rs. 30,000, and Rs. 50,000, respectively, in a business. The profit at the end of the year is Rs. 50,000. What is A's share of the profit?

(a) Rs. 9000
(b) Rs. 10000
(c) Rs. 11000
(d) Rs. 12000

Q59. A factory produces cylindrical cans, and each day it slightly increases the size of the label printed on the cans to match a design upgrade. On the first day, the label height is 1.2 cm, and each day, the height increases by 0.3 cm to improve visibility. What will be the height of the label on the 10th day?

(a) 3 cm
(b) 3.6 cm
(c) 3.9 cm
(d) 4.2 cm

Q60. What is the radius of the circumscribed circle for a triangle with sides 16, 30, 34 units?

(a) 15 cm
(b) 16 cm
(c) 17 cm
(d) 18 cm

Q61. Anshu invested a certain sum at a simple interest of r% p.a. such that it amounts to 180% of itself in 5 years. Find the interest earned when Rs. 2500 is invested at a simple interest of r% p.a. for 2 years.

(a) Rs. 800
(b) Rs. 760
(c) Rs. 920
(d) Rs. 600

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Q62. Aman distributed 80% of his total money between Kavya and Aryan in the ratio 3: 5. Kavya invested her share at 9% p.a. and Aryan at 6% p.a. simple interest for 6 years. If the difference in the interest earned by Aryan and Kavya is Rs. 2,592, then what is the total amount Aman had?

(a) Rs. 1,44,000
(b) Rs. 1,12,000
(c) Rs. 1,67,000
(d) Rs. 1,21,000

Q63. A ladder rests against a vertical wall and makes an angle θ with the horizontal ground such that tan θ = 5/12. If the length of the ladder is 13 meters, find the height at which the ladder touches the wall.

(a) 15 meters
(b) 11 meters
(c) 5 meters
(d) 8 meters

Q64. A sum of Rs. 6,400 amounts to Rs. 8,100 in 8 years at a certain rate of interest, compounded annually. Find the amount received after 4 years when Rs. 2,240 are invested at same rate of compound interest (compounded annually).

(a) Rs. 2,600
(b) Rs. 2,330
(c) Rs. 2,880
(d) Rs. 2,520

Q65. The ratio between the son and mother is 1:3. After five years, the ratio of their age becomes 3:7. What are the ages of the son and mother?

(a) 10, 30
(b) 5, 25
(c) 8, 28
(d) 7, 27

Q66. In a circle, chord AB subtends an angle of 75° at the circumference at point C. A tangent is drawn at point A. If the angle between this tangent and chord AC is 40°, what is the measure of the angle subtended by the minor arc AC at the center of the circle?

(a) 80°
(b) 100°
(c) 110°
(d) 150°

Q67. A car and a bus travel at speeds in the ratio of 5:3. The bus covers a distance of 360 km in 6 hours. What is the time taken by the car to cover the same distance?

(a) 4 hours
(b) 3.6 hours
(c) 4.5 hours
(d) 6 hours

Q68. In a class, ratio of the boys to the girls is 5:3. If 20% of the boys and 40% of the girls fail an exam, what is the ratio of the number of boys who passed to the number of girls who passed?

(a) 20:9
(b) 9:20
(c) 21:19
(d) 22:7

Q69. If sec(θ)=cosec(42°), what is the value of θ ?

(a) 48°
(b) 138°
(c) 58°

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(d) 42°

Q70. If $(\sqrt{3})^5 \times 9^2 = 3^n \times 3\sqrt{3}$, then what is the value of n?

(a) 3
(b) 4
(c) 5
(d) 6

Q71. If $y = 3 - \sqrt{8}$, find the value of $y + 1/y$

(a) 3
(b) 4
(c) 5
(d) 6

Q72. The areas of two similar triangles are 5 cm^2 and 45 cm^2. If a side of the smaller triangle is 2 cm, what is the length of the corresponding side of the larger triangle?

(a) 3 cm
(b) 7 cm
(c) 5 cm
(d) 6 cm

Q73. A trapezoid is formed by cutting a smaller triangle from the top of a larger similar triangle. If the height of the smaller triangle is 1/3 of the height of the larger triangle, what is the ratio of the area of the trapezoid to the area of the larger triangle?

(a) 1:9
(b) 8:9
(c) 3:4
(d) 2:3

Q74. If $x + y = 7$ and $xy = 12$, calculate the value of $x^2 + y^2$.

(a) 24
(b) 25
(c) 18
(d) 20

Q75. If $x + y = 12$ and $x - y = 4$, find $(x^3+y^3)/(x+y)$.

(a) 48
(b) 45
(c) 42
(d) 46

GENERAL AWARENESS

Q76. Which of the following features of the Indian Constitution is borrowed from United States of America?

(a) Fundamental Rights
(b) Centrifugal form of federalism where the centre is stronger than the states
(c) Concept of Concurrent list
(d) Single citizenship

Q77. Which of the following is NOT a Fundamental Duty mentioned in the Indian Constitution?

(a) To respect ideals of the constitution
(b) To respect the National Flag
(c) To respect the National Anthem
(d) Separation of judiciary from executive

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Q78. The 16th Islamic Summit of the OIC will be held in _____ in 2026.

(a) Azerbaijan
(b) Gambia
(c) Indonesia
(d) Morocco

Q79. Who among the following was named the goodwill ambassador for Earth Hour India 2024?

(a) Mithali Raj
(b) P V Sindhu
(c) Sakshi Malik
(d) Saina Nehwal

Q80. Har Gobind Khorana won the Nobel Prize in which field in 1968?

(a) Medicine
(b) Chemistry
(c) Peace
(d) Literature

Q81. Who authored 'Bijak', a collection of devotional poems and teachings?

(a) Surdas
(b) Raskhan
(c) Kabir Das
(d) Mirabai

Q82. In November 2024, Prime Minister Narendra Modi was honoured with the Dr. Martin Luther King Jr. Global Peace Award for Minority Upliftment in which country?

(a) United States of America
(b) France
(c) United Kingom
(d) Russia

Q83. Purple Fests (Festival of Inclusion) has been organised in India since _____.

(a) 2023
(b) 2020
(c) 2021
(d) 2022

Q84. _____ is a type of start which is essential for sprint races in sports.

(a) Crouch Start
(b) Vertical Start
(c) Jumping start
(d) Standing Start

Q85. The Ramgarh Vishdhari Tiger Reserve is in _____.

(a) Rajasthan
(b) Karnataka
(c) Odisha
(d) Jharkhand

Q86. Which of the following protected area of Odisha has been declared the 107th National Park of India?

(a) Simlipal National Park
(b) Bhitarkanika National Park
(c) Satkosia National Park
(d) Nandankanan National Park

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Q87. 47th HFI Junior Boy's National Handball Championship will be held in _____.

(a) New Delhi
(b) Haryana
(c) Chandigarh
(d) Odisha

Q88. The final round of the _____th Senior National Football Championship for Santosh Trophy began in December 2024.

(a) 70
(b) 72
(c) 74
(d) 78

Q89. The final round of 78th Senior National Football for Santosh Trophy was held in which city?

(a) Hyderabad
(b) Surat
(c) Mumbai
(d) Kolkata

Q90. Who is the author of the book 'Show Business', which parodies and satirizes formulaic Bollywood cinema?

(a) Arundhati Roy
(b) Salman Rushdie
(c) Shashi Tharoor
(d) Khushwant Singh

Q91. Which of the following statement state the importance of the universal law of gravitation?

I. The motion of planets around the Sun

II. The tides due to the moon and the Sun

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Q92. What happens to solid carbon dioxide (dry ice) when the pressure is decreased to 1 atmosphere?

(a) It sublimates directly into a gas.
(b) It melts into a liquid.
(c) It remains as a solid.
(d) It freezes further into a solid.

Q93. Which of the following statement is correct regarding the government budget?

I. Subsidies are an important policy instrument which aim at increasing welfare.

II. Defence expenditure, is committed expenditure in the sense that given the national security concerns, there exists little scope for drastic reduction.

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Q94. Shujauddaulah was the Nawab of which of the following region?

(a) Amber
(b) Awadh
(c) Mysore
(d) Hyderabad

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Q95. Which of the following qualifications is required to contest the election of the President of India?

I. He or she must hold any office of profit under Central government.

II. He or she must qualify to become member of House of the People.

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Q96. President shall from time to time summon each House of Parliament to meet at such time and place as he thinks fit, but _____ months shall not intervene between its last sitting in one session and the date appointed for its first sitting in the next session.

(a) twelve
(b) three
(c) six
(d) nine

Q97. For how long a person can serve as a minister without being a member of either House of Parliament of India?

(a) 6 consecutive months
(b) 3 consecutive months
(c) 12 consecutive months
(d) 2 consecutive month

Q98. Rajya Sabha is required to return a Money Bill passed and transmitted by Lok Sabha within a period of _____ days from the date of its receipt.

(a) 7 days
(b) 14 days
(c) 1 month
(d) 20 days

Q99. What is the other name of the tissue fluid in human body?

(a) Sweat
(b) Urine
(c) Lymph
(d) Mucus

Q100. Who was the Pallava king that built the 'seven rathas' at Mahabalipuram?

(a) Pulkeshin I
(b) Rajendra I
(c) Senguttuvan
(d) Narasimhavarman

ANSWER KEY

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

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91 c	92 a	93 c	94 b	95 b	96 c	97 a	98 b	99 c	100 d

SOLUTIONS

Q1. Answer: (a) Injured were taken to the hospital.

The correct answer is option 1.

Key Points

To answer this question, let's break down each sentence to identify the grammatically and contextually correct ones:

• 1. Injured were taken to the hospital.
• This sentence describes injured people being taken to the hospital.
• The sentence is erroneous because it is missing the article "the" before "injured".
• The correct sentence would be: "The injured were taken to the hospital."
• 2. The baby laughed on seeing itself in the mirror.
• This sentence describes a baby laughing upon seeing its reflection.
• This sentence is grammatically and contextually correct.
• 3. Whose book is this?
• This sentence is used to ask about the ownership of a book.
• This sentence is grammatically and contextually correct.
• 4. Shakespeare was the most prolific writer that time has ever seen.
• This sentence describes Shakespeare's prolific writing nature.
• This sentence is grammatically and contextually correct.

Q2. Answer: (c) with

The correct answer is 'with'.

Key Points

• The preposition "with" is used to indicate compatibility or suitability.
• The phrase "compatible with" is a standard collocation used in English grammar.
• Options 1, 2, and 4 are incorrect as they do not fit the context of the sentence.

Therefore, the correct answer is Option 3.

Complete Sentence: "The solution is not compatible with older versions of the software."

Additional Information

• Option 1: "for" is incorrect because "compatible for" is not a valid phrase in English.
• Option 2: "to" is incorrect because "compatible to" is not a standard collocation.
• Option 4: "at" is incorrect as it does not fit the sentence context.

Q3. Answer: (a) puts down

The correct answer is 'puts down'.

Key Points

• The phrasal verb "puts down" means to attribute or assign something to a particular cause.
• In the context of the sentence, "puts down" is appropriate because it implies the act of blaming or attributing her failures to bad luck.
• Options 2, 3, and 4 are incorrect because they do not fit the meaning or context of the sentence:
• Option 2 (turns out): refers to a result or outcome and is not relevant here.
• Option 3 (breaks into): refers to entering a place forcefully and does not fit the context.
• Option 4 (boils down): refers to simplifying or summarizing, which does not match the intended meaning.

Therefore, the correct answer is Option 1.

Complete Sentence: "She always puts down her failures to bad luck rather than taking ownership."

Additional Information

• Option 2: "turns out" is incorrect because it implies a result or discovery, which does not align with the idea of attributing failures to bad luck.
• Option 3: "breaks into" is incorrect as it refers to entering a place forcefully, unrelated to the sentence's context.
• Option 4: "boils down" is incorrect as it refers to simplifying or summarizing, which is not relevant here.

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Q4. Answer: (a) Quarantine

The solution is in Hindi. Read it online.

Q5. Answer: (a) I need to check the expiry date on this milk carton.

The solution is in Hindi. Read it online.

Q6. Answer: (c) Reduce

The solution is in Hindi. Read it online.

Q7. Answer: (a) to eat

The correct answer is 'to eat'.

Key Points

• The verb phrase "to eat" is correct because it properly follows the verb "gave" to describe the purpose of the action.

• The inclusion of "it" in Option 2 is unnecessary and redundant, as "cake" is already mentioned in the sentence.

• Options 3 and 4 are grammatically incorrect, as they do not properly align with the structure of the sentence.

Therefore, the correct answer is Option 1.

Complete Sentence: "My mother gave us some cake to eat."

Additional Information

• Option 2: "to eat it" is incorrect because "it" is redundant when "cake" is already specified.

• Option 3: "eating it" is incorrect because it disrupts the intended meaning and grammatical structure of the sentence.

• Option 4: "eat it" is incorrect because it does not properly follow "gave us" in the sentence.

Q8. Answer: (b) She said that she could go there the following morning if her mother did not want her to go for shopping.

The correct answer is Option 2.

Key Points

• Indirect Speech: She said that she could go there the following morning if her mother did not want her to go for shopping.

• Key Conversions:

• "I can come here tomorrow morning" becomes "She could go there the following morning"

• Pronoun "I" is replaced by "she" as per the subject.

• Modal verb "can" changes to its past form "could" in reported speech.

• Adverb "here" is changed to "there" to indicate a shift in place.

• Adverb "tomorrow morning" is converted to "the following morning" to reflect the time change.

• "if my mother does not want me to go" becomes "if her mother did not want her to go"

• Pronoun "my" is changed to "her" to match the subject.

• Verb "does not want" is converted to "did not want" to maintain past tense in reported speech.

• Pronoun "me" is replaced by "her" as per the subject.

• Punctuation and Format:

• The reporting verb "said" is used without quotation marks in indirect speech.

• The sentence structure is adjusted to maintain proper grammar and flow in indirect speech.

Therefore, the correct answer is Option 2.

Correct Sentence: "She said that she could go there the following morning if her mother did not want her to go for shopping."

Additional Information

• Option 1: "She said that she can go there the next morning if her mother did not want her to go for shopping."

• Incorrect because "can" is not changed to "could" in reported speech.

• Option 3: "She said that she could go there the following morning if her mother does not want her to go for shopping."

• Incorrect because "does not" is not changed to "did not" in reported speech.

• Option 4: "She said that she went there the following morning if her mother does not want her to go for shopping."

• Incorrect because "went" is an incorrect conversion of "can come" and alters the meaning of the sentence.

Q9. Answer: (b) The students asked the teacher what was the proper way to write a report when there was no details mentione...

The correct answer is Option 2.

Key Points

• Indirect Speech: The students asked the teacher what was the proper way to write a report when there was no details mentioned in the question.
• Key Conversions:
• "What is the proper way" becomes "what was the proper way"
• The reporting verb changes from present to past tense.
• The verb "is" is converted to "was" to match the sequence of tense.
• "there is no details" becomes "there was no details"
• The present tense "is" is changed to past tense "was" to maintain tense consistency.
• Punctuation and Format:
• The question in direct speech is converted into a statement in indirect speech.
• The quotation marks are removed, and the sentence is restructured.
• The reporting verb "said" is changed to "asked" to reflect the interrogative nature of the original sentence.

Therefore, the correct answer is Option 2.

Correct Sentence: The students asked the teacher what was the proper way to write a report when there was no details mentioned in the question.

