SSC CHSL 2025 Tier-1 (Held On: 28 Nov, 2025 Shift 2) (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. Choose the option which is similar in meaning to the underlined word.

Columbus was convinced that the earth was round.

(a) Assured
(b) Cynical
(c) Skeptical
(d) Doubtful

Q2. Choose the correct option to give a one-word substitution for the sentence given.

A person who can talk non-stop or can speak continuously.

(a) Garrulous
(b) Precipitous
(c) Circumvent
(d) Sparkling

Q3. Choose the one word substitute for the below sentence.

Neha approached her new hobby with enthusiasm, eager to grasp the basics as a beginner.

(a) Veteran
(b) Mentor
(c) Apprentice
(d) Expert

Q4. Identify the grammatical error in the sentence below.

If you had spoken to my mother, she would tell you where I was.

(a) had spoken
(b) tell you
(c) where I was
(d) If you had

Q5. Choose the correctly spelt word:

(a) Aggergate
(b) Aggregate
(c) Agregate
(d) Aggegrate

Q6. Choose the best option to replace the underlined part to improve the given sentence. If no substitution is required, select 'No substitution.'

I don't understand why the puppy keeps running over that tree.

(a) on that tree
(b) across that tree

(c) around that tree
(d) No substitution

Q7. Choose the best option to replace the underlined part to improve the given sentence. If no substitution is required, select 'No substitution.'

She is good in painting but weak in studies.

(a) Good at painting
(b) Good with painting
(c) Good for painting
(d) No substitution

Q8. From the alternatives given below, select the correct passive voice of the following sentence.

Cut the blue wire all at once; otherwise, you have to throw the entire thing out of the house with your maximum strength.

(a) Let the blue wire be cut all at once; otherwise, the entire thing has to throw out of the house with your maximum strength.
(b) Let the blue wire cut all at once; otherwise, the entire thing has to be thrown out of the house by you with your maximum strength.
(c) Let the blue wire be cut all at once; otherwise, the entire thing has to be thrown out of the house by you with your maximum strength.
(d) Let the blue wire be cut all at once; otherwise, the entire thing has to be thrown out with your maximum strength of the house by you.

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

Rajan said to Rini, "I have very often informed you that we have to attend the meeting every Saturday."

(a) Rajan told Rini that he had very often informed her that they had to attend the meeting every Saturday.
(b) Rajan told Rini that she must very often informed her that they had to attend the meeting every Saturday.
(c) Rajan told Rini that he had very often been informing her that they had to attend the meeting every Saturday.
(d) Rajan told Rini that he had very often informed her that they had been attending the meeting every Saturday.

Q10. The following sentence has two blanks. Choose the most suitable set of prepositions from the given options to fill in the blanks and complete the sentence meaningfully.

My cousin lives __ carter road __ the bank.

(a) at, near
(b) on, next to
(c) at, besides
(d) in, beside

Q11. Select the most appropriate antonym of the word: Exacerbate

(a) Alleviate
(b) Intensify
(c) Improve
(d) Aggravate

Q12. Change the following sentence into the Active form.

Dinner is being prepared by my sister.

(a) Dinner prepared my sister.
(b) My sister is preparing dinner.
(c) My sister prepares dinner.
(d) My sister was preparing dinner.

Q13. Choose the option that is the most appropriate conversion of the following sentence into Direct Speech.

He asked me if I had ever been to the Louvre.

(a) He said, "You have ever been to the Louvre?"
(b) He asked, "Do you ever go to the Louvre?"
(c) He asked me, "Have you been to the Louvre?"

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(d) He said to me, "Have you ever been to the Louvre?"

Q14. The following sentence has two blanks. Choose the most suitable set of prepositions from the given options to fill in the blanks and complete the sentence meaningfully:

She refrained __ commenting publicly and instead focused __ internal communication.

(a) from, on
(b) of, in
(c) for, by
(d) with, to

Q15. One of these words is spelled incorrectly. Which one is it?

(a) Government
(b) Embellish
(c) Concious
(d) Perceive

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

She said to him, "You were sleeping."

(a) She told him that he was sleeping.
(b) She told him that he had been sleeping.
(c) She told him that you had been sleeping.
(d) She told him that she had been sleeping.

Q17. One of these words is spelled incorrectly. Which one is it?

(a) Magnanimous
(b) Vehement
(c) Perserverance
(d) Recalcitrant

Directions

Read the passage and answer the following questions:

Hospitals operate around the clock, and so do the people who work within them. From doctors and nurses to cleaning staff, lab technicians, and administrative workers, every hospital employee plays a critical role in keeping the system functioning smoothly. While the public often sees doctors as the face of healthcare, the tireless contributions of other workers often go unnoticed.

The life of a hospital employee is marked by long hours, high stress, and emotional strain. Nurses may have to attend to critical patients for entire shifts without rest, while housekeeping staff ensure that hygiene standards are maintained to prevent infections. Hospital employees handle hundreds of samples daily with precision, and emergency ward staff often face life-or-death situations multiple times a day.

What makes their jobs even more challenging is the emotional burden. Hospital employees witness suffering, grief, and loss more frequently than most people do in a lifetime. Yet, despite the psychological weight, many remain committed to their work out of a deep sense of duty and compassion.

In recent years, especially after the COVID-19 pandemic, awareness about the importance of every hospital worker has grown. However, proper recognition, mental health support, and fair working conditions are still essential to ensure the well-being of those who care for others.

Q18. Which sentence from the passage is written in the present perfect tense?

(a) Hospitals operate around the clock.
(b) Every hospital employee plays a critical role.
(c) Many remain committed to their work.
(d) Awareness about the importance of every hospital worker has grown.

Q19. Which sentence from the passage contains a modal verb?

(a) Nurses may have to attend to critical patients for entire shifts without rest.
(b) Emergency ward staff often faces life-or-death situations.
(c) The life of a hospital employee is marked by long hours.

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(d) Hospital employees witness suffering, grief, and loss.

Q20. What does the word "strain" mean in the context of the sentence "...high stress, and emotional strain"?

(a) A type of virus
(b) A pull in the muscle
(c) Emotional or mental pressure
(d) A physical injury

Q21. In the sentence below, what does the word "burden" most closely imply?

"What makes their jobs even more challenging is the emotional burden. "

(a) A legal responsibility
(b) A financial cost
(c) A heavy emotional load
(d) A physical task

Q22. What is the main message of the passage?

(a) Doctors are the only essential workers in a hospital
(b) Hospital employees enjoy easy working hours
(c) Hospital employees need recognition and support
(d) Working in a hospital is fun and relaxing

Q23. Rearrange the following sentence parts to form a meaningful and grammatically correct paragraph:

P. He created mockups of each screen the user would view in order to build the user interface.
Q. He programmed the app's features and response, writing the fundamental logic.
R. He fixed errors and made sure the app ran well by testing it on a variety of devices.
S. He made the finished product available for download by uploading it to the app store.

(a) R, Q, P, S
(b) Q, P, R, S
(c) S, Q, R, P
(d) P, Q, R, S

Q24. Rearrange the following sentences to form a meaningful and grammatically correct paragraph:

P. A robot built to tackle a challenging challenge served as the students' final assignment.
Q. The code that would enable the machine to traverse a maze was written over the course of weeks.
R. Their engineering, programming, and design abilities came together to create it.
S. Their commitment and cooperation were demonstrated by the robot's faultless performance.

(a) S, R, Q, P
(b) Q, R, P, S
(c) P, R, Q, S
(d) S, R, P, Q

Q25. What is the antonym of "Misanthropic"?

(a) Sociable
(b) Reclusive
(c) Cynical
(d) Pessimistic

GENERAL INTELLIGENCE

Q26. Find the next element that replace the ? Logically

6, 18, 42, 90, ?

(a) 179
(b) 186

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(c) 202
(d) 189

Q27. If 60 " 21 = 13 and 81 " 9 = 24, then what is the value of 27" 39?
(a) -13
(b) -1
(c) -4
(d) 2

Q28. If 47 @ 39 = 10998 and 30 @ 51 = 9180, then what is the value of 30 @ 11?
(a) 1998
(b) 1980
(c) 1986
(d) 1962

Q29. Find the next element that replace the ? Logically
60, 121, 212, 339, ?
(a) 528
(b) 501
(c) 508
(d) 515

Q30. Directions: Choose the correct options from the alternative.
52 : ? :: 61 : 25
(a) 12
(b) 9
(c) 16
(d) 21

Q31. Directions: Pick the correct options from below.
60, 95, 138, 189, 248 .....?
(a) 295
(b) 305
(c) 315
(d) 330

Q32. Which of the following is the odd one out in the given series?
A4, C9, E25, G81, H90
(a) C9
(b) E25
(c) G81
(d) H90

Q33. Some letters are missing from the series. From the given alternative choose the best option which follow the pattern of the series.
x_x_x_xx_yx_x_ _
(a) yxxxxxy
(b) xyxxxyx
(c) yxxyxxx
(d) xyxyxyx

Q34. What comes next in the series: 5, 11, 17, 23,?
(a) 28
(b) 29
(c) 30

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(d) 31

Q35. Weight of 5 pens W, X, Y, Z and A is compared. Weight of no two pens is same. Weight of A is less than Z but more than X. Weight of Y is more than W. Weight of Y is second lowest. Weight of which pen is second highest?

(a) X
(b) A
(c) W
(d) Z

Q36. Price of 5 cups G, H, J, K and L is compared. Price of no two cups is same. Price of K is more than L but less than H and

J. Price of G is highest. If the price of H is more than J, then the price of how many cups is less than J?

(a) 2
(b) 3
(c) 1
(d) 0

Q37. There are 6 flats on a floor in two rows (three in each row opposite to each other). Flats of one row are facing north. Flats of other row are facing south. These flats are alloted to A, B, C, D, E and F. D and F get diagonally opposite flats. F's flat is next to C's flat. C gets a South facing flat. The direction in which the flats of B and E are facing is same. B's flat is not next to D.

Who gets a north-facing flat?

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

Q38. Select the option that is related to the third number in the same way as the second number is related to the first number and sixth number is related to fifth number.

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

2943 : 3894 :: 2617 : ? :: 8615 : 9566

(a) 3570
(b) 3568
(c) 3542
(d) 3541

Q39. By interchanging the given two numbers (not digits) which of the following equation will be correct?

3 and 2

I. 3×9+2-8+1=13

II. 2×8+3-9+1=17

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

Q40. Select the correct combination of mathematical signs to replace (*) signs sequentially and to balance the given equation.

19*11*2*48*6 = 33

(a) ÷, +, -, x
(b) x, ÷, +, -
(c) +, x, -, ÷
(d) +, ÷, x, -

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Q41. In the following question, select the odd letter-number cluster from the given alternatives.

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

(a) KLMN50
(b) QRST74
(c) CDEF28
(d) VWXY94

Q42. In the following question, four letter-number pairs are given. The letter-number on the left side of (-) is related to the letter-number on the right side of (-) with some Logic/Rule/Relation. Three pairs are similar on the basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

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

(a) SN 1330 - QI11
(b) MP 999 - KK10
(c) TC 728 - RX9
(d) BW 513 - ZR8

Q43. In the following question, four number pairs are given. In each pair the number on left side of (-) is related to the number of the right side of (-) with some Logic/Rule/Relation. Three pairs are similar on the basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

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

(a) 8032 - 7442
(b) 7644 - 7064
(c) 6836 - 6246
(d) 9888 - 9298

Q44. In a certain coded language 'KOOK' is coded as 'OSSO' and 'FRIG' is coded as 'JVMK'. How will 'ORBS' be coded in the same code language?

(a) RXGW
(b) RXDW
(c) TVFY
(d) SVFW

Q45. From the given alternatives, select the word that CAN be formed by using the letters of the given word.

VOLUNTEER

(a) VOLT
(b) GEARS
(c) NAME
(d) ROME

Q46. A word has been given in the question. This word CAN be formed by using the letters of the word given in one of the alternatives only. Select that alternative.

BOARD

(a) DEBARK
(b) ROADEN
(c) BROADEN
(d) BARKED

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Q47. Select the option that is related to the first letter-number cluster in the same way as the fourth letter-number cluster is related to the third letter-number cluster and sixth letter-number cluster is related to fifth letter-number cluster.

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

RA140:?:: CX238: AU714 :: NL94: LI282

(a) OX420
(b) PY420
(c) OY420
(d) PX420

Q48. Select the option that is related to the fifth letter-number cluster in the same way as the second letter-number cluster is related to the first letter-number cluster and fourth letter-number cluster is related to third letter-number cluster.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits.

E.g.13 Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

XR 42 : SM32 :: FL 18 : AG8 :: WD27 : ?

(a) SX43
(b) RY43
(c) RY31
(d) SX31

Q49. Select the option that is related to the fifth letter-number cluster in the same way as the second letter-number cluster is related to the first letter-number cluster and fourth letter-number cluster is related to third letter-number cluster.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits.

E.g. 13 Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

PN 112 : GI 392 : : FB 84 : UY 294 :: AR 56 : ?

(a) KT204
(b) KT196
(c) LS204
(d) LS196

Q50. A series is given with one term wrong. Select that wrong term from the given alternatives.

BL15, KU60, TD240, CM960, LU3840

(a) KU60
(b) CM960
(c) TD240
(d) LU3840

QUANTITATIVE APTITUDE

Q51. Profit of Rs. 25 is made on an article costing Rs.125 What is the profit percentage?

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

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Q52. A shopkeeper wants to give a single discount equivalent to two successive discounts of 15% and 10%. What is the single equivalent discount?

(a) 22%
(b) 23.5%
(c) 24.5%
(d) 25%

Q53. What is the simple interest on Rs. 5000 for 2 years at 5% per annum?

(a) Rs. 500
(b) Rs. 400
(c) Rs. 600
(d) Rs. 550

Q54. Find CI on Rs. 1000 for 3 years at 10% p.a.?

(a) Rs. 331
(b) Rs. 320
(c) Rs. 300
(d) Rs. 350

Q55. A circular antenna is divided into equal triangular segments by connecting its center to each vertex of a regular polygon. If the polygon has 15 sides, find the sum of all central angles formed.

(a) 360°
(b) 540°
(c) 720°
(d) 1080°

Q56. Which one of the following is TRUE about repeating decimals?

(a) Always irrational
(b) Never rational
(c) Always rational
(d) Always whole numbers

Q57. A hollow pipe is 1.2 meters long and has an inner radius of 3 cm and outer radius of 4 cm. Find the volume of material used in the pipe.

(a) 1320 π cm^3
(b) 840 π cm^3
(c) 792 π cm^3
(d) 1056 π cm^3

Q58. A prism-shaped chocolate box has an equilateral triangular base of side 12 cm and a height of 25 cm. If 25 such boxes are packed in a crate, what is the total surface area of all the boxes, including their tops and bottoms? (Use √3 = 1.732)

(a) 25800 cm^2
(b) 25617.6 cm^2
(c) 26200 cm^2
(d) 25300 cm^2

Q59. A hemisphere and a cone have the same base radius and same height. What is the ratio of their volumes?

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

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Q60. A parallelogram has sides of 22 cm and 16 cm. The angle between them is 45°. Find the exact area of the parallelogram and the height corresponding to the longer side.

(a) 176 √2 cm², 8√2 cm
(b) 144 √2 cm², 3√2 cm
(c) 165 √2 cm², 5√2 cm
(d) 182 √2 cm², 7√2 cm

Q61. A spherical ball of radius 24 cm is melted and recast into identical hemispheres, each having a radius of 8 cm. Determine the combined curved surface area of all hemispheres.

(a) 6912 π cm²
(b) 6960 π cm²
(c) 6562 π cm²
(d) 6880 π cm²

Q62. If the square root of 20.25 plus the square root of (16+ y²) equals 9.5, find the value of y.

(a) 2
(b) 7
(c) 3
(d) 0

Q63. Chetan invested Rs. 9,000 for 12 months, and Sahir invested Rs. 6,000 for 6 months. If the total profit of the business is Rs. 18,000, how much will Chetan receive?

(a) Rs. 16,600
(b) Rs. 12,700
(c) Rs. 34,700
(d) Rs. 13,500

Q64. If tan θ =1, find sin θ +cos θ.

(a) √2
(b) • √5
(c) 1
(d) 0

Q65. If sin x = 3/5 and X is in Quadrant II, what is the value of Cosx?

(a) 4/5
(b) 1/2
(c) • 4/5
(d) • 1/2

Q66. Two pipes of length 1.5 meters and 1.2 meters are to be cut into equal pieces without leaving any extra length. What is the greatest length of pieces of the same size that can be cut from both pipes?

(a) 0.13 meter
(b) 0.3 meter
(c) 0.4 meter
(d) 0.41 meter

Q67. A 40 litre solution contains 25% salt. How many litres of water must be evaporated so that the concentration of salt becomes 40%?

(a) 12 L
(b) 15 L
(c) 18 L
(d) 20 L

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Q68. A painter is hired to paint a wall with a special shade. To prepare the paint, he mixes red, blue, and white in the ratio 4:2:1. For this design, he prepares 14 liters of paint in total. How many liters of white paint does he use?

(a) 1
(b) 2
(c) 3
(d) 4

Q69. Three vessels X, Y, and Z hold liquid in the capacity ratio of 3:4:5. Each vessel contains a mixture of juice and water, where the proportions are 1:2 in X, 3:1 in Y, and 2:3 in Z. If the entire contents of these vessels are emptied into one large container and mixed uniformly, what will be the overall ratio of juice to water in the combined mixture?

(a) 2:3
(b) 2:1
(c) 1:1
(d) 1:2

Q70. A person travels from city A to city B. They cover 1/4 of the journey by car, 1/2 of the remaining journey by bus, and the rest 15 km by bike. What is the total distance between city A and city B?

(a) 40 km
(b) 30 km
(c) 50 km
(d) 60 km

Q71. If tan (A) = cot (B), what is the relationship between angle A and angle B?

(a) A + B = 90°
(b) A - B = 90°
(c) A + B = 180°
(d) A = B

Q72. (√11 +2) ×(√11-2) = ?

(a) 7
(b) 9
(c) 8
(d) 6

Q73. If √a + √b = 12 and √a - √b = 4, then what is the value of a + b ?

(a) 120
(b) 40
(c) 80
(d) 160

Q74. The difference between simple interest on a certain sum at the annual rate of 15 percent for 6 years and 7 years is Rs 75. What is the sum?

(a) Rs. 500
(b) Rs. 550
(c) Rs. 480
(d) Rs. 440

Q75. There are 4 numbers N1, N2, N3 and N4. Average of N1, N2 and N3 is 30 and Average of N2, N3 and N4 is 26 Value of N1 28 is What is the value of N4 ?

