

UG 2027

ADMIT CARD NUMBER

--	--	--	--	--	--	--	--

QUESTION BOOKLET NO: 2027UG18



INSTRUCTIONS TO CANDIDATES

Duration of Test: 2 Hours (120 minutes)

Maximum Marks : 120

1. This Question Booklet (QB) contains 120 (One hundred and twenty) Multiple Choice Questions across 31 (Thirty-One) pages including 1 (One) blank pages for rough work. No additional sheet(s) of paper will be supplied for rough work.
2. You shall enter your Admit Card No. on the first page of the QB at the start of the test.
3. You have to answer ALL questions in the separate carbonised Optical Mark Reader (OMR) Response Sheet supplied along with this QB. You must READ the detailed instructions provided with the OMR Response Sheet on the reverse side of this packet BEFORE you start the test.
4. No clarification can be sought on the QB from anyone. In case of any discrepancy such as printing error or missing pages, in the QB, request the Invigilator to replace the QB and OMR Response Sheet. Do not use the previous OMR Response Sheet with the fresh QB.
5. You should write the QB Number, and the OMR Response Sheet Number, and sign in the space/column provided in the Attendance Sheet.
6. The QB for the Undergraduate Programme is for 120 marks. Every Right Answer secures 1 mark. Every Wrong Answer results in the deduction of 0.25 mark. There shall be no deductions for Unanswered Questions.
7. You may retain the QB and the Candidate's copy of the OMR Response Sheet after the test.
8. The use of any unfair means shall result in your disqualification. Possession of Electronic Devices such as mobile phones, headphones, digital watches etc., is/are strictly prohibited in the test premises. Impersonation or any other unlawful practice will lead to your disqualification and possibly, appropriate action under the law.

DO NOT OPEN TILL 2PM

Section A: English Language

Passage: Benjamin Franklin's fertile mind constantly spun off inventive and useful ideas. His lightning rod saved buildings and lives. His energy-saving improvement of the wood-burning fireplace kept families warm and forests from being leveled. His lending library extended literacy to those who couldn't afford books. His map of the Gulf Stream made travel faster and commerce more efficient.

But Franklin's ingenuity showed most clearly in his invention, or rather recurrent reinvention, of himself. In the course of his life, Franklin devised dozens of authorial personas in print, which allowed him to challenge authority, identify folly and promote human progress with an unsparing vigor he never could have achieved under his own name.

Franklin created his first alter ego when he was in his teens: a middle-aged widow named Silence Dogood. Mrs. Dogood allowed Franklin to evade an embargo against publication imposed by his jealous elder brother James, a printer to whom Ben was apprenticed. James had a newspaper and sought contributors, but he refused Ben's submissions as corrosive of the master-apprentice relationship. So Ben disguised his handwriting and surreptitiously slipped letters from Mrs. Dogood under the door of the print shop. Franklin's account of her life delighted readers while underscoring the difficulties facing widows and women of the day.

Polly Baker was a literal—as opposed to an actual—descendant of Silence Dogood. Polly had the misfortune of falling in love with men who had no intention of marrying her. When she became pregnant, she was brought before the magistrates to be punished for her crime of fornication. In defending herself, she said she had done nothing more than obey the biblical command to be fruitful and multiply. Anyway, she asked, why was no sanction brought against the men who were equally responsible for her illegitimate children and more responsible for the corruption, as the court insisted, of the honest if imperfect woman who stood before it?

Franklin's most famous alter ego was Richard Saunders, an astronomer and a polymath who annually published Poor Richard's Almanack. The almanac provided information on holidays, solstices, phases of the moon and the like. What made it special were the squibs of advice and humor that filled otherwise blank spots on the pages. "Fish and visitors stink in three days" recommended itself to guests and hosts alike. "Three may keep a secret if two of them are dead" chided the garrulity of blabbers and the naïveté of confiders.