Additional Information

• Option 1: "The students asked the teacher what had been the proper way to write a report when there was no details mentioned in the question."
• Incorrect usage of "had been" as it changes the meaning unnecessarily to past perfect tense.
• Option 3: "The students asked the teacher what had to be the proper way to write a report when there was no details mentioned in the question."
• Incorrect usage of "had to be" as it implies obligation, which is not present in the original sentence.
• Option 4: "The students asked the teacher what was being the proper way to write a report when there was no details mentioned in the question."
• Incorrect structure: "was being" is grammatically incorrect in this context.

Q10. Answer: (b) Experts have determined that the ancient artifact is authentic.

The correct answer is Option 2.

Key Points

• Active voice structure: The subject performs the action, while the object receives it.
• In the passive sentence, "It has been determined that the ancient artifact is authentic," the subject (experts) is not explicitly mentioned.
• To convert to active voice, reintroduce the subject (experts) as the doer of the action.
• The verb "has been determined" is changed to "have determined" to match the active voice structure.
• The object, "the ancient artifact is authentic," remains unchanged in the active voice.

Therefore, the correct answer is Option 2.

Correct Sentence: "Experts have determined that the ancient artifact is authentic."

Additional Information

• Option 1: "The ancient artifact is authentic." – This is a statement, not a conversion to active voice.
• Option 3: "It was determined that the ancient artifact is authentic." – This is still in passive voice.
• Option 4: "The authenticity of the ancient artifact has been determined." – This is also in passive voice.

Q11. Answer: (b) She said, "Ugh! How terrible this food tastes!"

The correct answer is Option 2.

Key Points

• Indirect Speech: She exclaimed with disgust that the food tasted terrible.
• Key Conversions:
• "She exclaimed with disgust" becomes "Ugh!"
• The expression "Ugh!" conveys the disgust mentioned in the indirect speech.
• "the food tasted terrible" becomes "How terrible this food tastes!"
• The phrase is converted into a direct exclamation to match the tone and meaning.
• The verb tense is adjusted for direct speech.
• Punctuation and Format:

• Direct speech is enclosed in quotation marks.
• Starts with an exclamation "Ugh!" followed by a complete sentence expressing disgust.
• Maintains the tone and meaning of the original indirect speech.
Therefore, the correct answer is Option 2.
Correct Sentence: "She said, "Ugh! How terrible this food tastes!"
Additional Information
• Option 1: "Alas! This food tastes terrible."
• The word "Alas" expresses sadness rather than disgust, altering the tone.
• Option 3: "Oh no! This food tastes terrible."
• The phrase "Oh no" conveys surprise or concern, which doesn't match the disgust in the original sentence.
• Option 4: "What terrible-tasting food!"
• Although it conveys disgust, the sentence structure is different and doesn't match the original sentence fully.

Q12. Answer: (d) maintenance

The correct answer is option 4.
Key Points
The correctly spelled word is 'maintenance'.
• Maintenance refers to the process of preserving a condition or situation, or the state of being preserved.
• In the given context, it implies regular upkeep or servicing of machinery to ensure smooth and efficient functioning.
• For Example: Regular maintenance of the air conditioning system will prevent unnecessary repairs.
Therefore, the correct answer is 'maintenance'.
Additional Information
Explanation of the incorrect options:
• Option 1 - 'maintainance': Incorrect spelling of the word.
• Option 2 - 'maintanence': Incorrect spelling of the word.
• Option 3 - 'maintanance': Incorrect spelling of the word.

Q13. Answer: (c) Leave no stone unturned in the search for the missing documents.

The correct answer is Option 3.
Key Points
• Active voice structure: The subject performs the action, while in passive voice, the subject is acted upon.
• The sentence "Let no stone be left unturned in the search for the missing documents" is in the passive form.
• To convert to active voice: Use the imperative structure to directly instruct the action.
• The phrase "Let no stone be left unturned" becomes "Leave no stone unturned."
• This ensures the meaning remains the same while converting the sentence to the active voice.
Therefore, the correct answer is Option 3.
Correct Sentence: "Leave no stone unturned in the search for the missing documents."
Additional Information
• Option 1: "Don't leave a stone unturned in the search for the missing documents." – Incorrect structure with "Don't."
• Option 2: "No stone should be left unturned in the search for the missing documents." – Passive voice, not active.
• Option 4: "Leave every stone unturned in the search for the missing documents." – Changes the meaning of the sentence.

Q14. Answer: (c) Refridgerator

The solution is in Hindi. Read it online.

Q15. Answer: (b) She hoped to aquire the experience necessary to move up the strict corporate hierarchy.

The correct answer is option 2.
Key Points
The misspelled word is 'aquire'.
• The correct spelling is 'acquire'.
• The word 'acquire' is a verb which means 'to gain or obtain something, often through effort or experience'.
• For Example -
• He worked hard to acquire the skills necessary for his job.

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Therefore, the correct answer would be 'aquire'.

Additional Information

Let's understand the meanings of the other relevant words in the context -

• Hierarchy - a system in which people or things are arranged according to their importance or rank.

• Responsibilities - duties or tasks that one is required or expected to carry out.

Q16. Answer: (a) My mother asked me, "Are you going to the party tonight?"

The correct answer is Option 1.

Key Points

• Indirect Speech: My mother lovingly asked me if I was going to the party that night.

• Key Conversions:

• "if I was going" becomes "Are you going"

• Indirect question "if I was going" is converted to direct question "Are you going."

• Pronoun "I" is changed to "you" to match direct speech.

• Verb "was going" is changed to "are going" to match the present tense in direct questions.

• "that night" becomes "tonight"

• Time expression "that night" is converted to "tonight" to reflect the perspective of the speaker.

• Reporting verb:

• Indirect: "lovingly asked"

• Converted to: "asked" while maintaining the context.

• Punctuation and Format:

• Direct speech is enclosed in quotation marks.

• Starts with a capital letter "Are" and ends with a question mark "?".

• Reporting clause precedes the quoted speech, ending with a comma.

Therefore, the correct answer is Option 1.

Correct Sentence: "My mother asked me, ‘Are you going to the party tonight?'"

Additional Information

• Option 2: "My mother said to me, ‘Were you going to the party that night?'"

• Incorrect tense: "were you" changes the context to past instead of present.

• Option 3: "My mother said to me, Were you going to the party that night?"

• Does not include proper punctuation for direct speech (missing quotation marks).

• Option 4: "My mother asked, ‘you going to the party that night?'"

• Lacks the auxiliary verb "Are" to form a correct question.

Q17. Answer: (c) The coach said to the athletes, "You have been training hard all season and deserved a break."

The correct answer is Option 3.

Key Points

• Indirect Speech: The coach told the athletes that they had been training hard all season and deserved a break.

• Key Conversions:

• "they had been training hard" becomes "You have been training hard"

• Pronoun "they" is changed to "you" to match the direct address.

• Verb tense "had been training" is converted to "have been training" to fit the direct speech context.

• "deserved a break" remains unchanged.

• Maintains the same idea while fitting into the direct speech format.

• Reporting verb:

• Indirect: "told"

• Converted to: "told the athletes" to preserve the clarity of the speaker and audience in direct speech.

• Punctuation and Format:

• Direct speech is enclosed in quotation marks.

• Starts with a capital letter "You" and ends with a period ".".

• Reporting clause follows the quoted speech, starting with a lowercase letter after the comma.

Therefore, the correct answer is Option 3.

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Correct Sentence: ""The coach said to the athletes, "You have been training hard all season and deserved a break."

Additional Information

• Option 1: "The coach said, ‘You were training hard all season and deserved a break.’"

• Incorrect tense: "were training" instead of "have been training" changes the meaning.

• Option 2: "The coach told the athletes, ‘You had been training hard all season and deserved a break.’"

• Incorrect tense: "had been training" does not match the implied present relevance of the speech.

• Option 4: "The coach told the athletes, ‘They had been training hard all season and deserved a break.’"

• Incorrect pronoun: "They" does not reflect direct speech addressing the athletes directly as "You."

Q18. Answer: (a) An extensive investigation is to be launched into the alleged financial irregularities by the government.

The correct answer is Option 1.

Key Points

• Passive voice structure: The object of the active voice sentence becomes the subject of the passive voice sentence.

• In the active voice, the sentence is: "The government is to launch an extensive investigation into the alleged financial irregularities."

• To convert to passive voice: Place the object "an extensive investigation" at the beginning.

• Change the active verb form "is to launch" to "is to be launched" (future passive structure).

• Add the preposition "by" followed by the original subject "the government."

Therefore, the correct answer is Option 1.

Correct Sentence: "An extensive investigation is to be launched into the alleged financial irregularities by the government."

Additional Information

• Option 2: "The alleged financial irregularities are to be extensively investigated by the government." – Incorrect structure as it changes the focus of the sentence.

• Option 3: "An extensive investigation will be launched into the alleged financial irregularities by the government." – Incorrect tense (future simple instead of "is to be").

• Option 4: "It is intended by the government to launch an extensive investigation into the alleged financial irregularities." – Incorrect transformation, as it alters the original meaning.

Q19. Answer: (d) If implemented effectively, the NEP could reshape India's educational landscape.

The correct answer is Option 4 i.e 'If implemented effectively, the NEP could reshape India's educational landscape'.

Key Points

• The sentence "If implemented effectively, the NEP could reshape India's educational landscape" contains the modal verb "could" which is used to express possibility.

• Modal verbs such as would, could, may, and might are often used to indicate possibility, permission, or ability.

Therefore, the correct answer is- Option 4.

Additional Information

• Option 1: The sentence does not contain a modal verb.

• Option 2: The sentence does not contain a modal verb.

• Option 3: While "will" is a modal verb, it is expressing a definite future event rather than possibility.

Q20. Answer: (b) Learning

The correct answer is Option 2 i.e 'Learning'.

Key Points

• A gerund is a verb form ending in "-ing" that functions as a noun.

• In the passage, the word "learning" is used as a noun, making it a gerund.

Therefore, the correct answer is- Option 2.

Additional Information

• Option 1: "Reshape" is a verb and not a gerund.

• Option 3: "Emphasis" is a noun and not a gerund.

• Option 4: "Replace" is a verb and not a gerund.

Q21. Answer: (c) Considering all parts as interconnected and complete

The solution is in Hindi. Read it online.

Q22. Answer: (b) Rigid

The solution is in Hindi. Read it online.

Q23. Answer: (c) To encourage practical and creative learning

The correct answer is Option 3 i.e 'To encourage practical and creative learning'.

Key Points

• The passage states that the NEP promotes vocational education, digital literacy, and interdisciplinary studies, and aims to reduce rote learning and exams-centric approaches by encouraging practical knowledge and creativity.

• The emphasis is on fostering practical and creative learning rather than rote memorization.

Therefore, the correct answer is- Option 3.

Additional Information

• Option 1: The passage emphasizes the use of mother tongue or regional language at the primary level, not the removal of regional languages from schools.

• Option 2: The NEP aims to reduce rote learning, not increase it.

• Option 4: The passage does not suggest focusing only on English; it discusses the emphasis on mother tongue or regional language at the primary level.

Q24. Answer: (b) Mockery

The correct answer is 'mockery'.

Key Points

• The word "sarcasm" refers to a form of mockery or ironic remark often intended to ridicule or criticize someone.

• Among the given options, the word "mockery" most closely aligns with the meaning of sarcasm.

• Options 1, 3, and 4 are incorrect because they do not convey the same meaning as sarcasm.

Therefore, the correct answer is Option 2.

Complete Sentence: "The stranger's eyes sparkled with a mixture of challenge and mockery."

Additional Information

• Option 1: "Kindness" is incorrect because sarcasm is not related to kindness.

• Option 3: "Encouragement" is incorrect because sarcasm does not imply encouragement.

• Option 4: "Compliment" is incorrect because sarcasm is often used to mock rather than compliment.

Q25. Answer: (b) Poise

The solution is in Hindi. Read it online.

Q26. Answer: (b) They are bored or disengaged; try to re-engage them with a question or interactive element.

Given: You're giving a presentation, and a few students in the back are yawning, looking at the ceiling, and occasionally checking their phones.

Option	Statement	Correctness	Reasoning
1	They are deeply concentrating; continue as is.	Incorrect	Yawning, looking away, and checking phones are signs fo disengagement, not concentration.
2	They are bored or disengaged; try to re-engage them with a question or interactive element.	Correct	These non-verbal cues indicates loss of attention. Asking questions or adding interection can regain their focus.
3	They are just tired; ignore their behavior.	Incorrect	Ignoring the signals may cause further loss of attention from the audience.
4	They are being disrespectful; stop the presentation and reprimand them.	Incorrect	This reaction is too harsh and may create a negative environment.

Qualities Projected in this situation: Observation skills, adaptability and Audience engagement.

Hence, "Option 2" is the correct answer

Key Points

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Checklist for attempting SRT questions:

1) Read the question and options carefully.

2) Look for options that are realistic, optimistic, and reflect officer-like qualities.

3) Do not skip any situation.

4) Relegate the negative sentences and choose the most logical option among the remaining. As time is an important factor, hence your thinking ability should be swift.

5) React quickly and be logical

Additional Information

Officer qualities:

Q27. Answer: (c) 30 m/s

Given:

Length of tunnel = 200 m

Length of train = 100 m

Time taken = 10 s

Formula used:

Speed = Distance ÷ Time

Calculations:

Total distance covered

=> Length of train + Length of tunnel

=> 100 + 200

=> 300 m

Speed

=> 300 ÷ 10

=> 30 m/s

Therefore Speed of the train = 30 m/s.

Q28. Answer: (c) 33

According to the question:

P's rank from the left → 7th

Q's rank from the right → 12th

After interchange, P's rank from the left → 22nd

Total number of people = P's rank from the left + After interchange, P's rank from the left - 1

Total number of people = 12 + 22 - 1 → 33

Hence, "Option 3" is the correct answer.

Q29. Answer: (c) 34

According to the question:

A's rank from the left → 12th

B's rank from the right → 15th

Number of students between A and B → 7

The maximum number of students in the row → A's rank from the left + B's rank from the right + The maximum number of students in the row

→ 12 + 15 + 7 = 34

Hence, the correct answer is "Option 3"

Q30. Answer: (a) 3

Given:

Total students = 30

Sneha position from left = 12

Priya position from right = 15

So, the students are between Sneha and Priya = Total students - (Position of Sneha + Position of Priya)

= 30 − (12 + 15)

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= 30 − 27

= 3

Therefore Number of students between Sneha and Priya = 3.

Q31. Answer: (a) Only conclusion I follows.

The least possible Venn diagram for the given statements is as shown below :

Conclusions:

(I) All planets are galaxies → Follow (As all planets are stars and all stars are galaxies. As whole planets comes in stars which whole comes in galaxies, therefore it is true.)

(II) All galaxies are planets → Does not follow (As all planets are stars and all stars are galaxies. So it is possible but not definite.)

Therefore Here, Only conclusion I follows.

Hence, the correct answer is "Option 1"

Q32. Answer: (a) If only I follows

Given Statement:

The government has announced a new policy to reduce carbon emissions by 50% in the next 10 years.

Check the Inferences:

I. The government is taking steps to combat climate change.

Reducing carbon emissions is a major action to fight climate change.

=> This inference follows. Yes

II. The new policy will have no impact on the environment.

The statement only says emissions will be reduced, which normally affects the environment positively.

=> Saying no impact is not supported.