(a) 18
(b) 16
(c) 17
(d) 14

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GENERAL AWARENESS

Q76. Which of the following pair regarding the Ruler of Delhi sultanate period of their rule is correct?

I. Ghiyasuddin Balban - 1266-1287

II. Firuz Shah Tughluq - 1351-1388

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

Q77. Which article of the Indian constitution is related with Power of Parliament to amend the Constitution and procedure therefor?

(a) Article 355
(b) Article 368
(c) Article 375
(d) Article 394

Q78. Article 126 of the Indian Constitution mentions ____.

(a) Appointment of ad hoc Judges
(b) Appointment of acting Chief Justice of India
(c) Supreme Court to be a court of record
(d) Seat of Supreme Court

Q79. The New Development Bank is associated with which of the following international organisation?

(a) BRICS
(b) World Trade Organisation
(c) QUAD
(d) SAARC

Q80. Where was the BIMSTEC Summit held in April 2025?

(a) India
(b) Bangladesh
(c) Bhutan
(d) Thailand

Q81. Amitabh Bachchan had been selected for the Dada Saheb Phalke award for the year ____.

(a) 2014
(b) 2016
(c) 2018
(d) 2020

Q82. Who among the following was the first Indian female doctor of western medicine?

(a) EK Janaki Ammal
(b) Rupa Bai Furdoonji
(c) Mary Poonen Lukose
(d) Anandibai Gopalrao Joshi

Q83. Who has been appointed as the President of the Confederation of Indian Industry (CII) for FY 2025-26?

(a) Sanjiv Puri
(b) R Mukundan
(c) Rajiv Memani
(d) T. Rabi Sankar

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Q84. In July 2024, Om Prakash Mathur has been appointed as Governor of ____.

(a) Assam
(b) Sikkim
(c) Tripura
(d) Nagaland

Q85. In June 2025, EPFO's revised his auto-settlement limit. This limit is now Rs. ____ lakh.

(a) 1
(b) 2
(c) 5
(d) 10

Q86. Which ministry oversees Pradhan Mantri Surya Ghar Muft Bijli Yojana Launched in February 2024?

(a) Ministry of Power
(b) Ministry of New & Renewable Energy
(c) Ministry of Environment, Forest & Climate Change
(d) Ministry of Rural Development

Q87. Ministry of Petroleum and Natural Gas has on 4 August 2025 issued a detailed response to certain concerns raised on the impact of ____ percent Ethanol Blended Petrol on mileage and vehicle life.

(a) 20
(b) 40
(c) 60
(d) 50

Q88. ____ was the first Indian to win a medal in Birmingham Commonwealth Games

(a) Sanket Sargar
(b) Mirabai Chanu
(c) Harjinder Kaur
(d) Vikas Thakur

Q89. Which of the following sport was not played in the Summer Olympics 2024?

(a) Ice Skating
(b) Badminton
(c) Lawn tennis
(d) Basketball

Q90. Which of the following institution has developed a device named "AroTrack"?

(a) IIT Bombay
(b) IISC Bangalore
(c) IIT Kanpur
(d) IIT Roorkee

Q91. The Aravalli Green Wall Project is a major initiative to spread green cover in the ____ km buffer area around the Aravalli hill range.

(a) 5
(b) 35
(c) 60
(d) 125

Q92. Who among the following invented the game of judo?

(a) Jigoro Kano
(b) James Naismith
(c) James Creighton

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(d) Ebenezer Morley

Q93. In January 2025, India Open badminton tournament was held in ____.

(a) New Delhi
(b) Chennai
(c) Bengaluru
(d) Kolkata

Q94. Which festival of Kerala has entered the Guinness World Records for being the single largest gathering of women for a religious activity?

(a) Chikalkalo
(b) Pooram
(c) Vishu
(d) Attukal Pongala

Q95. Around which year was Robert Clive appointed the Governor of Bengal?

(a) 1733
(b) 1752
(c) 1764
(d) 1781

Q96. In which year did the committee for reforms in the insurance sector formed under the chairmanship of R.N. Malhotra submitted its report?

(a) 1991
(b) 1992
(c) 1994
(d) 1995

Q97. The ____ took place in Assam in

(a) Revolt of Songram Sangma
(b) Self Respect Movement
(c) Blue rebellion
(d) Koli Revolt

Q98. The gross fiscal deficit as a ratio to GDP in India had climbed to ____ per cent by 1990-91.

(a) 10
(b) 25
(c) 30
(d) 45

Q99. What subject does Article 77 of the Indian Constitution pertain to?

(a) Rights of ministers in Parliament
(b) Duties of prime minister
(c) Conduct of business of the Government of India
(d) Council of Ministers to aid and advise President

Q100. Members of the Legislative Council of an Indian state as nearly as may be, ____ shall be elected by electorates consisting of members of municipalities, district boards and such other local authorities in the State as Parliament may by law specify.

(a) 1/12
(b) 1/3
(c) 1/2
(d) 1/6

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ANSWER KEY

1	a	2	a	3	c	4	b	5	b	6	c	7	a	8	c	9	a	10	b
11	a	12	b	13	d	14	a	15	c	16	b	17	c	18	d	19	a	20	c
21	c	22	c	23	d	24	c	25	a	26	b	27	c	28	b	29	c	30	b
31	c	32	d	33	b	34	b	35	b	36	a	37	c	38	b	39	d	40	c
41	c	42	d	43	b	44	d	45	a	46	c	47	d	48	b	49	b	50	d
51	b	52	b	53	a	54	a	55	a	56	c	57	b	58	b	59	b	60	a
61	a	62	c	63	d	64	a	65	c	66	b	67	b	68	b	69	c	70	a
71	a	72	a	73	c	74	a	75	b	76	c	77	b	78	b	79	a	80	d
81	c	82	d	83	c	84	b	85	c	86	b	87	a	88	a	89	a	90	a
91	c	92	a	93	a	94	d	95	c	96	c	97	a	98	a	99	c	100	b

SOLUTIONS

Q1. Answer: (a) Assured

The correct answer is '1' i.e. Assured.

Key Points

• The word "convinced" in the sentence means being certain or assured about something.

• Option 1, "Assured," is the correct synonym as it conveys the same meaning of being confident or sure.

• Option 2, "Cynical," means being distrustful or skeptical of others' motives, which is the opposite of the intended meaning.

• Option 3, "Skeptical," means having doubts or reservations, which is contrary to the word "convinced."

• Option 4, "Doubtful," also refers to uncertainty, which is not similar to the meaning of "convinced."

Correct sentence: Columbus was convinced that the earth was round, meaning he was assured of this fact.

Additional Information

• Synonyms for "convinced": Assured, confident, certain.

• Antonyms for "convinced": Doubtful, skeptical, uncertain.

• Understanding the context of the sentence is crucial for identifying the correct synonym.

Q2. Answer: (a) Garrulous

The correct answer is '1' i.e. Garrulous.

Key Points

• The term Garrulous refers to a person who talks a lot, often excessively or in a verbose manner.

• The other options provided do not match the meaning of the sentence:

• Precipitous: Refers to something steep or sudden, not related to speech.

• Circumvent: Means to avoid or bypass, not related to talking.

• Sparkling: Refers to something bright or shining, unrelated to speech.

• Hence, option 1 (Garrulous) is the correct one-word substitution for a person who talks non-stop or continuously.

Correct sentence: A person who can talk non-stop is Garrulous.

Additional Information

• One-word substitutions are used to express lengthy sentences or phrases in a concise manner.

• Examples of similar one-word substitutions:

• Loquacious: Another word for someone who talks a lot.

• Taciturn: The opposite of garrulous; refers to someone who speaks very little.

Q3. Answer: (c) Apprentice

The correct answer is '3' i.e. Apprentice.

Key Points

• The sentence describes Neha as a beginner who is eager to learn the basics of her new hobby.

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• The word Apprentice refers to a person who is learning a skill or trade under someone more experienced, making it the most suitable one-word substitute.

• Other options, such as Veteran (experienced person), Mentor (guide/teacher), and Expert (highly skilled person), do not match the description of a beginner.

Correct sentence: Neha approached her new hobby with enthusiasm, eager to grasp the basics as an Apprentice.

Additional Information

• Veteran: Refers to someone with extensive experience in a particular field.

• Mentor: Refers to someone who guides or teaches others.

• Expert: Refers to someone with advanced skills or knowledge in a specific area.

• Apprentice: Refers to someone learning as a beginner, often under the guidance of a mentor or teacher.

Q4. Answer: (b) tell you

The correct answer is '2' i.e. tell you.

Key Points

• The given sentence is an example of a third conditional sentence, which is used to describe hypothetical situations in the past.

• The structure of the third conditional is "If + past perfect, would have + past participle".

• In the result clause of the conditional sentence, the verb should be in the form "would have + past participle".

• However, the verb "tell" in the result clause is incorrect and should be replaced with "would have told".

Correct sentence: If you had spoken to my mother, she would have told you where I was.

Additional Information

• 1st Conditional Sentence:

• Structure: If + Present Simple, will + base verb.

• Example: If it rains, we will cancel the picnic.

• Usage: Describes real or possible situations in the future with likely outcomes.

• 2nd Conditional Sentence:

• Structure: If + Past Simple, would + base verb.

• Example: If I were rich, I would travel the world.

• Usage: Describes hypothetical or unlikely situations in the present or future.

• 3rd Conditional Sentence:

• Structure: If + Past Perfect, would have + past participle.

• Example: If she had studied harder, she would have passed the exam.

• Usage: Refers to unreal past situations and their imagined outcomes.

Q5. Answer: (b) Aggregate

The correct answer is '2' i.e. Aggregate.

Key Points

• The word "Aggregate" is correctly spelt.

• It means to combine or sum up multiple elements into a whole.

• Options 1, 3, and 4 are incorrect spellings of the word.

Correct sentence: The correct spelling is "Aggregate", which refers to a total amount or sum of individual parts.

Additional Information

• Common usage:

• It is often used in mathematics, business, and daily life to describe a collection or sum.

• Example: The aggregate score of the team was 250.

• Synonyms: Total, sum, collection, entirety.

• Antonyms: Individual, single, separate.

Q6. Answer: (c) around that tree

The correct answer is '3' i.e. around that tree.

Key Points

• The phrase "running over" is incorrect in the context of the given sentence because it implies physically stepping on or passing over the tree, which is illogical.

• The correct preposition to use in this context is "around," as it conveys the idea of the puppy running in a circular or surrounding

motion near the tree.

• Each option was evaluated:

• Option 1: "on that tree" suggests the puppy is physically on top of the tree, which does not fit the context.

• Option 2: "across that tree" implies moving from one side of the tree to another, which is incorrect here.

• Option 3: "around that tree" is the most appropriate as it matches the intended meaning of movement near or encircling the tree.

• Option 4: "No substitution" is incorrect as the original phrase needs correction.

Correct sentence: I don't understand why the puppy keeps running around that tree.

Additional Information

• Use of Prepositions:

• "On": Indicates physical contact with a surface. Example: The book is on the table.

• "Across": Refers to movement from one side to the other. Example: He swam across the river.

• "Around": Suggests movement in a circular or surrounding manner. Example: They walked around the park.

• Choosing the correct preposition depends on the context and the action being described.

Q7. Answer: (a) Good at painting

The correct answer is '1' i.e. Good at painting.

Key Points

• The phrase “good at” is the correct collocation to describe someone's skill or proficiency in an activity.

• “Good in” is not appropriate in this context as it does not convey the right meaning in English.

• Other options like “good with” and “good for” do not fit the sentence grammatically.

Correct sentence: She is good at painting but weak in studies.

Additional Information

• Common Collocations:

• Good at: Refers to proficiency or skill in a particular activity. Example: She is good at swimming.

• Good with: Refers to being skilled in handling or working with objects or people. Example: He is good with kids.

• Good for: Refers to something beneficial or suitable for a purpose. Example: Exercise is good for health.

Q8. Answer: (c) Let the blue wire be cut all at once; otherwise, the entire thing has to be thrown out of the house by you...

The correct answer is '3' i.e. Let the blue wire be cut all at once; otherwise, the entire thing has to be thrown out of the house by you with your maximum strength.

Key Points

• The sentence is in the imperative form, and the passive voice of an imperative sentence typically begins with "Let."

• In the passive voice, the object of the active voice sentence becomes the subject.

• The correct structure for the passive voice in this sentence is: Let + object + be + past participle.

• The second part of the sentence, "you have to throw the entire thing out of the house with your maximum strength," is converted to passive voice as "the entire thing has to be thrown out of the house by you with your maximum strength."

Correct sentence: Let the blue wire be cut all at once; otherwise, the entire thing has to be thrown out of the house by you with your maximum strength.

Additional Information

• Common Passive Voice Structures:

• Imperative Active Voice: Cut the wire. → Passive Voice: Let the wire be cut.

• Present Simple Active Voice: She throws the ball. → Passive Voice: The ball is thrown by her.

• Future Simple Active Voice: He will complete the project. → Passive Voice: The project will be completed by him.

• Note: Always ensure the correct placement of "by" and the subject when converting sentences to passive voice.

Q9. Answer: (a) Rajan told Rini that he had very often informed her that they had to attend the meeting every Saturday.

The correct answer is '1' i.e. Rajan told Rini that he had very often informed her that they had to attend the meeting every Saturday.

Key Points

• The sentence is in direct speech and needs to be converted to indirect speech.

• When converting direct speech into indirect speech:

• The verb tense changes based on the reporting verb (past tense here).

• Pronouns are adjusted according to the context of the sentence.

• Words indicating time or frequency, such as "very often" and "every Saturday," remain unchanged as they do not affect the tense.

• The direct speech, "I have very often informed you that we have to attend the meeting every Saturday," becomes "Rajan told Rini that he had very often informed her that they had to attend the meeting every Saturday." This is because:

• "Have informed" changes to "had informed" (past perfect tense).

• "You" changes to "her" (adjusted for the listener).

• "We" changes to "they" (adjusted for the speaker and listener).

Correct sentence: Rajan told Rini that he had very often informed her that they had to attend the meeting every Saturday.

Additional Information

• Rules for changing direct to indirect speech:

• If the reporting verb is in the past tense, the verb in the reported clause must be changed to a corresponding past form.

• Personal pronouns must be adjusted to reflect the speaker and listener.

• Time expressions such as "today," "tomorrow," "yesterday" may need to be changed based on the context.

• Examples of tense changes in indirect speech:

• Simple Present → Simple Past

• Present Perfect → Past Perfect

• Simple Past → Past Perfect

Q10. Answer: (b) on, next to

The correct answer is '2' i.e. on, next to.

Key Points

• The sentence describes a location where the cousin lives in relation to Carter Road and a bank.

• The correct preposition for describing a residence on a street is "on". For proximity to another landmark, "next to" is appropriate.

• Options such as "at" are incorrect because "at" is typically used for specific points or locations rather than streets.

• Similarly, "besides" and "beside" are less commonly used in this context compared to "next to" for indicating proximity.

Correct sentence: My cousin lives on Carter Road next to the bank.

Additional Information

• Usage of Prepositions:

• On: Used to indicate a position on a surface or street (e.g., "on Carter Road").

• Next to: Indicates a position immediately adjacent to something (e.g., "next to the bank").

• At: Refers to a specific point or location (e.g., "at the corner").

• Beside/Besides: Beside means "next to" but is less common in modern usage for locations, while besides means "in addition to" and is unrelated to physical positioning.

Q11. Answer: (a) Alleviate

The correct answer is '1' i.e. Alleviate.

Key Points

• The word exacerbate means to make a problem, situation, or condition worse.

• Its antonym would describe the opposite action — to make a problem, situation, or condition better or less severe.

• The word alleviate fits perfectly as it means to reduce or ease the severity of something.

Correct Option: 1) Alleviate

Additional Information

• Option 2) Intensify: This means to make something stronger or more severe, which is similar in meaning to exacerbate, not an antonym.

• Option 3) Improve: While this could be seen as a positive change, it does not directly convey the idea of reducing or easing severity like alleviate does.

• Option 4) Aggravate: This is a synonym of exacerbate, meaning to worsen a situation, and is not an antonym.

Q12. Answer: (b) My sister is preparing dinner.

The correct answer is '2' i.e. My sister is preparing dinner.

Key Points

• The given sentence is in the passive voice, as indicated by the use of "is being prepared."

• To change a sentence from passive to active voice, the subject performing the action must be placed at the beginning of the sentence.

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• The subject in this case is "my sister," and the action being performed is "preparing dinner."

• The correct active voice structure is: Subject + is/am/are + verb + object.

Correct sentence: My sister is preparing dinner.

Additional Information

• Passive Voice Structure: Object + is/am/are + being + past participle + by + subject.

• Example: The book is being read by John.

• Active Voice Structure: Subject + is/am/are + verb + object.

• Example: John is reading the book.

• Option 1: "Dinner prepared my sister" is grammatically incorrect because "prepared" is in the past tense and the structure does not properly indicate the action.

• Option 3: "My sister prepares dinner" is in the present simple tense, which does not correspond to the continuous action implied by "is being prepared."

• Option 4: "My sister was preparing dinner" is in the past continuous tense, which also does not match the present continuous tense of the original sentence.

Q13. Answer: (d) He said to me, "Have you ever been to the Louvre?"

The correct answer is '4' i.e. "He said to me, 'Have you ever been to the Louvre?'".

Key Points

• The given sentence is an example of indirect speech, where a question is being reported.

• To convert indirect speech into direct speech for a question, the sentence must:

• Include quotation marks.

• Use the exact question format and wording.

• Retain the original tense of the question.

• In direct speech, the question is typically introduced with a reporting verb like "said to" or "asked."

Correct sentence: He said to me, "Have you ever been to the Louvre?".

Additional Information

• Rules for converting indirect speech to direct speech:

• Remove introductory words like "He asked me" or "He said."

• Use quotation marks to enclose the exact words spoken.

• Ensure proper punctuation, such as a question mark for questions.

• Preserve the tense from the original direct speech.

• Examples:

• Indirect: She asked if I was coming tomorrow. → Direct: She asked, "Are you coming tomorrow?"

• Indirect: He wondered whether it was raining. → Direct: He said, "Is it raining?"

Q14. Answer: (a) from, on

The correct answer is '1' i.e. from, on.

Key Points

• The preposition "from" is commonly used with the verb "refrain" to indicate abstention or avoidance of an action. Hence, "refrained from" is grammatically correct.

• The preposition "on" is used with the verb "focused" to specify the target or area of concentration. Therefore, "focused on" is the correct usage.

• Options 2, 3, and 4 use incorrect prepositions, making the sentence grammatically and contextually incorrect.

Correct sentence: She refrained from commenting publicly and instead focused on internal communication.

Additional Information

• Usage of Prepositions:

• From: Indicates the source or point of abstention (e.g., refrained from eating).

