Q1. Two numbers are in the ratio 5 : 7 and their sum is 144. Find the numbers.
(a) 50, 94
(b) 60, 84
(c) 55, 89
(d) 65, 79

Q2. Find the missing term in the series.
?, 132, 165, 204, 249
(a) 96
(b) 105
(c) 108
(d) 120

Q3. How many letters are between the 1st from left and 2nd from right in the word COMPETITION, when arranged alphabetically?
(a) 9
(b) 8
(c) 10
(d) 6

Q4. If X is the daughter of Y and Y is the brother of Z, how is X related to Z?
(a) Niece
(b) Daughter
(c) Sister
(d) Cousin

Q5. Apply the same pattern used in the following group and find the correct option.
NUMBER : ERBMUN :: SCHOOL : ?
(a) LHCOSO
(b) OLOHCS
(c) OLHOSC
(d) LOOCHS

Q6. Find the missing term in the series.
2, 6, 18, 54, ?
(a) 96
(b) 108
(c) 162
(d) 216

Q7. If the sum of 36 and 24 is multiplied by 7, what is the result?
(a) 420
(b) 392
(c) 448
(d) 460

Q8. Statement:
Most students in the class passed the exam.
Conclusions:
I. Some students failed the exam.
II. All students appeared for the exam.
(a) Only I follows
(b) Only II follows
(c) Both I and II follow
(d) Neither I nor II follows

Q9. Which of the following addresses are exactly identical?
Amit Verma, 12A, Green Park, Delhi, 110016
Amit Verma, 12A Green Park, Delhi, 110016
Amit Verma, 12A, Green Park, Delhi, 110018
Amit Verma, 12A, Green Park, Delhi, 110016
(a) 1 and 2
(b) 1 and 4
(c) 2 and 3
(d) 3 and 4

Q10. In the following question, select the related word from the given alternatives.
Freedom : Independence :: Poverty : ?
(a) Hunger
(b) Wealth
(c) Hardship
(d) Illness

Q11. Statement:
Online education requires reliable internet access.
Assumptions:
I. Students have access to the internet.
II. Traditional education is outdated.
(a) Only I is implicit
(b) Only II is implicit
(c) Both I and II are implicit
(d) Neither I nor II is implicit

Q12. Apply the same pattern used in the following group and find the correct option.
KLM : NOP :: STU : ?
(a) XYZ
(b) VYZ
(c) WXY
(d) VWX

Q13. Find the odd one out.
Sodium, Calcium, Iron, Oxygen
(a) Sodium
(b) Oxygen
(c) Iron
(d) Calcium

Q14. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
EHF, JKM, ONT, ?
(a) TUV
(b) STU
(c) TQA
(d) QAT

Q15. If 8 + 4 = 96 and 7 + 3 = 70, then 6 + 5 = ?
(a) 60
(b) 66
(c) 72
(d) 78

Q16. A man says, "She is the wife of my father's only son." How is the woman related to the man?
(a) Sister
(b) Mother
(c) Wife
(d) Sister-in-law

Q17. If a + b = 20 and a - b = 6, then what is a × b?
(a) 64
(b) 100
(c) 96
(d) 91

Q18. In the following question, select the related word from the given alternatives.
Cell : Tissue :: Tissue : ?
(a) Nucleus
(b) Molecule
(c) Organ
(d) Gene

Q19. In a row of 60 students, P is 18th from the left and Q is 25th from the right. How many students are between P and Q?
(a) 15
(b) 16
(c) 17
(d) 18

Q20. How many meaningful 4-letter English words can be formed using 2nd, 4th, 5th and 6th letters of the word TEACHER, without repetition?
(a) Two
(b) Four
(c) One
(d) Three

Q21. Find the odd one out.
729, 1331, 2197, 3125
(a) 729
(b) 1331
(c) 2197
(d) 3125

Q22. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
BDH, EJM, IPR, ?
(a) NVW
(b) MUX
(c) NVX
(d) MVW

Q23. Find the number that breaks the pattern:
3, 7, 15, 31, 63, 120
(a) 7
(b) 15
(c) 31
(d) 120

Q24. Pointing to a boy, a woman said, "He is the son of my mother's only son." How is the boy related to the woman?
(a) Son
(b) Cousin
(c) Brother
(d) Nephew

Q25. If BALL = 211212 and CALL = 311212, then DOLL = ?
(a) 4141212
(b) 4511212
(c) 4151221
(d) 4151212

Q26. Examine the statements about long jump technique phases:
1. The run-up on the runway builds peak momentum prior to takeoff.
2. Takeoff involves pushing from the weaker leg to ensure stability.
Which statements are accurate?
(a) Only 1
(b) Only 2
(c) Both 1 and 2
(d) Neither 1 nor 2

Q27. Complete the statement:

Through the SLKIC component of Khelo India, _____ Kendriya Vidyalayas have been selected in collaboration with KVS.

(a) 3

(b) 4

(c) 5

(d) 6

Q28. If Earth's radius shrinks by 1% with mass constant, surface gravitational acceleration would:

(a) Rise by about 1%

(b) Fall by about 2%

(c) Rise by about 2%

(d) Fall by about 1%

Q29. Which statements about Article 270 are accurate?

1. It regulates tax distribution between the Union and States, covering GST proceeds.

2. Post-101st Amendment, it incorporates Union taxes and GST revenue sharing.

3. GST Compensation Cess distribution falls under Article 270.

(a) 1 and 3 only

(b) 1 only

(c) 1 and 2 only

(d) 2 and 3 only

Q30. Lysosomes primarily function in cells to:

(a) Synthesize proteins

(b) Perform intracellular digestion

(c) Generate energy

(d) Store genetic data

Q31. Which landslide type features rotational backward movement of the displaced material?

(a) Rockslide

(b) Rock fall

(c) Slump

(d) Debris fall

Q32. Which defines light industries accurately?

(a) Processing of heavy ores and minerals

(b) Manufacturing of large industrial equipment

(c) Dependence on bulky raw materials

(d) Utilizing lightweight inputs for consumer products

Q33. Evaluate these statements on India's water-sharing agreements with neighbors:

1. The 1996 Mahakali Treaty with Nepal covers joint Mahakali River development and the Pancheshwar Project.

2. The 1996 Ganga Water Treaty with Bangladesh enables year-round Ganga water allocation at Farakka.

Which is/are correct?

(a) Only 1

(b) Only 2

(c) Both 1 and 2

(d) Neither 1 nor 2

Q34. Constructing sea walls and raising structures in a coastal area against sea-level rise mainly exemplifies:

(a) Climate Change Mitigation

(b) Carbon Sequestration

(c) Geoengineering

(d) Climate Change Adaptation

Q35. Which Indian leader spoke at a 2025 special session titled "Environment, COP-30, and Global Health"?

(a) Piyush Goyal

(b) Hardeep Puri

(c) Narendra Modi

(d) S. Jaishankar

Q36. The Regulating Act of 1773 mainly reformed the East India Company's administration in which two key domains?

(a) Judicial processes and revenue systems

(b) Military tactics and commercial policies

(c) Home-country governance and Indian territorial authority

(d) Ties with princely states and international diplomacy

Q37. Assertion (A) and Reason (R) provided. Choose correctly:

Assertion (A): UDAN Scheme boosts regional air links.

Reason (R): It offers viability gap funding to airlines.

(a) Both true, R explains A

(b) Both true, R does not explain A

(c) A true, R false

(d) A false, R true

Q38. Schedule VII of the Indian Constitution lists:

(a) Election procedures

(b) Three legislative lists

(c) Emergency provisions

(d) Judicial rules

Q39. Per Oxford Economics' Global Cities Index 2025, which pair of cities held onto their leading ranks?
(a) Tokyo and Beijing
(b) London and New York
(c) Paris and Rome
(d) Berlin and Moscow

Q40. Assertion (A) and Reason (R) follow. Select the right choice:
Assertion (A): Population explosion happens when death rates drop sharply while birth rates stay elevated.
Reason (R): Changes in societal reproductive patterns occur immediately with healthcare advancements.
(a) Both A and R true, R explains A
(b) Both true, R does not explain A
(c) A true, R false
(d) A false, R true

Q41. Read the statements below labeled as Assertion (A) and Reason (R). Select the appropriate option:
Assertion (A): Humayun's Tomb marked the first significant Mughal garden tomb and served as a direct model for the Taj Mahal's architecture.
Reason (R): It pioneered the charbagh garden design and double-domed structure typical of subsequent Mughal tombs.
(a) Both A and R are true, and R correctly explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, but R is false
(d) A is false, but R is true

Q42. Population density refers to:
(a) Individuals per household
(b) Persons per square kilometre
(c) Persons per geographic region
(d) Persons per district

Q43. The key quantity allowing a satellite to sustain orbit without ongoing thrust is:
(a) Mass
(b) Gravitational force
(c) Orbital velocity
(d) Atmospheric drag

Q44. Which ancient Indian ruler's governance was characterized by a strongly centralized administrative framework?
(a) Harshavardhana
(b) Samudragupta
(c) Chandragupta Maurya
(d) Pulakeshin II

Q45. Per Bharatiya Nagarik Suraksha Sanhita (BNSS), the total permissible police custody duration, including periodic extensions by a magistrate, is:
(a) 30 days
(b) 60 days
(c) 90 days
(d) 15 days (initial, extendable)

Q46. Which option accurately describes the development of Indian classical music traditions?
(a) Jatis developed from ragas according to early scriptures
(b) The 72-mela system originated with Bharata in the 13th century
(c) Folk traditions initially relied on mela and grama scales
(d) Ragas derived from jatis, with 72-mela system by Venkatamakhi

Q47. What primarily drives the use of generative design in aerospace engineering?
(a) Enabling smooth multi-payload system integration
(b) Refining structures for lowest weight and highest durability
(c) Boosting crew safety through redundant life-support features
(d) Developing flexible propulsion systems

Q48. Which description fits *The Adventures of Kakababu, Volume 1* by Sunil Gangopadhyaya?
1. A groundbreaking Bengali adventure series starring detective Kakababu, blending mystery and cultural motifs.
2. A satirical critique of governance in independent India.
3. An autobiographical account of the author's involvement in Bengal's freedom struggle.
(a) Only 1
(b) Only 2
(c) 2 and 3
(d) 1, 2, and 3

Q49. In which event did Mary Kom secure her latest international gold medal?
(a) Asian Games, Hangzhou
(b) President's Cup, Indonesia
(c) Commonwealth Games, Birmingham
(d) Olympic Games, Tokyo

Q50. Pradhan Mantri Kisan Maandhan Yojana (PM-KMY) enrollment is open to farmers aged:
(a) 18–30 years
(b) 18–40 years
(c) 21–45 years
(d) 25–50 years

Q51. Let a = √5 + √7 and b = √12 + √3. Which is greater?
(a) a = b
(b) a > b
(c) a < b
(d) Cannot be determined

Q52. What is the central angle (in radians) of a sector with arc length 12 cm in a circle of radius 4 cm?
(a) 2 radians
(b) 3 radians
(c) 4 radians
(d) 5 radians

Q53. A firm ordered 15 premium machines and some standard machines. The price of a premium machine was 6 times that of a standard machine. By mistake, the number of premium and standard machines was interchanged in the delivery, which increased the total bill by 75%. What was the ratio of the number of premium machines to standard machines in the original order?
(a) 3:7
(b) 4:9
(c) 1:2
(d) 2:5

Q54. A circular garden has a radius of 18 m. A 2.5 m wide pathway is constructed around it. What is the approximate area of the pathway?
(a) 282 m²
(b) 302 m²
(c) 314 m²
(d) 328 m²

Q55. What is $\frac{3\pi}{2}$ radians in degrees?
(a) 180°
(b) 210°
(c) 270°
(d) 300°

Q56. Evaluate the continued fraction:
$$x = 3 + \frac{1}{2+\frac{1}{5+\frac{1}{3}}}$$
(a) 121/35
(b) 47/16
(c) 61/20
(d) 59/19