=> This inference does not follow. No

III. The government is not interested in reducing carbon emissions.

The statement clearly says the government wants to reduce emissions by 50%.

=> This is the opposite of the statement.

=> This inference does not follow. No

Therefore Only Inference I follows.

Q33. Answer: (a) Tree

Logic used here:

Stages of plant growth

Seed → initial stage

Sprout → seed begins to grow

Sapling → young plant

Next stage → Tree (fully grown plant)

Therefore The next word is Tree.

Q34. Answer: (a) Hygrometer

Odometer : Distance :: ? : Humidity

Instrument : What it measures

Odometer → measures Distance

Similarly, the instrument that measures Humidity is → Hygrometer

Hence Hygrometer : Humidity

Therefore The correct answer is Hygrometer.

Q35. Answer: (a) Light intensity

The logic followed here is:

Logic: The second word is what the first word measures.

Here,

Ammeter : Electric current → Ammeter measures Electric current.

Similarly,

Spectrophotometer : Light Intensity → Spectrophotometer measures Light Intensity.

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Hence, the correct answer is "Option 1 ".

Q36. Answer: (a) JPN

The logic followed here is.

For PEN : QGQ

For INK : ?

The resulting letters are JPN.

Hence, the correct answer is "Option 1".

Q37. Answer: (a) Apple

The logic followed here is: (Fruits that belong to the stone fruit / drupe family)

Apple → Has a core with seeds, belongs to pome fruit family

Nectarine → Has a hard stone/pit inside, belongs to stone fruit family

Apricot → Has a hard stone/pit inside, belongs to stone fruit family

Cherry → Has a hard stone/pit inside, belongs to stone fruit family

Three (Nectarine, Apricot, Cherry) are all stone fruits with a hard pit inside, while Apple is a pome fruit with seeds in a core.

Thus, Apple is different from the others.

Hence, the correct answer is " Option 1 ".

Q38. Answer: (d) RMQWT

The logic followed here is :

• TOTAL : YSWCM

Similarly,

• MINUS :?

Thus, the term at the place of ? will be " RMQWT ".

Hence, the correct answer is " Option 4 "

Q39. Answer: (b) 25/2

The logic followed here is :

Numerators follow the pattern of odd numbers squared → 1^2, 3^2, 5^2, 7^2, 9^2

Missing numerator = $5^2 = 25$

Thus, the missing number in the series is " 25/2 "

Hence, the correct answer is "Option 2"

Q40. Answer: (d) 343/2

The logic followed here is :

Numerators follow the pattern of consecutive numbers cubed → 3^3, 4^3, 5^3, 6^3, 7^3

Missing numerator = $7^3 = 343$

Thus, the missing term from the given series is " 343/2 ".

Hence, the correct answer is "Option 4".

Q41. Answer: (d) 35241

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

3. Wabash

5. Wackily

2. Wagged

4. Waggon

1. Wagnor

The correct order is '3, 5, 2, 4, 1'.

Hence, the correct answer is "Option 4 ".

Q42. Answer: (a) 37

Given: Anil is 18th from the left end and 20th from the right end.

Formula used :Total = Left rank + Right rank − 1

=> 18 + 20 − 1 = 37

So, the total number of students in the row is 37.

Hence, the correct answer is "Option 1".

Q43. Answer: (b) 16th

Given: Total boys = 25, Rakesh is 10th from the top.

Formula used : Position from bottom = Total − Rank from top + 1

=> 25 − 10 + 1 = 16

So, Rakesh's position from the bottom is 16th.

Hence, the correct answer is "Option 2".

Q44. Answer: (b) 46

Given: Sam's rank from top = 9th, Sam's rank from bottom

Formula used : Total students = Rank from top + Rank from bottom − 1

=> Total students = 9 + 38 − 1

=> Total students = 46

So, there are 46 students in the class.

Hence, The correct answer is " Option 2 "

Q45. Answer: (a) A

Given series: P, H, D, B, ?

The logic followed here is:

16 ÷ 2 = 8 ÷ 2 = 4 ÷ 2 = 2 ÷ 2 = 1

Position 1 = A

Thus, the missing term in the series is A

Hence, the correct answer is "Option 1"

Q46. Answer: (a) Bengaluru: 15th Aug.ust, 2025

Given Reference: Bengaluru: 15th Aug.ust, 2025

Compare each option with the given Reference:

Option	Address	Matching
(1)	Bengaluru: 15th Aug.ust, 2025	The statement matches exactly with the Given Reference.
(2)	Bengaluru: 15th August, 2025	Aug.ust is written as August (dot is missing).
(3)	Bangaluru: 15th Aug.ust, 2025	Bengaluru is written as Bangaluru.
(4)	Bengaluru; 15th August, 2025	Colon (:) is written as Semicolon (;) and dot is missing in Aug.ust.

So, the statement that exactly matches the Given Reference is option (1).

Hence, the correct answer is "Option (1)".

Q47. Answer: (c) Refer to psychiatric evaluation before sentencing

Given: You're a judge and the accused is proven guilty but also mentally unstable.

Let's check all the options:

(1) Maximum sentence => It is not appropriate (Ignores the mental instability completely, punishment without proper evaluation is unjust.)

(2) Immediate release => It is not appropriate (Accused is proven guilty, releasing immediately ignores the crime committed.)

(3) Refer to psychiatric evaluation before sentencing => It is the most appropriate verdict. (Balances both facts — guilty verdict AND mental instability. Law requires mental state to be considered before sentencing)

(4) Ignore mental state => It is not appropriate. (Mental instability is a legally relevant factor, ignoring it is against judicial principles)

Hence, the correct answer is "Option 3"

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Q48. Answer: (c) A majority of coastal waste is composed of single-use plastic items.

Given: A government bans single-use plastic, claiming it will reduce ocean pollution.

Let's check all the options:

(1) Most plastic waste in oceans comes from fishing nets and industrial waste => It does not support the decision (This weakens the decision as it shifts blame away from single-use plastic.)

(2) Citizens are unaware of recycling methods =>It does not support the decision. (This is irrelevant to the ban on single-use plastic)

(3) A majority of coastal waste is composed of single-use plastic items => It best supports the decision. (Directly proves that banning single-use plastic will reduce ocean pollution.)

(4) Plastic alternatives are more expensive and less durable => It does not support the decision. (This weakens the decision as it shows the ban may not be practical.)

Hence, the correct answer is "Option 3"

Q49. Answer: (d) All the words can be formed using the letters only once.

Given word: IDENTIFICATION

By checking all the options:

Available letters: I, D, E, N, T, I, F, I, C, A, T, I, O, N

(1) CONFIDENT => It can be formed

(2) DICTATION => It can be formed.

(3) INACTION => It can be formed.

So, All the words can be formed using the letters only once.

Hence, the correct answer is " Option 4 ".

Q50. Answer: (c) A

Given: 6 persons.

F is not at the right end. D is not at any end.

From clues, E is immediate left of B, and C is immediate Neighbour of both A and E

Remaining D and F go to the left

So, 2nd to the right of F = A

So, the person sitting second to the right of F is 'A'.

Hence, the correct answer is "Option 3".

Q51. Answer: (b) 1/17

Given:

Option 1: 1/4

Option 2: 1/17

Option 3: 1/10

Option 4: 1/8

Formula Used:

A fraction results in a non-terminating repeating decimal if its denominator (in simplest form) has prime factors other than 2 or 5.

Calculation:

=> For 1/4: Denominator = 4 = 2^2 (prime factor is 2 only, so terminates).

=> For 1/17: Denominator = 17 (prime number other than 2 or 5, so non-terminating repeating).

=> For 1/10: Denominator = 10 = 2 × 5 (prime factors are 2 and 5, so terminates).

=> For 1/8: Denominator = 8 = 2^3 (prime factor is 2 only, so terminates).

Therefore The correct answer is Option 2.

Q52. Answer: (c) 36

Shortcut Trick

Profit per dozen = (Selling Price per piece × 12) − Cost Price per dozen

=> Profit per dozen = (110 × 12) − 1200 = 1320 − 1200 = Rs. 120

Total items in dozens = Total Profit ÷ Profit per dozen = 360 ÷ 120 = 3 dozens

Total number of calculators = 3 × 12 = 36

Therefore The correct answer is 36 calculators.

Alternate Method
Given:
Cost Price (CP) of 1 dozen (12 calculators) = Rs. 1,200
Selling Price (SP) of 1 calculator = Rs. 110
Total Profit = Rs. 360
Formula Used:
1. Profit per unit = Selling Price per unit − Cost Price per unit
2. Number of units = Total Profit ÷ Profit per unit
Calculations:
=> Cost Price (CP) of 1 calculator = 1200 ÷ 12 = Rs. 100
=> Selling Price (SP) of 1 calculator = Rs. 110
=> Profit on 1 calculator = 110 − 100 = Rs. 10
=> Number of calculators bought = 360 ÷ 10
=> Number of calculators = 36
Therefore The correct answer is 36 calculators.
Additional Information
Profit Percentage Formula
Profit % = (Profit ÷ Cost Price) × 100. In this case, Profit % = (10 ÷ 100) × 100 = 10%.
Selling Price Calculation
SP = CP × (100 + Profit %) ÷ 100. This is used to find the Selling Price when CP and profit percentage are known.
Unitary Method in Profit and Loss
Always convert given quantities (like dozens, gross, or score) into single units to simplify the calculation of profit or loss per item.

Q53. Answer: (c) 4.8 cm

Shortcut Trick
Volume of sphere = Volume of water displaced in the cylindrical container.
$(4/3) \times r^3 = R^2 \times h$ (Since π cancels out from both sides)
$(4/3) \times r^3 = 10^2 \times 1.5$
$r^3 = (150 \times 3) \div 4 = 112.5$
$r = \sqrt[3]{(112.5)} \approx 4.8$ cm
Therefore The correct answer is 4.8 cm.
Alternate Method
Given:
Diameter of the cylindrical container = 20 cm
Rise in the water level (h) = 1.5 cm
Formula Used:
Volume of Cylinder = $\pi R^2 h$
Volume of Sphere = $(4/3)\pi r^3$
Calculations:
=> Radius of cylinder (R) = 20 ÷ 2 = 10 cm
=> Volume of water raised = Volume of cylinder with height 1.5 cm
=> Volume of water raised = $\pi \times (10)^2 \times 1.5$
=> Volume of water raised = 150π cm³
=> According to Archimedes' Principle, Volume of sphere = Volume of displaced water
=> $(4/3) \times \pi \times r^3 = 150\pi$
=> $4 \times r^3 = 150 \times 3$
=> $4 \times r^3 = 450$
=> $r^3 = 450 \div 4 = 112.5$
=> $r = \sqrt[3]{(112.5)}$
=> $r \approx 4.827$ cm
Therefore The correct answer is 4.8 cm.
Additional Information

Archimedes' Principle

When an object is fully or partially submerged in a fluid, the volume of the fluid displaced is equal to the volume of the submerged part of the object.

Volume of a Sphere

The volume (V) of a sphere with radius (r) is given by the formula $V = (4/3)\pi r^3$. The surface area is $4\pi r^2$.

Volume of a Cylinder

The volume (V) of a cylinder with base radius (R) and height (h) is $V = \pi R^2 h$. The curved surface area is $2\pi Rh$.

Q54. Answer: (c) 12.5%

Given:

Marked price of cupboard = Rs. 3,200

Marked price is 25% above cost price.

Discount on marked price = 10%

Formula Used:

Cost price = Marked price ÷ (1 + Markup percentage)

Selling price = Marked price × (1 - Discount percentage)

Profit percentage = [(Selling price - Cost price) ÷ Cost price] × 100

Calculation:

=> Cost price = Rs. 3,200 ÷ (1 + 25/100)

=> Cost price = Rs. 3,200 ÷ 1.25

=> Cost price = Rs. 2,560

=> Selling price = Rs. 3,200 × (1 - 10/100)

=> Selling price = Rs. 3,200 × 0.9

=> Selling price = Rs. 2,880

=> Profit percentage = [(Rs. 2,880 - Rs. 2,560) ÷ Rs. 2,560] × 100

=> Profit percentage = [Rs. 320 ÷ Rs. 2,560] × 100

=> Profit percentage = 12.5%

Therefore The correct answer is 12.5%.

Q55. Answer: (b) 15.6 years

Given:

Average age of 30 students = 18 years

Total number of students initially = 30

Number of students who left = 5

Number of students who joined = 5

New average age = 17.2 years

Average age of 5 students who left = 20.4 years

Formula Used:

Total age = Average age × Number of students

Total age of new group = Total age of remaining students + Total age of new students

Calculation:

=> Total age of initial 30 students = 18 × 30 = 540 years

=> Total age of 5 students who left = 20.4 × 5 = 102 years

=> Total age of remaining 25 students = 540 − 102 = 438 years

=> Total age of new group = 17.2 × 30 = 516 years

=> Total age of 5 students who joined = 516 − 438 = 78 years

=> Average age of 5 students who joined = 78 ÷ 5 = 15.6 years

Therefore The correct answer is 15.6 years.

Q56. Answer: (c) 1.67%

Given:

Defect rate1 = 1.8%

Defect rate2 = 2.4%

Defect rate3 = 1.6%
Total defective units (all 4) = 4.12
Defective units of 4th machine = 0.92
Total production of each machine = same
Formula Used:
Defective units = Production × Defect% ÷ 100
Total defective = Sum of individual defectives
Calculation:
=> Defective units from first three = 4.12 − 0.92
=> Defective units from first three = 3.20
=> Let production of each machine = P
=> P × (1.8 + 2.4 + 1.6) ÷ 100 = 3.20
=> P × 5.8 ÷ 100 = 3.20
=> P = 3.20 × 100 ÷ 5.8
=> P = 320 ÷ 5.8
=> P = 55.1724
=> Defect% of 4th = 0.92 × 100 ÷ 55.1724
=> Defect% of 4th ≈ 1.67%
Therefore The correct answer is approximately 1.67%.

Q57. Answer: (c) 86.4

Shortcut Trick
Sum of averages of pairs containing the target variable (Test 2) minus the average of the pair without it.
Score in Test 2 = (Avg of 1 & 2) + (Avg of 2 & 3) − (Avg of 1 & 3)
Score in Test 2 = 82.6 + 84.2 − 80.4 = 166.8 − 80.4 = 86.4
Therefore The correct answer is 86.4.
Alternate Method
Given:
Average of Test 1 (T1) and Test 2 (T2) = 82.6
Average of Test 2 (T2) and Test 3 (T3) = 84.2
Average of Test 1 (T1) and Test 3 (T3) = 80.4
Formula Used:
Sum = Average × Number of observations
Calculations:
=> T1 + T2 = 82.6 × 2 = 165.2 — (Eq. 1)
=> T2 + T3 = 84.2 × 2 = 168.4 — (Eq. 2)
=> T1 + T3 = 80.4 × 2 = 160.8 — (Eq. 3)
=> Adding all equations: 2(T1 + T2 + T3) = 165.2 + 168.4 + 160.8 = 494.4
=> T1 + T2 + T3 = 494.4 ÷ 2 = 247.2
=> T2 = (T1 + T2 + T3) − (T1 + T3)
=> T2 = 247.2 − 160.8 = 86.4
Therefore The correct answer is 86.4.
Additional Information
Cyclic Average Property
In a system of three variables where averages of pairs (A,B), (B,C), and (C,A) are given as x, y, and z, the individual values are A = x+z−y, B = x+y−z, and C = y+z−x.
Combined Average
The average of all three items together is simply the average of the three pairwise averages: (82.6 + 84.2 + 80.4) ÷ 3 = 82.4.
Weighted Average
If the number of items in each group is different, use the formula: Average_(total) = (n1A1 + n2A2) ÷ (n1 + n2).