• On: Specifies the focus or target area (e.g., focused on the task).

• Incorrect Options:

• Option 2 (of, in): "Refrained of" and "focused in" are grammatically incorrect.

• Option 3 (for, by): These prepositions do not align with the verbs "refrained" and "focused."

• Option 4 (with, to): "Refrained with" and "focused to" are incorrect usages.

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Q15. Answer: (c) Concious

The correct answer is '3' i.e. Concious is spelled incorrectly.

Key Points

• The word Concious is misspelled. The correct spelling is Conscious.

• The other words, Government, Embellish, and Perceive, are spelled correctly.

• This question tests your ability to identify misspelled words among a list of options.

Correct sentence: One of these words is spelled incorrectly. The correct word is Conscious.

Additional Information

• Tips for identifying spelling errors:

• Pay attention to commonly misspelled words, such as "Conscious," "Separate," and "Definite."

• Look for subtle differences in spelling, especially with vowels and consonant placement.

• Mnemonic for Conscious: "Be conscious of your spelling, as it has 'sci' in it."

Q16. Answer: (b) She told him that he had been sleeping.

The correct answer is '2' i.e. She told him that he had been sleeping.

Key Points

• The given sentence is in direct speech: She said to him, "You were sleeping."

• When converting a sentence from direct to indirect speech, the pronouns and tenses must be adjusted to match the context.

• Here, the past continuous tense in direct speech ("You were sleeping") changes to past perfect continuous tense ("he had been sleeping") in indirect speech.

• The pronoun "you" is changed to "he" to match the subject (him) in the indirect speech.

Correct sentence: She told him that he had been sleeping.

Additional Information

• Rules for changing direct to indirect speech:

• Change in pronouns: Adjust the pronoun to match the context of the sentence.

• Change in tense: The verb tense in the reported speech changes depending on the reporting verb (e.g., past continuous becomes past perfect continuous).

• Remove quotation marks: Replace them with conjunctions like "that".

• Example for practice:

• Direct: He said, "I am watching a movie."

• Indirect: He said that he was watching a movie.

Q17. Answer: (c) Perserverance

The correct answer is '3' i.e. Perserverance is incorrectly spelled.

Key Points

• The word Perserverance in Option 3 is incorrectly spelled.

• The correct spelling of the word is Perseverance, which means persistence in doing something despite difficulty or delay in achieving success.

• The other words — Magnanimous, Vehement, and Recalcitrant — are correctly spelled and valid English words.

Correct Answer: The word Perseverance should replace the incorrect spelling Perserverance.

Additional Information

• Magnanimous: Generous or forgiving, especially toward a rival or less powerful person.

• Vehement: Showing strong feeling; forceful, passionate, or intense.

• Recalcitrant: Having an obstinately uncooperative attitude toward authority or discipline.

Q18. Answer: (d) Awareness about the importance of every hospital worker has grown.

The correct answer is Option 4.

Key Points

• To identify the Present Perfect Tense, we look for the specific verb structure: Has/Have + Past Participle (V3).

• In Option 4, the sentence "Awareness... has grown" follows this exact formula (has + the third form of the verb grow). This tense is used to describe an action that happened at an unspecified time in the past or began in the past and continues to the present.

• Why other options are incorrect:

• Option 1: "Hospitals operate..." is in the Simple Present Tense (V1).

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• Option 2: "...employee plays..." is in the Simple Present Tense (V1 + s).

• Option 3: "Many remain..." is in the Simple Present Tense (V1).

Therefore, the correct answer is 4.

Analytical Insight: In competitive exams, identifying tenses is a foundational skill. Always remember that the Present Perfect ("has grown") links the past to the present, whereas the Simple Past ("grew") would imply the action is finished and disconnected from now.

Additional Information

• Present Perfect: Subject + has/have + V3 (e.g., has worked, have seen).

• Simple Present: Subject + V1 (s/es) (e.g., works, see).

• Tireless: Having or showing great effort or energy.

• Psychological weight: The mental or emotional burden of a situation.

Q19. Answer: (a) Nurses may have to attend to critical patients for entire shifts without rest.

The correct answer is Option 1.

Key Points

• To identify the sentence with a Modal Verb, we look for auxiliary (helping) verbs that express necessity, possibility, permission, or ability. Common modal verbs include can, could, may, might, must, shall, should, will, and would.

• In Option 1, the word "may" is a modal verb used to express possibility or a likely scenario. The phrase "may have to" combines this possibility with an obligation.

• Why other options are incorrect:

• Option 2: "Emergency ward staff often faces..." uses a main verb in the simple present tense. "Often" is an adverb, not a modal verb.

• Option 3: "...employee is marked..." uses a helping verb "is" (part of the passive voice structure), but it is a primary auxiliary, not a modal.

• Option 4: "Hospital employees witness..." uses a simple action verb (V1) without any auxiliary.

Therefore, the correct answer is 1.

Analytical Insight: In high-level competitive exams, modal verbs are frequently tested because they change the "mood" or "tone" of a sentence. "Nurses attend" (a fact) is very different from "Nurses may have to attend" (a potential requirement).

Additional Information

• Modal Verb: A verb that is used with another verb to express ideas such as possibility, permission, or intention.

• Precision: The quality, condition, or fact of being exact and accurate.

• Compassion: Sympathetic pity and concern for the sufferings or misfortunes of others.

• Around the clock: Happening all day and all night.

Q20. Answer: (c) Emotional or mental pressure

The correct answer is Option 3.

Key Points

• To determine the meaning of "strain," we must look at the words surrounding it: "...long hours, high stress, and emotional strain."

• In this context, the author is discussing the psychological challenges faced by hospital workers. Strain here refers to the severe pressure or tension placed on one's mental state due to demanding circumstances.

• Option 3 is the most accurate because "emotional or mental pressure" aligns perfectly with the passage's discussion of "psychological weight" and witnessing "suffering, grief, and loss."

• Why other options are incorrect:

• Option 1: While "strain" can refer to a genetic variant of a virus (e.g., a "strain of COVID-19"), it does not fit the context of a worker's emotional state.

• Option 2: A "pulled muscle" is a physical strain, but the passage explicitly uses the adjective "emotional" to qualify the word.

• Option 4: Like option 2, a "physical injury" describes a different type of strain that is not supported by the context of emotional burden.

Therefore, the correct answer is 3.

Analytical Insight: In high-level competitive exams, vocabulary questions often use "Polysemous" words (words with multiple meanings). You must ignore the literal or scientific meanings (like a virus strain or muscle strain) and choose the one that fits the tone and topic of the passage.

Additional Information

• Strain: A state of worry and tension caused by a difficult situation.

• Tireless: Putting a lot of hard work and energy into something over a long period.

• Psychological weight: The mental burden or impact of experiencing difficult emotions or events.

• Fragile: Easily broken or damaged; in this context, it refers to the delicate mental well-being of workers.

Q21. Answer: (c) A heavy emotional load

The correct answer is Option 3.

Key Points

• To identify what "burden" implies, we look at the immediate context in the third paragraph: "...emotional burden. Hospital employees witness suffering, grief, and loss..."

• In this context, burden refers to something that is difficult to bear or carry. Since it is described as "emotional," it signifies the mental weight or the heavy emotional load that comes from dealing with human suffering.

• The author reinforces this later by using the phrase "psychological weight," which is a direct synonym for an emotional burden in this setting.

• Why other options are incorrect:

• Option 1: A legal responsibility refers to duties defined by law; the passage focuses on the feeling and impact of the work, not its legal status.

• Option 2: A financial cost involves money; there is no mention of the employees' personal expenses or debts.

• Option 4: A physical task refers to manual labor; while hospital work is physically demanding, the word "burden" is specifically paired with "emotional" in this sentence.

Therefore, the correct answer is 3.

Analytical Insight: In high-level competitive exams, "Contextual Implication" questions test your ability to link related terms across the passage. Notice how the author uses "burden," "strain," and "weight" to describe the same psychological concept.

Additional Information

• Burden: A load, typically a heavy one; or a duty/misfortune that causes hardship.

• Compassion: Sympathetic pity and concern for the sufferings or misfortunes of others.

• Precision: The quality of being exact and accurate.

• Unnoticed: Not seen or noticed; disregarded.

Q22. Answer: (c) Hospital employees need recognition and support

The correct answer is Option 3.

Key Points

• To identify the main message, we look for the core argument or conclusion the author reaches after presenting all the facts.

• The passage describes the hardships (long hours, stress, emotional burden) and the critical roles played by all hospital staff, not just doctors.

• The final paragraph provides the "call to action" or the ultimate point: "However, proper recognition, mental health support, and fair working conditions are still essential to ensure the well-being of those who care for others."

• Option 3 directly summarizes this need for acknowledgement and better support systems for these workers.

• Why other options are incorrect:

• Option 1: This contradicts the text, which emphasizes that "every hospital employee plays a critical role" and that others' contributions often go "unnoticed."

• Option 2: This is the opposite of the truth; the text states their lives are marked by "long hours" and "entire shifts without rest."

• Option 4: The passage uses words like "high stress," "emotional strain," and "suffering," which are the opposite of "fun and relaxing."

Therefore, the correct answer is 3.

Analytical Insight: In competitive exams, the "Main Message" is usually found in the concluding sentences of the passage. While the middle paragraphs provide evidence of the struggle, the end explains why that struggle matters and what needs to change.

Additional Information

• Around the clock: Day and night without stopping.

• Recognition: Appreciation or acclaim for an achievement or service.

• Well-being: The state of being comfortable, healthy, or happy.

• Unnoticed: Not seen or noticed; disregarded.

Q23. Answer: (d) P, Q, R, S

The correct answer is '4' i.e. P, Q, R, S.

Key Points

• The given sentence parts describe a sequential process of developing and deploying an app.

• The correct order must follow the logical and chronological progression of steps in app development.
• P: This is the first step where the interface is designed by creating mockups of each screen.
• Q: After the design, the app's core features and logic are programmed.
• R: Once the app is built, testing is done to ensure it runs well on various devices.
• S: Finally, the app is uploaded to the app store for users to download.

Correct sequence: P, Q, R, S.

Additional Information

• This type of question tests your ability to understand the logical flow and order of events in a process.
• Pay attention to keywords and phrases indicating sequence or steps, such as "created," "programmed," "tested," and "uploaded."
• Practicing such questions improves comprehension and sequencing skills.

Q24. Answer: (c) P, R, Q, S

The correct answer is '3' i.e. P, R, Q, S.

Key Points

• The paragraph describes the process of designing and building a robot as part of a final assignment.
• Sentence P introduces the subject of the paragraph: a robot built as the students' final assignment.
• Sentence R follows logically, elaborating on the students' skills that contributed to building the robot.
• Sentence Q describes the detailed process of writing the code, which was a critical part of the assignment.
• Sentence S concludes the paragraph, highlighting the success of the robot's performance and the students' dedication.

Correct sequence: P, R, Q, S.

Additional Information

• When rearranging sentences, always identify the main subject or topic sentence, which is typically the first sentence of the paragraph.
• Look for sentences that elaborate on or provide details about the subject to follow logically.
• Conclude with a sentence that sums up the topic or provides an outcome.

Q25. Answer: (a) Sociable

The correct answer is '1' i.e. Sociable.

Key Points

• Misanthropic refers to the dislike or distrust of humanity or people in general.
• The antonym of "Misanthropic" would be a word that reflects a positive attitude towards people or society.
• Sociable means enjoying the company of others, which is the opposite of being misanthropic.
• Other options:
• Reclusive: Refers to someone who prefers isolation, similar to misanthropic.
• Cynical: Suggests distrust or skepticism, which aligns with misanthropic attitudes.
• Pessimistic: Indicates a negative outlook, but is not directly related to disliking people.

Correct sentence: The antonym of "Misanthropic" is Sociable, which represents a positive attitude toward people and society.

Additional Information

• Synonyms of Misanthropic: Antisocial, distrustful, hermit-like.
• Sociable: Represents friendliness, openness, and willingness to interact with others.
• Context: Understanding antonyms often involves identifying the opposite traits or qualities described by the word.

Q26. Answer: (b) 186

The logic followed here is:

thus, "186" will replace the question mark in the given series.

Hence, the correct option is "Option 2".

Q27. Answer: (c) -4

The logic followed here is:

Logic: Subtract the second number from the first and then divide by 3.

Given:

60 " 21 = (60 − 21) ÷ 3 = 39 ÷ 3 = 13

81 " 9 = (81 − 9) ÷ 3 = 72 ÷ 3 = 24

Now,

27 " 39 = (27 − 39) ÷ 3 = (−12) ÷ 3 = −4

Hence, the correct answer is Option 3.

Q28. Answer: (b) 1980

The logic followed here is:

Logic: Last Number = 6 × 1st Number × 2nd Number

Given:

47 @ 39 = 10998

Last Number = 6 × 47 × 39 = 10998

30 @ 51 = 9180

Last Number = 6 × 30 × 51 = 9180

Similarly, 30 @ 11 = ?

So, ? = 6 × 30 × 11 = 1980

Hence, the correct answer is Option 2.

Q29. Answer: (c) 508

The logic followed here is:

Logic: Cube of consecutive numbers starting from 4, then subtract 4

Checking the given series:

$4^3 - 4 = 64 - 4 = 60$

$5^3 - 4 = 125 - 4 = 121$

$6^3 - 4 = 216 - 4 = 212$

$7^3 - 4 = 343 - 4 = 339$

Now, for the next term:

$8^3 - 4 = 512 - 4 = 508$

thus, "508" will replace the question mark in the given series.

Hence, the correct option is "Option 3".

Q30. Answer: (b) 9

The logic followed here is:

Logic: The pattern is based on the square of the difference of digits.

$61 \rightarrow (6 - 1)^2 = 5^2 = 25$

Similarly,

$52 \rightarrow (5 - 2)^2 = 3^2 = 9$

Hence, the correct answer is Option 2.

Q31. Answer: (c) 315

The logic followed here is:

thus, "315" will replace the question mark in the given series.

Hence, the correct option is "Option 3".

Q32. Answer: (d) H90

The logic followed here is:

The series combines letters in alphabetical order and numbers as squares:

A → 1, $1^2 = 1$ → A4 (Number seems adjusted)

C → 3, $3^2 = 9$ → C9

E → 5, $5^2 = 25$ → E25

G → 7, $7^2 = 49$ → G81 (Actually $9^2 = 81$, so number follows square of odd numbers in sequence: 2^2, 3^2, 5^2, 9^2)

H → 8, $8^2 = 64$ → H90

Here, H90 does not fit the pattern of letter following odd positions and number being a perfect square.

Hence, the correct answer is Option 4.

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Q33. Answer: (b) xyxxxyx

The logic followed here is:

Given Sequence: x _ x _ x _ x x _ y x _ x _ _

Now, putting the letters in the blank spaces given in the options one by one:

Option 1) yxxxxxy → x y x x x x x x x y x x x x y

→ Pattern breaks, not consistent

Option 2) xyxxxyx → x x x y x x x x x y x x x y x

→ x and y appear in positions that maintain a consistent pattern

Option 3) yxxyxxx → x y x x x x x x y y x x x x x

→ Pattern inconsistent

Option 4) xyxyxyx → x x x y x x x x y y x x x y x

→ Pattern inconsistent

Here, “xyxxxyx” fills the blanks maintaining the correct sequence.

Hence, the correct answer is "Option 2".

Q34. Answer: (b) 29

The logic followed here is:

thus, "29" will replace the question mark in the given series.

Hence, the correct option is "Option 2".

Q35. Answer: (b) A

Given: Weights of 5 pens W, X, Y, Z, and A are all different.

Weight of A is less than Z but more than X → X < A < Z

Weight of Y is more than W

Weight of Y is second lowest

Position (Lowest → Highest)	Pen
1	W
2	Y
3	X
4	A
5	Z

So, the second highest weight is A.

Hence, the correct answer is Option 2.

Q36. Answer: (a) 2

Given: Price of 5 cups G, H, J, K and L is compared.

Price of no two cups is the same.

Price of K is more than L but less than H and J.

Price of G is the highest.

Price of H is more than J.

Now, arranging the cups in descending order of price:

Cup	Position (Price)
G	Highest
H	Second highest
J	Third highest
K	Fourth highest
L	Lowest

Cups with price less than J are K and L → total 2 cups.

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Hence, the correct answer is Option 1.

Q37. Answer: (c) B

Given: There are 6 flats on a floor in two rows (three in each row opposite to each other).

Flats of one row are facing north and the other row is facing south. Flats are allotted to A, B, C, D, E and F with the following conditions:

D and F get diagonally opposite flats.

F's flat is next to C's flat.

C gets a South-facing flat.

B and E face the same direction.

B is not next to D.

North-facing flats → B, E, D

From the options, 'B' is the correct answer.

Hence, the correct answer is Option 3.

Q38. Answer: (b) 3568

The logic followed here is:

Logic: The pattern is based on adding 951 to the given number.

2943 + 951 = 3894

8615 + 951 = 9566

Similarly,

2617 + 951 = 3568

Hence, the correct answer is Option 2.

Q39. Answer: (d) Neither I nor II

BODMAS Table:

By interchanging the given two numbers (not digits) 3 and 2, we check each equation:

Equation I: 3 × 9 + 2 − 8 + 1 = 13

Interchange 3 and 2 → 2 × 9 + 3 − 8 + 1 = ?

=> 18 + 3 − 8 + 1 = 14 (≠ 13) → Not correct

Equation II: 2 × 8 + 3 − 9 + 1 = 17

Interchange 2 and 3 → 3 × 8 + 2 − 9 + 1 = ?

=> 24 + 2 − 9 + 1 = 18 (≠ 17) → Not correct

Hence, after interchanging, neither equation is correct.

The correct answer is Option 4.

Q40. Answer: (c) +, x, -, ÷

BODMAS Table:

Given equation: 19 * 11 * 2 * 48 * 6 = 33

Now, if * signs are replaced sequentially as +, ×, -, ÷, then:

=> 19 + 11 × 2 − 48 ÷ 6 = ?

=> 19 + 22 − 8 = ?

=> 41 − 8 = ?

=> 33

Hence, the correct answer is Option 3.

Q41. Answer: (c) CDEF28

The logic followed here is:

Logic: The pattern is based on sum of positions of letters = given number.

Now, checking the options:

Option 1) KLMN → 11 + 12 + 13 + 14 = 50

Option 2) QRST → 17 + 18 + 19 + 20 = 74

Option 3) CDEF → 3 + 4 + 5 + 6 = 18 ≠ 28

Option 4) VWXY → 22 + 23 + 24 + 25 = 94

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Hence, the correct answer is Option 3.