Q57. M and N contribute to a business investment in the ratio 2:7. They earn a profit of ₹81,000. M is a working partner and receives 15% of the profit extra. What is M's total share?
(a) ₹24,000
(b) ₹27,450
(c) ₹30,000
(d) ₹33,000

Q58. The number of yellow, red, and blue pens in a box is in the ratio 2:5:7. If 18 yellow pens, 12 red pens, and some blue pens are added to the box, the ratio of yellow, red, and blue pens becomes 3:6:8. Determine the number of blue pens added.
(a) 6
(b) 8
(c) 10
(d) 12

Q59. Find the compound interest on ₹12,000 at 8% per annum for 2 years 9 months, interest compounded annually.
(a) ₹2,456
(b) ₹2,598
(c) ₹2,712
(d) ₹2,837

Q60. An 80-litre mixture contains milk and water in the ratio 7:1. Some quantity of this mixture is removed and replaced with pure milk. If the final ratio of milk to water becomes 15:1, how many litres of the mixture were replaced?
(a) 40 litres
(b) 18 litres
(c) 32 litres
(d) 46 litres

Q61. P and Q invest ₹50,000 and ₹75,000 respectively in a business. What is P's share in a profit of ₹60,000?
(a) ₹18,000
(b) ₹22,000
(c) ₹24,000
(d) ₹26,000

Q62. In a group of 60 workers, the average monthly income per worker is ₹28,000. If 20 junior workers average ₹18,000 each, what is the average monthly income (in ₹) for the senior workers?
(a) ₹33,000
(b) ₹34,500
(c) ₹35,000
(d) ₹36,500

Q63. X, Y, and Z can complete a project in 20, 40, and 60 days respectively. X works every day, while Y and Z join X every third day. How long will it take to finish the project?
(a) $12\frac{7}{2}$ days
(b) $15\frac{5}{6}$ days
(c) $16\frac{5}{6}$ days
(d) 18 days

Q64. The price of diesel increased by 6%. Before the increase, the price was ₹85 per litre. A person travels 2880 km every month and his vehicle gives a mileage of 12 km per litre. What is the increase in the monthly expenditure (to the nearest ₹) on his travel due to the price hike?
(a) ₹1,224
(b) ₹1,428
(c) ₹1,530
(d) ₹1,632

Q65. If sin (90° - B) = 2/3, what is cos B?
(a) 1/3
(b) 2/3
(c) √5/3
(d) √3/2

Q66. If x = √11, determine the value of x + 1/x.
(a) $\frac{12\sqrt{11}}{11}$
(b) $\frac{11\sqrt{11}}{12}$
(c) $\frac{13\sqrt{11}}{11}$
(d) $\frac{14\sqrt{11}}{11}$

Q67. Two similar circles have their radii in the ratio 5:8. What is the ratio of their areas?
(a) 5:8
(b) 25:64
(c) 8:5
(d) 64:25

Q68. The ratio of efficiencies of workers A and B is 4:3. If A can finish a task in 18 days, in how many days will B finish the same task alone?
(a) 20 days
(b) 22 days
(c) 24 days
(d) 26 days

Q69. On a circular track, a motorcycle starts from point X and a truck starts from point Y, which is 500 m ahead of X in the direction of motion. The speed of the motorcycle is 20 m/s and that of the truck is 8 m/s. If the length of the track is 2.2 km, how much distance will the motorcycle have travelled when it overtakes the truck for the first time?
(a) 845.5 m
(b) 1,800 m
(c) 800 m
(d) 833.33m

Q70. A baker buys three types of flour: wheat, rye, and oats. Wheat flour costs 5 for ₹40, rye flour at 6 for ₹45, and oats flour at 4 for ₹36. He mixes them in the ratio 2:2:3. He sells all the mixed flour at 3 for ₹32. What is his approximate profit or loss percentage?
(a) Loss of 28%
(b) Profit of 27%
(c) Profit of 29%
(d) Loss of 19%

Q71. The ratio of male to female employees in a company is 8:6. If 15 more female employees join the company, the new ratio of male to female employees becomes 8:7. What is the total number of employees in the company initially?
(a) 180
(b) 210
(c) 252
(d) 315

Q72. The angles of a cyclic quadrilateral are in the ratio 1:3:4:4. What is the measure of the largest angle?
(a) 90°
(b) 108°
(c) 120°
(d) 135°

Q73. If $x = \sqrt{\frac{5+2\sqrt{6}}{5-2\sqrt{6}}}$, then determine the value of $x^2 + 3x - 15$?
(a) 50 + 12√6
(b) 40 + 23√6
(c) 49 + 26√6
(d) 35 + 15√6

Q74. If cos A = 5/13 and A is acute, find tan A.
(a) 5/12
(b) 12/5
(c) 13/12
(d) 12/13

Q75. The line 3x + 2y = 12 passes through which of the following points?
(a) (2, 3)
(b) (4, 0)
(c) (0, 6)
(d) (1, 4)

Q76. Choose the correct one-word substitute for:
'A person who avoids pleasures and lives with strict self-discipline'.
(a) Skeptic
(b) Ascetic
(c) Mystic
(d) Agnostic

Q77. Select the most appropriate synonym of the given word: ABJURE
(a) Demand
(b) Accept
(c) Renounce
(d) Retain

Q78. Choose the most suitable option to replace the highlighted part of the sentence:
No sooner had I arrived at the platform when the train left.
(a) than the train left
(b) then the train left
(c) when the train had left
(d) than did the train leave

Directions (79-83): Read the following passage and answer the questions based on the passage:
The rapid expansion of social media has reshaped democratic life in profound ways, functioning at once as a driver of public participation and a channel for strategic deception. Platforms such as Twitter, Facebook, and Instagram, once viewed mainly as spaces for personal sharing, have evolved into major arenas of political conversation. They allow citizens to voice opinions, rally around causes, and hold those in power accountable almost instantly. Since democracy depends on the circulation of ideas and information, social media appears to broaden access by weakening the control once exercised by traditional gatekeepers. Political figures can address voters directly without editorial mediation, and citizen-led movements can use viral momentum to bring neglected concerns into public focus. In moments of high political intensity—elections, mass protests, policy disputes—these platforms operate like a modern digital marketplace of ideas, enabling wider involvement than was previously possible through newspapers or public meetings. Yet this openness carries serious risks. The same networks that spread accurate information can also accelerate falsehoods, deepen polarization, and strengthen echo chambers through algorithmic reinforcement. In several democracies, electoral processes have been challenged by fake profiles, coordinated harassment, and organized disinformation efforts. Further, content designed to trigger emotion and maximize engagement often overshadows careful reasoning, turning political discussion into a noisy stream of anger and extremes. Hence, the influence of social media on democracy depends not only on technology, but also on the ethical rules that shape its use. Strong oversight, public media awareness, and transparency in how algorithms rank and recommend content are crucial if societies wish to gain the benefits while limiting the damage. Ultimately, social media is not automatically beneficial or harmful—it reflects collective choices. Whether it strengthens democratic stability or fuels distortion depends on how responsibly it is used by citizens, institutions, and the platforms themselves.

Q79. What key democratic role of social media is highlighted in the passage?
(a) Increasing entertainment content
(b) Eliminating printed newspapers
(c) Enabling wider circulation of information and ideas
(d) Creating labour unions

Q80. Why does the author describe social media as a "double-edged" force in democracy?
(a) It is inexpensive to use
(b) It focuses mostly on images and videos
(c) It spreads both reliable information and false narratives
(d) It connects people globally

Q81. According to the passage, what helps previously unheard groups gain attention on social media?
(a) Newspaper editors and boards
(b) Strict journalistic gatekeeping
(c) Viral momentum along with citizen-led movements
(d) Government press agencies

Q82. What remedy does the author emphasize to reduce misuse of social media in democratic systems?
(a) Promoting meme-based communication
(b) Allowing unrestricted posting of all content
(c) Media awareness and transparency of algorithms
(d) Enforcing worldwide censorship

Q83. What factor decides whether social media strengthens or weakens democracy, as per the passage?
(a) The amount of political advertising
(b) The revenue model of platforms
(c) Ethical use driven by societal intent
(d) The influence of online celebrities

Q84. Select the most appropriate antonym of the given word: POTENT
(a) Strong
(b) Robust
(c) Powerful
(d) Feeble

Q85. A sentence is provided in indirect speech. From the four given options, choose the one that most accurately conveys the sentence in its corresponding direct speech:
The librarian of Public library said that silence must be maintained in the reading hall.
(a) "Silence should be maintained in the reading hall," said the librarian of public library.
(b) "You will maintain silence in the reading hall," said the librarian of public library.
(c) "Maintain silence in the reading hall," said the librarian of public library.
(d) "Must you maintain silence in the reading hall?" asked the librarian of public library.

Q86. Select the correct option:
The committee meets on Monday, ___ the final decision will be announced.
(a) whereupon
(b) at then
(c) when
(d) on which

Q87. Select the correct option:

Only a complete paradigm shift can ___ the deeply entrenched bureaucratic inertia.

(a) discourage

(b) dislodge

(c) disillusion

(d) persuasion

Q88. A sentence is provided in direct speech. From the four given options, choose the one that most accurately conveys the sentence in its corresponding indirect speech:

She said, "I met him yesterday morning."

(a) She said she had met him the previous morning.

(b) She said she has met him yesterday morning.

(c) She said she was meeting him yesterday morning.

(d) She said she had meet him the previous morning.

Q89. Spot the correct spelling of a drug-effect psychology field.

(a) Psychopharmacolgy

(b) Psychopharmacology

(c) Psychopharmocology

(d) Psychopharmecology

Q90. Select the correct option:

Neither the project lead ___ the team members were prepared for the audit.

(a) or

(b) nor

(c) either

(d) nor did

Q91. Change the following from active to passive:

Citizens can rarely access archived stamps without clearance.

(a) Archived stamps can rarely being accessed without clearance.

(b) Archived stamps could rarely be accessed without clearance.

(c) Archived stamps can rarely be accessed without clearance.

(d) Archived stamps are rarely able to be accessed without clearance.

Q92. Convert the sentence provided below from its passive voice structure to an active voice structure:

The parcel is delivered to the reception desk every evening.

(a) The reception desk delivers the parcel every evening.

(b) Someone delivers the parcel to the reception desk every evening.

(c) The reception desk has delivered the parcel every evening.

(d) The parcel delivers itself to the reception desk every evening.

Q93. Rearrange the following sentences to form a coherent paragraph:

1. Consequently, effective communication depends on more than merely the words we speak.
2. Non-verbal signals, such as tone, facial expressions, and gestures, may communicate more than the spoken message itself.
3. Communication is a multifaceted process that involves sharing information, ideas, and emotions between people.
4. Often, it is these subtle cues that reveal how a message is truly meant or received.

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

Q94. Find the part of the sentence that contains an error:

Much of what seems to be coordination (1) / among the regulatory bodies and private stakeholders (2) / are, in reality, coincidental overlaps (3) / arising from differing mandates (4).

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

Q95. Find the part of the sentence that contains an error:

That the policy omits provisions for backward compatibility (1) / is less troubling than the belief (2) / that all regional bodies will, without any pressure, (3) / complies with the central directive as issued (4).

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

Q96. Identify the misspelt word:

(a) Perseverance
(b) Supersede
(c) Privillage
(d) Mischievous

Q97. Select the sentence containing the homonym of the highlighted word:

The prince's gules stood out clearly on the family coat of arms.

(a) The shield displayed gules and argent in bold patterns.
(b) The cook served a dish with a sauce of rich gules and cumin.
(c) The gules trim on the banner represented a warrior tradition.
(d) The guide described the meaning of gules to the audience.

Q98. Choose the most suitable option to replace the highlighted part of the sentence:

The teacher asked to the student to submit the papers.