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Q58. Answer: (b) Rs. 10000

Given:

A's investment = Rs. 20,000

B's investment = Rs. 30,000

C's investment = Rs. 50,000

Total profit = Rs. 50,000

Formula Used:

Profit share ratio = Investment of A : Investment of B : Investment of C

Individual share of profit = (Individual ratio × Total profit) ÷ Total ratio

Calculation:

=> Profit share ratio = 20,000 : 30,000 : 50,000

=> Profit share ratio = 2 : 3 : 5

=> Total ratio = 2 + 3 + 5 = 10

=> A's share of profit = (2 × 50,000) ÷ 10

=> A's share of profit = 100,000 ÷ 10

=> A's share of profit = Rs. 10,000

Therefore The correct answer is Rs. 10,000.

Q59. Answer: (c) 3.9 cm

Given:

First day height = 1.2 cm

Daily increase = 0.3 cm

Day number = 10

Formula Used:

n^(th) term of AP = a + (n − 1)d

Calculation:

=> a = 1.2

=> d = 0.3

=> n = 10

=> Height on 10th day = 1.2 + (10 − 1) × 0.3

=> Height on 10th day = 1.2 + 9 × 0.3

=> Height on 10th day = 1.2 + 2.7

=> Height on 10th day = 3.9 cm

Therefore The correct answer is 3.9 cm.

Q60. Answer: (c) 17 cm

Given:

Sides = 16, 30, 34

Formula Used:

If $a^2 + b^2 = c^2$, triangle is right angled

Radius of circumcircle of right triangle = Hypotenuse ÷ 2

Calculation:

=> $16^2 + 30^2 = 256 + 900 = 1156$

=> $34^2 = 1156$

=> Triangle is right angled

=> Radius = 34 ÷ 2

=> Radius = 17

Therefore The correct answer is 17 units.

Q61. Answer: (a) Rs. 800

Given:

Amount after 5 years = 180% of Principal

Time1 = 5 years

Principal2 = 2500
Time2 = 2 years
Formula Used:
Amount = Principal × (1 + r × t ÷ 100)
Simple Interest = Principal × r × t ÷ 100
Calculation:
=> 1 + r × 5 ÷ 100 = 180 ÷ 100
=> 1 + 5r ÷ 100 = 1.8
=> 5r ÷ 100 = 0.8
=> 5r = 80
=> r = 16%
=> Interest = 2500 × 16 × 2 ÷ 100
=> Interest = 2500 × 32 ÷ 100
=> Interest = 800
Therefore The correct answer is 800.

Q62. Answer: (a) Rs. 1,44,000

Given:
80% of total money distributed
Ratio = 3 : 5
Rate1 = 9%
Rate2 = 6%
Time = 6 years
Difference in interest = 2592
Formula Used:
Simple Interest = Principal × Rate × Time ÷ 100
Percentage method (Assume total = 100)
Calculation:
=> Let total money = 100
=> Distributed amount = 80
=> Kavya = 3 ÷ 8 × 80 = 30
=> Aryan = 5 ÷ 8 × 80 = 50
=> Interest of Kavya = 30 × 9 × 6 ÷ 100 = 16.2
=> Interest of Aryan = 50 × 6 × 6 ÷ 100 = 18
=> Difference = 18 − 16.2 = 1.8
=> 1.8 corresponds to 2592
=> 100 corresponds to 2592 ÷ 1.8 × 100
=> Total money = 144000
Therefore The correct answer is 144000.

Q63. Answer: (c) 5 meters

Given:
tanθ = 5 ÷ 12
Length of ladder = 13 m
Formula Used:
tanθ = Perpendicular ÷ Base
Hypotenuse² = Perpendicular² + Base²
Calculation:
=> Perpendicular : Base = 5 : 12
=> Hypotenuse = √(5² + 12²)
=> Hypotenuse = √(25 + 144)
=> Hypotenuse = √169 = 13

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=> Scale factor = 13 ÷ 13 = 1
=> Height = 5 × 1 = 5 m
Therefore The correct answer is 5 m.

Q64. Answer: (d) Rs. 2,520

Given:
Principal1 = 6400
Amount1 after 8 years = 8100
Time1 = 8 years
Principal2 = 2240
Time2 = 4 years
Formula Used:
Amount = Principal × $(1 + r)^n$
Calculation:
=> 8100 = 6400 × (1 + r)^8
=> (1 + r)^8 = 8100 ÷ 6400
=> (1 + r)^8 = 81 ÷ 64
=> (1 + r) = (81 ÷ 64)^(1 ÷ 8)
=> 81 = 3^4 and 64 = 2^6
=> (81 ÷ 64)^(1 ÷ 8) = (3^4 ÷ 2^6)^(1 ÷ 8)
=> (1 + r) = 3^(1 ÷ 2) ÷ 2^(3 ÷ 4)
=> (1 + r)^4 = (81 ÷ 64)^(1 ÷ 2)
=> (1 + r)^4 = 9 ÷ 8
=> Required amount = 2240 × 9 ÷ 8
=> Required amount = 2240 × 1.125
=> Required amount = 2520
Therefore The correct answer is 2520.

Q65. Answer: (a) 10, 30

Given:
Ratio of son and mother's age = 1:3
After 5 years, ratio of their age = 3:7
Formula Used:
Present age = Ratio constant × Ratio value
Future age = Present age + 5
Calculation:
Let the present ages of son and mother be 1x and 3x respectively.
After 5 years:
=> (1x + 5) ÷ (3x + 5) = 3 ÷ 7
Cross multiplying:
=> 7(1x + 5) = 3(3x + 5)
=> 7x + 35 = 9x + 15
=> 35 - 15 = 9x - 7x
=> 20 = 2x
=> x = 10
Son's age = 1x = 10
Mother's age = 3x = 30
Therefore The correct answer is 10, 30.

Q66. Answer: (a) 80°

Given:
angle ACB = 75°
Angle between tangent at A and chord AC = 40°

Formula Used:
Angle between tangent and chord = Angle in opposite arc
Angle at center = 2 × Angle at circumference
Calculation:
=> Angle between tangent and chord AC = Angle in opposite arc
=> angle ABC = 40°
=> In triangle ABC:
=> angle BAC = 180° − (75° + 40°)
=> angle BAC = 180° − 115°
=> angle BAC = 65°
=> Minor arc AC subtends angle ABC at circumference
=> angle ABC = 40°
=> Angle at center = 2 × 40°
=> Angle at center = 80°
Therefore The correct answer is 80°.

Q67. Answer: (b) 3.6 hours

Given:
Speed ratio (Car : Bus) = 5 : 3
Distance = 360 km
Time taken by bus = 6 hours
Formula Used:
Speed = Distance ÷ Time
Time = Distance ÷ Speed
Calculation:
=> Speed of bus = 360 ÷ 6
=> Speed of bus = 60 km/hour
=> 3 parts = 60
=> 1 part = 20
=> Speed of car = 5 × 20
=> Speed of car = 100 km/hour
=> Time taken by car = 360 ÷ 100
=> Time taken by car = 3.6 hours
Therefore The correct answer is 3.6 hours.

Q68. Answer: (a) 20:9

Shortcut Trick
Pass % of boys = 100% − 20% = 80%
Pass % of girls = 100% − 40% = 60%
Required Ratio = (5 × 80%) : (3 × 60%)
=> 400 : 180 = 20 : 9
Therefore The correct answer is 20:9.
Alternate Method
Given:
Ratio of Boys : Girls = 5 : 3
Fail % of Boys = 20% | Fail % of Girls = 40%
Calculations:
Let the number of boys be 500 and girls be 300.
=> Number of boys who passed = 80% of 500
=> Passed boys = (80 ÷ 100) × 500 = 400
=> Number of girls who passed = 60% of 300
=> Passed girls = (60 ÷ 100) × 300 = 180

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=> Required Ratio = 400 : 180

=> Divide both by 20: (400 ÷ 20) : (180 ÷ 20) = 20 : 9

Therefore The correct answer is 20:9.

Additional Information

Complementary Percentages

The sum of passing percentage and failing percentage is always 100%. If x% fail, then (100 − x)% pass.

Ratio Scaling Property

Multiplying or dividing both terms of a ratio by the same non-zero constant (e.g., multiplying 5:3 by 100 to get 500:300) does not change the value of the ratio.

Base of Percentage

Always ensure the percentage is applied to the correct base. Here, 20% is of boys (5 units) and 40% is of girls (3 units).

Q69. Answer: (a) 48°

Given:

sec (θ) = csc (42°)

Formula Used:

sec θ = 1/cos θ

csc α = 1/sin α

sin (90° - α) = cos α

Calculation:

=> 1/cos θ = 1/(sin 42°)

=> cos θ = sin 42°

=> sin 42° = cos (90° - 42°)

=> sin 42° = cos 48°

=> cos θ = cos 48°

=> θ = 48°

Therefore The correct answer is θ = 48°.

Q70. Answer: (c) 5

Given:

(√3)^5 × 9^2 = 3^n × 3√3

Formula Used:

√a = a^(1/2)

(a^m)^n = a^(mn)

a^m × a^n = a^(m+n)

Calculation:

=> (√3)^5 × 9^2 = (3^(1/2))^5 × $(3^2)^2$ = 3^(5/2) × 3^4 = 3^(5/2 + 4) = 3^(13/2)

=> 3^n × 3√3 = 3^n × 3 × 3^(1/2) = 3^n × 3^(3/2) = 3^(n + 3/2)

=> 3^(13/2) = 3^(n + 3/2) => 13/2 = n + 3/2 => n = 10/2 = 5

Therefore The correct answer is 5.

Q71. Answer: (d) 6

Given:

y = 3 - √8

Formula Used:

1/(a - b) = (a + b)/(a^2 - b^2)

a^2 - b^2 = (a - b)(a + b)

Calculation:

=> 1/y = 1/(3 - √8) = (3 + √8)/(9 - 8) = 3 + √8

=> y + 1/y = (3 - √8) + (3 + √8) = 6

Therefore The correct answer is 6.

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Q72. Answer: (d) 6 cm

Given:

Area1 = 5 cm²

Area2 = 45 cm²

Side of smaller triangle = 2 cm

Formula Used:

Area2/Area1 = (Side2/Side1)²

Calculation:

=> 45/5 = (Side2/2)²

=> 9 = (Side2/2)²

=> Side2/2 = 3

=> Side2 = 6

Therefore The correct answer is 6 cm.

Q73. Answer: (b) 8:9

Shortcut Trick

Ratio of heights of smaller triangle to larger triangle = 1 : 3.

Ratio of their areas = (1)² : (3)² = 1 : 9.

Area of the trapezoid = Area of larger triangle − Area of smaller triangle = 9 − 1 = 8 units.

Required ratio = Area of trapezoid : Area of larger triangle = 8 : 9.

Therefore The correct answer is 8:9.

Alternate Method

Given:

Height of smaller triangle (h) = 1/3 × Height of larger triangle (H)

=> h/H = 1/3

Formula Used:

For two similar triangles, the ratio of their areas is equal to the square of the ratio of their corresponding heights or sides.

=> Area_(small) / Area_(large) = (h/H)²

Calculations:

=> Area_(small) / Area_(large) = (1/3)²

=> Area_(small) / Area_(large) = 1/9

=> Area_(small) = (1/9) × Area_(large)

=> Area_(trapezoid) = Area_(large) − Area_(small)

=> Area_(trapezoid) = Area_(large) − (1/9) × Area_(large)

=> Area_(trapezoid) = (8/9) × Area_(large)

=> Area_(trapezoid) / Area_(large) = 8/9

Therefore The correct answer is 8:9.

Additional Information

Similarity Property of Areas

If two triangles are similar, the ratio of their areas is equal to the square of the ratio of any two corresponding linear dimensions (sides, medians, altitudes, or perimeters).

Area of a Trapezoid

The area of a trapezoid formed by a parallel cut in a triangle can always be calculated as the difference between the areas of the original triangle and the smaller triangle removed from the top.

Midsegment Theorem Case

If the cut is made at the midpoints (h = 1/2 H), the area of the smaller triangle is 1/4 of the larger, and the trapezoid is 3/4 of the larger triangle area.

Q74. Answer: (b) 25

Given:

x + y = 7

xy = 12

Formula Used:

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

Calculation:

$\Rightarrow (x + y)^2 = 7^2 = 49$

$\Rightarrow x^2 + y^2 + 2xy = 49$

$\Rightarrow x^2 + y^2 + 2(12) = 49$

$\Rightarrow x^2 + y^2 + 24 = 49$

$\Rightarrow x^2 + y^2 = 49 - 24 = 25$

Therefore The correct answer is 25.

Q75. Answer: (a) 48

Given:

$x + y = 12$

$x - y = 4$

Formula Used:

$x^3 + y^3 = (x + y)^3 - 3xy(x + y)$

$xy = ((x + y)^2 - (x - y)^2)/4$

Calculation:

$\Rightarrow xy = (12^2 - 4^2)/4 = (144 - 16)/4 = 128/4 = 32$

$\Rightarrow x^3 + y^3 = 12^3 - 3 \times 32 \times 12 = 1728 - 1152 = 576$

$\Rightarrow (x^3 + y^3)/(x + y) = 576/12 = 48$

Therefore The correct answer is 48.

Q76. Answer: (a) Fundamental Rights

The correct answer is Fundamental Rights.

Key Points

• Fundamental Rights in the Indian Constitution are inspired by the Bill of Rights in the US Constitution. The Indian Constitution guarantees these rights under Part III, ensuring basic freedoms and equality to all citizens.

• The American Bill of Rights, added as the first ten amendments to the US Constitution in 1791, serves as a source of inspiration for ensuring civil liberties such as freedom of speech, religion, and equality before law.

• Indian Fundamental Rights include rights like the Right to Equality (Articles 14-18), Right to Freedom (Articles 19-22), and Right to Constitutional Remedies (Article 32), among others.

• Dr. B.R. Ambedkar, the chief architect of the Indian Constitution, emphasized the importance of Fundamental Rights in ensuring the protection of individual freedoms and societal equality.

• Although inspired by the US Constitution, the Indian Fundamental Rights are adapted to align with the socio-political conditions of India, allowing for reasonable restrictions and aligning with the principle of parliamentary sovereignty.

Additional Information

• Centrifugal form of federalism:

• The concept of a strong central government in India is not borrowed from the US; instead, it is influenced by the Government of India Act, 1935. This system centralizes power, contrary to the US model of federalism, which emphasizes state sovereignty.

• Indian federalism is described as quasi-federal, with a strong unitary bias, especially during emergencies.

• Concept of Concurrent List:

• The concept of the Concurrent List is borrowed from the Australian Constitution, not the US. This list allows both the Centre and states to legislate on subjects of common interest.

• Examples of subjects in the Concurrent List include education, marriage, and bankruptcy.

• Single Citizenship:

• The concept of single citizenship in India is derived from the British Constitution, ensuring that all Indians are citizens of India, irrespective of their state of residence.

• This contrasts with the US, where individuals have dual citizenship—one for their state and one for the federal nation.

• Additional Features Borrowed from the US Constitution:

• The Indian Constitution also draws inspiration from the US Constitution for features like judicial review, the independence of the judiciary, and the impeachment process of the President.