Q42. Answer: (d) BW 513 - ZR8

The logic followed here is:

Logic: Left number = (right number)³ − 1, and letters shift by −2 and −5

Checking the given pairs:

For, SN1330 − QI11

Number: $11^3 - 1 = 1331 - 1 = 1330$

Letters: S → Q (−2), N → I (−5)

For, MP999 − KK10

Number: $10^3 - 1 = 1000 - 1 = 999$

Letters: M → K (−2), P → K (−5)

For, TC728 − RX9

Number: $9^3 - 1 = 729 - 1 = 728$

Letters: T → R (−2), C → X (−5)

For, BW513 − ZR8

Number: $8^3 - 1 = 512 - 1 = 511$ (given 513)

Letters: B → Z (−2), W → R (−5)

Since, the number pattern is not followed in the 4th pair,

Hence, the correct answer is Option 4.

Q43. Answer: (b) 7644 - 7064

The logic followed here is:

Logic: The pattern is based on subtracting 590 from the number.

Now, checking the given options:

Option 1) 8032 − 590 = 7442

Option 2) 7644 − 580 = 7064

Option 3) 6836 − 590 = 6246

Option 4) 9888 − 590 = 9298

Here, all pairs follow subtraction of 590 except the second pair.

Hence, the correct answer is Option 2.

Q44. Answer: (d) SVFW

The logic followed here is:

For, ‘KOOK’ is written as OSSO,

For, ‘FRIG’ is written as JVMK,

Similarly, for ‘ORBS’,

So, ‘ORBS’ will be written as ‘SVFW’.

Hence, the correct answer is Option 4.

Q45. Answer: (a) VOLT

Given word: VOLUNTEER

Word	Letters Used	Valid / Not
VOLT	V, O, L, T	Valid
GEARS	G, E, A, R, S	G and A not in VOLUNTEER → Not Valid
NAME	N, A, M, E	A and M not in VOLUNTEER → Not Valid
ROME	R, O, M, E	M not in VOLUNTEER → Not Valid

Original word: V O L U N T E E R

Available letters: V, O, L, U, N, T, E, E, R

Only VOLT can be formed using the letters of VOLUNTEER.

Hence, the correct answer is Option 1.

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Q46. Answer: (c) BROADEN

Given word: BOARD

Now, Checking options:

For, DEBARK

Contains B, A, R, D but no O

For, ROADEN

Contains R, O, A, D but no B

For, BROADEN

Contains B, O, A, R, D

For, BARKED

Contains B, A, R, D but no O

Hence, the correct answer is Option 3.

Q47. Answer: (d) PX420

The logic followed here is:

Logic: The pattern is based on shifting letters backward (−2, −3) and multiplying the number by 3.

Now, checking the given pairs:

CX238 → AU714

NL94 → LI282

Similarly,

RA140 → ?

So,

RA140 → PX420

Hence, the correct answer is Option 4.

Q48. Answer: (b) RY43

The logic followed here is:

Logic: The pattern is based on shifting both letters backward by 5 positions and taking the sum of positions of the new letters as the number.

Now, checking the given pairs:

XR42 → SM32

FL18 → AG8

Similarly,

WD27 → ?

So,

WD27 → RY43

Hence, the correct answer is Option 2.

Q49. Answer: (b) KT196

The logic followed here is:

PN 112 : GI 392

FB 84 : UY 294

Similarly,

AR 56 : ?

Hence, the correct answer is Option (2).

Q50. Answer: (d) LU3840

The logic followed here is:

Hence, the correct term should be LV3840, but given is LU3840.

Hence, the correct answer is Option 4.

Q51. Answer: (b) 20%

Shortcut Trick

Profit % = (Profit ÷ Cost Price) × 100

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= (25 ÷ 125) × 100
= (1 ÷ 5) × 100
= 20%
Therefore Answer = 20%
Alternate Method
Given:
Cost Price (CP) = 125
Profit = 25
Selling Price (SP) = 125 + 25 = 150
Formula used:
Profit % = (Profit ÷ CP) × 100
CP = 125 Profit = 25 SP = 150
Calculations:
=> Profit % = (25 ÷ 125) × 100
=> = (1 ÷ 5) × 100
=> = 20%
Therefore The correct answer is 20%.

Q52. Answer: (b) 23.5%

Shortcut Trick
Successive Discount Formula = x + y − (x × y / 100)
Here x = 15 and y = 10
Equivalent Discount = 15 + 10 − (15 × 10 / 100)
Equivalent Discount = 25 − 1.5 = 23.5%
Therefore Answer = 23.5%
Alternate Method
Given:
First discount = 15%
Second discount = 10%
Formula used:
Net Discount % = [1 − (1 − d1/100) × (1 − d2/100)] × 100
Marked Price (100%) Selling Price (76.5%) 23.5% Total Discount Net Equivalent Discount = 23.5%
Calculations:
Assume the Marked Price (MP) = 100 units
=> Price after 15% discount = 100 − (15% of 100) = 85 units
=> Price after 10% successive discount = 85 − (10% of 85)
=> Final Selling Price = 85 − 8.5 = 76.5 units
=> Single Equivalent Discount = 100 − 76.5 = 23.5%
Therefore The correct answer is 23.5% (Option 2).

Q53. Answer: (a) Rs. 500

Shortcut Trick
Net interest percentage = Rate × Time
Net interest percentage = 5% × 2 = 10%
Simple Interest = 10% of 5000
Simple Interest = 500
Therefore Answer = Rs. 500
Alternate Method
Given:
Principal (P) = Rs. 5000
Time (T) = 2 years
Rate (R) = 5% per annum

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Formula used:
Simple Interest (SI) = (P × R × T) / 100
Start (Year 0)
Year 1
Year 2
P = Rs. 5000
+5% (Rs. 250)
+5% (Rs. 250)
Total SI = Rs. 250 + Rs. 250 = Rs. 500
Calculations:
SI = (5000 × 5 × 2) / 100
=> SI = (5000 × 10) / 100
=> SI = 50000 / 100
=> SI = 500
Therefore The correct answer is Rs. 500, which is option (1).

Q54. Answer: (a) Rs. 331

Shortcut Trick
The effective interest rate for 10% compounded annually for 3 years is 33.1%.
Compound Interest = 33.1% of Rs. 1000
CI = (33.1 ÷ 100) × 1000 = Rs. 331
Therefore The correct answer is Rs. 331.
Alternate Method
Given:
Principal (P) = Rs. 1000
Rate (R) = 10% per annum
Time (T) = 3 years
Formula Used:
Amount (A) = P(1 + R/100)^T
Compound Interest (CI) = A − P
=> A = 1000 × (1 + 10/100)³
=> A = 1000 × (1.1)³
=> A = 1000 × 1.331 = Rs. 1331
=> CI = 1331 − 1000 = Rs. 331
Therefore The correct answer is Rs. 331.
Additional Information
Effective Rate for 3 Years
For a rate R%, the 3-year effective rate is 3R + (3R²/100) + (R³/10000) %.
Difference between CI and SI
For 2 years, Difference = P(R/100)². For 3 years, Difference = P(R/100)² × (3 + R/100).
Compounding Half-Yearly
If interest is compounded semi-annually, the rate is halved (R/2) and the time is doubled (2T).

Q55. Answer: (a) 360°

Shortcut Trick
The central angles of any polygon inscribed in a circle are formed by the radii meeting at the center point.
The sum of all angles around a single central point is always a complete revolution.
Total angle of a complete revolution = 360°.
This sum remains 360° regardless of the number of sides of the polygon.
Therefore Answer = 360°
Alternate Method
Given:

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Number of sides of the regular polygon (n) = 15
Shape = Circular antenna divided into equal triangular segments
Formula used:
Central angle of one segment = 360° ÷ n
Sum of all central angles = n × (Central angle of one segment)
θ
Center
n = 15 sides
Sum of Central Angles = 360°
Calculations:
Since the circular antenna is divided into 15 equal triangular segments:
=> Central angle of each segment = 360° ÷ 15
=> Central angle = 24°
=> There are 15 such central angles formed at the center.
=> Sum of all central angles = 15 × 24°
=> Sum = 360°
Therefore The correct answer is (1).

Q56. Answer: (c) Always rational

Shortcut Trick
Repeating decimals (like 0.333...) can always be expressed in the form of p/q where p, q are integers and q ≠ 0.
By definition, any number that can be written as a fraction p/q is a Rational Number.
Non-terminating but repeating decimals = Rational Numbers.
Non-terminating and non-repeating decimals = Irrational Numbers.
Therefore Answer = Always rational
Alternate Method
Given:
A repeating decimal (e.g., 0.666..., 0.1212...)
Formula used:
A rational number is any number that can be expressed as p/q (where p, q are integers, q ≠ 0).
Real Numbers Rational Repeating Decimals (0.333... = 1/3) Irrational Non-repeating & Non-terminating
Calculations:
Let x = 0.333... (i)
=> Multiplying by 10 on both sides: 10x = 3.333... (ii)
=> Subtracting (i) from (ii): 10x − x = 3.333... − 0.333...
=> 9x = 3
=> x = 3/9 = 1/3
=> Since x is expressed as a fraction 1/3, it is a rational number.
Therefore The correct answer is Always rational. (Option 3)

Q57. Answer: (b) 840 π cm³

Shortcut Trick
Convert length to centimeters: 1.2 m = 120 cm.
Area of material cross-section = π × (Outer Radius² − Inner Radius²).
Difference in radius squares = 4² − 3² = 16 − 9 = 7.
Volume = 7 × 120 × π = 840π.
Therefore Answer = 840π cm³
Alternate Method
Given:
Length of the pipe (h) = 1.2 m = 120 cm
Inner radius (r) = 3 cm
Outer radius (R) = 4 cm

Formula used:

Volume of material in a hollow pipe = π × (R² − r²) × h

R=4 r=3 h = 120 cm Volume = π(R² − r²)h

Calculations:

=> Volume = π × (4² − 3²) × 120

=> Volume = π × (16 − 9) × 120

=> Volume = π × 7 × 120

=> Volume = 840π cm³

Therefore The correct answer is option (2).

Q58. Answer: (b) 25617.6 cm²

Shortcut Trick

Base Area = (√3 / 4) × 12² = 1.732 × 36 = 62.352 cm²

Lateral Surface Area = Perimeter × height = (3 × 12) × 25 = 900 cm²

TSA per box = 900 + (2 × 62.352) = 1024.704 cm²

Total Area for 25 boxes = 25 × 1024.704 = 25617.6 cm²

Therefore The correct answer is 25617.6 cm².

Alternate Method

Given:

Base side of the equilateral triangular base (s) = 12 cm

Height of the prism (h) = 25 cm

Number of boxes (n) = 25

Value of √3 = 1.732

Formula Used:

Total Surface Area (TSA) of a prism = Lateral Surface Area + 2 × Base Area

Lateral Surface Area (LSA) = Perimeter of base × Height

Area of Equilateral Triangle = (√3 / 4) × side²

Calculations:

=> Area of one triangular base = (1.732 / 4) × 12 × 12

=> Area of one triangular base = 1.732 × 36 = 62.352 cm²

=> Perimeter of the base = 3 × 12 = 36 cm

=> LSA of one box = 36 × 25 = 900 cm²

=> TSA of one box = 900 + 2 × 62.352

=> TSA of one box = 900 + 124.704 = 1024.704 cm²

=> TSA of 25 such boxes = 25 × 1024.704

=> TSA of 25 boxes = 25617.6 cm²

Therefore The correct answer is 25617.6 cm².

Additional Information

Properties of a Prism

A prism is a polyhedron with two congruent and parallel faces called bases. The volume of any prism is calculated as (Area of base × Height).

Lateral Surface Area (LSA)

The LSA of a prism is the area of all its side faces, which equals the (Perimeter of the base × height of the prism).

Equilateral Triangle formulas

For a side 's', the height is (√3 / 2)s and the area is (√3 / 4)s². All internal angles are 60°.

Q59. Answer: (b) 2:1

Shortcut Trick

For a hemisphere, the height is always equal to its radius (h = r).

Since the cone has the same height and radius, its height (h) is also equal to (r).

Volume Ratio = (2/3 π r³) : (1/3 π r² × r) = 2 : 1.

Therefore The correct answer is 2:1.

Alternate Method
Given:
Base radius of hemisphere = Base radius of cone = r
Height of hemisphere = Height of cone = h
Formula Used:
Volume of a hemisphere (V1) = 2/3 π r³
Volume of a cone (V2) = 1/3 π r² h
Calculations:
=> In a hemisphere, the distance from the center of the base to the top is its radius.
=> Therefore Height of hemisphere (h) = r
=> Since both have the same height, Height of cone (h) = r
=> Volume of cone (V2) = 1/3 π r² × r = 1/3 π r³
=> Ratio = V1 : V2 = (2/3 π r³) : (1/3 π r³)
=> Ratio = 2/3 : 1/3 = 2 : 1
Therefore The correct answer is 2:1.
Additional Information
Volume of Sphere
The volume of a complete sphere is given by 4/3 π r³, which is exactly double that of a hemisphere.
Surface Area of Hemisphere
Curved Surface Area (CSA) = 2π r² and Total Surface Area (TSA) = 3π r².
Volume of Cylinder
The volume of a cylinder with the same radius and height would be π r² h = π r³, making the ratio Cylinder : Hemisphere : Cone = 3 : 2 : 1.

Q60. Answer: (a) 176 √2 cm², 8√2 cm

Shortcut Trick
Area of Parallelogram = Side1 × Side2 × sin(θ)
Area = 22 × 16 × sin(45°) = 352 × (1/√2) = 176√2 cm²
Height (h) = Area ÷ Base = 176√2 ÷ 22 = 8√2 cm
Therefore Answer = 176√2 cm², 8√2 cm
Alternate Method
Given:
Sides of the parallelogram: a = 22 cm, b = 16 cm
Angle between the sides: θ = 45°
Formula used:
Area = Side1 × Side2 × sin(θ)
Area = Base × Height
45° Base (a) = 22 cm Side (b) = 16 cm h Area = 176√2 cm²
Calculations:
Area = 22 × 16 × sin(45°)
=> Area = 352 × (1/√2)
=> Area = (352 ÷ √2) × (√2 ÷ √2) = 176√2 cm²
=> Height corresponding to the longer side (h) × 22 = 176√2
=> h = 176√2 ÷ 22 = 8√2 cm
Therefore The correct answer is option (1).

Q61. Answer: (a) 6912 π cm²

Shortcut Trick
Number of hemispheres (n) = (Volume of Sphere) ÷ (Volume of Hemisphere)
n = [4/3 × π × R³] ÷ [2/3 × π × r³] = 2 × (R/r)³
n = 2 × (24/8)³ = 2 × 3³ = 2 × 27 = 54
Total CSA = n × 2πr² = 54 × 2 × π × 8² = 108 × 64π = 6912π

Therefore The correct answer is 6912π cm².
Alternate Method
Given: Radius of the spherical ball (R) = 24 cm, Radius of each hemisphere (r) = 8 cm.
Formula Used: Volume of sphere = 4/3 πR³ | Volume of hemisphere = 2/3 πr³ | CSA of hemisphere = 2πr²
=> Volume of the original sphere = 4/3 × π × (24)³ cm³
=> Volume of one hemisphere = 2/3 × π × (8)³ cm³
=> Let n be the number of hemispheres formed.
=> n × [2/3 × π × 8 × 8 × 8] = 4/3 × π × 24 × 24 × 24
=> n = [4 × 24 × 24 × 24] ÷ [2 × 8 × 8 × 8] = 2 × 3 × 3 × 3 = 54
=> Combined Curved Surface Area (CSA) = n × 2πr²
=> Total CSA = 54 × 2 × π × (8)² = 108 × 64π
=> Total CSA = 6912π cm²
Therefore The correct answer is 6912π cm².
Additional Information
Surface Area of a Sphere
A sphere only has one surface area, which is 4πr², where r is the radius.
Total Surface Area of a Hemisphere
The total surface area (TSA) includes the curved area (2πr²) and the flat base area (πr²), totaling 3πr².
Volume Invariance
When a solid object is melted and recast into other shapes, its Total Volume remains constant (Volume_(Initial) = Volume_(Final)).
Volume of Sphere vs Hemisphere
A hemisphere is exactly half of a sphere; thus, its volume is 2/3 πr³ compared to the sphere's 4/3 πr³.

Q62. Answer: (c) 3

Shortcut Trick
√20.25 = 4.5
4.5 + √(16 + y²) = 9.5
√(16 + y²) = 9.5 − 4.5 = 5
Square both sides: 16 + y² = 25
y² = 9 → y = 3
Therefore Answer = 3
Alternate Method
Given:
√20.25 + √(16 + y²) = 9.5
Formula used:
(√a)² = a | y² = k => y = √k
√20.25 4.5 √(16 + y²) 5.0 Total Equation Sum = 9.5 Finding y: √(16 + y²) = 5
Calculations:
=> √20.25 = √(2025/100) = 45/10 = 4.5
=> 4.5 + √(16 + y²) = 9.5
=> √(16 + y²) = 9.5 − 4.5
=> √(16 + y²) = 5
=> Squaring both sides: 16 + y² = 5² = 25
=> y² = 25 − 16
=> y² = 9
=> y = √9 = 3
Therefore The correct answer is (3).

Q63. Answer: (d) Rs. 13,500

Shortcut Trick
Profit Ratio (Chetan : Sahir) = (9,000 × 12) : (6,000 × 6)
Ratio = 108,000 : 36,000 = 3 : 1

Total Ratio units = 3 + 1 = 4 units
Value of 4 units = Rs. 18,000 → 1 unit = Rs. 4,500
Chetan share = 3 units = 3 × 4,500 = 13,500
Therefore Answer = Rs. 13,500
Alternate Method
Given:
Chetan investment = Rs. 9,000 | Time = 12 months
Sahir investment = Rs. 6,000 | Time = 6 months
Total business profit = Rs. 18,000
Formula used:
Profit Share Ratio = (Investment1 × Time1) : (Investment2 × Time2)
Profit Distribution Bar Chetan (3 units) Sahir (1) Total Profit = Rs. 18,000 (4 Units) Chetan Share = (3/4) × 18,000 = Rs. 13,500
Calculations:
=> Profit Ratio = (9,000 × 12) : (6,000 × 6)
=> Profit Ratio = 108,000 : 36,000
=> Simplified Ratio = 3 : 1
=> Total profit share parts = 3 + 1 = 4
=> Chetan share = (3 ÷ 4) × 18,000
=> Chetan share = 3 × 4,500 = 13,500
Therefore The correct answer is Rs. 13,500 (Option 4).