(a) asked the student that submit the papers
(b) requested the student to submit papers
(c) asked the student to submit the papers
(d) told to the student submit papers

Q99. Choose the correct meaning of idiom: Leave no stone unturned
(a) To keep shifting from one place to another repeatedly
(b) To make every possible effort to achieve a goal
(c) To remain quiet as a form of protest
(d) To obey someone without questioning

Q100. Rearrange the following sentences to form a coherent paragraph:
1. One effective approach is to broaden energy options by moving away from fossil fuels towards renewables such as solar, wind, and geothermal energy.
2. To reduce the severe impacts of climate change, nations must sharply cut dependence on high-carbon energy generation.
3. This transition not only lowers greenhouse gas output but also improves air quality and opens up new economic possibilities.
4. In addition, measures that encourage energy efficiency in buildings and transport can further reduce total energy use.
(a) 2, 1, 3, 4
(b) 1, 2, 4, 3
(c) 3, 1, 4, 2
(d) 2, 3, 1, 4

Solutions

S1. Ans.(b)
Sol. Given:
Two numbers are in the ratio 5 : 7 and their sum is 144.
Solution:
Let the numbers be 5x and 7x.
5x + 7x = 144
12x = 144
x = 12
The numbers are:
5x = 5 × 12 = 60
7x = 7 × 12 = 84
So, the numbers are 60, 84.
Thus, correct option is (b).

S2. Ans.(b)
Sol. Given: ?, 132, 165, 204, 249
Logic: Double difference increasing + 6 place.

165 - 132 = 33
204 - 165 = 39
249 - 204 = 45
Differences are increasing by + 6.
33, 39, 45
The previous difference should be:
33 - 6 = 27
132 - 27 = 105
So, the missing term is 105.
Thus, correct option is (b).

S3. Ans.(b)

Sol. Given: COMPETITION

Given Letters	C	O	M	P	E	T	I	T	I	O	N
Alphabetical Order	C	E	I	I	M	N	O	O	P	T	T

Alphabetical order: C E I I M N O O P T T
1st letter from left: C
2nd letter from right: T
Letter are between 1st from left and 2nd from right: E, I, I, M, N, O, O, P
So, 8 letters are between the 1st from left and 2nd from right in the word.
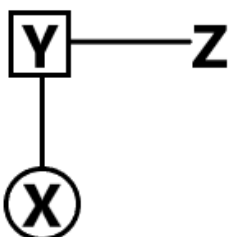Thus, correct option is (b).

S4. Ans.(a)

Sol. Given:
If X is the daughter of Y and Y is the brother of Z.

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

From the given information blood relation diagram will be.
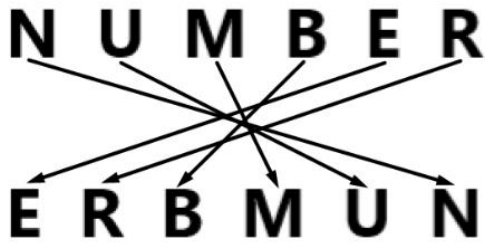

So, X is the niece of Z.
Thus, correct option is (a).

S5. Ans.(b)
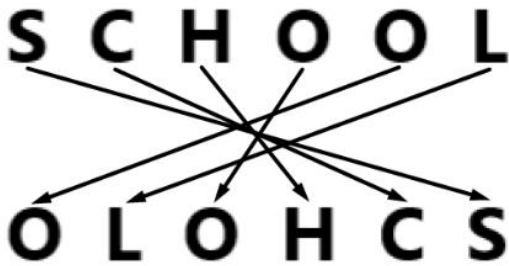**Sol.** Given: NUMBER : ERBMUN :: SCHOOL : ?
Logic: Positions of letters are interchanged.
For, NUMBER : ERBMUN

Similarly,
SCHOOL : ?

So, SCHOOL : OLOHCS
Thus, correct option is (b).

S6. Ans.(c)
Sol. Given: 2, 6, 18, 54, ?
Logic: Numbers are multiply by 3.
2 × 3 = 6
6 × 3 = 18
18 × 3 = 54
54 × 3 = 162
So, the missing term is 162.
Thus, correct option is (c).

S7. Ans.(a)
Sol. Given:
If the sum of 36 and 24 is multiplied by 7
Solution:
36 + 24 = 60
Now multiply by 7:
60 × 7 = 420
So, the result is 420.
Thus, correct option is (a).

S8. Ans.(a)
Sol. Statement:

Most students in the class passed the exam.
Conclusions:
I. Some students failed the exam.
Follows, "most" means more than half, but not all so at least some students did not pass (i.e., failed).
II. All students appeared for the exam.
Not follow, the statement does not say that all students appeared; it only talks about those who passed.
So, Only I follows.
Thus, correct option is (a).

S9. Ans.(b)
Sol. Given:
Amit Verma, 12A, Green Park, Delhi, 110016
Amit Verma, 12A Green Park, Delhi, 110016
Amit Verma, 12A, Green Park, Delhi, 110018
Amit Verma, 12A, Green Park, Delhi, 110016
Compare the addresses carefully:
1. Amit Verma, 12A, Green Park, Delhi, 110016
2. Amit Verma, 12A Green Park, Delhi, 110016
Same details; comma difference doesn't matter
3. Amit Verma, 12A, Green Park, Delhi, 110018
PIN code is different
4. Amit Verma, 12A, Green Park, Delhi, 110016
Exactly same as Address 1
So, the exactly identical addresses are 1 and 4.
Thus, correct option is (b).

S10. Ans.(c)
Sol. Given: Freedom : Independence :: Poverty : ?
Freedom leads to independence.
Similarly,
Poverty : ?
Poverty leads to hardship.
Thus, correct option is (c).

S11. Ans.(a)
Sol. Statement:
Online education requires reliable internet access.
Assumptions:
I. Students have access to the internet.
This is implicit, because without internet access, online education cannot function.
II. Traditional education is outdated.
This is not implicit, the statement says nothing about traditional education.
So, Only I is implicit.
Thus, correct option is (a).

S12. Ans.(d)
Sol. Given: KLM : NOP :: STU : ?

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

Logic: Letters are increasing + 3 place.
For, KLM : NOP
K + 3 = N, L + 3 = O, M + 3 = P
Similarly,
STU : ?
S + 3 = V, T + 3 = W, U + 3 = X
So, STU : VWX
Thus, correct option is (d).

S13. Ans.(b)
Sol. Sodium, Calcium and Iron are metals. Oxygen is non-metal.
So, oxygen is odd one out.
Thus, correct option is (b).

S14. Ans.(c)
Sol. Given: EHF, JKM, ONT, ?

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

Logic: 1st letter + 5, 2nd letter + 3 and 3rd letter + 7 place.
For, 1st letter
E + 5 = J, J + 5 = O, O + 5 = T
For, 2nd letter
H + 3 = K, K + 3 = N, N + 3 = Q
For, 3rd letter
F + 7 = M, M + 7 = T, T + 7 = A
So, the missing term is TQA.
Thus, correct option is (c).

S15. Ans.(b)
Sol. Given: If 8 + 4 = 96 and 7 + 3 = 70
Logic: (1st number × 2nd number) + (1st number)^2= 3rd number
For, 8 + 4 = 96
(8 × 4) + (8)^2= 32 + 64 = 96
For, 7 + 3 = 70
(7 × 3) + (7)^2= 21 + 49 = 70
Similarly,
6 + 5 = ?
(6 × 5) + (6)^2= 30 + 36 = 66
Thus, correct option is (b).

S16. Ans.(c)
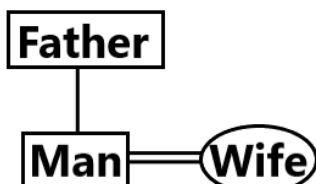**Sol.** Given:
A man says, "She is the wife of my father's only son."

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

From the given information blood relation diagram will be.

| Father |
| Man ⊨ Wife |

So, the woman is wife of the man.
Thus, correct option is (c).

S17. Ans.(d)
Sol. Given:
If a + b = 20 and a - b = 6
Solution:
Add both equations:
2a = 26 => a = 13
Substitute a = 13 into a + b = 20:
b = 7
Now, a × b = 13 × 7 = 91
So, a × b = 91
Thus, correct option is (d).

S18. Ans.(c)
Sol. Given: Cell : Tissue :: Tissue : ?
Cells combine to form tissue.
Similarly,
Tissue : ?
Tissues combine to form an organ.
Thus, correct option is (c).

S19. Ans.(c)
Sol. Given:
In a row of 60 students, P is 18th from the left and Q is 25th from the right.
Solution:
Total students = 60
P is 18th from the left.
Q is 25th from the right, so Q's position from the left:
= 60 - 25 + 1
= 36
Now positions from the left:
P = 18 and Q = 36
Students between P and Q:
= 36 - 18 - 1
= 17
So, 17 students are between P and Q.
Thus, correct option is (c).

S20. Ans.(c)
Sol. Given Word: TEACHER
Letter positions:
1-T, 2-E, 3-A, 4-C, 5-H, 6-E, 7-R
Letters are: E, C, H, E
The only meaningful 4-letter English word that can be formed is:
ECHE (a valid English word meaning a ridge or terrace, though rarely used)
So, one meaningful 4-letter English words can be formed using 2nd, 4th, 5th and 6th letters of the word TEACHER, without repetition.
Thus, correct option is (c).

S21. Ans.(d)
Sol. Given: 729, 1331, 2197, 3125
$729 = 9^3$
$1331 = 11^3$
$2197 = 13^3$
$3125 = 5^5$
729, 1331 and 2197 are cubes of consecutive odd numbers.

So, 3125 does not follow the pattern.
Thus, correct option is (d).

S22. Ans.(a)
Sol. Given: BDH, EJM, IPR, ?

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

Logic: 1st letter increasing from 3, 2nd letter + 6 and 3rd letter + 5 place.
For, 1st letter
B + 3 = E, E + 4 = I, I + 5 = N
For, 2nd letter
D + 6 = J, J + 6 = P, P + 6 = V
For, 3rd letter
H + 5 = M, M + 5 = R, R + 5 = W
So, the missing term is NVW.
Thus, correct option is (a).

S23. Ans.(d)
Sol. Given: 3, 7, 15, 31, 63, 120
Logic: Numbers are multiply by 2 and + 1 place.
$3 × 2 + 1 = 7$
$7 × 2 + 1 = 15$
$15 × 2 + 1 = 31$
$31 × 2 + 1 = 63$
$63 × 2 + 1 ≠ 120$
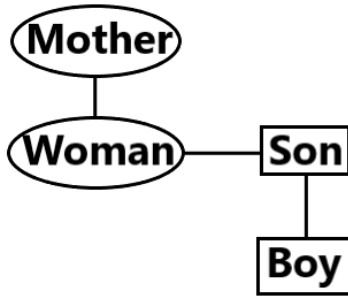So, 120 is breaks the pattern.
Thus, correct option is (d).

S24. Ans.(d)
Sol. Given:
Pointing to a boy, a woman said, "He is the son of my mother's only son."

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

From the given information blood relation diagram will be.

So, the boy is nephew of the woman.
Thus, correct option is (d).

S25. Ans.(d)
Sol. Given: If BALL = 211212 and CALL = 311212

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

Logic: Place value of letters are given.
For, BALL = 211212
B = 2, A = 1, L = 12, L = 12
For, CALL = 311212
C = 3, A = 1, L = 12, L = 12
Similarly,
DOLL = ?
D = 4, O = 15, L = 12, L = 12
So, DOLL = 4151212
Thus, correct option is (d).

S26. Ans.(a)
Sol. The correct answer is (a) Only 1.
● The run-up phase is meant to build maximum horizontal speed and momentum before takeoff.
● Takeoff is executed using the stronger leg, not the weaker leg, to generate maximum force.
Information Booster:
● Long jump phases: Run-up, Takeoff, Flight, Landing.
● Speed achieved during run-up directly affects jump distance.
● Takeoff angle is usually around 18–22 degrees.
Additional Knowledge:
● Using the weaker leg reduces power and jump efficiency.
● Proper coordination between run-up speed and takeoff strength is critical for performance.

S27. Ans.(b)

Sol. The correct answer is (b) 4.

Explanation:

• Under the SLKIC (State Level Khelo India Centre) component of the Khelo India Scheme, 4 Kendriya Vidyalayas have been selected in collaboration with the Kendriya Vidyalaya Sangathan (KVS).

• These Kendriya Vidyalayas function as State Level Khelo India Centres, focusing on sports training and talent development at the school level.