• Other influences include the concept of a written Constitution and the division of powers among the legislature, executive, and judiciary.

Important Points

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• Fundamental Rights:

• Fundamental Rights in India are enforceable by courts. Citizens can approach the Supreme Court under Article 32 or High Courts under Article 226 for their enforcement.

• These rights aim to abolish discrimination, ensure equality, and protect individual liberty.

• Adaptations to Indian Context:

• Unlike the US Bill of Rights, Indian Fundamental Rights include the concept of reasonable restrictions to balance individual liberty with societal interests.

• For example, freedom of speech (Article 19) in India is subject to restrictions based on sovereignty, public order, and morality.

Q77. Answer: (d) Separation of judiciary from executive

The correct answer is Separation of judiciary from executive.

Key Points

• Fundamental Duties are enshrined in Part IV-A of the Indian Constitution under Article 51A.

• They were added by the 42nd Amendment Act of 1976 upon the recommendations of the Swaran Singh Committee.

• The Fundamental Duties include duties such as respecting the Constitution, National Flag, and National Anthem.

• They aim to promote a sense of discipline and commitment among citizens.

• The separation of judiciary from executive is not a Fundamental Duty but a Directive Principle of State Policy (DPSP) under Article 50 of the Indian Constitution.

Additional Information

• Fundamental Duties:

• These duties are non-justiciable, meaning they cannot be enforced by a court of law.

• There are a total of 11 Fundamental Duties listed under Article 51A.

• Some of the important duties include:

• To cherish and follow the noble ideals that inspired the national struggle for freedom.

• To protect and improve the natural environment including forests, lakes, rivers, and wildlife.

• To safeguard public property and abjure violence.

• Directive Principles of State Policy (DPSPs):

• DPSPs are enshrined in Part IV of the Indian Constitution.

• They provide guidelines to the government for establishing social and economic democracy.

• The separation of judiciary from executive under Article 50 ensures the independence of the judiciary for the proper functioning of the legal system.

• Difference Between Fundamental Duties and DPSPs:

• Fundamental Duties apply to citizens, whereas DPSPs are guidelines for the state.

• Duties are non-justiciable and aim at inspiring citizens, whereas DPSPs aim to establish socio-economic justice.

• 42nd Amendment Act (1976):

• Known as the “Mini Constitution” due to the extensive changes made.

• Added Fundamental Duties and introduced the words “Socialist” and “Secular” in the Preamble.

Important Points

• Key Characteristics of Fundamental Duties:

• They serve as moral obligations for citizens.

• They are inspired by the Constitution of the USSR.

• They complement Fundamental Rights by emphasizing responsibilities.

• Article 50:

• Part of the DPSPs, it ensures the independence of the judiciary.

• It mandates that the state shall separate the judiciary from the executive in public services.

Q78. Answer: (a) Azerbaijan

The correct answer is Azerbaijan.

Key Points

• The 16th Islamic Summit of the Organisation of Islamic Cooperation (OIC) is scheduled to be held in 2026.

• The event will take place in Azerbaijan, a country known for its active role in the OIC and its efforts to promote unity among Muslim nations.

• The OIC is the second-largest intergovernmental organization after the United Nations, with a membership of 57 countries,

primarily from the Islamic world.

• This summit provides a platform for collaboration and addressing political, economic, cultural, and social issues affecting member states.

• The previous summit, the 15th Islamic Summit, was held in Saudi Arabia, emphasizing the importance of this periodic gathering.

Additional Information

• Organisation of Islamic Cooperation (OIC):

• The OIC was established in 1969 following the burning of Al-Aqsa Mosque in Jerusalem, with the aim of safeguarding the interests of the Muslim world.

• It has its headquarters in Jeddah, Saudi Arabia.

• The OIC works on promoting international peace and harmony and addressing issues such as the Palestinian cause, Islamophobia, and humanitarian crises.

• Azerbaijan:

• Azerbaijan is a transcontinental country located at the crossroads of Eastern Europe and Western Asia.

• It is a predominantly Muslim country with a rich cultural and historical heritage influenced by both its Islamic and post-Soviet history.

• The country has been an active member of the OIC since 1991, shortly after gaining independence from the Soviet Union.

• Islamic Summits:

• The Islamic Summit is the highest decision-making body of the OIC, bringing together heads of state to discuss pressing issues.

• Past summits have addressed topics such as Islamophobia, regional conflicts, and the advancement of science and technology in OIC member states.

• Other Host Countries:

• Gambia: Though a member of the OIC, it is a smaller nation and has not been chosen as the host for the 16th summit.

• Indonesia: It is the largest Muslim-majority country by population and has played significant roles in the OIC but is not hosting the 2026 summit.

• Morocco: Known for its contributions to the Islamic world, it has hosted previous summits but is not the host for the upcoming one.

Q79. Answer: (b) P V Sindhu

The correct answer is P V Sindhu.

Key Points

• P V Sindhu, a celebrated Indian badminton player, was named the Goodwill Ambassador for Earth Hour India 2024.

• Earth Hour is a global environmental initiative organized by the World Wide Fund for Nature (WWF). It encourages individuals, communities, and businesses to turn off non-essential electric lights for one hour as a symbol of commitment to the planet.

• As the goodwill ambassador, P V Sindhu will raise awareness about the importance of energy conservation, combating climate change, and adopting sustainable practices.

• P V Sindhu's involvement reflects her strong commitment to environmental conservation and serves as an inspiration for millions of her fans to participate in this initiative.

• The Earth Hour campaign for 2024 aims to focus on renewable energy and reducing the carbon footprint, aligning with global efforts to combat climate change.

Additional Information

• P V Sindhu:

• P V Sindhu is an Indian professional badminton player, born on 5 July 1995 in Hyderabad, India.

• She is a recipient of prestigious awards such as the Padma Bhushan, Padma Shri, and Rajiv Gandhi Khel Ratna Award.

• Her landmark achievements include winning a silver medal at the 2016 Rio Olympics and a bronze medal at the 2020 Tokyo Olympics.

• She is known for her dedication, discipline, and the ability to inspire young athletes across the globe.

• Earth Hour:

• Earth Hour was first launched in 2007 by the WWF in Sydney, Australia, and has since grown into a global movement.

• It is observed annually on the last Saturday of March, when participants turn off lights for one hour, from 8:30 PM to 9:30 PM local time.

• The movement aims to spread awareness about environmental challenges such as climate change, deforestation, and energy conservation.

• Earth Hour 2024 will focus on promoting the adoption of renewable energy and reducing greenhouse gas emissions.

• World Wide Fund for Nature (WWF):

• WWF, founded in 1961, is one of the world's leading organizations dedicated to conserving nature and reducing the most pressing threats to biodiversity.

• The organization operates in over 100 countries and has over 5 million supporters worldwide.

• Key WWF initiatives include protecting endangered species, conserving forests, reducing plastic pollution, and addressing climate change.

• Other Notable Goodwill Ambassadors:

• In past years, several influential personalities such as actors, athletes, and environmentalists have served as Earth Hour ambassadors.

• These ambassadors play a crucial role in engaging the public and spreading the message of sustainability and conservation.

Important Points

• India and Earth Hour:

• India has been a strong participant in the Earth Hour movement, with several landmarks such as the India Gate and Gateway of India going dark to support the cause.

• Various schools, colleges, and organizations actively participate to raise awareness about energy conservation.

• Climate Change and Energy Conservation:

• Climate change is one of the most significant challenges of the 21st century, with rising global temperatures and extreme weather events posing threats to ecosystems and communities.

• Energy conservation and the adoption of renewable energy sources are critical steps to mitigate climate change.

Q80. Answer: (a) Medicine

The correct answer is Medicine.

Key Points

• Har Gobind Khorana was awarded the Nobel Prize in Medicine in the year 1968. He shared this prestigious award with Robert W. Holley and Marshall W. Nirenberg.

• The Nobel Prize was awarded to them for their interpretation of the genetic code and its function in protein synthesis. This groundbreaking work provided profound insights into how DNA operates within living organisms.

• Har Gobind Khorana and his colleagues demonstrated how nucleotides in DNA determine the amino acid sequence of proteins, elucidating the essential principles of genetics and molecular biology.

• This research was instrumental in advancing the field of genetic engineering and paved the way for further studies on DNA sequencing and biotechnology.

• Their work also contributed to the understanding of the triplet nature of the genetic code, showing that three nucleotides (codons) specify one amino acid.

Additional Information

• Har Gobind Khorana's Background:

• Har Gobind Khorana was born on January 9, 1922, in Raipur, Punjab (now in Pakistan).

• He pursued his higher education in biochemistry and specialized in the field of genetics and molecular biology.

• Khorana became a naturalized citizen of the United States and conducted much of his Nobel-winning research there.

• Nobel Prize-Winning Research:

• The genetic code research demonstrated that the sequence of nucleotides in DNA determines the sequence of amino acids in proteins.

• The discovery of the triplet code (codons) revealed the mechanism by which DNA instructions are translated into functional proteins.

• Their work also defined the start and stop codons, which play a crucial role in the initiation and termination of protein synthesis.

• Applications of His Work:

• Khorana's research laid the foundation for genetic engineering, which has applications in medicine, agriculture, and biotechnology.

• It has been pivotal in the development of DNA-based diagnostics and therapies for genetic disorders.

• The understanding of protein synthesis has also contributed to advancements in drug development and treatment strategies for diseases like cancer.

• Other Contributions:

• Khorana was one of the first scientists to synthesize oligonucleotides, which are short DNA or RNA molecules. This technology is now widely used in genetic research and medicine.

• His work also contributed to the development of techniques for gene sequencing and editing.

• Khorana's contributions are celebrated globally, and he remains a key figure in the history of molecular biology.

Important Points

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• Nobel Prize in Medicine (Physiology or Medicine):
• This is one of the six Nobel Prizes established by the will of Alfred Nobel in 1895.
• It is awarded annually for outstanding contributions to the field of medical science.
• Notable recipients include Alexander Fleming for the discovery of penicillin and Watson, Crick, and Wilkins for the discovery of the structure of DNA.
• Triplet Genetic Code:
• The genetic code is composed of sequences of three nucleotides, also known as codons.
• Each codon corresponds to a specific amino acid, which is a building block of proteins.
• The discovery of the triplet code was crucial in understanding how genes direct the synthesis of proteins.
• Applications of Genetic Engineering:
• Genetic engineering has revolutionized fields such as agriculture (e.g., genetically modified crops) and medicine (e.g., gene therapy).
• It has also enabled the production of recombinant proteins, such as insulin and vaccines.

Q81. Answer: (c) Kabir Das

The correct answer is Kabir Das.

Key Points

• Bijak is a collection of devotional poems and teachings authored by Kabir Das, a prominent 15th-century Indian mystic and poet.
• The Bijak is considered one of the most important works of Kabir Das and is regarded as a spiritual guide for Kabir Panth, his followers.
• The poems in Bijak are written in a mix of Hindi, Avadhi, Braj, and Bhojpuri, reflecting Kabir's universal message transcending linguistic barriers.
• The teachings in the Bijak focus on the principles of unity, equality, and spirituality, rejecting rituals and promoting devotion to the supreme creator.
• Kabir Das used his poems in Bijak to criticize orthodox religious practices and uphold a philosophy based on simplicity, humanity, and self-realization.

Additional Information

• Kabir Das:
• Kabir Das was born in 1398 and is believed to have lived in Varanasi, Uttar Pradesh.
• Kabir was influenced by both Hinduism and Islam, yet he rejected the rigidity of both religions and emphasized the importance of inner spirituality.
• Kabir's teachings are centered around Bhakti movement ideologies, promoting devotion to the formless divine and rejecting idol worship.
• His followers are known as Kabir Panth, and his verses continue to be popular among devotees of various faiths.
• Other Poets Mentioned:
• Surdas: A prominent Bhakti poet known for his devotional songs dedicated to Lord Krishna. He is associated with the Sur Sagar, a collection of his poems.
• Raskhan: A Muslim poet who was devoted to Krishna. His works include poems that depict Krishna's life and teachings.
• Mirabai: A 16th-century Hindu mystic and poet known for her devotion to Lord Krishna. Her poems are widely read and sung as devotional songs.
• Key Themes of Bijak:
• The Bijak emphasizes the rejection of meaningless rituals and focuses on personal devotion to the divine.
• Kabir's teachings highlight the unity of human beings irrespective of caste, religion, or social status.
• The work promotes moral values, simplicity, and self-realization as paths to spiritual enlightenment.
• It is widely regarded as an essential text for understanding Indian spirituality and the Bhakti movement.
• Historical Significance:
• Kabir Das played a crucial role in bridging the gap between Hinduism and Islam during the 15th century.
• The Bijak remains a vital text for Kabir's followers and serves as a guide for spiritual seekers worldwide.
• His teachings have inspired many reformers and movements, spreading the idea of universal brotherhood.

Q82. Answer: (a) United States of America

The correct answer is United States of America.

Key Points

• Prime Minister Narendra Modi was awarded the Dr. Martin Luther King Jr. Global Peace Award in November 2024 for his

contributions towards minority upliftment and promotion of peace globally.

• The Dr. Martin Luther King Jr. Global Peace Award is a prestigious honor conferred in the United States of America, recognizing leaders who contribute to societal harmony and advocate for the rights of minorities.

• The award acknowledges Modi's efforts in empowering minorities in India through initiatives like educational reforms, economic upliftment programs, and inclusive policies.

• The United States holds a significant position in acknowledging global leaders for their contributions to peace, equality, and human rights, aligning with Dr. Martin Luther King Jr.'s legacy.

• This recognition further strengthens the diplomatic relationship between India and the United States, emphasizing the global impact of Modi's leadership.

Additional Information

• Dr. Martin Luther King Jr.:

• He was a prominent leader of the American civil rights movement and is renowned for advocating non-violent resistance.

• His famous speech, "I Have a Dream," delivered in 1963, is a pivotal moment in American history, emphasizing racial equality and justice.

• The Martin Luther King Jr. Day, observed annually in January in the United States, commemorates his legacy and contributions.

• Minority Upliftment in India:

• Under Modi's leadership, initiatives like Pradhan Mantri Jan Vikas Karyakram (PMJVK) aim to improve infrastructure in minority-concentrated areas.

• Programs like "Seekho aur Kamao" focus on skill development for minority youths.

• The introduction of scholarships such as the Pre-Matric and Post-Matric Scholarships for minorities has significantly enhanced educational opportunities.

• Emphasis on entrepreneurship development through schemes like "Stand-Up India" ensures economic empowerment.

• India-U.S. Relations:

• The relationship between India and the United States has strengthened under Modi's leadership through bilateral trade, defense collaborations, and cultural exchanges.

• Initiatives like India-U.S. Strategic Partnership Forum highlight the shared interests in global peace and development.

• Recognition of Indian leaders like Modi in the U.S. underscores the importance of India's global leadership role.

• Global Peace Awards:

• These awards serve to honor individuals who work towards peacebuilding, human rights, and societal development.

• Such recognition promotes the values of global harmony and reinforces the efforts of leaders in addressing critical issues like inequality, discrimination, and poverty.

• Past recipients include figures like Barack Obama and Malala Yousafzai, who have contributed significantly to global peace and justice.

Important Points

• Dr. Martin Luther King Jr. Global Peace Award:

• Recognizes contributions to peacebuilding and minority upliftment.

• Named after the iconic leader who advocated for non-violent resistance and racial equality.