Q64. Answer: (a) √2

Shortcut Trick
If tan θ = 1, then the angle θ = 45°.
Standard values: sin 45° = 1/√2 and cos 45° = 1/√2.
Sum = sin 45° + cos 45° = 1/√2 + 1/√2 = 2/√2 = √2.
Therefore Answer = √2
Alternate Method
Given:
tan θ = 1
Formula used:
tan θ = Perpendicular (P) / Base (B)
Hypotenuse (H) = √(P² + B²)
sin θ = P / H and cos θ = B / H
θ Base (B) = 1 P = 1 H = √(12 + 12) = √2
Calculations:
=> tan θ = 1 / 1 → Perpendicular (P) = 1 and Base (B) = 1
=> Hypotenuse (H) = √(1² + 1²) = √2
=> sin θ = P / H = 1 / √2
=> cos θ = B / H = 1 / √2
=> sin θ + cos θ = (1 / √2) + (1 / √2)
=> Result = 2 / √2 = √2
Therefore The correct answer is (1).

Q65. Answer: (c) • 4/5

Shortcut Trick
Since sin x = 3/5, we use the Pythagorean triplet (3, 4, 5) where Perpendicular = 3 and Hypotenuse = 5.
The magnitude of the Base (Adjacent side) = √(5² − 3²) = 4.
In Quadrant II, sine is positive but cosine is negative (ASTC rule).
Therefore, cos x = −Base/Hypotenuse = −4/5.
Therefore Answer = −4/5
Alternate Method

Given:
sin x = 3/5 and x is in Quadrant II.
Formula used:
cos x = ±√(1 − sin²x)
x Base = −4 Perp = 3 Hyp = 5 Quadrant II cos x = −4/5 (Negative in Q2)
Calculations:
sin x = 3/5
=> cos²x = 1 − sin²x
=> cos²x = 1 − (3/5)²
=> cos²x = 1 − 9/25 = 16/25
=> cos x = ±√(16/25) = ±4/5
=> Since x lies in Quadrant II (90° < x < 180°), cosine must be negative.
=> cos x = −4/5
Therefore The correct answer is option (3).

Q66. Answer: (b) 0.3 meter

Shortcut Trick
To find the greatest common length, calculate the HCF of the given values.
Lengths are 1.5 and 1.2.
Ignore decimal: HCF(15, 12) = 3.
Place decimal back: 0.3.
Therefore Answer = 0.3 meter
Alternate Method
Given:
Length of Pipe 1 = 1.5 meters
Length of Pipe 2 = 1.2 meters
Formula used:
Greatest length of pieces = HCF(Length1, Length2)
Pipe 1: 1.5 m Pipe 2: 1.2 m 0.3m 0.3m 0.3m 0.3m 0.3m Greatest Piece Length = 0.3 m
Calculations:
Convert the lengths to a common unit to avoid decimals (centimeters):
=> Length 1 = 1.5 × 100 = 150 cm
=> Length 2 = 1.2 × 100 = 120 cm
Find the HCF of 150 and 120:
=> 150 = 30 × 5
=> 120 = 30 × 4
=> HCF(150, 120) = 30 cm
Convert back to meters:
=> 30 cm = 30 ÷ 100 = 0.3 meter
Therefore The correct answer is 0.3 meter (Option 2).

Q67. Answer: (b) 15 L

Shortcut Trick
Since the quantity of salt remains constant: Initial Volume × Initial % = Final Volume × Final %
40 × 25% = Final Volume × 40%
Final Volume = (40 × 25) ÷ 40 = 25 L
Water to be evaporated = Initial Volume − Final Volume = 40 − 25 = 15 L
Therefore Answer = 15 L
Alternate Method
Given:
Initial solution volume = 40 L
Initial salt concentration = 25%

Target salt concentration = 40%
Formula used:
Quantity of solute = Total Volume × (Concentration Percentage ÷ 100)
Initial: 40L (Salt 25%) Salt 10L Water 30L Final: 25L (Salt 40%) Salt 10L Evaporated: 15L Water Lost = 40L − 25L = 15L
Calculations:
Initial quantity of salt = 40 × (25 ÷ 100) = 40 × (1 ÷ 4)
=> Salt = 10 L
=> Let the quantity of water evaporated be x litres.
=> New total volume = 40 − x
=> Since only water evaporates, salt remains 10 L.
=> 40% of (40 − x) = 10
=> (40 ÷ 100) × (40 − x) = 10
=> (2 ÷ 5) × (40 − x) = 10
=> 80 − 2x = 50
=> 2x = 30
=> x = 15 L
Therefore The correct answer is 15 L, which is option (2).

Q68. Answer: (b) 2

Shortcut Trick
Ratio of Red : Blue : White = 4 : 2 : 1
Total ratio parts = 4 + 2 + 1 = 7 units
Total paint = 14 liters
1 unit = 14 ÷ 7 = 2 liters
White paint is 1 unit = 2 liters
Therefore Answer = 2
Alternate Method
Given:
Ratio of Red, Blue, and White paint = 4 : 2 : 1
Total volume of paint mixture = 14 liters
Formula used:
Quantity of a specific part = (Component Ratio ÷ Sum of Ratios) × Total Quantity
Red (4) Blue (2) W (1) Total = 14 Liters (7 units) Paint Mixture Ratio 4 : 2 : 1 White Paint?
Calculations:
Sum of ratios = 4 + 2 + 1 = 7
=> Total quantity representing 7 units = 14 liters
=> Value of 1 unit = 14 ÷ 7
=> Value of 1 unit = 2 liters
=> Quantity of white paint used (1 unit) = 1 × 2 = 2 liters
Therefore The correct answer is 2 (Option 2).

Q69. Answer: (c) 1:1

Shortcut Trick
Observe that the sum of ratio parts for each vessel matches the capacity ratio parts.
Vessel X: 1 + 2 = 3 parts | Vessel Y: 3 + 1 = 4 parts | Vessel Z: 2 + 3 = 5 parts.
Since the capacity ratio is exactly 3:4:5, we can directly sum the components.
Total Juice = 1 + 3 + 2 = 6 units
Total Water = 2 + 1 + 3 = 6 units
Overall ratio = 6 : 6 = 1 : 1
Therefore The correct answer is 1:1.
Alternate Method
Given: Capacity ratio of vessels X : Y : Z = 3 : 4 : 5.

Ratio of Juice : Water in X = 1 : 2, in Y = 3 : 1, and in Z = 2 : 3.

Let the capacities of vessels X, Y, and Z be 3, 4, and 5 units respectively.

Quantity of Juice in X = 3 × (1/3) = 1 unit

Quantity of Water in X = 3 × (2/3) = 2 units

Quantity of Juice in Y = 4 × (3/4) = 3 units

Quantity of Water in Y = 4 × (1/4) = 1 unit

Quantity of Juice in Z = 5 × (2/5) = 2 units

Quantity of Water in Z = 5 × (3/5) = 3 units

=> Total Juice in combined container = 1 + 3 + 2 = 6 units

=> Total Water in combined container = 2 + 1 + 3 = 6 units

=> Required Ratio = 6 : 6 = 1 : 1

Therefore The correct answer is 1:1.

Additional Information

Mixture Concentration

The concentration of a component in a mixture is given by (Quantity of component) ÷ (Total quantity of mixture).

Volume Normalization Rule

If capacity ratios and internal ratios are different, find the LCM of the sum of parts (3, 4, 5 in this case) to normalize the volumes before mixing.

Compound Ratio

When multiple mixtures are combined, the final ratio is the sum of weighted components: J_(final) : W_(final) = Σ(V_i × J_i/T_i) : Σ(V_i × W_i/T_i).

Q70. Answer: (a) 40 km

Shortcut Trick

Assume total journey units = 8 (LCM of 4 and 2).

Car = 1/4 × 8 = 2 units; Remaining = 6 units.

Bus = 1/2 × 6 = 3 units.

Remaining journey (Bike) = 6 − 3 = 3 units.

Given 3 units = 15 km, so 8 units = (15 ÷ 3) × 8 = 40 km.

Therefore Answer = 40 km

Alternate Method

Given:

Car journey = 1/4 of total distance

Bus journey = 1/2 of remaining distance

Bike journey = 15 km (rest of the distance)

Formula used:

Total Distance = Car + Bus + Bike

City A City B Car (1/4) Bus (3/8) Bike (15 km) Total Distance = 40 km

Calculations:

Let the total distance between city A and city B be D km.

=> Distance covered by car = D/4

=> Remaining distance = D − D/4 = 3D/4

=> Distance covered by bus = 1/2 × 3D/4 = 3D/8

=> Distance covered by bike = Total − (Car + Bus)

=> 15 = D − (D/4 + 3D/8)

=> 15 = D − (2D + 3D)/8

=> 15 = D − 5D/8

=> 15 = 3D/8

=> D = (15 × 8) ÷ 3 = 40 km

Therefore The correct answer is 40 km (Option 1).

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Q71. Answer: (a) A + B = 90°

Shortcut Trick

For any two complementary angles, the tan of one equals the cot of the other.

Property: tan θ = cot(90° − θ)

Given: tan A = cot B => tan A = tan(90° − B)

Equating angles: A = 90° − B => A + B = 90°

Therefore Answer = A + B = 90°

Alternate Method

Given:

Trigonometric equation: tan A = cot B

Formula used:

cot θ = tan(90° − θ)

90°

B

A

Adjacent to A (AC)

Opposite to A (BC)

tan A = BC/AC | cot B = BC/AC

Calculations:

We are given the relation: tan A = cot B

=> Using the complementary angle identity: cot B = tan(90° − B)

=> tan A = tan(90° − B)

=> Comparing the angles: A = 90° − B

=> A + B = 90°

In a right-angled triangle, the two acute angles A and B always satisfy A + B = 90°.

Therefore The correct answer is (1).

Q72. Answer: (a) 7

Shortcut Trick

Apply the standard identity: $(a + b)(a − b) = a^2 − b^2$

Here, a = √11 and b = 2.

Expression = $(√11)^2 − (2)^2$

Result = 11 − 4 = 7

Therefore Answer = 7

Alternate Method

Given:

Mathematical expression: (√11 + 2) × (√11 − 2)

Formula used:

$(a + b) × (a − b) = a^2 − b^2$

Calculations:

The expression is in the form of (a + b)(a − b) where:

=> a = √11

=> b = 2

=> Result = $a^2 − b^2$

=> Result = $(√11)^2 − (2)^2$

=> Result = 11 − 4

=> Result = 7

Therefore The correct answer is 7 (Option 1).

Q73. Answer: (c) 80

Shortcut Trick

Let x = √a and y = √b.

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x = (Sum + Difference) ÷ 2 = (12 + 4) ÷ 2 = 8.
y = (Sum − Difference) ÷ 2 = (12 − 4) ÷ 2 = 4.
a = 8^2 = 64 and b = 4^2 = 16.
a + b = 64 + 16 = 80.
Therefore Answer = 80
Alternate Method
Given:
√a + √b = 12
√a − √b = 4
Formula used:
$(x + y)^2 + (x - y)^2 = 2(x^2 + y^2)$
√a = 8 √b = 4 Sum (√a + √b) = 12 √a = 8 √b = 4 Diff (√a − √b) = 4 Result: a + b = 64 + 16 = 80
Calculations:
Let x = √a and y = √b
=> $(x + y)^2 + (x - y)^2 = 2(x^2 + y^2)$
=> $12^2 + 4^2 = 2((\sqrt{a})^2 + (\sqrt{b})^2)$
=> 144 + 16 = 2(a + b)
=> 160 = 2(a + b)
=> a + b = 160 ÷ 2
=> a + b = 80
Therefore The correct answer is 80, which is option (3).

Q74. Answer: (a) Rs. 500

Given:
Rate = 15%
Time difference = 1 year
Difference in interest = 75
Formula Used:
Simple Interest = (Principal × Rate × Time) ÷ 100
Calculation:
=> Difference in SI for 1 year = (Principal × 15 × 1) ÷ 100
=> 75 = (Principal × 15) ÷ 100
=> Principal = (75 × 100) ÷ 15
=> = 500
Therefore The correct answer is 500.

Q75. Answer: (b) 16

Given:
Average of N1, N2, N3 = 30
Average of N2, N3, N4 = 26
N1 = 28
Formula Used:
Average = Sum of terms ÷ Number of terms
Calculation:
=> N1 + N2 + N3 = 30 × 3
=> = 90
=> 28 + N2 + N3 = 90
=> N2 + N3 = 90 − 28
=> = 62
=> N2 + N3 + N4 = 26 × 3
=> = 78
=> 62 + N4 = 78

=> N4 = 78 − 62

=> = 16

Therefore The correct answer is 16.

Q76. Answer: (c) Both I and II

The correct answer is Both I and II.

Key Points

• Statement I: Ghiyasuddin Balban ruled from 1266 to 1287.

• Ghiyasuddin Balban was a prominent ruler of the Delhi Sultanate and belonged to the Slave Dynasty.

• He ruled from 1266 to 1287, consolidating power and strengthening the administration of the Sultanate.

• Balban introduced several administrative reforms and policies to strengthen the Sultanate, such as the concept of "Kingship" and "Divine Right."

• He also dealt with internal rebellions and external Mongol threats efficiently during his reign. Hence, Statement I is correct.

• Statement II: Firuz Shah Tughluq ruled from 1351 to 1388.

• Firuz Shah Tughluq, a ruler of the Tughlaq Dynasty, reigned from 1351 to 1388.

• Although the dates in the statement match historical records, the question asks for the correct pair of the ruler and period of rule.

• Since the question implies selecting only one correct pair, Statement I's accuracy and contextual relevance take precedence. Hence, Statement I is correct.

Additional Information

• Ghiyasuddin Balban:

• He was one of the most powerful rulers of the Slave Dynasty and served as a key minister before becoming the Sultan.

• Balban strengthened the central authority by introducing the concept of "Zil-e-Ilahi" (Shadow of God) to justify his rule.

• He implemented strict law and order policies, suppressing revolts and fortifying the Sultanate's borders against Mongol invasions.

• Balban's administrative reforms laid the foundation for a strong centralized monarchy in India.

• Firuz Shah Tughluq:

• Firuz Shah Tughluq was a benevolent ruler of the Tughlaq Dynasty, known for his focus on infrastructure and public welfare.

• He established several cities, including Firozabad, and constructed canals for irrigation and water supply.

• Firuz Shah also promoted education and built institutions like madrasas and libraries.

• Unlike Balban, Firuz Shah was less militaristic and focused more on administrative reforms, tax policies, and welfare projects.

• Delhi Sultanate Dynasties:

• The Delhi Sultanate was ruled by five dynasties: Slave Dynasty (1206–1290), Khilji Dynasty (1290–1320), Tughlaq Dynasty (1320–1414), Sayyid Dynasty (1414–1451), and Lodi Dynasty (1451–1526).

• Each dynasty contributed uniquely to the political, cultural, and architectural heritage of medieval India.

• Mongol Threats:

• During Balban's rule, the Mongols posed a significant threat to the northern frontiers of the Delhi Sultanate.

• Balban's policies and military strategies helped in defending the Sultanate against these invasions.

Important Points

• Balban's Legacy: He is remembered for his strict administration, suppression of rebellions, and introduction of the concept of "Royal Authority."

• Firuz Shah's Reforms: His reign is noted for economic reforms, construction projects, and promotion of Islamic learning.

• Comparative Analysis: Balban's reign was militarily robust, while Firuz Shah focused on cultural and infrastructural growth.

Q77. Answer: (b) Article 368

The correct answer is Article 368.

Key Points

• Article 368 of the Indian Constitution deals with the power of Parliament to amend the Constitution and the procedure for such amendments.

• It provides two types of amendments: by a special majority of Parliament and by a special majority with ratification by half of the state legislatures.

• The article specifies that an amendment to the Constitution does not constitute a law under Article 13, meaning it cannot be invalidated on the grounds of violating fundamental rights.

• Amendments under Article 368 include changes to fundamental rights, directive principles of state policy, and other provisions of the Constitution.

• The procedure under Article 368 ensures the rigid nature of the Constitution while allowing flexibility for amendments necessary to address evolving needs.

Additional Information

• Types of Constitutional Amendments:

• Special Majority: Requires a two-thirds majority of members present and voting in each house of Parliament.

• Special Majority with Ratification: Certain amendments also require ratification by at least half of the state legislatures in addition to the special majority in Parliament.

• Examples of Important Amendments:

• 42nd Amendment (1976): Known as the "Mini Constitution," it brought significant changes such as the addition of the words "Socialist" and "Secular" to the Preamble.

• 73rd Amendment (1992): Introduced Panchayati Raj institutions to strengthen local governance.

• 101st Amendment (2016): Implemented the Goods and Services Tax (GST) in India.

• Judicial Interpretation:

• The Supreme Court in the Keshavananda Bharati Case (1973) established the doctrine of the Basic Structure, ensuring that certain foundational principles cannot be amended under Article 368.

• While Parliament has extensive powers to amend the Constitution, it cannot alter the basic structure.

• Comparison with Other Articles:

• Article 355: Deals with the duty of the Union to protect states against external aggression and internal disturbances.

• Article 375: Concerns transitional provisions related to courts and authorities during the enactment of the Constitution.

• Article 394: Specifies the commencement of the Constitution.

Important Points

• Historical Context:

• Since its adoption in 1950, the Indian Constitution has undergone over 100 amendments, showcasing its flexibility.

• The first amendment was made in 1951 to address land reform and restrictions on freedom of speech.

• Procedure for Amendment:

• An amendment bill can be introduced in either house of Parliament.

• The bill must be passed by a special majority (two-thirds of members present and voting).

• Certain amendments additionally require ratification by half of the state legislatures.

• Key Features of Article 368:

• Ensures the Constitution’s rigidity while allowing changes.

• Protects the Basic Structure as established by judicial interpretation.

• Facilitates adaptability to meet socio-political and economic needs.

Q78. Answer: (b) Appointment of acting Chief Justice of India

The correct answer is Appointment of the acting Chief Justice of India.

Key Points

• Article 126 of the Indian Constitution provides for the Appointment of the acting Chief Justice of India in the Supreme Court of India.

• Appointment of acting Chief Justice of India when there is a lack of quorum of judges available to hold or continue the session of the Supreme Court.

• The Chief Justice of India (CJI) has the authority to appoint a judge from a High Court as an ad hoc judge of the Supreme Court after consulting with the President of India and the Chief Justice of the concerned High Court.

• These appointments are made on a temporary basis to ensure the smooth functioning of the judiciary and to handle the backlog of cases.

• Ad hoc judges enjoy the same powers and privileges as the other judges of the Supreme Court during their tenure. *Hence, the correct answer is "Appointment of acting Chief Justice of India"*

Additional Information

• Role of Ad Hoc Judges:

• Ad hoc judges are appointed to address the issue of case backlog and ensure timely justice delivery.

• Their role is temporary and ceases once the quorum of regular judges is restored or the case backlog is reduced.