• The initiative aims to integrate sports with formal education and strengthen grassroots sports infrastructure.

Information Booster :

• SLKICs are designed to nurture young sporting talent within states.

• Kendriya Vidyalayas were chosen due to their pan-India presence and standardized infrastructure.

• Khelo India is implemented by the Ministry of Youth Affairs and Sports.

• The scheme emphasizes talent identification, training, and competition exposure.

Additional Knowledge :

• Apart from SLKICs, Khelo India includes components such as Khelo India Youth Games and Khelo India University Games.

• The programme supports India's long-term objective of building a strong sports ecosystem.

• Collaboration with KVS ensures early access to quality sports facilities for students.

S28. Ans.(c)

Sol. The correct answer is (c) Rise by about 2%.

Explanation:

• Gravitational acceleration at the surface is given by $g = \frac{GM}{R^2}$

• If Earth's mass (M) remains constant and radius (R) decreases by 1%, then R→0.99RR \to 0.99RR→0.99R.

• Since $g \propto \frac{1}{R^2}$, a 1% decrease in radius leads to an approximate 2% increase in g.

• Hence, surface gravity would rise by about 2%.

Information Booster :

• Gravitational acceleration depends on mass and radius, not on the object's mass.

• Small percentage changes can be approximated using differentials: $frac\Delta g g \approx -2\frac{\Delta R}{R}$

• Earth's average surface gravity is about 9.8 m/s².

Additional Knowledge :

• Option (a) is incorrect: the increase is not linear with radius.

• Option (b) and (d) are incorrect because a decrease in radius increases, not decreases, gravity.

• Similar logic applies to changes in gravity on planets and stars with different radii and masses.

S29. Ans.(c)

Sol. The correct answer is (c) 1 and 2 only.

Explanation:

• Article 270 of the Constitution of India provides for the distribution of net tax proceeds between the Union and the States.

• After the 101st Constitutional Amendment Act, 2016, Article 270 was amended to include Goods and Services Tax (GST) within the divisible pool of taxes.

• However, the GST Compensation Cess is excluded from the divisible pool and is not distributed under Article 270.

Information Booster :

• Article 270 operates on the recommendations of the Finance Commission.

• GST introduced the concept of concurrent taxation by Union and States.

• The divisible pool excludes cesses and surcharges levied by the Union.

• The 101st Amendment came into force on 1 July 2017 with GST rollout.

Additional Knowledge :

• Statement 3 is incorrect because GST Compensation Cess is collected separately to compensate States for revenue loss.

• Distribution of GST Compensation Cess is governed by the GST (Compensation to States) Act, 2017, not Article 270.

• Article 269A separately deals with inter-State GST (IGST) and its apportionment.

S30. Ans.(b)

Sol. The correct answer is (b) Perform intracellular digestion.

Explanation:

• Lysosomes are membrane-bound organelles containing hydrolytic enzymes.

• They digest worn-out organelles, cellular waste, and foreign particles within the cell.

• Hence, they are often called the "suicidal bags" of the cell.

Information Booster :

• Lysosomes were discovered by Christian de Duve in 1955.

• They contain enzymes like proteases, lipases, nucleases, active in acidic pH.

• Commonly abundant in animal cells.

• Help in autophagy (self-digestion of damaged organelles).

Additional Knowledge :

• Option (a) – Protein synthesis occurs in ribosomes and rough endoplasmic reticulum.

• Option (c) – Energy generation is the function of mitochondria.

• Option (d) – Genetic data is stored in the nucleus (DNA).

S31. Ans.(c)

Sol. The correct answer is (c) Slump.

Explanation:

• A slump is a type of landslide characterized by rotational movement of soil or rock along a curved slip surface.

• The displaced material moves downward and backward, forming a stepped or terraced appearance.

• Slumps commonly occur in clay-rich soils and on over-steepened slopes, often triggered by heavy rainfall or earthquakes.

Information Booster :

• Slumps are also called rotational slides.

• The head scarp in a slump is typically curved and concave.

• Common in road cuttings, river banks, and coastal cliffs.

• Water saturation significantly increases the likelihood of slumping.

Additional Knowledge :

• Rockslide – Involves translational movement along a planar surface, not rotational.

• Rock fall – Sudden free fall of rocks from steep slopes or cliffs.

• Debris fall – Rapid downward movement of loose debris without rotation.

S32. Ans.(d)

Sol. The correct answer is (d) Utilizing lightweight inputs for consumer products.

Explanation:

• Light industries use lightweight raw materials and produce consumer goods meant for direct use.

• They are generally less capital-intensive and can be located close to markets.

• Examples include textiles, electronics, toys, and food processing.

Information Booster :

• Light industries are a part of the manufacturing (secondary) sector.

• They require less space and power compared to heavy industries.

• Output is mostly non-durable or semi-durable goods.

• Commonly found in urban and semi-urban areas.

Additional Knowledge :

• Option (a) and (c) describe heavy industries, which rely on bulky raw materials.

• Option (b) relates to capital goods industries, also categorized as heavy industries.

• Heavy industries include iron & steel, shipbuilding, and machinery manufacturing.

S33. Ans.(c)

Sol. The correct answer is (c) Both 1 and 2.

Explanation:

• The 1996 Mahakali Treaty between India and Nepal provides for integrated development of the Mahakali River, including the Pancheshwar Multipurpose Project.

• The 1996 Ganga Water Treaty between India and Bangladesh ensures year-round sharing of Ganga waters at Farakka, replacing earlier short-term arrangements.

• Hence, both statements are correct.

Information Booster :

• The Mahakali Treaty is also known as the Treaty of Integrated Development of the Mahakali River.

• The Pancheshwar Project is designed for hydropower generation and irrigation.

• The Ganga Water Treaty is valid for 30 years (1996–2026).

• It replaced the 1977 Ganga Water Agreement between India and Bangladesh.

Additional Knowledge :

• Water-sharing treaties are governed by principles of equitable utilization and no significant harm.

• India has similar river water treaties with Pakistan (Indus Waters Treaty, 1960) and Bhutan (hydropower cooperation).

• Farakka Barrage was commissioned in 1975 to divert water to the Hooghly River for Kolkata Port maintenance.

S34. Ans.(d)

Sol. The correct answer is (d) Climate Change Adaptation.

Explanation:

• Building sea walls and elevating structures helps communities adjust to the impacts of sea-level rise.

• These measures do not reduce greenhouse gas emissions, but reduce vulnerability and damage from climate impacts.

• Hence, they are classified as adaptation strategies, not mitigation.

Information Booster :

• Climate change adaptation focuses on coping with effects like floods, droughts, and heatwaves.

• Coastal adaptation measures include mangrove restoration, embankments, and storm surge barriers.

• India's National Action Plan on Climate Change (NAPCC) includes adaptation missions.

• Small island and coastal nations prioritize adaptation due to high climate risk.

Additional Knowledge :

• Option (a) – Mitigation aims at reducing emissions (e.g., renewable energy).

• Option (b) – Carbon sequestration involves absorbing CO_2 through forests or technology.

• Option (c) – Geoengineering refers to large-scale technological interventions in climate systems, not local protective measures.

S35. Ans.(c)

Sol. The correct answer is (c) Narendra Modi.

Explanation:

• Narendra Modi addressed the 2025 special session on "Environment, COP-30, and Global Health".

• His address emphasized climate action, global cooperation, and the interlinkage between environmental sustainability and public health.

• The speech reinforced India's commitment to multilateral climate initiatives ahead of COP-30.

Information Booster :

• COP-30 is scheduled to be held in Brazil, focusing on accelerated climate action.

• India has committed to achieving net-zero emissions by 2070.

• The Prime Minister has consistently highlighted Lifestyle for Environment (LiFE) as a global movement.

• India plays an active role in international climate platforms like the International Solar Alliance.

Additional Knowledge :

• Piyush Goyal mainly handles commerce and industry portfolios.

• Hardeep Singh Puri is associated with petroleum, natural gas, and urban affairs.

• S. Jaishankar, as External Affairs Minister, represents India in diplomatic forums but did not deliver this address.

S36. Ans.(c)

Sol. The correct answer is (c) Home-country governance and Indian territorial authority.

Explanation:

• The Regulating Act of 1773 brought the East India Company under Parliamentary supervision in Britain.

• It restructured administration in India, especially by strengthening the Governor-General of Bengal over other Presidencies.

• The Act aimed to curb company misrule and establish a framework of dual control (Company + Crown).

Information Booster :
• Lord Warren Hastings became the first Governor-General of Bengal (1773).
• A Supreme Court at Calcutta was established under this Act (1774).
• Required the Court of Directors to report Company affairs to the British government.
• Marked the first step of state intervention in Company administration.

S37. Ans.(a)
Sol. The correct answer is (a) Both true, R explains A.
Explanation:
• The UDAN (Ude Desh ka Aam Naagrik) Scheme aims to enhance regional air connectivity by making flights on underserved and unserved routes viable.
• Viability Gap Funding (VGF) compensates airlines for operating losses on these routes, encouraging them to connect smaller cities.
• Therefore, the reason directly explains how the scheme boosts regional air links.
Information Booster :
• UDAN was launched in 2016 as part of the National Civil Aviation Policy.
• Implemented by the Ministry of Civil Aviation.
• Airfares on UDAN routes are capped to keep travel affordable.
• The scheme focuses on Tier-2 and Tier-3 cities and remote regions.
Additional Knowledge :
• Viability Gap Funding is shared by the Central Government and State Governments.
• Airports under UDAN include revived, unserved, and underserved airports.
• UDAN supports broader goals of economic development, tourism, and regional integration.

S38. Ans.(b)
Sol. The correct answer is (b) Three legislative lists.
Explanation:
• Schedule VII of the Indian Constitution contains the division of legislative powers between the Union and the States.
• It includes three lists: the Union List, State List, and Concurrent List.
• These lists define the subjects on which laws can be made by Parliament and State Legislatures.
Information Booster :
• The Union List contains subjects of national importance like defence, foreign affairs, and currency.
• The State List includes subjects such as police, public health, and agriculture.
• The Concurrent List covers subjects like education, forests, and criminal law.
• The Seventh Schedule has been amended multiple times to shift subjects between lists.
Additional Knowledge :
• Option (a) – Election procedures are covered under Articles 324–329 and related laws.
• Option (c) – Emergency provisions are detailed in Part XVIII (Articles 352–360).
• Option (d) – Judicial rules are addressed through various constitutional articles, not Schedule VII.

S39. Ans.(b)
Sol. The correct answer is (b) London and New York.
Explanation:

• According to the Oxford Economics Global Cities Index 2025, London and New York retained their top global rankings.

• The index evaluates cities based on economics, human capital, quality of life, environment, and governance.

• London and New York consistently score high due to their financial dominance, global connectivity, and institutional strength.

Information Booster :

• London is a leading global financial and cultural hub.

• New York hosts major institutions like the UN Headquarters and global financial markets.

• The Global Cities Index assesses 1,000 cities worldwide.

• Rankings emphasize both current performance and future potential.

Additional Knowledge :

• Tokyo and Beijing rank high in Asia but did not occupy the top two global positions.

• Paris and Rome score well culturally but lag economically compared to London and New York.

• Berlin and Moscow face constraints related to economic scale and governance indicators.

S40. Ans.(c)

Sol. The correct answer is (c) A true, R false.

Explanation:

• The assertion is correct: population explosion occurs when mortality declines rapidly due to better healthcare, sanitation, and nutrition, while fertility remains high.

• The reason is incorrect because reproductive behavior does not change immediately with healthcare improvements; it changes gradually due to social, economic, and cultural factors.

• Hence, Assertion (A) is true, but Reason (R) is false.

Information Booster :

• Rapid population growth is a feature of the second stage of the Demographic Transition Model.

• Declining death rates are linked to vaccination, antibiotics, and improved public health.

• Birth rates decline later due to education, urbanization, and family planning.

• Many developing countries experienced population explosion in the 20th century.

S41. Ans.(a)

Sol. The correct answer is (a) Both A and R are true, and R correctly explains A.

● Humayun's Tomb was the first major Mughal garden tomb.