• Signifies international acknowledgment of leaders promoting human rights and inclusive policies.

• India's Minority Upliftment Efforts:

• Focuses on educational, economic, and social empowerment of minorities.

• Ensures inclusive growth through schemes like "Nai Roshni" and "Ustaad" aimed at skill development and heritage preservation.

• Contributes to reducing inequalities and fostering harmony within the country.

• Global Leadership Recognition:

• Highlights the significance of India's role in promoting peace and development globally.

• Strengthens diplomatic ties and enhances India's global influence.

• Encourages further collaboration on international platforms for addressing global challenges.

Q83. Answer: (a) 2023

The correct answer is 2023.

Key Points

• Purple Fests, also known as the Festival of Inclusion, was first organized in India in 2023. The event is celebrated to promote inclusion, diversity, and equality in society.

• The festival focuses on creating awareness and celebrating the spirit of inclusivity, particularly emphasizing the rights and contributions of Persons with Disabilities (PwDs).

• The inaugural Purple Fest was hosted in Goa, a state known for its vibrant culture and tourism, making it an ideal location to promote inclusivity.

• Organized by the Department of Empowerment of Persons with Disabilities (Divyangjan), the Purple Fest aligns with the government's initiatives to empower marginalized communities.

• The event featured activities such as cultural programs, panel discussions, exhibitions, and workshops to foster understanding, collaboration, and inclusion.

Additional Information

• Purpose of Purple Fest:

• The festival is designed to provide a platform for Persons with Disabilities (PwDs) to showcase their talents and engage in discussions about their rights and opportunities.

• It aims to bridge the gap between disabled and non-disabled communities by promoting mutual understanding and cooperation.

• Key Highlights of the 2023 Purple Fest:

• Interactive sessions on topics related to disability rights, accessibility, and inclusion.

• Exhibitions featuring assistive technologies and innovations designed to enhance the lives of PwDs.

• Cultural performances and showcases by artists with disabilities, emphasizing their creativity and contributions to society.

• Importance of Inclusivity:

• Inclusion ensures that every individual, regardless of their abilities, has equal opportunities to participate in all aspects of life.

• Events like Purple Fest play a crucial role in breaking stereotypes and fostering a more inclusive and empathetic society.

• Government Initiatives for PwDs:

• The Rights of Persons with Disabilities Act, 2016 provides a legal framework to ensure equality and dignity for PwDs in India.

• Other initiatives include the Accessible India Campaign, which focuses on enhancing accessibility in public spaces and transportation.

Important Points

• Venue of the First Purple Fest: Goa, a state with a robust infrastructure and tourist-friendly environment, was chosen to host the inaugural event.

• Global Influence: The Purple Fest aligns with global efforts to promote inclusivity, such as the United Nations' Convention on the Rights of Persons with Disabilities (CRPD).

• Annual Event: Following its successful launch in 2023, the Purple Fest is expected to become an annual celebration to continue promoting inclusivity and awareness.

Q84. Answer: (a) Crouch Start

The correct answer is Crouch Start.

Key Points

• Crouch Start is a fundamental technique used in sprint races, especially in track and field events. It is designed to maximize acceleration at the beginning of the race.

• In the crouch start position, the sprinter's body is bent forward with knees and hands on the ground, ensuring a stable posture to push off quickly and efficiently.

• The crouch start consists of three primary positions: "On your marks," "Set," and "Go." These commands ensure readiness and proper alignment before the race begins.

• This type of start is essential for short-distance sprint races like the 100m, 200m, and 400m where initial speed is crucial.

• The crouch start allows athletes to utilize their explosive power effectively, minimizing reaction time and maximizing propulsion during the first few meters of the race.

Additional Information

• Standing Start:

• Used in longer races and casual runs, the standing start involves the athlete starting from an upright position.

• This start is not suitable for short sprints as it reduces the efficiency of initial acceleration.

• It is commonly used in middle-distance and long-distance races.

• Jumping Start:

• The jumping start is not a recognized technique in professional sprinting.

• It involves launching forward without proper grounding or stability, leading to inefficiency and slower starts.

• This type of start may be seen in informal races or playful scenarios.

• Vertical Start:

• The vertical start involves standing upright and starting without crouching, similar to the standing start.

• It does not provide the explosive advantage needed for sprint races.

• This start is often used in recreational or non-competitive settings.
• Importance of Crouch Start:
• The crouch start was standardized in professional sports to ensure fairness and optimal performance in sprint races.
• Athletes undergo rigorous training to perfect this technique, as it significantly impacts their race outcomes.
• Starting blocks are often used to enhance stability and provide better grip during the crouch start.

Important Points

• Historical Context:
• The crouch start was introduced as a standardized method in sprinting events in the late 19th century.
• It has been refined over time with the introduction of starting blocks in the 1930s.
• These advancements have allowed athletes to achieve faster start times and break records consistently.
• Physiological Benefits:
• The crouch start engages major muscle groups such as quadriceps, hamstrings, and calves, enabling explosive power.
• It minimizes air resistance and optimizes body posture for rapid acceleration.
• Proper technique is crucial to avoiding injuries and maximizing performance.

Q85. Answer: (a) Rajasthan

The correct answer is Rajasthan.

Key Points

• Ramgarh Vishdhari Tiger Reserve is located in the state of Rajasthan, India.
• It was notified as the 52nd Tiger Reserve of India in May 2022 under the Project Tiger, a conservation program initiated in 1973 to protect tigers and their habitats.
• The reserve is situated in the Bundi district of Rajasthan and serves as a critical corridor between the Ranthambore Tiger Reserve in the northeast and the Mukundra Hills Tiger Reserve in the south.
• It spans an area of approximately 1,501.89 square kilometers, which includes a buffer zone and a core zone rich in biodiversity.
• The reserve is home to a variety of wildlife, including tigers, leopards, Indian wolves, striped hyenas, and sloth bears, along with numerous species of birds and reptiles.

Additional Information

• Project Tiger:
• Project Tiger was launched in 1973 by the Government of India to ensure a viable population of Bengal tigers in their natural habitats and to protect them from extinction.
• It is administered by the National Tiger Conservation Authority (NTCA).
• As of October 2023, India has 54 tiger reserves distributed across various states.
• Rajasthan and Tiger Conservation:
• Rajasthan is home to three tiger reserves: Ranthambore Tiger Reserve, Sariska Tiger Reserve, and the newly added Ramgarh Vishdhari Tiger Reserve.
• These reserves contribute significantly to the conservation of tigers and other wildlife species in the arid and semi-arid regions of the state.
• Biodiversity in Ramgarh Vishdhari:
• The reserve is characterized by its dry deciduous forest and rocky terrain, which provide an ideal habitat for tigers and other wildlife.
• It also has rich flora and fauna, including species like khair, salar, dhok, and cheela.
• The reserve serves as a critical habitat corridor for tigers migrating from neighboring reserves.
• Challenges in Conservation:
• Despite efforts under Project Tiger, challenges such as habitat fragmentation, human-wildlife conflict, and poaching persist in tiger conservation.
• Effective measures, including community participation, eco-development programs, and anti-poaching patrols, are essential for the long-term sustainability of tiger reserves.

Important Points

• Tiger Population in India:
• India is home to approximately 70% of the global tiger population, according to the 2018 Tiger Census.
• The All-India Tiger Estimation Report 2018 recorded a population of 2,967 tigers, showcasing a significant increase in tiger numbers since 2006.
• Significance of Tiger Reserves:
• Tiger reserves not only protect tigers but also serve as conservation hubs for other wildlife species and promote ecotourism.

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• They play a crucial role in maintaining the ecological balance and supporting the livelihoods of local communities through sustainable tourism practices.

• Role of NTCA:

• The National Tiger Conservation Authority (NTCA) was established in 2005 under the Wildlife Protection Act of 1972 to strengthen tiger conservation initiatives.

• It provides technical and financial support to tiger reserves and oversees the implementation of policies and programs related to tiger conservation.

Q86. Answer: (c) Satkosia National Park

The correct answer is Satkosia National Park.

Key Points

• Satkosia National Park was declared as the 107th National Park of India, located in Odisha. It is known for its unique biodiversity and natural beauty.

• The park is situated across the districts of Angul, Nayagarh, Boudh, and Cuttack and covers an area of approximately 963.87 square kilometers.

• Satkosia is renowned for its Satkosia Gorge, formed by the Mahanadi River as it cuts through the Eastern Ghats, creating a stunning landscape.

• The park is home to numerous species, including the endangered Gharial crocodile, as well as diverse flora and fauna, making it a significant conservation site.

• Satkosia National Park serves as a critical habitat for species such as tigers, leopards, elephants, and various bird species. It is also a popular ecotourism destination.

Additional Information

• Simlipal National Park:

• Located in Mayurbhanj district, Odisha, Simlipal is a UNESCO World Heritage Site. It covers an area of approximately 2,750 square kilometers.

• The park is known for its Bengal Tigers, Asian elephants, and other wildlife species. It also houses beautiful waterfalls like Barehipani and Joranda.

• Bhitarkanika National Park:

• Located in Kendrapara district, Odisha, Bhitarkanika is famous for its mangrove forests and saltwater crocodiles.

• The park is a Ramsar site and covers an area of approximately 672 square kilometers.

• It is home to diverse wildlife, including migratory birds, monitor lizards, and turtles.

• Nandankanan National Park:

• Located near Bhubaneswar, Odisha, Nandankanan is a zoological park rather than a protected national park.

• It is famous for its white tigers and serves as a major tourist attraction with a wide range of exotic animals.

• Nandankanan also has the distinction of being the first zoo to join the World Association of Zoos and Aquariums (WAZA).

• Protected Areas of India:

• India has a total of 107 National Parks and over 500 Wildlife Sanctuaries, forming a significant part of its ecological conservation efforts.

• National parks are governed by the Wildlife Protection Act of 1972, ensuring strict conservation measures.

• These areas aim to protect endangered species, biodiversity, and ecosystems unique to the region.

Important Points

• The declaration of Satkosia National Park as the 107th National Park of India highlights the government’s focus on conserving biodiversity and promoting ecotourism.

• While Simlipal and Bhitarkanika are already established national parks, they cater to specific ecological niches such as mangroves and tiger reserves.

• Protected areas like Satkosia help in safeguarding endangered species such as the Gharial crocodile and preserving the natural beauty of Odisha’s landscapes.

• India’s growing network of protected areas underscores its commitment to global conservation goals like the Aichi Targets and the Convention on Biological Diversity (CBD).

Q87. Answer: (a) New Delhi

The correct answer is New Delhi.

Key Points

• The 47th HFI Junior Boy's National Handball Championship is a prestigious national-level event organized by the Handball Federation of India (HFI).

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• This championship serves as a platform to showcase the young handball talent across various states in India.

• The event will be held in New Delhi, which is known for hosting several high-profile sporting events due to its well-equipped sports infrastructure.

• New Delhi, the capital city of India, is a hub for national sports competitions and has facilities like the Jawaharlal Nehru Stadium and other sports complexes suitable for such tournaments.

• The championship aims to promote handball as a sport among the youth and identify promising players for future national and international representation.

Additional Information

• Handball Federation of India (HFI):

• HFI is the governing body for handball in India, responsible for organizing national and regional handball tournaments.

• It is affiliated with the International Handball Federation (IHF) and works to promote the sport across the country.

• New Delhi as a Sports Venue:

• The city is equipped with state-of-the-art sports facilities such as Indira Gandhi Indoor Stadium, Talkatora Indoor Stadium, and others.

• New Delhi has hosted various international events like the 2010 Commonwealth Games, making it an ideal choice for national championships.

• Importance of Junior Championships:

• Junior tournaments like the HFI Junior Boy's National Championship are vital for nurturing young talent and encouraging participation in sports.

• They provide an opportunity for players to gain experience, enhance their skills, and prepare for higher levels of competition.

• Handball in India:

• Handball is gaining popularity in India, especially among youth, due to its fast-paced nature and team dynamics.

• Efforts are being made by organizations like HFI to increase awareness and participation in handball at the grassroots level.

Important Points

• Eligibility Criteria:

• The championship is open to junior boys under the age category specified by HFI.

• Teams from various states and union territories participate, showcasing regional talent.

• Role of Sports in Youth Development:

• Sports like handball play a significant role in building teamwork, discipline, and leadership skills among youth.

• Such tournaments encourage physical fitness and provide a platform for players to excel in their sports careers.

• Significance of Hosting National Championships:

• Hosting events like the HFI Junior Boy's National Championship boosts the local economy and promotes sports culture.

• It provides exposure to players and strengthens the country's sports infrastructure.

Q88. Answer: (d) 78

The correct answer is 78.

Key Points

• The Senior National Football Championship for Santosh Trophy is one of India's premier football tournaments, organized under the aegis of the All India Football Federation (AIFF).

• The 78th edition of the championship commenced in December 2024, showcasing top talent from across Indian states and union territories.

• The tournament is renowned for promoting grassroots football and providing a platform for talented players to demonstrate their skills at a national level.

• The championship has a rich history, with its inception dating back to 1941, making it one of the oldest football tournaments in India.

• The Santosh Trophy is contested by regional teams, representing different states and governmental institutions, fostering a sense of regional pride and competition.

Additional Information

• All India Football Federation (AIFF):

• The AIFF, established in 1937, is the governing body for football in India, responsible for organizing national-level tournaments including the Santosh Trophy.

• It aims to promote and regulate football across the country, ensuring the sport's growth and development.

• The AIFF is affiliated with the Asian Football Confederation (AFC) and the FIFA, enabling Indian teams to participate in international competitions.

• History of Santosh Trophy:

• The trophy was instituted in 1941 and named after Maharaja Sir Manmatha Nath Roy Chowdhary of Santosh, a region in present-day Bangladesh.

• Initially, the tournament was the premier football competition in India, attracting the best players from across the nation.

• Over the years, its significance has evolved, serving as a platform for nurturing young talent.

• Format of the Tournament:

• The championship is divided into qualifying rounds followed by the final round, where teams compete in a league-cum-knockout format.

• Teams represent states, union territories, and government institutions, such as Railways and Services.

• The final round of the 78th edition in December 2024 is expected to witness fierce competition among the top qualifying teams.

• Legacy and Importance:

• The Santosh Trophy has historically been a stepping stone for many players who later represented India at the international level.

• It plays a pivotal role in promoting football in less-represented regions and encouraging young players to pursue the sport professionally.

• Despite facing competition from professional leagues like the Indian Super League (ISL), the Santosh Trophy remains a cherished tournament for showcasing regional pride and footballing talent.

Important Points

• Challenges Faced:

• The Santosh Trophy has struggled to maintain its popularity amidst the rise of professional leagues like the ISL and I-League.

• Efforts are being made to revitalize the tournament by ensuring better coverage, infrastructure, and incentives for participating teams.

• Future Prospects:

• The AIFF aims to integrate the Santosh Trophy with India's broader football development agenda, ensuring its relevance in the modern footballing ecosystem.

• Plans to improve the tournament's visibility and attract sponsorships are underway to preserve its legacy and promote grassroots football.

Q89. Answer: (a) Hyderabad

The correct answer is Hyderabad.

Key Points

• The 78th Senior National Football Championship for Santosh Trophy final round was conducted in Hyderabad, Telangana, showcasing the nation’s top football talent.

• The championship is one of the most prestigious football tournaments in India, established in 1941, and is named after the late Maharaja of Santosh.