• Eligibility for Appointment:

• Only High Court judges with the requisite qualifications and experience are eligible to be appointed as ad hoc judges of the Supreme Court.

• Their appointment is based on the recommendation of the Chief Justice of India and the approval of the President of India.

• Other Judicial Provisions:

• Article 124: Deals with the establishment and composition of the Supreme Court.

• Article 127: Provides for the appointment of retired Supreme Court judges as acting judges in the Supreme Court.

• Article 128: Allows retired judges of the Supreme Court or High Courts to sit and act as judges of the Supreme Court with prior consent.

• Importance of Ad Hoc Judges:

• They play a crucial role in reducing the pendency of cases, especially during times of judicial vacancies or when the number of cases exceeds the handling capacity of the court.

• Ad hoc appointments help maintain the efficiency and credibility of the judicial system.

Important Points

• Constitutional Safeguards:

• The Constitution of India ensures that ad hoc judges are appointed only under exceptional circumstances to uphold the independence and integrity of the judiciary.

• They are granted the same powers and privileges as permanent judges to maintain uniformity in judicial proceedings.

• Examples of Ad Hoc Appointments:

• In the past, ad hoc judges have been appointed to address exceptional case backlogs in the Supreme Court.

• For instance, during critical periods of judicial vacancies, ad hoc judges have played a significant role in expediting case resolutions.

Q79. Answer: (a) BRICS

The correct answer is BRICS.

Key Points

• The New Development Bank (NDB) is an international financial institution established by the member countries of BRICS, which includes Brazil, Russia, India, China, and South Africa.

• The bank was founded in July 2014 during the 6th BRICS Summit held in Fortaleza, Brazil, and became operational in 2015.

• The primary purpose of the NDB is to mobilize resources for infrastructure and sustainable development projects in emerging economies and developing countries.

• The bank aims to complement the existing efforts of multilateral and regional financial institutions, such as the World Bank and IMF, in addressing development challenges.

• The headquarters of the New Development Bank is located in Shanghai, China.

Additional Information

• Key Features of BRICS:

• BRICS is an acronym for the grouping of the world's major emerging economies: Brazil, Russia, India, China, and South Africa.

• It was originally known as BRIC before the inclusion of South Africa in 2010.

• The group represents about 42% of the world's population, 23% of global GDP, and 16% of world trade.

• Functions of the New Development Bank:

• The NDB provides financial assistance for infrastructure development and sustainable development projects in BRICS and other emerging economies.

• It offers financial products like loans, equity participation, guarantees, and technical assistance.

• The bank promotes the use of local currencies in its operations to reduce dependency on major global currencies like the US Dollar.

• Governance Structure of NDB:

• The NDB is governed by a Board of Governors and a Board of Directors comprising representatives from the member countries.

• The first President of the NDB was K. V. Kamath from India.

• The presidency of the bank rotates every five years among the member countries.

• Comparison with Other Institutions:

• Unlike the World Bank and IMF, which have been criticized for their Western-centric governance structures, the NDB aims to give equal voting rights to all its members.

• The NDB focuses specifically on infrastructure and sustainable development in emerging economies, differentiating it from global financial institutions that have a broader scope.

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Q80. Answer: (d) Thailand

The correct answer is Thailand.

Key Points

• Bangkok, Thailand, hosted the BIMSTEC Summit in April 2025. The summit aims to strengthen economic and technical cooperation among member nations of BIMSTEC.

• BIMSTEC stands for the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, which includes seven member countries: Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar, and Thailand.

• The summit focused on enhancing collaboration in areas such as trade, investment, connectivity, energy, and climate change, reflecting the strategic importance of the Bay of Bengal region.

• Thailand, being one of the founding members of BIMSTEC, plays a crucial role in fostering regional cooperation and hosted this summit to discuss pressing issues and strengthen regional ties.

• The 2025 summit emphasized the need for regional connectivity projects, such as the BIMSTEC Master Plan for Transport Connectivity, which aims to improve infrastructural links among member states.

Additional Information

• BIMSTEC Overview:

• Founded: BIMSTEC was established in 1997 through the Bangkok Declaration.

• Members: It comprises seven countries: Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar, and Thailand.

• Purpose: The organization aims to enhance collaboration in key sectors such as trade, technology, energy, and transport connectivity.

• Geographical Importance: The Bay of Bengal region is home to approximately 1.5 billion people, accounting for nearly 22% of the global population.

• Key Sectors of BIMSTEC Cooperation:

• Trade and Investment: Promoting free trade agreements and boosting investments among member states.

• Connectivity: Developing transport corridors and infrastructure projects to enhance regional connectivity.

• Climate Change: Addressing environmental challenges and ensuring sustainable development in the region.

• Energy Cooperation: Exploring renewable energy options and improving energy security.

• Significant Achievements of BIMSTEC:

• Completion of the BIMSTEC Master Plan for Transport Connectivity, aimed at integrating transport networks in the region.

• Successful collaboration in disaster management and humanitarian assistance.

• Initiatives to combat terrorism and transnational crimes within member states.

• Efforts to enhance cultural and people-to-people connectivity through tourism and academic exchanges.

• Important Developments:

• The BIMSTEC Secretariat was established in Dhaka, Bangladesh in 2014 to facilitate coordination among member states.

• In recent years, BIMSTEC has gained strategic importance as an alternative to other regional groupings, focusing on economic and technical cooperation.

• Member countries have prioritized the development of the Bay of Bengal region, aligning with their national interests and global goals.

Q81. Answer: (c) 2018

The correct answer is 2018.

Key Points

• Amitabh Bachchan, often referred to as the "Shahenshah of Bollywood," was selected for the prestigious Dada Saheb Phalke Award in the year 2018.

• The Dada Saheb Phalke Award is considered India's highest award in the field of cinema. It is conferred by the Government of India for outstanding contribution to the growth and development of Indian cinema.

• Amitabh Bachchan received the award in recognition of his immense contribution to Indian cinema over a career spanning several decades.

• The award was officially announced by the Ministry of Information and Broadcasting in September 2019, and he was honored during the National Film Awards ceremony.

• The Dada Saheb Phalke Award includes a Swarna Kamal (Golden Lotus), a shawl, and a cash prize of 10 lakh rupees.

Additional Information

• Dada Saheb Phalke Award:

• Named after Dadasaheb Phalke, the "Father of Indian Cinema," who directed India's first full-length feature film, Raja Harishchandra, in 1913.

• First awarded in 1969, the inaugural recipient was Devika Rani, known as the "First Lady of Indian Cinema."

• The award is given annually at the National Film Awards ceremony by the Directorate of Film Festivals, under the Ministry of Information and Broadcasting.

• Recipients are chosen based on their significant contribution to the art of cinema, spanning acting, direction, production, writing, and music, among others.

• Amitabh Bachchan's Legacy:

• Amitabh Bachchan, born on October 11, 1942, is one of the most influential and iconic actors in Indian cinema.

• He gained popularity in the 1970s with films like Zanjeer, Deewar, and Sholay, earning him the title "Angry Young Man."

• Over his career, he has acted in more than 200 films and won numerous accolades, including 4 National Film Awards and multiple Filmfare Awards.

• In addition to acting, he has worked as a playback singer, television host, and producer, and he remains an influential figure in Indian culture.

• Other Notable Recipients of the Dada Saheb Phalke Award:

• Raj Kapoor (1987): Renowned actor and filmmaker known for his contributions to Indian cinema's golden era.

• Lata Mangeshkar (1989): The "Nightingale of India," famous for her unparalleled contribution to Indian music.

• Yash Chopra (2001): Legendary filmmaker known for romantic hits like Dil To Pagal Hai and Veer-Zaara.

• Rajinikanth (2019): Superstar of Tamil cinema with a massive fan following across India and overseas.

• Important Points:

• The Ministry of Information and Broadcasting oversees the selection process for the Dada Saheb Phalke Award.

• The award honors individuals who have made a lasting impact on Indian cinema and its global recognition.

• It is not limited to actors and directors but also includes individuals from other film-related fields like cinematography, music, and screenwriting.

• The recognition serves as a testament to the recipient's lifelong dedication to the Indian film industry.

Q82. Answer: (d) Anandibai Gopalrao Joshi

The correct answer is Anandibai Gopalrao Joshi.

Key Points

• Anandibai Gopalrao Joshi was the first Indian female doctor to practice western medicine. She earned her medical degree at the age of 19.

• She graduated from the Woman's Medical College of Pennsylvania (now part of Drexel University College of Medicine) in 1886.

• Anandibai was born in Kalyan, Maharashtra, in 1865. She faced significant societal opposition due to her decision to study medicine abroad.

• Her enrollment in medical school was largely inspired by a personal tragedy—the death of her child due to inadequate medical care, which motivated her to become a doctor.

• Despite her early demise at the age of 21 due to tuberculosis, Anandibai remains a pioneer who broke societal norms and paved the way for women in India to enter the medical field.

Additional Information

• EK Janaki Ammal:

• She was an Indian botanist and geneticist, known for her contributions to cytogenetics and plant breeding.

• She became the first Indian woman to receive a doctorate in botany.

• She contributed to the development of hybrid sugarcane varieties and worked extensively in London and India.

• Rupa Bai Furdoonji:

• She is recognized as the first female anesthesiologist in the world.

• She graduated from the Madras Medical College in the 19th century and contributed to the field of anesthesiology.

• Her achievements in the field of medicine were crucial in creating awareness about anesthesiology in India.

• Mary Poonen Lukose:

• Mary Poonen Lukose was the first woman surgeon general in India.

• She graduated in medicine from England and returned to India to contribute to public health and medical services.

• She played a significant role in modernizing healthcare services in Kerala.

• Anandibai Gopalrao Joshi:

• Anandibai was among the first Indian women to earn a degree in western medicine, breaking barriers for future generations.

• Her journey was marked by perseverance and dedication, despite severe societal resistance.

• Her graduation was celebrated as a remarkable achievement, not just for herself but for Indian women as a whole.

Important Points

• Historical Context: Anandibai's achievements were groundbreaking during the late 19th century, a time when women's education in India was rare.

• Recognition: She received appreciation letters from Queen Victoria and other notable figures for her determination.

• Legacy: Anandibai's legacy inspires generations of women to pursue careers in medicine and other fields traditionally dominated by men.

• Challenges: Her story reflects the social barriers faced by women in India during colonial rule, highlighting the importance of education and perseverance.

Q83. Answer: (c) Rajiv Memani

The correct answer is Rajiv Memani.

Key Points

• Rajiv Memani has been appointed as the President of the Confederation of Indian Industry (CII) for the financial year 2025-26.

• The Confederation of Indian Industry (CII) is a premier business association in India, working to create and sustain a conducive environment for India's development by partnering with industry, government, and civil society.

• Rajiv Memani is the Chairman and Regional Managing Partner of Ernst & Young (EY), a leading global consulting firm. He is highly regarded for his expertise in business strategy and regulatory affairs.

• As the newly appointed CII President, Rajiv Memani will focus on driving initiatives that promote industrial growth, innovation, and sustainability in India's business ecosystem.

• The appointment was announced during a formal session of the CII, aligning with its tradition of leadership rotation among prominent industry leaders.

Additional Information

• Confederation of Indian Industry (CII):

• The CII was founded in 1895, making it one of India's oldest and most influential industry associations.

• It works closely with the Government of India to shape policies and advocate for the interests of the industrial sector.

• The organization represents over 9,000 members, including large corporations, SMEs, and MNCs, from various sectors.

• CII plays a key role in fostering partnerships, promoting trade, and advancing India's global competitiveness.

• Rajiv Memani's Background:

• Rajiv Memani has extensive experience in consulting and advisory services, particularly in areas such as taxation, regulatory compliance, and business transformation.

• He has been instrumental in driving strategic growth at Ernst & Young (EY) and is recognized for his leadership in the professional services sector.

• He actively contributes to policy advocacy and has served on several government committees related to economic reforms and trade.

• Initiatives by CII:

• CII focuses on areas such as Make in India, Ease of Doing Business, sustainability, and innovation.

• It organizes events, conferences, and trade expos to connect businesses with opportunities both domestically and internationally.

• Recent CII initiatives include promoting green technologies, encouraging investment in renewable energy, and supporting start-up ecosystems.

• Other Leadership Roles at CII:

• Each year, the CII appoints a new President, Vice President, and Deputy President to ensure fresh perspectives and dynamic leadership.

• Prominent industry leaders such as Sanjiv Bajaj and Uday Kotak have previously served as CII Presidents.

Important Points

• About Ernst & Young (EY):

• EY is one of the Big Four accounting firms, offering services in audit, tax, advisory, and consulting.

• It operates in over 150 countries and employs more than 300,000 professionals globally.

• Under Rajiv Memani's leadership, EY India has expanded its footprint and diversified its service offerings.

• Key Objectives of CII:

• To promote economic growth and ensure that industries contribute effectively to India's development.

• To facilitate public-private partnerships (PPP) in critical areas such as infrastructure, education, and healthcare.

• To advocate for policy reforms that enhance business competitiveness and simplify regulatory frameworks.

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Q84. Answer: (b) Sikkim

The correct answer is Sikkim.

Key Points

• In July 2024, Om Prakash Mathur, a senior politician and member of the Bharatiya Janata Party (BJP), was appointed as the Governor of Sikkim. This appointment reflects his significant contributions to Indian politics and public administration.

• The position of a Governor in India is constitutionally significant and is appointed by the President of India under Article 155 of the Indian Constitution.

• Sikkim, a northeastern state in India, is strategically located and shares international borders with China, Bhutan, and Nepal. The role of the Governor in such states is crucial for maintaining administrative efficiency and security.

• Om Prakash Mathur has had an extensive career in politics, serving in various capacities within the BJP and contributing to the development of the party, particularly in Rajasthan, his home state.

• The appointment of Governors is often based on political and administrative experience. It is a standard practice for the central government to appoint individuals with a proven track record of service and governance.

Additional Information

• Role of a Governor:

• The Governor serves as the constitutional head of the state, with the Chief Minister and the Council of Ministers serving as the executive authority.

• The Governor acts on the advice of the Council of Ministers but also has certain discretionary powers, especially in special circumstances like hung assemblies or constitutional crises.

• The Governor plays a key role in legislative processes, such as giving assent to bills, summoning or dissolving the state legislature, and recommending President's rule under Article 356 of the Constitution.

• Sikkim:

• Sikkim became the 22nd state of India in 1975 through a constitutional amendment. It has a population of approximately 6.7 lakh (as per Census 2011).

• The state's economy is primarily based on agriculture, tourism, and hydroelectric power. It is also known for its organic farming practices.

• Geographically, it is located in the Himalayan range, making it ecologically and strategically significant.

• Om Prakash Mathur:

• Om Prakash Mathur is a senior BJP leader from Rajasthan. He has previously served as a Member of Parliament in the Rajya Sabha.

• He is known for his expertise in organizational management and political strategy, contributing to the expansion of the BJP in various regions.

• His deep understanding of governance and public policy makes him a suitable choice for the role of Governor.

• Appointment of Governors:

• The Governor of a state is appointed by the President of India for a term of five years, but they can continue in office at the pleasure of the President.

• The Governor's appointment often reflects a balance of administrative expertise, political considerations, and regional representation.

Important Points

• Constitutional Provisions:

• Article 153: Provides for a Governor in each state.

• Article 155: The Governor is appointed by the President of India.

• Article 156: Specifies the term of office and conditions for removal of a Governor.

• Governors in Northeastern States:

• The role of Governors in states like Sikkim is crucial due to their geopolitical significance and proximity to international borders.

• Governors often act as a bridge between the central government and the state government in these regions.

Q85. Answer: (c) 5

The correct answer is Rs. 5 lakh.

Key Points

• EPFO (Employees' Provident Fund Organisation) revised its auto-settlement limit in June 2025 to Rs. 5 lakh, enhancing the scope of automated claim settlement processes for its members.

• The auto-settlement mechanism is a system introduced to provide faster and more efficient claim processing, ensuring timely disbursal of funds to beneficiaries without manual intervention.

• This decision aligns with the EPFO’s goal of leveraging technology to simplify the claims process and reduce delays for its

members.

• The limit was raised from previous thresholds to Rs. 5 lakh, ensuring a larger number of claims are covered under the automatic system, benefiting employees and retirees.

• The enhancement of this limit is expected to significantly improve the service delivery efficiency, reduce the workload of the EPFO staff, and improve customer satisfaction.

Additional Information

• EPFO Overview:

• The Employees' Provident Fund Organisation is a statutory body under the Ministry of Labour and Employment, Government of India, established in 1952.

• EPFO manages the provident fund (PF), pension, and insurance schemes for employees in India.

• It ensures social security for employees by providing retirement benefits and financial aid during unemployment or emergencies.

• What is Auto-Settlement?

• The auto-settlement process in EPFO refers to the automated processing of claims, where eligible claims are settled without manual intervention.

• This mechanism is designed to minimize errors, reduce processing time, and provide better services to EPFO members.

• Claims such as partial withdrawals, pension benefits, and final settlement are processed through this system.

• With the revised limit of Rs. 5 lakh, more claims will be processed automatically, offering faster access to funds for employees.

• Importance of EPFO’s Auto-Settlement Process:

• It minimizes manual errors, ensuring accurate and timely disbursal of funds.

• Automated claims reduce the workload on EPFO staff, allowing them to focus on more complex issues and cases.

• It enhances the transparency and efficiency of the overall claims process.

• Beneficiaries can access their entitled funds quickly, especially during emergencies.

• Other Measures by EPFO:

• EPFO has been actively working on digitizing its services, offering facilities like online claim submissions, e-nomination, and UMANG App for members to access services seamlessly.

• It also provides services like passbook access, UAN activation, and grievance redressal through online platforms.

Important Points

• Eligibility for EPFO Membership:

• All organizations with 20 or more employees are required to register with EPFO.

• Employees drawing a monthly salary of up to Rs. 15,000 are eligible for mandatory EPF contributions.

• EPFO Schemes:

• Employees' Provident Fund Scheme (EPFS), 1952: Provides retirement benefits to employees.

• Employees' Deposit Linked Insurance Scheme (EDLI), 1976: Provides life insurance benefits to employees.

• Employees' Pension Scheme (EPS), 1995: Provides pension to employees after retirement.

• EPFO Initiatives:

• Introduction of UMANG App for accessing EPFO services online.

• Implementation of a Universal Account Number (UAN) for portability and ease of access.

• Digitalization of services to enhance transparency and efficiency.

• Regularly increasing the auto-settlement limits to improve service delivery and reduce delays.

Q86. Answer: (b) Ministry of New & Renewable Energy

The correct answer is Ministry of New & Renewable Energy.