● It served as the architectural prototype for the Taj Mahal.

● The charbagh layout and double-dome structure explain its influence on later Mughal tombs.

Information Booster:

● Year of completion: 1570 AD

● Commissioned by: Bega Begum (Haji Begum)

● Built during the reign of: Akbar

● Location: Delhi

● UNESCO World Heritage Site: 1993

Additional Knowledge:

● Charbagh is a Persian four-part garden design.

● Double dome consists of an inner dome and a taller outer dome.

● Taj Mahal construction period: 1632–1653 AD.

S42. Ans.(b)
Sol. The correct answer is (b) Persons per square kilometre.
Explanation:
• Population density is defined as the number of persons living per unit area, usually measured per square kilometre.
• It helps in understanding the pressure of population on land and resources.
• This concept is widely used in demography and human geography.
Information Booster :
• Formula: Population Density = Total Population ÷ Total Area.
• India's population density (Census 2011): 382 persons per sq km.
• Bihar has one of the highest population densities among Indian states.
• Low population density is seen in areas like Ladakh and Arunachal Pradesh.
Additional Knowledge :
• Option (a) – Refers to household size, not density.
• Option (c) – Too vague; density requires a fixed unit area.
• Option (d) – District-wise population is used for administration, not density definition.

S43. Ans.(c)
Sol. The correct answer is (c) Orbital velocity.
Explanation:
• A satellite remains in orbit when it has the correct tangential (orbital) velocity so that gravitational pull provides the centripetal force needed for circular or elliptical motion.
• With sufficient orbital velocity, the satellite continuously falls toward Earth but keeps missing it, resulting in stable orbit.
• No continuous thrust is required once this velocity is achieved (ignoring drag).
Information Booster :
• Orbital velocity near Earth is about 7.9 km/s for a low Earth orbit.
• Condition for circular orbit:
$$frac GMmr^2 = \frac{mv^2}{r}$$
• Orbital motion is an application of Newton's law of gravitation.
• Satellites in higher orbits require lower orbital velocity.
Additional Knowledge :
• Option (a) – Mass does not determine orbital motion directly.
• Option (b) – Gravity alone would cause the satellite to fall without sufficient velocity.
• Option (d) – Atmospheric drag actually destabilizes orbits and causes decay.

S44. Ans.(c)
Sol. The correct answer is (c) Chandragupta Maurya.
● Chandragupta Maurya established a highly centralized administrative system.
● The Mauryan Empire had central control over revenue, military, judiciary, and espionage.
● Administration was directly supervised by the emperor with officials appointed by the state.

Information Booster:
- Mauryan Empire founded: 321 BCE
- Capital: Pataliputra
- Chief advisor: Chanakya (Kautilya)
- Administrative treatise: Arthashastra
- Extensive use of state-appointed officials and spies

Additional Knowledge:
- Harshavardhana had a relatively decentralized and feudal administration.
- Samudragupta followed a less centralized Gupta model, allowing autonomy to local rulers.
- Pulakeshin II ruled the Chalukya kingdom with regional governors, not a centralized system.

S45. Ans.(d)
Sol. The correct answer is (d) 15 days (initial, extendable).
Explanation:
- Under the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, the maximum total period of police custody cannot exceed 15 days.
- This 15-day limit applies in aggregate, even if custody is granted in parts through periodic extensions by a magistrate.
- Beyond this period, the accused can only be kept in judicial custody, not police custody.

Information Booster :
- BNSS replaces the Code of Criminal Procedure (CrPC), 1973.
- The 15-day police custody limit continues the constitutional safeguard against custodial abuse.
- Magistrate oversight is mandatory for any police custody beyond the first 24 hours.
- BNSS aims to make criminal procedure citizen-centric, time-bound, and rights-oriented.

Additional Knowledge :
- Options (a), (b), and (c) relate to maximum periods of detention for investigation (60/90 days) before default bail, not police custody.
- Judicial custody can extend beyond 15 days, but police custody cannot.
- This provision aligns with Article 22 of the Constitution, ensuring protection against arbitrary detention.

S46. Ans.(d)
Sol. The correct answer is (d) Ragas derived from jatis, with 72-mela system by Venkatamakhi.
- Ragas evolved from earlier jatis, as described in ancient musicological texts.
- The 72-mela (melakarta) system was systematized by Venkatamakhi.
- This system forms the theoretical base of Carnatic classical music.

Information Booster:
- Jatis are discussed in the *Natyashastra*.
- Venkatamakhi formulated the 72-mela system in the 17th century.
- Treatise associated: Chaturdandi Prakashika.

Additional Knowledge:
- Bharata Muni lived around 2nd century BCE–2nd century CE, not the 13th century.
- The 72-mela system is specific to Carnatic music, not folk traditions.

S47. Ans.(b)
Sol. The correct answer is (b) Refining structures for lowest weight and highest durability.
Explanation:
• Generative design uses algorithms and computational optimization to create structures that achieve minimum weight with maximum strength.
• In aerospace engineering, weight reduction directly improves fuel efficiency, payload capacity, and performance.
• The technique explores thousands of design iterations that are impractical with traditional design methods.
Information Booster :
• Generative design relies on AI, topology optimization, and high-performance computing.
• Widely used in aircraft components, spacecraft parts, and satellite structures.
• Helps reduce material usage and manufacturing costs.
• Often combined with additive manufacturing (3D printing).

S48. Ans.(a)
Sol. The correct answer is (a) Only 1.
Explanation:
• *The Adventures of Kakababu, Volume 1* is an adventure–mystery series centered on the detective Kakababu, created by Sunil Gangopadhyaya.
• The stories combine thrilling investigations with Bengali cultural and geographical settings, appealing to young and adult readers alike.
• It is fictional and not satirical political commentary or autobiography.
Information Booster :
• Kakababu (Raja Roy Chowdhury) is portrayed as a wheelchair-bound yet brilliant detective.
• The series is among the most popular Bengali adventure franchises.
• Sunil Gangopadhyaya was a leading figure of the Krittibas literary movement.
• Several Kakababu stories have been adapted into films and TV serials.

S49. Ans.(b)
Sol. The correct answer is (b) President's Cup, Indonesia.
Explanation:
• Mary Kom won her latest international gold medal at the President's Cup Boxing Tournament held in Indonesia.
• The President's Cup is an international-level boxing competition, making the medal officially recognized.
• This victory demonstrated her continued competitiveness at the elite level.
Information Booster :
• Mary Kom clinched gold in the 52 kg category at the President's Cup.
• She is a six-time World Boxing Champion, the most by any woman boxer.
• She is the only Indian woman boxer to win an Olympic medal (Bronze, London 2012).
• Popularly known as "Magnificent Mary."
Additional Knowledge :

• Asian Games, Hangzhou – Not her latest international gold medal event.
• Commonwealth Games, Birmingham (2022) – She did not participate due to age eligibility norms.
• Olympic Games, Tokyo (2021) – She did not win a medal at Tokyo.

S50. Ans.(b)
Sol. The correct answer is (b) 18–40 years.
Explanation:
• Pradhan Mantri Kisan Maandhan Yojana (PM-KMY) is a voluntary pension scheme for small and marginal farmers.
• Eligible farmers must be in the age group of 18 to 40 years at the time of enrollment.
• The scheme provides old-age social security after the age of 60.
Information Booster :
• Launched in 2019 by the Ministry of Agriculture & Farmers' Welfare.
• Assured pension of ₹3,000 per month after attaining 60 years.
• Farmers contribute ₹55 to ₹200 per month, depending on entry age.
• The Central Government contributes an equal matching amount.
Additional Knowledge :
• Option (a) is incorrect: upper age limit is higher than 30 years.
• Options (c) and (d) are incorrect: minimum eligible age starts from 18 years, not 21 or 25.
• The scheme is implemented through the Life Insurance Corporation of India (LIC).

S51. Ans.(c)
Sol.
Given $a = \sqrt{5} + \sqrt{7}$ $b = \sqrt{12} + \sqrt{3}$ Formula Used $x > y \Leftrightarrow x^2 > y^2 (x, y > 0)$ Solution $a^2 = (\sqrt{5} + \sqrt{7})^2 = 5 + 7 + 2\sqrt{35} = 12 + 2\sqrt{35}$ $b^2 = (\sqrt{12} + \sqrt{3})^2 = 12 + 3 + 2\sqrt{36} = 15 + 12 = 27$ $2\sqrt{35} \approx 11.832$ $12 + 11.832 = 23.832 < 27 \Rightarrow a^2 < b^2 \Rightarrow a < b$ Final Answer $b > a$

S52. Ans.(b)
Sol. Given: $l = 12$ $r = 4$ Formula Used: $l = r\theta$ Solution: $\theta = \frac{l}{r} = \frac{12}{4} = 3$ Final Answer 3 radians

S53. Ans.(c)
Sol. Given: Number of premium machines = 15 Number of standard machines = x Price of premium machine $= 6 \times$ price of standard machine Increase in bill = 75% Formula Used: Percentage increase $= \frac{\text{Increase}}{\text{Original}} \times 100$ Solution: Let price of standard machine = 1 Price of premium machine = 6 Original bill = $15 \times 6 + x \times 1 = 90 + x$ Interchanged bill = $x \times 6 + 15 \times 1 = 6x + 15$ $6x + 15 = 1.75(90 + x)$ $6x + 15 = 157.5 + 1.75x$ $4.25x = 142.5$ $x = 30$ Required ratio = $15 : 30 = 1 : 2$ Final Answer $1 : 2$

S54. Ans.(b)
Sol.
Given: Radius of garden = 18 Width of pathway = 2.5 Formula Used: Area of pathway = $\pi(R^2 - r^2)$ Solution: $R = 18 + 2.5 = 20.5$ $r = 18$ Area of pathway = $\pi(20.5^2 - 18^2) = \pi(420.25 - 324) = \pi \times 96.25$ Using $\pi = 3.14 = 3.14 \times 96.25 = 302.225$ Final Answer $302 m^2$

S55. Ans.(c)
Sol.

Given: Angle $= \frac{3\pi}{2}$ radians Formula Used: Degrees $=$ Radians $\times \frac{180°}{\pi}$ Solution: $\frac{3\pi}{2} \times \frac{180°}{\pi} = \frac{3 \times 180°}{2} = 270°$ Final Answer $270°$

S56. Ans.(a)
Sol.

Given: $x = 3 + \cfrac{1}{2 + \cfrac{1}{5 + \frac{1}{3}}}$ Formula Used: $a + \frac{1}{b} = \frac{ab+1}{b}$ Solution: $5 + \frac{1}{3} = \frac{16}{3}$ $\frac{1}{5 + \frac{1}{3}} = \frac{3}{16}$ $2 + \frac{3}{16} = \frac{35}{16}$ $\frac{1}{2 + \cfrac{1}{5 + \frac{1}{3}}} = \frac{16}{35}$ $3 + \frac{16}{35} = \frac{121}{35}$ Final Answer $\frac{121}{35}$

S57. Ans.(b)
Sol.

Given: Investment ratio of M : N = 2 : 7 Total profit = 81,000 Extra profit to M = 15% Formula Used: Extra share $= \frac{15}{100} \times$ Total profit Solution: Extra profit of M $= \frac{15}{100} \times 81,000 = 12,150$ Remaining profit $= 81,000 - 12,150 = 68,850$ Total ratio parts $= 2 + 7 = 9$ M's share from remaining profit $= \frac{2}{9} \times 68,850 = 15,300$ Total share of M $= 15,300 + 12,150 = 27,450$ Final Answer ₹27,450

S58. Ans.(a)
Sol.

Given: Initial ratio of yellow : red : blue pens = 2 : 5 : 7 Yellow pens added = 18 Red pens added = 12 Blue pens added = y New ratio = 3 : 6 : 8 Formula Used: If ratio is $a : b : c$, quantities $= ka, kb, kc$ Solution: Initial numbers $= 2x, 5x, 7x$ After addition: Yellow $= 2x + 18$ Red $= 5x + 12$ Blue $= 7x + y$ $\frac{2x+18}{3} = \frac{5x+12}{6}$ $6(2x + 18) = 3(5x + 12)$ $12x + 108 = 15x + 36$ $3x = 72$ $x = 24$ $\frac{2x+18}{3} = \frac{66}{3} = 22$ $\frac{7x+y}{8} = 22$ $7(24) + y = 176$ $168 + y = 176$ $y = 8$ Final Answer 8

S59. Ans.(d)
Sol.