• In the 78th edition, football teams from various states and Union Territories competed fiercely to win the coveted trophy.

• Hyderabad was selected due to its modern football facilities and infrastructure, making it an ideal venue for hosting national-level tournaments.

• This edition witnessed a massive turnout of football enthusiasts, reflecting the growing popularity of football in India.

Additional Information

• About Santosh Trophy:

• The tournament was introduced in 1941, aimed at promoting football across the states of India.

• It is organized annually by the All India Football Federation (AIFF).

• The Santosh Trophy serves as a platform for budding footballers to showcase their skills and secure opportunities at higher levels.

• Hyderabad's Football Legacy:

• Hyderabad has a rich history in football, producing legendary players like Syed Abdul Rahim, who is considered the architect of Indian football.

• The city boasts modern football stadiums, including the Gachibowli Stadium, which often hosts national and international events.

• Other Cities Mentioned:

• Surat: Known for its textile industry rather than football, Surat rarely hosts major football tournaments.

• Mumbai: Mumbai has a vibrant sports culture but was not chosen for the 78th Santosh Trophy due to logistical and scheduling constraints.

• Kolkata: A football hub in India, but the 78th Santosh Trophy was held in Hyderabad to diversify tournament venues.

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• Significance of Santosh Trophy:

• The tournament acts as a stepping stone for players aspiring to play in the Indian Super League (ISL) and other professional leagues.

• It fosters grassroots development and encourages state-level participation in football.

• The Santosh Trophy has helped many players emerge as national stars in Indian football history.

Important Points

• All India Football Federation (AIFF):

• The AIFF governs football in India and is affiliated with FIFA and the Asian Football Confederation (AFC).

• It organizes major tournaments like the Indian Super League (ISL), I-League, and Santosh Trophy.

• Football Infrastructure in India:

• India has been improving its football infrastructure, with cities like Hyderabad, Kolkata, and Goa leading the development.

• Efforts are being made to enhance grassroots programs to identify and nurture young talent.

• Growth of Football in India:

• Football has seen significant growth due to leagues like the Indian Super League (ISL) and international exposure.

• Efforts by organizations like AIFF and private entities are contributing to the sport's popularity.

• Historical Winners:

• States like West Bengal and Karnataka have a strong record of winning the Santosh Trophy multiple times.

• Each edition sees fierce competition among states, making it one of the most anticipated football events in India.

Q90. Answer: (c) Shashi Tharoor

The correct answer is Shashi Tharoor.

Key Points

• 'Show Business' is a novel written by Shashi Tharoor, an Indian politician, diplomat, and author.

• The book is a satirical and parodic take on Bollywood and examines the formulaic nature of the Indian film industry.

• It revolves around the life of a Bollywood actor and explores themes such as ambition, fame, and the moral dilemmas faced in the entertainment industry.

• Shashi Tharoor employs a unique narrative style, combining humor, sharp wit, and cultural references to highlight societal issues.

• The novel was first published in 1992, and it remains one of Tharoor's most celebrated works in the field of fiction.

Additional Information

• About Shashi Tharoor:

• Shashi Tharoor is an acclaimed Indian author, diplomat, and politician, known for his eloquence and literary contributions.

• He served as the Under-Secretary-General of the United Nations and has been a Member of Parliament for Thiruvananthapuram since 2009.

• Some of his other notable works include 'The Great Indian Novel', 'Inglorious Empire', and 'Why I Am a Hindu'.

• Bollywood Satire in 'Show Business':

• The novel provides a critique of the superficiality and commercialism of Bollywood cinema.

• It portrays the struggles of an actor caught between personal values and professional demands.

• The book uses parody and exaggeration to shed light on the societal impact of cinema in India.

• Other Notable Authors from the Options:

• Arundhati Roy: Known for her Booker Prize-winning novel 'The God of Small Things'.

• Salman Rushdie: Famous for his controversial work 'The Satanic Verses' and the Booker-winning 'Midnight's Children'.

• Khushwant Singh: Renowned for his works such as 'Train to Pakistan', which depict India's history and partition.

• Bollywood's Cultural Significance:

• Bollywood, the Indian film industry, is the largest in the world in terms of the number of films produced annually.

• It plays a crucial role in shaping cultural narratives and influencing public opinion in India.

• The industry has often been criticized for its formulaic approach, which 'Show Business' effectively satirizes.

Important Points

• Unique Style of 'Show Business':

• The book is written in a non-linear format, incorporating dialogues, screenplay-like sequences, and monologues.

• It provides an insider's view of Bollywood, highlighting the ethical dilemmas faced by actors and filmmakers.

• Significance of Satire in Literature:

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• Satire is a literary device used to criticize societal flaws through humor, irony, and exaggeration.

• Books like 'Show Business' use satire to provoke thought and initiate conversations about pressing cultural and social issues.

• Bollywood's Influence on Society:

• Bollywood films often reflect and shape societal trends, values, and beliefs in India.

• As a major source of entertainment, it significantly impacts public opinion and cultural identity.

Q91. Answer: (c) Both I and II

The correct answer is Both I and II.

Key Points

• The motion of planets around the Sun: The Universal Law of Gravitation, formulated by Isaac Newton, explains the gravitational force that governs the motion of celestial objects. This force is responsible for keeping planets in their elliptical orbits around the Sun. It provides the centripetal force required to counterbalance the centrifugal force of their motion. Hence, statement I is correct.

• The tides due to the Moon and the Sun: Gravitational force between the Earth and the Moon is the primary reason for the occurrence of tides on Earth. The Sun's gravitational influence also contributes to tidal effects, particularly during full moon and new moon phases when the Sun, Moon, and Earth align (spring tides). Hence, statement II is correct.

• The Universal Law of Gravitation plays a pivotal role in explaining natural phenomena, such as the Earth's rotation, revolution, and its interaction with other celestial bodies.

• Both statements I and II highlight the importance of the Universal Law of Gravitation in understanding and predicting key natural and celestial phenomena.

• Hence, the correct answer is Both I and II.

Additional Information

• Universal Law of Gravitation: This law states that every object in the universe attracts every other object with a force that is directly proportional to the product of their masses and inversely proportional to the square of the distance between them. Mathematically, F = G (m1m2/r²), where G is the gravitational constant.

• Gravitational Constant (G): The value of G is approximately 6.674 × 10^-¹¹ Nm²/kg². It is a universal constant, meaning it is the same throughout the universe.

• Importance of Gravitation in Astronomy: The Universal Law of Gravitation is fundamental in understanding the motion of stars, planets, and satellites. It helps explain phenomena such as planetary orbits, the formation of galaxies, and the behavior of objects in space.

• Tides and Their Types: Tides are caused by the gravitational pull of the Moon and the Sun. Spring tides occur during full or new moon phases, while neap tides occur when the Sun and Moon form a right angle with Earth, reducing the tidal range.

• Applications of Gravitation: Gravitation plays a crucial role in areas such as satellite technology, space exploration, oceanography, and geophysics. For example, geostationary satellites rely on gravitational forces to maintain their position relative to Earth.

Important Points

• Newton's Contributions: Isaac Newton, one of the most influential scientists in history, formulated the Universal Law of Gravitation in 1687, which was published in his work Philosophiæ Naturalis Principia Mathematica.

• The Role of Gravitation in Weather: Gravitational forces influence ocean currents and global weather patterns, making them critical for understanding Earth's climate system.

• Kepler's Laws and Gravitation: Johannes Kepler's laws of planetary motion were later explained and validated using Newton's Universal Law of Gravitation.

• Space Exploration: The Universal Law of Gravitation is fundamental for calculating trajectories of rockets and satellites, ensuring successful missions like moon landings and interplanetary exploration.

• Scientific Validation: The Universal Law of Gravitation has been verified through numerous experiments and observations, such as the motion of celestial bodies, tides, and artificial satellites.

Q92. Answer: (a) It sublimates directly into a gas.

The correct answer is It sublimates directly into a gas..

Key Points

• Dry ice, or solid carbon dioxide, does not exist in a liquid state under normal atmospheric pressure (1 atmosphere). Instead, it directly transitions from a solid to a gaseous state, a process called sublimation.

• This occurs because the triple point of carbon dioxide, where solid, liquid, and gas phases coexist, is at a pressure of 5.1 atmospheres. At pressures below this, liquid carbon dioxide cannot form.

• When the pressure around dry ice is reduced to 1 atmosphere, the temperature of dry ice (-78.5°C) causes it to bypass the liquid phase and convert directly into carbon dioxide gas. Hence, the statement is correct.

• Sublimation is a characteristic property of substances like dry ice, which have low boiling points and exist as solids at very low

temperatures.

• Dry ice is widely used in applications such as food preservation, special effects in entertainment, and scientific experiments, where its ability to sublimate is advantageous.

Additional Information

• Sublimation Process:

• Sublimation is the transition of a substance directly from the solid phase to the gas phase without passing through the liquid phase.

• It occurs in substances like dry ice and iodine, which have specific phase diagrams with low triple points.

• Applications include freeze-drying processes, cleaning delicate surfaces, and creating fog effects in entertainment.

• Triple Point:

• The triple point of a substance is the unique temperature and pressure at which solid, liquid, and gas phases coexist in equilibrium.

• For carbon dioxide, the triple point is at a pressure of 5.1 atmospheres and a temperature of -56.6°C.

• Below this pressure, carbon dioxide can only exist as a solid or gas, not as a liquid.

• Uses of Dry Ice:

• Dry ice is extensively used for transporting perishable goods, such as vaccines and food, due to its cooling properties.

• It is also used in industrial cleaning, where the sublimation property helps remove contaminants without leaving residue.

• In the entertainment industry, dry ice is used for creating fog effects in stage performances and movies.

• Scientific applications include experiments requiring low temperatures or controlled atmospheres.

• Safety Precautions:

• Handling dry ice requires caution as its temperature (-78.5°C) can cause frostbite on skin contact.

• It should be stored in well-ventilated areas to prevent the accumulation of carbon dioxide gas, which can lead to suffocation.

• Protective gloves and goggles are recommended when working with dry ice.

Important Points

• Comparison with Water Ice:

• Unlike water ice, which melts into liquid under normal atmospheric pressure, dry ice sublimates directly into gas.

• This behavior is due to the phase diagram of carbon dioxide and its low triple point.

• Environmental Impact:

• Dry ice is environmentally friendly as it sublimates into carbon dioxide gas, which is already present in the atmosphere.

• However, excessive use may contribute to increasing greenhouse gas concentrations.

Q93. Answer: (c) Both I and II

The correct answer is Both I and II.

Key Points

• Statement I: Subsidies are an important policy instrument which aim at increasing welfare.

• Subsidies are financial assistance provided by the government to individuals, businesses, or sectors to lower the cost of goods or services and promote welfare.

• Subsidies are intended to address social inequalities by supporting lower-income groups and ensuring access to essential services such as health, education, and food security.

• Examples include subsidies for agricultural fertilizers, healthcare schemes, and education initiatives aimed at uplifting marginalized sections of society.

• This statement is correct as subsidies play a crucial role in enhancing social welfare and economic inclusivity.

• Statement II: Defence expenditure is committed expenditure in the sense that given the national security concerns, there exists little scope for drastic reduction.

• Defence expenditure forms a significant part of the government budget due to national security priorities.

• Such spending is categorized as committed expenditure, meaning it is obligatory and cannot be drastically reduced owing to strategic and geopolitical considerations.

• India allocates substantial resources to defence, ranking among the top global spenders in this sector to ensure readiness against external threats and internal security challenges.

• This statement is correct as defence spending is integral to maintaining sovereignty and territorial integrity.

• Both statements I and II are correct, making the correct answer option 3.

Additional Information

• Government Budget:

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• The government budget is a financial statement outlining revenue generation and expenditure allocation for a fiscal year.

• It serves as a policy tool for implementing economic strategies, addressing socio-economic challenges, and promoting equitable growth.

• Components include capital expenditure, revenue expenditure, taxes, subsidies, and allocation for welfare programs.

• Subsidies:

• Subsidies help reduce the cost burden on essential goods and services for vulnerable sections of the population.

• Examples include food subsidies through the Public Distribution System (PDS) and educational scholarships for marginalized communities.

• Subsidy allocation is determined based on socio-economic priorities and is subject to annual revisions.

• Defence Expenditure:

• India's defence budget for 2023-24 was approximately Rs. 5.93 lakh crore, highlighting its importance in national security.

• Spending covers areas such as personnel salaries, equipment procurement, infrastructure development, and research.

• India is among the top global spenders on defence, given its strategic location and geopolitical challenges.

• Importance of Budget Allocation:

• It ensures the effective utilization of resources to achieve developmental goals and maintain economic stability.

• Allocation priorities reflect government policies, addressing areas like poverty alleviation, healthcare, education, and infrastructure.

Important Points

• Subsidy Management:

• Subsidies should be implemented efficiently to prevent misuse and ensure targeted benefits for the intended beneficiaries.

• Periodic audits and monitoring mechanisms are essential to maintain transparency in subsidy distribution.

• Defence Spending Trends:

• India's defence spending has been steadily rising due to advancements in technology and increasing security concerns.

• Collaborations with international defence organizations and private companies enhance capabilities and reduce dependence on imports.

• Budget Reforms:

• Reforms like digitization of transactions and direct benefit transfers (DBT) have improved the efficiency of subsidy and budget implementation.

• Innovative approaches, such as outcome-based budgeting, ensure greater accountability and effective resource utilization.

Q94. Answer: (b) Awadh

The correct answer is Awadh.

Key Points

• Shujauddaulah was the Nawab of Awadh, a region located in present-day Uttar Pradesh, India.

• He served as the Nawab from 1754 to 1775, during the late Mughal period in Indian history.

• Shujauddaulah is notably remembered for his involvement in the Battle of Buxar (1764), which was fought between the forces of the East India Company and the combined armies of Shujauddaulah, Mir Qasim (Nawab of Bengal), and Shah Alam II (Mughal emperor).

• The defeat of Shujauddaulah and his allies in the Battle of Buxar marked a significant step in the consolidation of British power in India.

• Awadh, under Shujauddaulah, was a prosperous region known for its contributions to Indian culture, including architecture, music, and cuisine.

Additional Information

• Awadh:

• Awadh was historically known as the kingdom of Oudh and was an important political and cultural center in northern India.

• The region included cities like Lucknow, which later became its capital and a hub for literature, arts, and architecture.

• Awadh's cultural legacy includes contributions to Urdu poetry, Kathak dance, Mughal cuisine (including biryani and kebabs), and traditional clothing like chikankari embroidery.

• Battle of Buxar:

• The Battle of Buxar was fought on 23 October 1764 and was a pivotal event in Indian history.

• The East India Company, led by Hector Munro, defeated the combined forces of Shujauddaulah, Mir Qasim, and Shah Alam II.

• This victory strengthened British control over Bengal, Bihar, and Odisha and enabled them to acquire Diwani rights (revenue collection) through the Treaty of Allahabad in 1765.

• Other Regions:

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• Amber: Amber was a region in Rajasthan ruled by the Kachhwaha dynasty. It was known for the Amber Fort, a UNESCO World Heritage Site.

• Mysore: Mysore was a kingdom in southern India ruled by the Wodeyar dynasty and later by Hyder Ali and Tipu Sultan. Tipu Sultan is famously known as the ."

• Hyderabad: Hyderabad was founded by the Qutb Shahi dynasty and later ruled by the Asaf Jahi dynasty (Nizams). It was an influential region known for its rich heritage, including Golconda Fort, pearls, and biryani.