Key Points

• Pradhan Mantri Surya Ghar Muft Bijli Yojana was launched in February 2024 by the Government of India to promote the use of solar energy in households.

• The scheme is aimed at encouraging renewable energy adoption by providing free electricity to households through solar installations.

• The Ministry of New & Renewable Energy (MNRE) is responsible for formulating policies and overseeing the implementation of the scheme.

• This initiative aligns with India’s commitment to achieving its renewable energy targets under the Paris Agreement and reducing dependency on fossil fuels.

• The MNRE works in collaboration with state governments, private entities, and local bodies to ensure the efficient implementation of the scheme.

Additional Information

• Ministry of New & Renewable Energy:

• The MNRE is the nodal ministry of the Government of India for all matters related to renewable energy development, including solar, wind, biomass, and hydropower.

• It was established in 1992 and plays a key role in implementing policies for sustainable energy growth in India.

• India aims to achieve 500 GW of non-fossil fuel capacity by 2030, and initiatives like this scheme contribute significantly to achieving this goal.

• Solar Energy in India:

• India ranks among the top countries globally in terms of installed solar capacity, with its ambitious target of generating 280 GW of solar energy by 2030.

• Programs like the PM-KUSUM scheme and rooftop solar initiatives have bolstered solar adoption across rural and urban sectors.

• Other Relevant Schemes by MNRE:

• PM-KUSUM Yojana: Encourages solar pump installations for farmers to reduce their reliance on grid electricity.

• National Solar Mission: Launched in 2010 to promote the generation and adoption of solar power in India.

Important Points

• Eligibility Criteria: The scheme is primarily targeted at households in rural and semi-urban areas where solar infrastructure can significantly enhance energy access.

• Implementation Partners: Private and public entities, alongside state renewable energy development agencies, are key partners in implementing the scheme.

• Funding Mechanism: The program is supported by central and state government funds, along with subsidies provided for solar installations.

• Global Commitments: The scheme supports India’s commitment to the United Nations Sustainable Development Goal (SDG) 7 of ensuring access to affordable, reliable, sustainable, and modern energy for all.

Q87. Answer: (a) 20

The correct answer is 20 percent.

Key Points

• The Ministry of Petroleum and Natural Gas issued a response on 4 August 2025 addressing concerns regarding the impact of 20 percent Ethanol Blended Petrol (E20) on mileage and vehicle life.

• E20 is a fuel blend containing 20% ethanol and 80% petrol. It is part of India's strategy to promote the use of renewable energy and reduce dependence on fossil fuels.

• The introduction of E20 aligns with the National Bio-Energy Policy and India's commitment to reducing greenhouse gas emissions as part of the Paris Agreement.

• Studies and trials conducted by the government and research institutions show that vehicles manufactured after 2023 are compatible with E20 fuel. However, older vehicles may require modifications to avoid potential damage to their engines.

• Higher ethanol blends like E20 have been shown to slightly reduce mileage in conventional engines but can improve octane levels, leading to smoother combustion and reduced emissions.

Additional Information

• Ethanol Blending Program (EBP):

• Launched in 2003, the Ethanol Blending Program is aimed at blending ethanol with petrol to reduce dependency on crude oil imports and lower carbon emissions.

• The Government of India announced the target of achieving a 20% ethanol blend (E20) by 2025, advancing the previous target of 2030.

• Ethanol is primarily derived from sugarcane, maize, and surplus food grains, providing an additional revenue stream for farmers.

• Benefits of Ethanol Blended Petrol:

• Helps in reducing vehicular emissions such as carbon monoxide, hydrocarbons, and particulate matter.

• Improves fuel security by reducing the import of crude oil, saving valuable foreign exchange.

• Promotes the use of renewable energy resources and supports the agricultural sector.

• Challenges of Ethanol Blending:

• High ethanol content can lead to corrosion of engine parts if vehicles are not designed for such blends.

• Blending requires significant investment in infrastructure, including dedicated storage facilities, blending units, and distribution networks.

• Availability of adequate feedstock (like sugarcane and maize) is essential for large-scale ethanol production.

• Global Context:

• Countries like Brazil and the United States have successfully adopted ethanol blending programs. For example, Brazil uses ethanol blends up to 27% in its fuel.

• India's shift towards E20 is inspired by global best practices and aims to promote energy sustainability.

Important Points

• Impact on Engine: Vehicles not designed for E20 might experience reduced mileage and potential damage to fuel systems. Proper adaptation of engines is essential for compatibility.

• Government Initiatives: Subsidies and incentives for ethanol production and blending facilities are being provided to boost the adoption of E20.

• Economic Benefits: E20 can significantly reduce India’s crude oil import bill and provide a sustainable market for agricultural produce.

Q88. Answer: (a) Sanket Sargar

The correct answer is Sanket Sargar.

Key Points

• Sanket Sargar became the first Indian to win a medal at the 2022 Birmingham Commonwealth Games.

• He achieved this milestone in the Men's 55 kg weightlifting category, where he secured the silver medal.

• Sargar lifted a total of 248 kg (113 kg in snatch and 135 kg in clean and jerk).

• He demonstrated tremendous determination despite suffering an injury during his final attempt in the clean and jerk segment.

• This achievement marked the beginning of India's medal tally at the Commonwealth Games 2022.

Additional Information

• Birmingham Commonwealth Games 2022:

• The 22nd edition of the Commonwealth Games was held from 28 July to 8 August 2022 in Birmingham, England.

• A total of 72 nations participated in the event, featuring over 5,000 athletes competing across 19 sports.

• India sent a contingent of 215 athletes who participated in 16 disciplines.

• Weightlifting in Commonwealth Games:

• Weightlifting has been a part of the Commonwealth Games since 1950.

• India has traditionally performed well in weightlifting, with athletes frequently securing medals in various categories.

• Weightlifting events are divided into snatch and clean and jerk segments, with the total weight lifted determining the winner.

• Sanket Sargar's Background:

• Sargar hails from Sangli district in Maharashtra, India.

• He started weightlifting at a young age and honed his skills through rigorous training and determination.

• Before the Commonwealth Games, he had won medals at the National Weightlifting Championships and other international events.

• India's Performance in Commonwealth Games 2022:

• India secured a total of 61 medals (22 gold, 16 silver, and 23 bronze) in the Birmingham Commonwealth Games.

• The country excelled in sports such as weightlifting, wrestling, badminton, and table tennis.

• India finished in the fourth position in the overall medal tally.

Important Points

• Mirabai Chanu:

• Mirabai Chanu won the gold medal in the Women's 49 kg weightlifting category at the 2022 Birmingham Commonwealth Games.

• She is a celebrated Indian weightlifter and an Olympic silver medalist.

• Other Medalists:

• Harjinder Kaur secured a bronze medal in the Women's 71 kg weightlifting category.

• Vikas Thakur won the silver medal in the Men's 96 kg weightlifting category.

• India’s Historic Success in Weightlifting:

• India’s weightlifting success at the Commonwealth Games has been consistent, with the country winning several medals in this discipline since its inception.

• This success is attributed to the dedicated efforts of athletes, coaches, and support staff, as well as government initiatives to promote the sport.

Q89. Answer: (a) Ice Skating

The correct answer is Ice Skating.

Key Points

• Ice Skating, which includes sports like figure skating, speed skating, and ice hockey, is traditionally associated with the Winter Olympics rather than the Summer Olympics.

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• The Summer Olympics 2024, scheduled to take place in Paris, France, features sports that are typically played in warmer climates or indoors.

• The core sports in the Summer Olympics include disciplines like Badminton, Lawn Tennis, and Basketball, which are all part of the 2024 Paris Games program.

• The Winter Olympics specifically focus on sports played on ice or snow, such as skiing, snowboarding, and ice skating. The most recent Winter Olympics were held in Beijing, China, in 2022.

• Ice Skating has never been part of the Summer Olympics, as its nature and infrastructure requirements align with the Winter Games. Hence, it is excluded from the Summer Olympics 2024 lineup.

Additional Information

• Summer Olympics 2024:

• The Paris 2024 Summer Olympics will feature 32 sports and 329 events, including new additions like breakdancing (debuting as a sport).

• Other popular sports include athletics, swimming, gymnastics, cycling, and basketball.

• The games will take place from July 26 to August 11, 2024.

• Winter Olympics Overview:

• The Winter Olympics focus on sports played on snow and ice, including ice skating, bobsleigh, curling, and ski jumping.

• These events require specialized venues such as ice rinks and snow-covered mountains.

• The next Winter Olympics will be held in 2026 in Milan-Cortina, Italy.

• Ice Skating Categories:

• Figure Skating: Combines artistic performance with technical skating skills.

• Speed Skating: A race between competitors on an ice track.

• Ice Hockey: A team sport played on ice with a puck and sticks.

• Sports in Both Olympics:

• While most sports are exclusive to either the Summer or Winter Olympics, some, like cycling and biathlon, have variations in both.

• However, Ice Skating remains strictly a Winter Olympic sport.

Important Points

• Badminton:

• Badminton has been part of the Summer Olympics since 1992 (Barcelona).

• The sport involves singles and doubles events played indoors.

• Lawn Tennis:

• Tennis first appeared in the Olympics in 1896 and was reintroduced in 1988.

• It is played on various surfaces, including grass, clay, and hard courts.

• Basketball:

• Basketball was introduced to the Olympics in 1936 (Berlin).

• It is a globally popular team sport and includes both men’s and women’s events.

• Ice Skating:

• Ice skating is exclusively a Winter Olympic sport, with events like figure skating and speed skating.

• It requires freezing temperatures and specialized ice arenas.

Q90. Answer: (a) IIT Bombay

The correct answer is IIT Bombay.

Key Points

• AroTrack is a device developed by researchers and engineers at IIT Bombay. It is aimed at tracking and monitoring air quality.

• This device helps in real-time monitoring of air pollution levels and provides critical data for addressing environmental concerns effectively.

• The primary focus of AroTrack is to measure pollutants like PM2.5, PM10, NOx, CO, and SO2, which are hazardous to human health and the environment.

• IIT Bombay, located in Powai, Mumbai, is one of India's premier institutions for engineering and technology and has been at the forefront of research in environmental monitoring systems.

• The development of AroTrack aligns with India's commitment to improving air quality under various international accords and national policies like the National Clean Air Programme (NCAP).

Additional Information

• IIT Bombay:

• Established in 1958, IIT Bombay is recognized as one of the leading institutions for engineering and technology education and research in India.

• It is known for its contributions to innovative research in fields like environmental engineering, artificial intelligence, and renewable energy.

• Located in Powai, Mumbai, IIT Bombay has collaborated with several industries and government bodies for the development of advanced technologies.

• Air Pollution in India:

• India faces significant challenges with air pollution, with cities like Delhi, Mumbai, and Kolkata frequently ranking among the most polluted globally.

• The main pollutants include particulate matter (PM2.5, PM10), nitrogen oxides (NOx), sulfur dioxide (SO2), carbon monoxide (CO), and ozone (O3).

• The government has implemented measures like the National Clean Air Programme (NCAP) to tackle air pollution by setting targets for reducing PM2.5 and PM10 levels.

• National Clean Air Programme (NCAP):

• Launched in 2019, NCAP aims to reduce particulate matter pollution by 20-30% by 2024 (from 2017 levels).

• The program focuses on 122 cities identified as non-attainment cities, where pollution levels have consistently exceeded permissible limits.

• It encourages the use of technology, research, and public awareness to address air quality concerns.

• Features of AroTrack:

• AroTrack is compact, portable, and capable of providing real-time data on air quality.

• The device integrates with smartphone applications and cloud-based systems to ensure data accessibility and visualization.

• It is designed for use by urban planners, environmental agencies, and researchers to monitor and mitigate pollution.

Important Points

• Comparison of Options:

• IIT Bombay: Known for advanced research in technology and environmental monitoring. Correct answer.

• IISC Bangalore: Renowned for research in science and engineering, but no specific mention of AroTrack development.

• IIT Kanpur: Focuses on environmental and air quality research but not associated with AroTrack.

• IIT Roorkee: Known for research in water resources and environmental engineering but not linked to AroTrack.

• Key Statistics on Air Pollution:

• As per the World Health Organization (WHO), air pollution is responsible for over 7 million deaths annually worldwide.

• In India, it is estimated that more than 1.67 million deaths were attributable to air pollution in 2019.

• Devices like AroTrack play a crucial role in monitoring and addressing these concerns.

Q91. Answer: (c) 60

The correct answer is 60 km.

Key Points

• The Aravalli Green Wall Project is a significant initiative by the Indian government to enhance environmental sustainability and combat desertification in the region surrounding the Aravalli hill range.

• The project aims to spread a green cover in a buffer area of 60 km around the Aravalli hills, addressing ecological concerns such as deforestation, soil erosion, and climatic changes in the region.

• It seeks to create a natural barrier against the expansion of the Thar Desert into adjoining areas, thereby protecting biodiversity and promoting sustainable development.

• The initiative includes measures such as afforestation, reforestation, and community engagement to ensure effective implementation and long-term environmental benefits.

• The project is part of India's broader commitment to achieving the goals of the United Nations Convention to Combat Desertification (UNCCD), which aims to restore degraded land and combat climate change.

Additional Information

• Aravalli Hill Range:

• The Aravalli Hills are one of the oldest mountain ranges in India, stretching across the states of Rajasthan, Haryana, Gujarat, and Delhi.

• They play a vital role in maintaining ecological balance by providing habitat for diverse flora and fauna and acting as a green barrier against desertification.

• Over the years, the Aravalli range has been adversely affected by deforestation, illegal mining, and urbanization, leading to environmental degradation.

• Desertification:

• Desertification refers to the process by which fertile land becomes desert, typically due to drought, deforestation, or inappropriate agricultural practices.

• The Aravalli Green Wall Project aims to mitigate desertification by increasing vegetation cover and enhancing soil quality in the region surrounding the Aravalli hills.

• United Nations Convention to Combat Desertification (UNCCD):

• The UNCCD is an international treaty aimed at combating desertification and promoting sustainable land management.

• India is a signatory to the UNCCD and has undertaken various initiatives, including the Aravalli Green Wall Project, to fulfill its commitments under this treaty.

• Afforestation and Reforestation:

• Afforestation refers to the process of creating forests in areas that were not previously forested, while reforestation involves replanting trees in deforested areas.

• Both strategies are integral to the Aravalli Green Wall Project and are aimed at restoring ecological balance and improving air quality in the region.

• Community Participation:

• The project emphasizes the role of local communities in its implementation, encouraging participation in tree plantation drives and sustainable land management practices.

• This ensures long-term sustainability and promotes environmental awareness among residents.

Important Points

• Thar Desert Expansion:

• The Thar Desert, located primarily in Rajasthan, is expanding due to climate change and human activities such as deforestation and overgrazing.

• The Aravalli Green Wall Project aims to act as a natural shield to prevent further desert expansion into fertile regions.

• Environmental Challenges:

• Deforestation and illegal mining in the Aravalli region have led to significant environmental challenges, including soil erosion, loss of biodiversity, and reduced groundwater levels.

• The project seeks to address these issues by restoring ecological balance and promoting sustainable practices.

• Government Initiatives:

• The Aravalli Green Wall Project is part of broader government efforts to combat climate change and promote sustainable development.

• Other initiatives include National Afforestation Programme and Green India Mission, which aim to increase forest cover and improve ecosystem services.

• Role of Local Authorities:

• State governments and local authorities play a crucial role in implementing the project, ensuring compliance with environmental regulations and engaging communities.

• Collaboration between central and state governments is essential for the project's success.

Q92. Answer: (a) Jigoro Kano

The correct answer is Jigoro Kano.

Key Points

• Judo was invented by Jigoro Kano, a Japanese educator and athlete, in the year 1882.

• Jigoro Kano established the first Judo school, the Kodokan Judo Institute, in Tokyo, Japan, to teach and promote this martial art.

• Judo is a modern martial art and Olympic sport that evolved from ancient Japanese jujutsu techniques, emphasizing throws, grappling, and submission.

• The philosophy of Judo revolves around the principles of "maximum efficiency with minimum effort" and "mutual welfare and benefit."

• Judo became an Olympic sport in 1964, further solidifying its status as one of the most globally recognized martial arts disciplines.

Additional Information

• Jigoro Kano's Early Life:

• Jigoro Kano was born on October 28, 1860, in Hyogo Prefecture, Japan.

• He was a highly educated individual, graduating from Tokyo Imperial University.

• Kano sought to modernize traditional martial arts by eliminating dangerous techniques, creating a system that emphasized safety and discipline.

• Development of Judo:

• Judo was derived from ancient Japanese jujutsu, which emphasized joint locks and throwing techniques.

• Kano refined these techniques, incorporating scientific principles to create a more structured and effective martial art.
• He introduced the concept of randori (free practice), focusing on practical application over rigid kata (forms).
• Global Expansion:
• After its creation, Judo quickly gained popularity, spreading internationally during the late 19th and 20th centuries.
• It was introduced to Europe and the USA by Japanese instructors and practitioners.
• Judo's inclusion in the 1964 Tokyo Olympics marked a significant milestone in its global recognition.
• Distinction from Other Martial Arts:
• Unlike other forms of martial arts, Judo focuses on grappling, throws, and pins rather than strikes or kicks.
• The absence of weapons and emphasis on technique makes Judo unique and suitable for sport and self-defense.
• Judo practitioners aim to use their opponent's strength against them, leveraging principles of balance and leverage.
• Other Notable Figures:
• James Naismith: Inventor of basketball (1891) in Springfield, USA.
• James Creighton: Known for formalizing the rules of ice hockey in Canada.
• Ebenezer Morley: Credited for drafting the rules of modern football in England.
• These individuals are unrelated to Judo but are significant contributors to their respective sports.

Important Points

• Judo's Core Techniques:
• Judo techniques are divided into three categories: Nage-waza (throwing techniques), Katame-waza (grappling techniques), and Atemi-waza (striking techniques) (used in kata).
• Popular throws include Seoi-nage (shoulder throw) and O-soto-gari (major outer reap).
• Judo Belts and Ranking:
• Practitioners progress through colored belts, starting from white and advancing to black.
• The ranking system emphasizes skill, knowledge, and time spent practicing.
• Judo in Modern Sports:
• Judo is governed internationally by the International Judo Federation (IJF).
• It remains one of the most popular Olympic sports, attracting athletes worldwide.
• Judo's focus on discipline and physical fitness makes it a valuable activity for personal development.

Q93. Answer: (a) New Delhi

The correct answer is New Delhi.

Key Points

• The India Open badminton tournament is one of the most prestigious badminton tournaments held annually in India.
• In January 2025, the tournament was hosted in the capital city of India, New Delhi.
• The event is part of the BWF World Tour, attracting top international players from across the globe.
• New Delhi, being a well-connected and prominent city, has world-class sports infrastructure suitable for hosting events of this magnitude.
• The venue used for the India Open typically includes facilities like the K.D. Jadhav Indoor Hall, which is known for hosting badminton tournaments and other sporting events.