Given: $P = 12,000$ $r = 8\%$ Time $= 2$ years 9 months Compounded annually Formula Used: $A = P\left(1 + \frac{r}{100}\right)^n$ SI $= \frac{PRT}{100}$ Solution: $A_2 = 12,000\left(1 + \frac{8}{100}\right)^2 = 12,000 \times 1.1664 = 13,996.8$ Remaining time $= \frac{3}{4}$ year SI for 9 months $= \frac{13,996.8 \times 8 \times 3}{100 \times 4} = 839.808$ $A = 13,996.8 + 839.808 = 14,836.608$ CI $= 14,836.608 - 12,000 = 2,836.608 \approx 2,837$ Final Answer ₹2,837
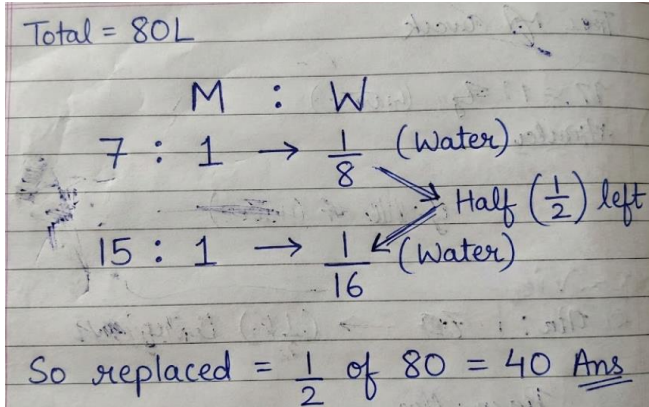
S60. Ans.(a)
Sol.

Given: Total mixture = 80 Initial ratio of milk : water = 7 : 1 Final ratio of milk : water = 15 : 1 Formula Used: Water removed = Water reduced

Solution: Initial water $= \frac{1}{8} \times 80 = 10$ Initial milk $= 80 - 10 = 70$

Let mixture removed $= x$ Milk removed $= \frac{7}{8}x$ Water removed $= \frac{1}{8}x$

Milk after replacement $= 70 - \frac{7}{8}x + x = 70 + \frac{1}{8}x$ Water after replacement $= 10 - \frac{1}{8}x \frac{70+\frac{1}{8}x}{10-\frac{1}{8}x} = \frac{15}{1}$ $70 +$

$\frac{1}{8}x = 150 - \frac{15}{8}x \frac{16}{8}x = 80 x = 40$ FinalAnswer40

Exam Hall Method:

S61. Ans.(c)
Sol.

Given:Investment of P $= 50,000$ Investment of Q $= 75,000$ Total profit $=$ 60,000 FormulaUsed:Share of P $= \frac{\text{P's investment}}{\text{Total investment}} \times$ Total profitSolution:$P: Q = 50,000: 75,000 =$ $2: 3$ Total parts $= 2 + 3 = 5$ P's share $= \frac{2}{5} \times 60,000 = 24,000$ FinalAnswer₹24,000

S62. Ans.(a)
Sol.

Given:Total workers $= 60$ Average income per worker $= 28,000$ Junior workers $=$ 20 Average income of junior workers $= 18,000$ FormulaUsed:Total income $=$ Average $\times$ NumberSolution:Total income of all workers $= 60 \times 28,000 =$ 16,80,000 Total income of junior workers $= 20 \times 18,000 = 3,60,000$ Number of senior workers $=$ $60 - 20 = 40$ Total income of senior workers $= 16,80,000 - 3,60,000 =$ 13,20,000 Average income of senior workers $= \frac{13,20,000}{40} = 33,000$ FinalAnswer₹33,000

S63. Ans.(b)
Sol.

Given:X can do work in20days$Y$ can do work in40days$Z$ can do work in60days$X$ works every day$Y$ and$Z$ work eve $= \frac{\text{LCM}}{\text{Days}}$ Solution:LCM of20,40,60 $= 120 X = \frac{120}{20} = 6 Y = \frac{120}{40} = 3 Z = \frac{120}{60} = 2$ Work in 3 days:Day 1 $= 6$ Day $2 = 6$ Day $3 = 6 + 3 + 2 = 11$ Total in 3 days $= 23$ Work in 15 days $= 5 \times 23$ $= 115$ Remaining work $= 120 - 115 = 5$ Time for remaining work $= \frac{5}{6}$ dayTotal time $= 15 + \frac{5}{6}$ $= 15\frac{5}{6}$ daysFinalAnswer$15\frac{5}{6}$ days

S64. Ans.(a)
Sol.

Given:Original price of diesel = 85Increase in price = 6%Monthly distance travelled = 2880Mileage of vehicle = 12FormulaUsed:Fuel consumed = $\frac{\text{Distance}}{\text{Mileage}}$Solution:Fuel consumed per month = $\frac{2880}{12}$ = 240Increase in price per litre = $\frac{6}{100} \times 85$ = 5.1Increase in monthly expenditure = 240 × 5.1 = 1224FinalAnswer₹1224

S65. Ans.(b)
Sol.

Given:sin $(90° - B) = \frac{2}{3}$FormulaUsed:sin $(90° - \theta)$ = cos θSolution:sin $(90° - B)$ = cos Bcos $B = \frac{2}{3}$FinalAnswer$\frac{2}{3}$

S66. ans.(a)
Sol.

Given:$x = \sqrt{11}$FormulaUsed:$x + \frac{1}{x}$Solution:$x + \frac{1}{x} = \sqrt{11} + \frac{1}{\sqrt{11}}$$\frac{1}{\sqrt{11}} = \frac{\sqrt{11}}{11} = \sqrt{11} + \frac{\sqrt{11}}{11} = \frac{11\sqrt{11}+\sqrt{11}}{11} = \frac{12\sqrt{11}}{11}$FinalAnswer$\frac{12\sqrt{11}}{11}$

S67. Ans.(b)
Sol.

Given:Ratio of radii = 5 : 8FormulaUsed:Ratio of areas = (Ratio of radii)^{2}Solution:Ratio of areas = $5^2 : 8^2$ = 25 : 64FinalAnswer25 : 64

S68. Ans.(c)
Sol.

Given:Ratio of efficiencies of A : B = 4 : 3Time taken by A = 18daysFormulaUsed:Efficiency ∝ $\frac{1}{\text{Time}}$Solution:$A : B$ = 4 : 3Time ratio (inverse) = 3 : 4Time taken by B = $\frac{4}{3} \times 18$ = 24days

S69. Ans.(d)
Sol.

Given:Initial distance between X and Y = 500Speed of motorcycle = 20Speed of truck = 8Length of circular track = 2200FormulaUsed:Relative speed = Speed of motorcycle − Speed of truckTime = $\frac{\text{Distance}}{\text{Relative speed}}$Solution:Relative speed = 20 − 8 = 12Time to overtake = $\frac{500}{12}$ = $\frac{125}{3}$Distance travelled by motorcycle = 20 × $\frac{125}{3}$ = $\frac{2500}{3}$ = 833.33FinalAnswer833.33m

S70. Ans.(c)
Sol.

Given:Wheat:5for40Rye:6for45Oats:4for36Mixing ratio = 2 : 2 : 3

Selling price = 3for32FormulaUsed:Profit % = $\frac{\text{Profit}}{\text{Cost Price}} \times 100$

Solution:Cost per unit of wheat = $\frac{40}{5}$ = 8Cost per unit of rye = $\frac{45}{6}$ = 7.5Cost per unit of oats = $\frac{36}{4}$ = 9Total units = 2 + 2 + 3 = 7Total cost = (2 × 8) + (2 × 7.5) + (3 × 9) = 16 + 15 + 27 =

58Selling price per unit $= \frac{32}{3}$ Selling price of 7 units $= \frac{224}{3} \approx 74.67$Profit $= 74.67 - 58 =$ 16.67Profit % $= \frac{16.67}{58} \times 100 \approx 28.7\%$FinalAnswerApproximately29%profit

S71. Ans.(b)
Sol.
Given:Initial ratio of male : female $= 8: 6$Female employees added $= 15$New ratio of male : female $= 8: 7$FormulaUsed:If ratio is$a: b$,numbers $=$ ka, kbSolution:Let initial numbers be$8x$and$6x$After addition:Male $= 8x$Female $= 6x + 15$ $\frac{8x}{6x+15} = \frac{8}{7}$$7 \times 8x = 8(6x + 15)$$56x = 48x + 120$$8x = 120$$x = 15$Initial total employees $= 8x + 6x = 14x =$ $14 \times 15 = 210$FinalAnswer210

S72. Ans.(c)
Sol.
Given:Ratio of angles $= 1: 3: 4: 4$FormulaUsed:Sum of angles of a quadrilateral $=$ $360°$Solution:Let angles be$x, 3x, 4x, 4x$$x + 3x + 4x + 4x = 12x$$12x = 360°$$x = 30°$Largest angle $=$ $4x = 4 \times 30° = 120°$FinalAnswer120°

S73. Ans.(c)
Sol.
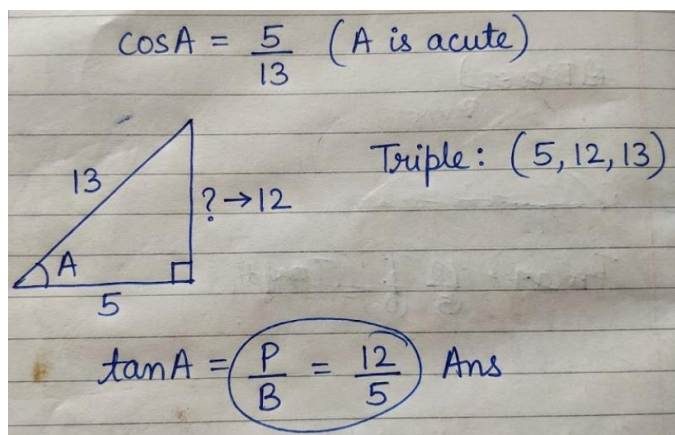Given:$x = \sqrt{\frac{5+2\sqrt{6}}{5-2\sqrt{6}}}$FormulaUsed:$(\sqrt{a} \pm \sqrt{b})^2 = a + b \pm 2\sqrt{ab}$Solution:$5 + 2\sqrt{6} = (\sqrt{3} + \sqrt{2})^2$$5 - 2\sqrt{6} = (\sqrt{3} - \sqrt{2})^2$$x = \sqrt{\frac{(\sqrt{3}+\sqrt{2})^2}{(\sqrt{3}-\sqrt{2})^2}}$$x = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$$x = \frac{(\sqrt{3}+\sqrt{2})^2}{3-2}$$x = 5 + 2\sqrt{6}$$x^2 = (5 + 2\sqrt{6})^2 = 49 + 20\sqrt{6}$$3x = 15 + 6\sqrt{6}$$x^2 + 3x - 15 = 49 + 26\sqrt{6}$FinalAnswer$49 + 26\sqrt{6}$

S74. Ans.(b)
Sol.
Given:$\cos A = \frac{5}{13}$$A$is acuteFormulaUsed:$\sin A = \sqrt{1 - \cos^2 A}$$\tan A = \frac{\sin A}{\cos A}$Solution:$\sin A =$ $\sqrt{1 - \left(\frac{5}{13}\right)^2} = \sqrt{1 - \frac{25}{169}} = \sqrt{\frac{144}{169}} = \frac{12}{13}$$\tan A = \frac{\frac{12}{13}}{\frac{5}{13}} = \frac{12}{5}$FinalAnswer$\frac{12}{5}$

Exam Hall Method:

S75. Ans.(a)
Sol.
Given: $3x + 2y = 12$ Formula Used: Substitute values of x and y Solution: Let $x = 2$ $3(2) + 2y = 12$ $6 + 2y = 12$ $2y = 6$ $y = 3$ Final Answer (2,3)

S76. Ans.(b)
Sol. Explanation:
The phrase describes a person who deliberately gives up worldly pleasures and follows strict self-control and discipline, often for spiritual or moral reasons. Such a person is called an Ascetic (तपस्वी/संयमी), who lives a life of simplicity, restraint, and often renunciation.