Important Points

• Shujauddaulah:

• Shujauddaulah aligned with Mir Qasim and Shah Alam II due to shared interests in resisting British dominance.

• After the Battle of Buxar, he signed the Treaty of Allahabad, which made Awadh a dependent state under British influence.

• The Nawab was allowed to retain his throne, but the region's sovereignty was significantly diminished.

• Awadh later became a center of anti-British resistance during the 1857 Revolt, with figures like Begum Hazrat Mahal playing a pivotal role.

• British Expansion:

• The defeat at Buxar was a turning point for Indian rulers as it marked the decline of Mughal authority and regional powers.

• The East India Company consolidated its position as the dominant force in India after obtaining the Diwani rights.

• This marked the beginning of the British colonial economy, which relied heavily on revenue collection from Indian territories.

Q95. Answer: (b) Only II

The correct answer is Only II.

Key Points

• Eligibility to Contest for the President of India:

• As per Article 58 of the Constitution of India, the individual must be a citizen of India.

• The individual must have completed the age of 35 years.

• The candidate must be qualified for election as a member of the House of the People (Lok Sabha). Hence, statement II is correct.

• Office of Profit:

• To contest the election for the President of India, the individual must not hold any office of profit under the Government of India, any state government, or any local authority.

• Holding an office of profit disqualifies a candidate from contesting the Presidential election as per constitutional provisions. Hence, statement I is incorrect.

• The President of India is elected by an electoral college composed of elected members of both houses of Parliament and elected members of the Legislative Assemblies of States and Union territories.

• The election is conducted using a system of proportional representation by means of a single transferable vote.

• Hence, the correct answer is Only II.

Additional Information

• Article 58 of the Constitution:

• Article 58 lays down the eligibility criteria to contest the election for the President of India.

• The candidate must not hold any office of profit under the Government of India, state government, or any subordinate authority.

• He/she must fulfill qualifications for election as a member of the Lok Sabha, which includes citizenship of India, minimum age of 25 years, and adherence to other disqualification clauses.

• Election Process of President:

• The election is conducted by the Election Commission of India.

• It involves an electoral college comprising elected representatives from Parliament and Legislative Assemblies.

• The election follows the single transferable vote system to ensure proportional representation.

• Office of Profit:

• The term "office of profit" refers to a position that brings financial gain or remuneration to the holder.

• It is a disqualification criterion for contesting certain elections, including that of the President, as per constitutional provisions.

• Important Presidential Eligibility Criteria:

• He/she must not be a member of Parliament or State Legislature.

• He/she must not have any financial interest in government contracts or works.

• He/she must not hold any office of profit under the Government of India or state governments.

Important Points

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• Electoral College:
• Includes elected members of the Lok Sabha, Rajya Sabha, and Legislative Assemblies of States and Union Territories.
• Nominated members are excluded from the electoral process.
• Votes are weighted based on the population of the states represented.
• Single Transferable Vote System:
• Allows voters to rank candidates in order of preference.
• Ensures proportional representation in the election of the President.
• Votes are transferred to the next preference if the first preference candidate is eliminated.
• Role of Election Commission:
• Conducts and supervises the Presidential election process.
• Ensures transparency and adherence to constitutional provisions.
• Disqualification Criteria:
• Holding an office of profit under the government.
• Being an undischarged insolvent.
• Non-compliance with eligibility criteria mentioned under Article 58.

Q96. Answer: (c) six

The correct answer is six.

Key Points

• According to Article 85(1) of the Indian Constitution, the President has the power to summon each House of Parliament to meet at such time and place as he thinks fit. However, the gap between two sessions of Parliament should not exceed six months.
• This provision ensures that Parliament meets regularly and there are no prolonged gaps between sessions, allowing for continuous legislative and executive oversight.
• The Constitutional mandate to maintain a maximum interval of six months between two sessions of Parliament is intended to uphold the democratic process and accountability of the government.
• The three sessions of Parliament traditionally held each year are: the Budget Session (February-May), Monsoon Session (July-September), and Winter Session (November-December).
• If more than six months elapse between the last sitting of one session and the first sitting of the next, it would violate the constitutional provisions and require the intervention of the judiciary or other constitutional mechanisms.

Additional Information

• Article 85 of the Indian Constitution:
• This article deals with the sessions of Parliament, prorogation, and dissolution. It mandates that the President shall summon each House of Parliament at such intervals that the gap between two sessions does not exceed six months.
• This ensures that Parliament convenes at least twice a year.
• Purpose of the Six-Month Rule:
• The six-month rule ensures that the legislative arm of the government remains active and functional, preventing prolonged inactivity.
• It provides an opportunity for Members of Parliament to question the government, discuss issues of national importance, and pass legislation.
• Sessions of Parliament:
• The Indian Parliament typically conducts three sessions in a year:
• Budget Session: Held between February and May for discussing and passing the Union Budget.
• Monsoon Session: Held between July and September, focusing on various legislative matters.
• Winter Session: Held between November and December for other legislative and policy-related discussions.
• Judicial Interpretation:
• The judiciary has emphasized the importance of the six-month rule in ensuring the accountability of the executive to the legislature, as enshrined in the principle of parliamentary democracy.
• In case of a violation, this would lead to a legal and constitutional crisis.

Important Points

• Historical Context:
• The six-month rule reflects the practices followed in parliamentary democracies worldwide, ensuring regular legislative sessions.
• This provision was adopted to avoid the misuse of executive power by bypassing the legislature.
• Role of the President:

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• The President's power to summon, prorogue, or dissolve Parliament is exercised on the advice of the Council of Ministers headed by the Prime Minister.

• This ensures that the executive remains accountable to the legislature.

• Exceptions:

• In case of emergencies or unforeseen circumstances, Parliament may not adhere to its regular schedule but must convene within the constitutional timeframe.

• For example, during the COVID-19 pandemic, sessions were adjusted while adhering to the six-month rule.

Q97. Answer: (a) 6 consecutive months

The correct answer is 6 consecutive months.

Key Points

• Article 75(5) of the Constitution of India: According to this provision, a person can serve as a minister for a maximum of 6 consecutive months without being a member of either House of Parliament. During this period, they must get elected as a Member of Parliament to continue serving as a minister.

• This rule applies to both the Lok Sabha and the Rajya Sabha, ensuring that all ministers are accountable to the legislature. Hence, the correct option is 6 consecutive months.

• After the expiration of the 6-month period, if the individual has not been elected to either House, they must resign from their position as a minister.

• The provision ensures that ministers have a direct connection to the legislative framework and are accountable to the democratic process.

• Example: In 2021, Anil Deshmukh, the then Home Minister of Maharashtra, was required to resign from his position after failing to become a member of the legislature within the stipulated time.

Additional Information

• Article 75 of the Constitution:

• Article 75 addresses the appointment, tenure, and responsibilities of Ministers in the Union Government of India.

• The Prime Minister is appointed by the President, and other ministers are appointed on the advice of the Prime Minister.

• Clause 5 of Article 75 specifies the requirement for ministers to be a member of Parliament within 6 months of appointment.

• Role of Ministers:

• Ministers are responsible for the administration of their respective departments, such as Finance, Defense, or Health.

• They are accountable to the Parliament and must answer questions regarding their ministry's performance.

• Parliament Membership:

• Individuals appointed as ministers must be elected as members of either the Lok Sabha or the Rajya Sabha within 6 months.

• The Lok Sabha is the lower house of Parliament, where members are directly elected by the people. The Rajya Sabha is the upper house, where members are elected by state legislatures.

• Instances of Resignation:

• If a minister fails to become a member of Parliament within 6 months, they must resign from their position.

• This has occurred in several cases, ensuring that the rule is strictly adhered to.

Important Points

• Constitutional Safeguard: The requirement to be elected as a member of Parliament within 6 months ensures that ministers are part of the democratic process and are accountable to the legislature.

• Checks and Balances: This provision prevents individuals from holding ministerial positions indefinitely without being elected, maintaining transparency and accountability in governance.

• Historical Context: The practice is rooted in ensuring that ministers have a direct connection with the electorate or their legislative representatives.

Q98. Answer: (b) 14 days

The correct answer is 14 days.

Key Points

• The Rajya Sabha has limited powers concerning a Money Bill under the Indian Constitution. It cannot reject or amend a Money Bill and must return it to the Lok Sabha within a stipulated time.

• As per Article 110 of the Indian Constitution, if a Money Bill is passed by the Lok Sabha and transmitted to the Rajya Sabha, the latter must return it within 14 days from the date of its receipt.

• If the Rajya Sabha fails to return the Money Bill within this period, it is deemed to have been passed by both Houses of Parliament.

• The 14-day time limit is crucial to ensure that financial legislation is not unduly delayed, as the Union Government relies on such

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bills for its fiscal management.

• This limitation on Rajya Sabha's powers ensures the supremacy of the Lok Sabha in financial matters, as Lok Sabha directly represents the people through elected members.

Additional Information

• Definition of a Money Bill:

• As per Article 110, a Money Bill deals exclusively with matters like the imposition, abolition, remission, alteration, or regulation of taxes, the borrowing of money by the government, or the appropriation of funds from the Consolidated Fund of India.

• The Speaker of the Lok Sabha certifies whether a bill is a Money Bill, and their decision is final.

• Role of Lok Sabha and Rajya Sabha:

• In financial matters, the Lok Sabha has overriding powers due to its direct accountability to the electorate.

• The Rajya Sabha can discuss a Money Bill and suggest amendments, but it cannot reject or amend it without the consent of the Lok Sabha.

• Process of Passing a Money Bill:

• A Money Bill is introduced only in the Lok Sabha, not in the Rajya Sabha.

• After the Lok Sabha passes it, the bill is transmitted to the Rajya Sabha for consideration.

• The Rajya Sabha must return the bill within 14 days, either with recommendations or without, after which the Lok Sabha may accept or reject the recommendations.

• Significance of the 14-Day Rule:

• The time limit ensures that financial legislation is passed promptly, avoiding delays in government functioning.

• This rule upholds the principle of parliamentary accountability, as the Lok Sabha, being a directly elected body, has the final say in matters concerning public finance.

• Comparison with Ordinary Bills:

• For ordinary bills, the Rajya Sabha has equal legislative powers with the Lok Sabha and can suggest amendments, reject, or hold a bill for six months.

• However, for Money Bills, its powers are restricted as per the provisions of the Constitution.

Q99. Answer: (c) Lymph

The correct answer is Lymph.

Key Points

• Lymph is the other name for tissue fluid, which is a clear fluid that circulates throughout the lymphatic system in the human body.

• Tissue fluid is formed when blood plasma leaks out of capillaries into surrounding tissues, facilitating the exchange of nutrients, oxygen, and waste products between blood and cells.

• Lymph is similar to blood plasma but lacks red blood cells and large proteins, making it a lighter fluid.

• The primary function of lymph is to collect and return interstitial fluid back to the bloodstream, thus maintaining fluid balance in the body.

• Lymph also plays a vital role in the immune system by transporting white blood cells (lymphocytes) and filtering harmful substances through lymph nodes.

Additional Information

• Lymphatic System:

• The lymphatic system is a network of vessels, nodes, and organs that work together to transport lymph throughout the body.

• It consists of lymphatic vessels, lymph nodes, the spleen, thymus, and tonsils.

• Lymph nodes act as filters, trapping pathogens and foreign particles to prevent them from entering the bloodstream.

• Formation of Tissue Fluid:

• Tissue fluid is formed through the process of filtration at the capillary level, where hydrostatic pressure forces plasma out of blood vessels.

• Approximately 90% of this fluid is reabsorbed into the capillaries, while the remaining 10% enters the lymphatic system as lymph.

• Functions of Lymph:

• Maintains fluid balance by collecting excess interstitial fluid and returning it to the blood circulation.

• Facilitates the removal of waste products and toxins from tissues.

• Supports immunity by transporting lymphocytes and antibodies to sites of infection.

• Aids in the absorption of fats and fat-soluble vitamins from the digestive system through lacteals in the small intestine.

• Comparison of Options:

• Sweat: Sweat is produced by sweat glands and primarily aids in temperature regulation and excretion of salts. It is not tissue fluid.

• Urine: Urine is excreted by the kidneys to remove waste and excess water from the body. It is unrelated to tissue fluid.

• Mucus: Mucus is produced by mucous membranes to protect and lubricate surfaces, such as the respiratory and digestive tracts, and is different from lymph.

Important Points

• Lymph Nodes:

• Lymph nodes are small bean-shaped structures located along lymphatic vessels.

• They contain immune cells such as lymphocytes and macrophages that attack and destroy pathogens.

• Swelling in lymph nodes may indicate an infection or disease, such as cancer.

• Pathway of Lymph:

• Lymph flows from lymphatic capillaries to larger lymphatic vessels and eventually drains into the bloodstream via the thoracic duct or right lymphatic duct.

• Clinical Importance:

• Disorders of the lymphatic system include lymphedema, lymphoma, and infections such as tonsillitis.

• Maintaining a healthy lymphatic system is crucial for immunity and fluid balance in the body.

Q100. Answer: (d) Narasimhavarman

The correct answer is Narasimhavarman.

Key Points

• Narasimhavarman I, also known as Mamalla, was one of the most significant rulers of the Pallava dynasty in South India.

• He ruled from 630 CE to 668 CE and was known for his architectural contributions and military conquests.

• The 'Seven Rathas' or the Panch Rathas at Mahabalipuram were built during his reign. These are rock-cut monolithic temples designed in the shape of chariots.

• The monuments at Mahabalipuram were created to showcase the Pallava dynasty's artistic and architectural brilliance and are now recognized as a UNESCO World Heritage Site.

• Narasimhavarman is also remembered for defeating the Chalukya king Pulakesin II and taking control of the Chalukyan capital of Vatapi, earning him the title Vatapikonda.

Additional Information

• Mahabalipuram:

• Located on the Coromandel Coast, Mahabalipuram is famous for its rock-cut architecture and monolithic temples.

• The site includes the Shore Temple, cave temples, and the Panch Rathas, which are an excellent example of Pallava architecture.

• Mahabalipuram served as a major port city during the Pallava dynasty.

• Pallava Dynasty:

• The Pallavas ruled parts of South India from the 3rd century CE to the 9th century CE.

• They were known for their contributions to art, architecture, and the spread of Brahmanical and Dravidian culture.

• Their capital was at Kanchipuram, which was an important center of learning and religion.

• Seven Rathas:

• The 'Seven Rathas' or Panch Rathas are named after the Pandavas and Draupadi from the Mahabharata.

• They are carved out of single granite blocks and exhibit different architectural styles.

• Each ratha is dedicated to a deity and is a prototype of various temple styles.

• Narasimhavarman's Military Achievements:

• He defeated the Chalukya king Pulakesin II in the Battle of Vatapi around 642 CE, a significant victory in South Indian history.

• He extended the Pallava influence over much of South India during his reign.

Important Points

• Architectural Significance: The monuments at Mahabalipuram mark the transition from rock-cut to structural temples in South Indian architecture.

• UNESCO Recognition: The group of monuments at Mahabalipuram was designated a UNESCO World Heritage Site in 1984.

• Vatapikonda Title: The title "Vatapikonda" (Conqueror of Vatapi) reflects Narasimhavarman's military prowess and successful campaigns.

• Legacy: Narasimhavarman's reign is remembered as a golden age of Pallava art and culture, leaving a lasting impact on South Indian history and architecture.

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