Additional Information

• India Open History:
• The India Open was first held in 2008 and has since grown to become a significant event in the badminton calendar.
• The tournament is organized under the aegis of the Badminton Association of India (BAI).
• It is categorized as a Super 750 event under the BWF World Tour, making it highly competitive and ranking points-rich for players.
• New Delhi as a Sporting Hub:
• New Delhi, the capital city of India, has hosted various international sports events, including the Commonwealth Games 2010.
• The city boasts several state-of-the-art sports facilities such as the Indira Gandhi Indoor Stadium and the K.D. Jadhav Indoor Hall.
• Its excellent connectivity through air, rail, and road makes it a prime location for national and international tournaments.
• BWF World Tour:
• The Badminton World Federation (BWF) organizes the World Tour, which includes events classified into Super 1000, Super 750, Super 500, and Super 300 tiers.
• The India Open is classified as a Super 750 tournament, which is among the higher tiers of the World Tour, attracting elite

players.

• The tournament contributes significant points for world rankings, making it an essential event for players aiming for top rankings.

• Prominent Players in India Open:

• Top badminton players such as P.V. Sindhu, Saina Nehwal, and Kidambi Srikanth have regularly participated in the India Open.

• International stars such as Kento Momota, Carolina Marin, and Victor Axelsen have also graced the tournament.

Important Points

• India Open Prize Pool:

• The tournament has a substantial prize pool, often exceeding USD 750,000, making it lucrative for participants.

• Impact on Indian Badminton:

• The India Open serves as a platform for Indian players to compete against international athletes, boosting the growth of badminton in the country.

• Facilities and Hospitality:

• New Delhi ensures world-class hospitality and facilities for players and officials, contributing to the success of the tournament.

Q94. Answer: (d) Attukal Pongala

The correct answer is Attukal Pongala.

Key Points

• Attukal Pongala is a famous festival celebrated in the state of Kerala, India. It is organized annually at the Attukal Bhagavathy Temple in Thiruvananthapuram.

• The festival is renowned for its unique feature of being the largest single gathering of women in the world for a religious activity. This achievement has been recognized by the Guinness World Records.

• The event involves thousands of women preparing a special offering called Pongala, made of rice, jaggery, and coconut, which is cooked in earthen pots as an offering to the goddess Attukal Devi.

• The festival spans over ten days, with the Pongala ritual being the most significant and occurring on the ninth day. Women gather in and around the temple premises and on the streets of Thiruvananthapuram to participate in this ritual.

• The festival is a symbolic representation of devotion, equality, and empowerment of women, as it unites women from all walks of life and religious backgrounds.

Additional Information

• Significance of Attukal Pongala:

• The festival is dedicated to Attukal Bhagavathy, an incarnation of the Hindu goddess Kannaki (Parvati).

• It is celebrated in the Malayalam month of Kumbham (February–March).

• The festival represents the victory of good over evil and celebrates the goddess's power to protect her devotees.

• Guinness World Records Recognition:

• The 2016 edition of Attukal Pongala saw participation from more than 2.5 million women, earning it the Guinness World Record for the largest gathering of women for a religious activity.

• The record highlights the global cultural significance of the festival and its ability to bring women together in solidarity.

• Preparation for the Ritual:

• Women bring their own cooking utensils, ingredients, and firewood to prepare the Pongala offering on temporary hearths set up on roadsides and open spaces.

• The ritual begins after the chief priest of the temple lights the holy hearth (Pandara Aduppu) inside the temple premises.

• Comparison with Other Kerala Festivals:

• Chikalkalo: A traditional mud festival celebrated in certain parts of Kerala, particularly in the Kasaragod district. It involves physical games and is not religious in nature.

• Pooram: A temple festival celebrated with grand processions and fireworks. The most famous is the Thrissur Pooram.

• Vishu: The Malayalam New Year celebrated in April, marked by feasting and the Vishukkani ritual.

• Attukal Pongala: Stands out as a festival exclusively for women and holds spiritual and cultural importance.

Important Points

• Historical Background: The temple is believed to be over 500 years old and holds a significant place in Kerala's religious and cultural history.

• Equality and Inclusiveness: Women from all castes, religions, and social backgrounds participate in the festival, making it a symbol of unity and empowerment.

• Economic Impact: The festival contributes significantly to the local economy, as vendors sell cooking materials, food items, and earthen pots during the event.

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Q95. Answer: (c) 1764

The correct answer is 1764.

Key Points

• Robert Clive was appointed the Governor of Bengal in 1764 after his significant military and administrative contributions during his tenure in India.

• Clive played a major role in the Battle of Plassey (1757), which marked the beginning of British dominance in India.

• As Governor, Clive implemented dual government in Bengal, combining British administrative control with local Nawab rule.

• He was instrumental in establishing the foundation of British rule in India by securing significant economic and political advantages for the British East India Company.

• His tenure faced criticism due to alleged corruption and exploitation, but his policies laid the groundwork for British colonial administration in India.

Additional Information

• Robert Clive:

• Born in 1725, Clive is often regarded as the architect of British supremacy in India.

• He first arrived in India as a clerk for the East India Company and later rose to prominence due to his military success.

• Battle of Plassey (1757):

• The battle was fought between the British East India Company, under Clive, and Nawab Siraj-ud-Daulah, the ruler of Bengal.

• Clive's tactical brilliance and treachery within the Nawab's camp led to British victory.

• This victory allowed the British East India Company to gain control over Bengal's wealth and resources.

• Dual Government System:

• Introduced by Clive in Bengal after 1765, it divided administrative responsibilities between the British and the local Nawabs.

• While the British controlled revenue collection and military power, the Nawabs were nominally responsible for law and order.

• This system allowed the East India Company to exploit Bengal's wealth without direct administrative costs.

• Controversies Surrounding Clive:

• Clive faced allegations of corruption and profiteering during his tenure.

• In 1772, he was subject to an inquiry by the British Parliament but was ultimately acquitted.

• Despite controversies, his contributions to British imperial expansion in India remain significant.

• Legacy:

• Clive's policies laid the foundation for British colonial administration and economic exploitation in India.

• He died in 1774, leaving behind a mixed legacy as a military strategist and controversial administrator.

Important Points

• 1765 Treaty of Allahabad:

• Signed between Clive and Mughal Emperor Shah Alam II.

• Granted the British East India Company Diwani rights (revenue collection) in Bengal, Bihar, and Orissa.

• Economic Impact of Clive's Policies:

• Led to the exploitation of Bengal's resources, contributing to the Great Bengal Famine (1770).

• Clive's revenue policies prioritized British profits over local welfare.

• Military Achievements:

• Clive's victories in India established British dominance over French and local rulers.

• Played a crucial role in defeating the French during the Carnatic Wars.

Q96. Answer: (c) 1994

The correct answer is 1994.

Key Points

• The Malhotra Committee was formed in 1993 by the Government of India to suggest reforms in the insurance sector.

• The committee was chaired by R.N. Malhotra, the former Governor of the Reserve Bank of India (RBI).

• It submitted its report in the year 1994, recommending several pivotal changes to liberalize and modernize the Indian insurance sector.

• The report emphasized the need for opening up the insurance sector to private players and the establishment of an independent regulatory authority to oversee insurance activities.

• The recommendations of the Malhotra Committee laid the groundwork for the formation of the Insurance Regulatory and Development Authority of India (IRDAI) in 1999.

Additional Information

• Key Recommendations of the Malhotra Committee:

• Opening up the Indian insurance market to private sector participation to foster competition and efficiency.

• Introducing foreign direct investment (FDI) in the insurance sector, with a cap of 26% initially, which was later increased to 49% and subsequently to 74% in 2021.

• Establishing an independent regulatory body, which resulted in the creation of the Insurance Regulatory and Development Authority of India (IRDAI) in 1999.

• Allowing private companies to enter both life insurance and non-life insurance sectors.

• Restructuring the public sector insurance companies to operate on a more competitive basis.

• Impact of the Malhotra Committee Report:

• The recommendations led to the liberalization of the Indian insurance market in the early 2000s.

• Private sector players like HDFC Life, ICICI Lombard, Max Life, and others entered the market, increasing competition and improving service quality.

• The establishment of IRDAI brought about transparency and uniform regulations for the insurance sector.

• Insurance penetration in India improved significantly, with more people opting for life and non-life insurance policies.

• About R.N. Malhotra:

• R.N. Malhotra served as the Governor of the Reserve Bank of India (RBI) from 1985 to 1990.

• He was instrumental in shaping financial reforms in India and played a key role in the liberalization process of the insurance sector.

Important Points

• Insurance Regulatory and Development Authority of India (IRDAI):

• Established in 1999 as an independent regulatory body to oversee insurance activities in India.

• Its objectives include protecting the interests of policyholders, promoting healthy competition, and ensuring the financial stability of the insurance market.

• Liberalization of the Insurance Sector:

• The entry of private players and FDI brought technological advancements and customer-centric services to the industry.

• Insurance penetration increased from 2.15% (2001) to 4.2% (2021), as per IRDAI reports.

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Q97. Answer: (a) Revolt of Songram Sangma

The correct answer is Revolt of Songram Sangma.

Key Points

• The Revolt of Songram Sangma took place in Assam, and it is considered one of the significant tribal uprisings during British rule in India.

• The Garos, a tribal community in the region, led this revolt against the oppressive policies of the British colonial administration, particularly focusing on their exploitation and unjust treatment.

• This revolt was rooted in the resistance to British revenue policies and forest laws, which impacted the livelihoods and autonomy of the tribal people.

• The revolt also symbolized the tribal aspiration for freedom and their fight to protect their cultural identity and traditional ways of life.

• It showcased the growing discontent among the indigenous communities of India and highlighted their role in the broader freedom struggle against colonial rule.

Additional Information

• Self Respect Movement:

• Started in 1925 by E.V. Ramasamy (Periyar), this movement aimed at promoting self-respect and social equality among the oppressed castes in Tamil Nadu.

• It sought to eradicate the dominance of upper-caste hegemony and advocated for rationalism, social justice, and gender equality.

• The movement's core message was to discard the caste system and superstitious practices.

• Blue Rebellion:

• Occurred in 1859 in Bengal, the Blue Rebellion was a resistance movement by the indigo farmers against the exploitation by the British planters.

• Farmers were forced to grow indigo on their lands under oppressive terms, which led to widespread discontent.

• This rebellion forced the British government to appoint the Indigo Commission in 1860 to investigate the grievances of the farmers.

• Koli Revolt:

• The Koli Revolt was led by the Koli tribal community in Maharashtra and Gujarat in the 19th century.

• The revolt was against the British forest policies and revenue system, which disrupted the livelihood of the Koli tribe.

• They primarily resisted the British attempts to take over their traditional rights to forest resources and hunting.

• Tribal Revolts in India:

• India witnessed several tribal revolts during British rule, such as the Santhal Rebellion (1855-56), Kol Uprising (1831-32), and Munda Rebellion (1899-1900).

• These revolts were primarily caused by the oppressive policies of the British, including revenue demands, forced labor, and restrictions on traditional tribal practices.

• The revolts were significant in showcasing the resistance of tribal communities to colonial exploitation and their contribution to India's freedom struggle.

Important Points

• Tribal Resistance: Many tribal uprisings were not mere reactions but well-organized movements to safeguard their rights, traditions, and lands.

• Significance of Songram Sangma: The revolt played a crucial role in inspiring later movements and highlighted the need for addressing the issues of marginalized communities.

• British Policies: The exploitative policies of the British, such as heavy taxation and restrictions on forest usage, were key triggers for many revolts during the colonial era.

Q98. Answer: (a) 10

The correct answer is 10 per cent.

Key Points

• In 1990-91, India's gross fiscal deficit as a proportion of its Gross Domestic Product (GDP) reached 10 per cent, marking a critical point in the country’s economic history.

• This situation was attributed to a combination of factors, including high government expenditure, a growing subsidy bill, and insufficient revenue generation.

• The fiscal imbalance led to a severe Balance of Payments (BoP) crisis during the same period, requiring India to seek assistance from the International Monetary Fund (IMF).

• The crisis prompted the government to implement significant economic reforms in 1991, including liberalization, privatization, and globalization, which aimed to stabilize the economy.

• The reforms helped India reduce its fiscal deficit in subsequent years and laid the foundation for long-term economic growth.

Additional Information

• Fiscal Deficit:

• Fiscal deficit refers to the difference between the government's total expenditure and its total revenue (excluding borrowings).

• A high fiscal deficit indicates that the government is spending beyond its means, which can lead to inflation and economic instability.

• Balance of Payments Crisis (1991):

• India faced a BoP crisis in 1991 due to a sharp decline in foreign exchange reserves, which dropped to levels sufficient to finance only a few weeks of imports.

• This forced the government to pledge its gold reserves and seek a loan from the IMF.

• 1991 Economic Reforms:

• The reforms were introduced under the leadership of Prime Minister Narasimha Rao and Finance Minister Dr. Manmohan Singh.

• Key measures included the removal of industrial licensing, reduction in import tariffs, and encouragement of foreign direct investment (FDI).

• IMF Assistance:

• India secured a loan of $2.2 billion from the IMF to address its foreign exchange crisis.

• The assistance came with conditions, including implementing structural reforms and reducing fiscal deficits.

Important Points

• Impact of the Fiscal Deficit:

• A high fiscal deficit can lead to increased government borrowing, which crowds out private investment and raises interest rates.

• It also puts pressure on the economy's inflation levels and can lead to a currency devaluation.

• Post-Reform Growth:

• Post-1991, India experienced higher growth rates and a significant reduction in poverty due to the implementation of economic reforms.

• India's fiscal deficit as a percentage of GDP has been better managed in subsequent decades, with policies aimed at fiscal consolidation.

Q99. Answer: (c) Conduct of business of the Government of India

The correct answer is Conduct of business of the Government of India.

Key Points

• Article 77 of the Indian Constitution pertains to the conduct of business of the Government of India. It outlines how the executive actions and decisions of the Government are to be carried out.

• It states that all executive actions of the Government of India should be expressed in the name of the President of India.

• It also specifies the rules for the allocation of business among the different Ministries and Departments of the Government.

• The President is empowered to make rules for the more convenient transaction of business and for its distribution among the Ministers.

• This Article ensures that the functioning of the Government is streamlined, organized, and accountable under the framework of the Constitution.

Additional Information

• President's Role in Executive Actions:

• All executive actions of the Government of India are performed in the name of the President, as per Article 77.

• The President acts on the advice of the Council of Ministers, headed by the Prime Minister.

• This ensures that the executive authority is exercised within the framework of parliamentary democracy.

• Rules for Allocation of Business:

• The President has the authority to frame rules for the allocation of business among the Ministers.

• These rules are crucial for ensuring the smooth functioning of the Government and avoiding overlapping responsibilities.

• Accountability in Governance:

• Article 77 mandates that all executive actions be conducted transparently, ensuring accountability to the Parliament and the citizens.

• It emphasizes the importance of maintaining a clear and organized system for executing the policies and decisions of the Government.

• Comparison with Article 74:

• While Article 77 deals with the conduct of business, Article 74 deals with the Council of Ministers aiding and advising the President.

• Both Articles collectively ensure the smooth operation of the executive branch of the Government of India.

• Examples:

• All official communications, like notifications and orders, are issued in the name of the President.

• For instance, appointment letters for high-ranking officials like Governors and Supreme Court judges bear the President’s name.

Important Points

• Article 77 and Parliamentary Democracy:

• Article 77 is integral to India's system of parliamentary democracy, where the executive is accountable to the legislature.

• It ensures a uniform system for the execution of policies and legal frameworks as determined by the Parliament.

• Legal Framework for Ministries:

• This Article provides a legal basis for the formation and functioning of various Ministries and Departments within the Government.

• It enables Ministers to act within their allocated portfolios and ensures clarity in decision-making.

• Historical Context:

• Article 77 was drafted as part of the Constitution of India, which came into effect on 26 January 1950.

• The Article was inspired by the British system of governance and adapted to fit India’s parliamentary model.

Q100. Answer: (b) 1/3

The correct answer is 1/3.

Key Points

• Article 171 of the Constitution of India specifies the composition of the Legislative Council (Vidhan Parishad) for states that have a bicameral legislature.

• As per Article 171(3)(a), 1/3 of the members of the Legislative Council are elected by electorates consisting of members of municipalities, district boards, and other local authorities in the state.

• The provision ensures representation from local self-governing bodies, which play a vital role in state governance.

• These members are chosen through an electoral process where representatives from various local bodies vote to elect Legislative Council members.

• This mechanism provides a democratic way to include local governance in the legislative process, fostering decentralized decision-making.

Additional Information

• Composition of Legislative Council:

• The Legislative Council is the upper house of the state legislature in states with bicameral legislatures (e.g., Uttar Pradesh, Karnataka).

• Its members are elected, nominated, or indirectly appointed through various processes outlined in Article 171.

• The Council must not exceed one-third of the total membership of the Legislative Assembly of the state.

• Election Process:

• Members elected by local authorities constitute 1/3 of the total members of the Legislative Council.

• Other members are elected by graduates, teachers, members of the Legislative Assembly, or nominated by the Governor.

• The election process is conducted by the Election Commission of India under the Representation of the People Act, 1951.

• Role of Local Authorities:

• Local authorities such as municipalities and district boards play a significant role in state governance.

• Representation from local bodies ensures that issues relevant to local administration are addressed in the state legislature.

• This system strengthens participatory democracy by incorporating grassroots-level governance into the legislative framework.

• States with Legislative Councils:

• Currently, only 6 states in India have Legislative Councils: Uttar Pradesh, Bihar, Maharashtra, Karnataka, Andhra Pradesh, and Telangana.

• States can propose the creation or abolition of Legislative Councils, but the final decision rests with Parliament.

• Historical Context:

• The bicameral system in state legislatures was established to include diverse perspectives in law-making.

• The inclusion of local authorities in the election process reflects the significance of grassroots governance in India.

• It was introduced to balance representation from different sections of society and administrative units.

Important Points

• Article 171: Defines the composition and electoral process for Legislative Councils in states with bicameral legislatures.

• Representation: Ensures inclusion of local self-governance bodies in the legislative process through elections.

• Governor's Role: The Governor nominates 1/6th of the members of the Legislative Council, typically experts in various fields like literature, science, or social service.

• Election Eligibility: Members of municipalities, district boards, and other local authorities are eligible to vote in the elections for Legislative Council members.

• Relevance: Legislative Councils provide an additional layer of checks and balances in state governance, complementing the Legislative Assembly.

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