Example: After renouncing luxury, he lived like an ascetic in a small hut to practise self-discipline.

Meanings of the other options:

• Option (A) Skeptic: A person who doubts or questions accepted beliefs (संदेहवादी).

• Option (C) Mystic: A person who seeks spiritual understanding through inner experience and contemplation (रहस्यवादी/आध्यात्मिक साधक).

• Option (D) Agnostic: A person who believes that the existence of God is unknown or cannot be proved (अज्ञेयवादी).

So the correct answer is (b)

S77. Ans.(c)
Sol. Explanation:
The word ABJURE means to formally reject, give up, or renounce a belief, claim, or course of action, usually in a deliberate and serious manner (त्याग करना/औपचारिक रूप से छोड़ देना). It often carries the sense of publicly or firmly abandoning something.

Example (given word): The leader decided to abjure violence and adopt peaceful methods.

Correct synonym: Renounce means to give up or refuse to continue something, especially a claim, belief, or habit (त्याग देना/छोड़ देना). It matches the idea of abandoning something willingly or formally.

Example (correct word): He chose to renounce his claim to the property.

Synonyms: abandon, relinquish, forswear, reject.

Antonyms: accept, adopt, retain, embrace.

Meanings of the other options:

• Option (A) Demand: To ask for something forcefully or insistently (मांग करना).

• Option (B) Accept: To receive or agree to something willingly (स्वीकार करना).

• Option (D) Retain: To keep or continue to have something (बनाए रखना/रखना).

So the correct answer is (c)

S78. Ans.(a)
Sol. Explanation:
The structure "No sooner ... than ..." is a fixed correlative expression used to show that one action happened immediately after another. Therefore, after no sooner, we must use than (not when).

Correct sentence: No sooner had I arrived at the platform than the train left. This clearly conveys immediacy: the train left immediately after the speaker arrived.

Grammatical rule used:
- No sooner + auxiliary (had) + subject + past participle + than + simple past.
- This pattern is similar in meaning to Hardly/Scarcely ... when, but with no sooner, the connector must be than.

Example (rule in use): No sooner had the bell rung than the students rushed out.

Why other options are incorrect:
- Option (B) then the train left: "Then" is an adverb, not the required conjunction in this fixed structure.
- Option (C) when the train had left: Uses "when" and changes tense unnecessarily; it breaks the standard pattern and meaning of immediacy.
- Option (D) than did the train leave: Although inversion can occur in some emphatic constructions, here the second clause normally remains in simple past without "did" in standard exam usage; option (A) is the correct and most accepted form.

Information booster: Remember: Hardly/Scarcely ... when but No sooner ... than. Mixing these pairs is a common exam trap.

So the correct answer is (a)

S79. Ans.(c)
Sol. Explanation:

Context of the passage: The author highlights that democracy relies on the circulation of ideas and information. Social media broadens participation by letting citizens speak, organize, and challenge power quickly, often without the mediation of traditional media.

Why option (c) is correct:
- The passage emphasizes that social media supports democracy by enabling the wider circulation of information and ideas.
- It weakens traditional gatekeeping, allows direct communication from political figures to citizens, and encourages broader public involvement.
- Hence, option (c) best matches the key democratic role described.

Why the other options are incorrect:
- Option (A): Entertainment content is not the democratic role highlighted; the focus is political participation and information flow.
- Option (B): Eliminating printed newspapers is not discussed as a democratic role; the passage compares platforms with traditional media but does not claim elimination.
- Option (D): Labour unions are not mentioned; the passage discusses citizen movements broadly, not union formation specifically.

So the correct answer is (c)

S80. Ans.(c)
Sol. Explanation:

Context of the passage: The author presents social media as a force that can strengthen democracy by increasing participation and access to information, but also harm it by spreading misinformation, creating polarization, and reinforcing echo chambers. This combination of benefit and harm is why it is described as a complex and risky influence on democratic life.

Why option (c) is correct:

- The author explains that social media can spread accurate information quickly, helping citizens engage and hold power accountable.
- At the same time, the same platforms can accelerate falsehoods, enable disinformation, and intensify polarization.
- This exact contrast is captured in option (c): it spreads both reliable information and false narratives, making it a "double-edged" force.

Why the other options are incorrect:

- Option (a): Being inexpensive is not the main reason for the "double-edged" description; the passage focuses on truth vs falsehood and participation vs manipulation.
- Option (b): The passage does mention platforms and engagement, but the double-edged nature is not about images/videos; it is about the mixed impact on democracy.
- Option (d): Global connection is a feature, but it does not directly explain the harm/benefit contrast emphasized by the author.

So the correct answer is (c)

S81. Ans.(c)
Sol. Explanation:

Context of the passage: The author explains that social media reduces the power of traditional gatekeepers and allows political communication to spread rapidly. In particular, citizen-led movements can make ignored issues visible through mass sharing and viral growth.

Why option (c) is correct:

- The passage states that citizen-led movements can use viral momentum to bring neglected concerns into public focus.
- This directly explains how previously unheard groups gain attention: their messages spread quickly when people share and support them widely.
- Therefore, option (c) accurately captures the mechanism mentioned by the author.

Why the other options are incorrect:

- Option (A): Editors and boards represent traditional gatekeepers; the passage says social media weakens their control rather than depending on them.
- Option (B): Strict gatekeeping is the earlier media system; it is not what helps unheard groups on social media.
- Option (D): Government press agencies are not presented as the route for neglected groups; the emphasis is on citizen-driven viral attention.

So the correct answer is (c)

S82. Ans.(c)
Sol. Explanation:

Context of the passage: The author acknowledges that social media expands democratic participation, but warns about misuse through fake profiles, harassment, disinformation, and algorithm-driven echo chambers. Hence, the author proposes corrective measures that can reduce harm while retaining benefits.

Why option (c) is correct:

- The passage explicitly states that strong oversight, public media awareness, and transparency in algorithms are crucial to control damage.

- Option (c) directly matches this remedy by mentioning media awareness and transparency of algorithms.
- These measures help citizens detect misinformation and ensure platforms are accountable for how content is ranked and recommended.

Why the other options are incorrect:

- Option (a): Promoting meme-based communication is not suggested; memes can even intensify emotion-driven engagement, which the passage criticizes.
- Option (b): Unrestricted posting is presented as risky, not as a solution, because openness can fuel falsehoods and harassment.
- Option (d): Worldwide censorship is not advocated; the author emphasizes responsible use, oversight, and transparency rather than blanket suppression.

So the correct answer is (c)

S83. Ans.(c)
Sol. Explanation:

Context of the passage: The author concludes that social media is not inherently good or bad. Its impact on democracy depends on how it is used and governed. The passage stresses ethical rules, responsible citizen behaviour, institutional action, and platform accountability.

Why option (c) is correct:

- The passage states that the influence of social media depends not only on technology but also on the ethical rules that shape its use.
- It further says social media reflects collective choices, and whether it strengthens stability or fuels distortion depends on how responsibly it is used by citizens, institutions, and platforms.
- Therefore, the deciding factor is ethical and responsible use driven by societal intent, which is exactly option (c).

Why the other options are incorrect:

- Option (A): Political advertising is not presented as the deciding factor; the focus is broader ethical and responsible use.
- Option (B): Revenue model is not directly identified as the deciding element in the author's conclusion.
- Option (D): Online celebrities are not discussed as the key determinant of democratic strength or weakness.

So the correct answer is (c)

S84. Ans.(d)
Sol. Explanation:

The word POTENT means very powerful, highly effective, or having strong influence or strength (शक्तिशाली/प्रभावशाली). It is often used for medicines, arguments, or forces that produce a strong effect.

Example (given word): The new medicine is highly potent and works quickly.

Correct antonym: Feeble means weak, lacking strength, energy, or effectiveness (कमज़ोर/निर्बल). This is the direct opposite of "potent."

Example (correct word): His voice was feeble after the long illness.

Synonyms (Potent): powerful, strong, forceful, effective.

Antonyms (Potent): weak, feeble, powerless, ineffective.

Meanings of the other options:

- Option (A) Strong: Having great physical power or intensity (मज़बूत).
- Option (B) Robust: Strong and healthy; sturdy (सुदृढ़/मज़बूत).
- Option (C) Powerful: Having great power or influence (शक्तिशाली).

So the correct answer is (d)

S85. Ans.(c)

Sol. Explanation:

The indirect sentence is: The librarian ... said that silence must be maintained in the reading hall. The meaning is not a question and not a future prediction; it is an instruction or rule being stated for people in the reading hall.

Why option (c) is correct:

- In direct speech, an instruction is best expressed using the imperative form: "Maintain silence ..."
- The reporting verb is said, and the direct form naturally becomes a command or instruction without changing the meaning.
- Option (c) conveys the same rule clearly and directly.

Rules involved in conversion:

- When an indirect statement expresses an order/instruction, direct speech often uses an imperative sentence.
- For instructions, the base verb form is used: Maintain, Keep, Do not, etc.
- Quotation marks are used in direct speech, and the exact spoken words are placed inside them.

Example (similar rule): Indirect: The teacher said that students must sit quietly. Direct: "Sit quietly," said the teacher.

Why the other options are incorrect:

- Option (A): "should be maintained" changes the force of the rule from "must" to "should," making it weaker and less accurate.
- Option (B): "You will maintain" expresses a future statement rather than an instruction/rule.
- Option (D): Converts it into a question using "asked," which changes both tone and meaning.

So the correct answer is (c)

S86. Ans.(c)

Sol. Explanation:

The sentence talks about a time reference: the committee meets on Monday, and at that time the final decision will be announced. The most natural connector for time in such a sentence is when (जब), which links the day (Monday) to the action that follows.

Why option (c) is correct:

- When is used to refer to a time or occasion and introduces a clause related to that time.
- Meaning becomes: The committee meets on Monday, when the final decision will be announced.
- This is grammatically correct and contextually appropriate.

Why the other options are incorrect:

- Option (A) whereupon: Means "immediately after that" (तुरंत उसके बाद). It can fit in some contexts, but the sentence here is best expressed with the simple time-linking word "when" for standard exam correctness.

- Option (B) at then: Incorrect structure; "then" is not used with "at" like this (ungrammatical).
- Option (D) on which: Generally used to refer to a specific day as a relative clause, but the more appropriate and natural connector here is "when," since we are linking time to an event.

So the correct answer is (c)

S87. Ans.(b)

Sol. Explanation:

The sentence means that bureaucratic inertia is firmly fixed and resistant to change, and only a major change in thinking can remove it from its position. The verb that best matches the meaning "to remove from a fixed place" or "to force out" is dislodge (हटाना/उखाड़ देना/स्थान से हटाना).

Why option (b) is correct:

- Dislodge means to knock or force something out of its position, or to remove something firmly established.
- "Deeply entrenched bureaucratic inertia" suggests something settled and fixed; therefore, it needs to be dislodged.

Example: A bold reform was needed to dislodge the old practices from the system.

Why the other options are incorrect:

- Option (A) discourage: Means to reduce confidence or to prevent by making someone feel less willing (हतोत्साहित करना). It does not mean "remove" entrenched inertia.
- Option (C) disillusion: Means to free someone from illusion or false belief (भ्रम दूर करना). It does not fit with "inertia" as the object here.
- Option (D) persuasion: It is a noun (मनाना/प्रेरणा) and cannot be used after "can" where a base-form verb is required.

So the correct answer is (b)

S88. Ans.(a)

Sol. Explanation:

The direct sentence is: She said, "I met him yesterday morning." The reporting verb said is in the past tense, so we generally apply backshift rules in indirect speech.

Why option (a) is correct:

- Pronoun change: "I" becomes "she" because the speaker is "she."
- Tense change: Simple past "met" changes to past perfect "had met" when the reporting verb is in the past.
- Time expression change: "yesterday morning" changes to "the previous morning" in indirect speech.
- Thus, the correct indirect form is: She said she had met him the previous morning.

Rules involved in conversion:

- Reporting verb in past: past tense in direct speech usually changes one step back (past) to past perfect.
- Time words change: yesterday → the previous day; yesterday morning → the previous morning.

Example (rule in use): Direct: He said, "I bought it yesterday." Indirect: He said that he had bought it the previous day.

Why the other options are incorrect:

- Option (B): Uses "has met" and keeps "yesterday morning," both incorrect with past reporting verb and time shift.

- Option (C): "was meeting" changes meaning to continuous action, which is not intended in the original.
- Option (D): Incorrect verb form "had meet" (should be "had met").

So the correct answer is (a)

S89. Ans.(b)
Sol. Explanation:

Option (B) is the correctly spelt word: Psychopharmacology. It refers to the scientific study of how drugs affect the mind, behaviour, and mental processes (औषधियों का मन/व्यवहार पर प्रभाव का अध्ययन). It combines psychology with pharmacology, focusing on drug effects on the nervous system and mental functioning.

Example: Psychopharmacology helps doctors understand how antidepressants influence brain chemistry.

Meanings of all the given options:

- Option (A) Psychopharmacolgy: Incorrect spelling; intended meaning is psychopharmacology (गलत वर्तनी).
- Option (B) Psychopharmacology: The study of drug effects on the mind and behaviour (मनो-औषधि विज्ञान).
- Option (C) Psychopharmocology: Incorrect spelling; intended meaning is psychopharmacology (गलत वर्तनी).
- Option (D) Psychopharmecology: Incorrect spelling; intended meaning is psychopharmacology (गलत वर्तनी).

Parts of speech note: "Psychopharmacology" is a noun (a field/branch of study).

So the correct answer is (b)

S90. Ans.(b)
Sol. Explanation:

The correct correlative pair is neither ... nor. It is used to join two negative alternatives and indicates that both are not true. Therefore, the sentence must be: Neither the project lead nor the team members were prepared for the audit.

Why option (b) is correct:

- Neither must be followed by nor to complete the correlative structure.
- The verb agrees with the subject closer to it in "neither...nor" constructions; here "team members" is plural, so were is correct.

Example (rule in use): Neither the manager nor the employees were informed about the change.

Why the other options are incorrect:

- Option (A) or: "Neither ... or" is incorrect; it must be "neither ... nor."
- Option (C) either: "Neither ... either" is not a valid pair.
- Option (D) nor did: "nor did" would require a different structure with inversion and an additional verb phrase; it does not fit here.

So the correct answer is (b)

S91. Ans.(c)
Sol. Explanation:
Active sentence: Citizens can rarely access archived stamps without clearance.
Here, Citizens is the subject, can access is the verb phrase with a modal, and archived stamps is the object. To convert into passive voice, the object becomes the subject, and the verb changes to modal + be + past participle.
Passive structure with a modal:
- Active: Subject + can + base verb + object
- Passive: Object + can + be + past participle (+ by + subject)
Correct passive sentence: Archived stamps can rarely be accessed without clearance. The adverb rarely is correctly placed after the modal can and before be, which is the standard placement in exam grammar.
Why other options are incorrect:
- Option (A): "can rarely being accessed" is grammatically incorrect; after a modal, we use be, not being in this construction.
- Option (B): Changes the modal from can to could, which changes meaning (ability/possibility level).
- Option (D): Though meaningful, it unnecessarily changes structure and adds "are able to," which is not the direct passive conversion of "can access."
So the correct answer is (c)

S92. Ans.(b)
Sol. Explanation:
Passive sentence: The parcel is delivered to the reception desk every evening.
This is a simple present passive structure: is + past participle (is delivered). To convert into active voice, we need an active subject (the doer). Since the doer is not mentioned in the passive sentence, we commonly use an indefinite subject like someone or they in active voice.
Structure:
- Passive Voice: Object + is/are + V3 (+ by + agent) + other words
- Active Voice: Agent + V1/V1(s) + object + other words
Why option (b) is correct:
- Option (b) supplies a suitable doer: Someone.
- It correctly converts is delivered into simple present active: delivers.
- It retains the place phrase to the reception desk and time phrase every evening without changing meaning.
Why the other options are incorrect:
- Option (A): "The reception desk" cannot logically deliver the parcel; it is the location receiving it, not the agent performing the action.
- Option (C): Changes tense to present perfect ("has delivered"), which is not equivalent to simple present passive.
- Option (D): Incorrect and illogical; a parcel cannot deliver itself.
So the correct answer is (b)

S93. Ans.(a)

Sol. Explanation:

To form a coherent paragraph, we should begin with the most general statement and then move toward specific details and conclusions.

• Step 1: Sentence 3 is the best opener because it defines communication broadly as a multifaceted process.

• Step 2: Sentence 2 logically follows by adding an important aspect of communication: non-verbal signals that may communicate more than spoken words.

• Step 3: Sentence 1 begins with "Consequently," which indicates a conclusion drawn from the earlier idea that non-verbal cues matter; hence it must come after sentences 3 and 2.

• Step 4: Sentence 4 supports and clarifies the conclusion by explaining that these subtle cues reveal the real meaning or reception of a message.

Coherent order: 3, 2, 1, 4

Why other sequences are incorrect: They either begin with a conclusion ("Consequently") without context, or place the definition after supporting statements, which breaks the logical flow of introduction → explanation → conclusion → reinforcement.

So the correct answer is (a)

S94. Ans.(c)

Sol. Explanation:

The subject of the sentence is "Much of what seems to be coordination". The head word Much is singular, and the phrase "Much of" takes a singular verb when it refers to an uncountable or singular quantity/idea.

Error in part (3): The verb are is plural, but it should be is to agree with the singular subject.

Correct form: Much of what seems to be coordination ... is, in reality, coincidental overlaps ...

Grammatical rule used (Subject–Verb Agreement):

• Expressions like much of, each of, every one of generally take a singular verb when they act as the main subject.

• The verb must agree with the main subject, not with nearby plural nouns inside prepositional phrases (e.g., "among the regulatory bodies").

Example (rule in use): Much of the information is inaccurate. (Not: are inaccurate)

Information booster: Do not be trapped by plural nouns placed after "of/among." Always identify the real subject first, then choose the verb accordingly.

So the correct answer is (c)

S95. Ans.(d)

Sol. Explanation:

In the clause: "that all regional bodies will, without any pressure, complies with the central directive", the modal auxiliary will must be followed by the base form (V1) of the verb, not the third-person singular form.

Error in part (4): The word complies is incorrect after will. It should be comply.

Correct form: ... that all regional bodies will, without any pressure, comply with the central directive as issued.

Grammatical rule used (Modal + Base Verb):

- After modals such as will, can, could, may, might, must, shall, should, we use the base form of the verb.
- Therefore: will comply, can comply, must comply (not: will complies).

Example (rule in use): The officials will follow the instructions. (Not: will follows)

Information booster: If you see a modal, immediately check the next verb. Any "s/es" form after a modal is usually an error in SSC-level grammar questions.

So the correct answer is (d)

S96. Ans.(c)

Sol. Explanation:

Option (C) is misspelt. The correct spelling is Privilege, not "Privillage." Privilege means a special right, advantage, or benefit granted to a person or group (विशेषाधिकार/सुविधा). It is often used in social, legal, or institutional contexts.

Example: Access to the restricted archive is a privilege, not a right.

Meanings of all the given options:

- Option (A) Perseverance: Continued effort and determination despite difficulties (धैर्यपूर्वक प्रयास/लगन).
- Option (B) Supersede: To replace or take the place of something older (स्थान लेना/प्रतिस्थापित करना).
- Option (C) Privillage: Incorrect spelling; correct word is "Privilege" (गलत वर्तनी).
- Option (D) Mischievous: Playfully causing trouble; naughty (शरारती).

So the correct answer is (c)

S97. Ans.(b)

Sol. Explanation:

In the given sentence, gules is used in the context of heraldry (coat of arms). In heraldic language, gules refers to the colour red (लाल रंग), commonly used to describe sections of shields and family emblems.

Why option (b) is correct:

- Option (b) uses gules in a food context, referring to a sauce of "rich gules," i.e., a rich red colour associated with the sauce.
- This represents a different contextual sense compared to heraldry, showing the word used with a different application/meaning, which is the intended "homonym/homograph" usage in such questions.

Why the other options are incorrect:

- Option (A): Still clearly in heraldry with "argent," so it repeats the same heraldic sense.
- Option (C): "gules trim on the banner" remains a colour reference connected to symbols and flags, close to the heraldic sense and not showing a distinct alternate use.
- Option (D): Talks about explaining the meaning of the same heraldic word, not using a different sense.

Information booster: In exam questions, "homonym" is sometimes used loosely to test whether you can identify the same word used in a clearly different context/sense. Here, the cooking context is the clearest shift.

So the correct answer is (b)

S98. Ans.(c)

Sol. Explanation:

The highlighted portion is incorrect because the verb ask does not take the structure "asked to the student to." The correct pattern is ask + object + to-infinitive.

Correct sentence: The teacher asked the student to submit the papers.

Why option (c) is correct:

- It follows the correct verb pattern: asked + the student + to submit.
- It keeps the meaning unchanged and makes the sentence grammatically correct.

Grammatical rule used:

- Ask + someone + to + verb (V1) is used to give an instruction or request.
- We do not use an extra "to" before the object: incorrect: asked to the student to; correct: asked the student to.

Example (rule in use): The officer asked the passengers to show their tickets.

Why the other options are incorrect:

- Option (A): "asked ... that submit" is incorrect; after "asked," we either use "to + verb" or "asked that + subject + should/verb," not "that submit" directly.
- Option (B): Although "requested the student to submit papers" is close in meaning, it changes the highlighted verb "asked" and also drops "the" before papers; the best direct substitution keeping structure and accuracy is option (c).
- Option (D): Incorrect structure ("told to the student") and missing "to" before verb in the final part ("submit").

Information booster: Remember common verb patterns: ask/request + object + to-infinitive, but suggest/recommend generally do not take this pattern in the same way.

So the correct answer is (c)

S99. Ans.(b)

Sol. Explanation:

The idiom "Leave no stone unturned" means to try every possible method and make all efforts to achieve something or to find something (कोई कसर न छोड़ना/हर संभव प्रयास करना). It suggests thoroughness and determination, not partial or limited effort.

Why option (b) is correct:

- Option (b) states: To make every possible effort to achieve a goal, which matches the idiom's meaning exactly.
- The idiom emphasizes searching or working so completely that nothing is left unexplored.

Example: The police left no stone unturned in their search for the missing child.

Other related idioms and meanings:

- Go the extra mile: To do more than what is expected (अतिरिक्त प्रयास करना).
- Move heaven and earth: To make extreme efforts (बहुत अधिक प्रयास करना).
- By hook or by crook: By any means, fair or unfair (किसी भी तरह से).

Why the other options are incorrect:

- Option (A): Talks about moving repeatedly; it does not mean thorough effort toward a goal.
- Option (C): Being quiet in protest is unrelated to the idiom's meaning.
- Option (D): Blind obedience is not implied by this idiom.

So the correct answer is (b)

S100. Ans.(a)

Sol. Explanation:

To create a coherent paragraph, we should first present the main problem/need, then offer the primary solution, then explain the benefits of that solution, and finally add an additional supporting measure.

• Step 1: Sentence 2 is the best opening because it states the main objective: cutting dependence on high-carbon energy to reduce climate change impacts.

• Step 2: Sentence 1 follows logically by presenting a specific approach to achieve the objective: shifting from fossil fuels to renewables.

• Step 3: Sentence 3 must come next because it starts with "This transition," directly referring back to the shift described in sentence 1, and explains its benefits.

• Step 4: Sentence 4 begins with "In addition," indicating an extra measure beyond the transition; hence it naturally comes at the end.

Correct order: 2, 1, 3, 4

Why other sequences are incorrect: They either place "This transition" before introducing what the transition is, or place "In addition" before establishing the main approach, which disturbs the logical flow.

So the correct answer is (a)