Extracted with edits and revisions from: <https://www.smithsonianmag.com/history/among-all-great-things-benjamin-franklin-invented-discovered-alter-egos-gave-him-most-freedom-180988824/>

1. Which of the following best captures what the passage presents as Franklin's most distinctive form of ingenuity?
 - (a) Turning practical problems into inventions that improved everyday life
 - (b) Creating different public voices to express ideas his own identity restricted
 - (c) Using print culture to make knowledge available to a wider readership
 - (d) Combining scientific curiosity with a lasting interest in social reform
2. The opening list of Franklin's practical inventions prepares the reader to understand that:
 - (a) his usefulness was more important than his originality
 - (b) his inventiveness extended beyond physical objects and discoveries
 - (c) his scientific interests eventually shaped his fictional writings
 - (d) his public reputation depended mainly on practical achievements
3. Why was Silence Dogood especially useful to the young Franklin?
 - (a) She disguised criticism of James as social commentary.

- (b) She tested whether anonymous writing attracted more readers.
- (c) She bypassed James's refusal without revealing Franklin as the author.
- (d) She discussed women's problems without revealing Franklin's age.

4. Polly Baker's defence before the magistrates most clearly exposes:

- (a) unequal punishment of equally responsible participants.
- (b) tension between religious duty and criminal prohibition.
- (c) procedural unfairness in prosecuting only one participant.
- (d) social prejudice against unmarried women in relationships.

5. The brief sayings inserted into Poor Richard's Almanack most clearly show Franklin's ability to:

- (a) simplify factual material through memorable comic phrasing.
- (b) conceal serious criticism inside apparently harmless jokes.
- (c) fill spare space mainly with entertaining comic remarks.
- (d) turn spare space into witty pieces of practical advice.

6. What do Franklin's three fictional speakers collectively reveal about his writing?

- (a) They helped him avoid restrictions placed on his authorship.
- (b) They gradually replaced criticism with lighter public instruction.
- (c) They relied on readers accepting each speaker as genuine.
- (d) They allowed him to serve different rhetorical purposes.

Passage: Culture and its transmission from generation to generation is the defining feature of humanity. It is perhaps the best candidate for the thing that separates us from other beasts. Though there are other species that have been shown to hand down accumulated knowledge – including chimps, who show some evidence for cultural transmission of tool-use – no other animal approaches our ability to layer breakthrough upon breakthrough in such a complex way, and certainly no other animal does it with the conscious intent to lift future communities beyond the achievements that came before. That is a human distinction if there ever were one.

Why has no other animal evolved this demonstrably useful ability? There are lots of intelligent animal candidates, but most have some straightforward biological reality holding them back.

Take the octopodes: famously intelligent, and with a rich visual communication system in their incredible instantaneous colour changes. But their very short lifespans, coupled with rapid senescence and death after a single mating and clutch of eggs, leave little time for a parent to hand on knowledge to offspring. Most fish and reptiles face a similar challenge – though they do not die after reproducing like octopodes, they do tend to produce large clutches of eggs that hatch and mature without much, if any, parental input, relying on the statistics of very large clutch sizes to ensure a few offspring reach adulthood.

Birds are the real quandary. The philosopher and biologist Peter Godfrey-Smith points to birds as the expected place to find another species treading the same path that we humans have, not least because they already come with several of the important adaptations that made cultural sharing possible for us: complex brains, long lives, strong parental care of offspring in most species, and robust communication. With all of those advantages, why don't birds have a complex culture like we do? Why do they not write technical manuals and make art and argue over economic policy? Why do they not have a market economy, with not only goods for trade, but luxury goods whose value relies on concepts rather than raw usefulness. Why don't birds drive Bentleys?

The last time I spoke to Godfrey-Smith about this, he asked if I had any ideas why birds hadn't produced a highly cultural species. I didn't then. But I do now.

His question set me cogitating about birds and what makes them different from humans. This was a good counter-exercise for me – I’ve written a book, *The Parrot in the Mirror* (2022), about how much birds and humans share, from long childhoods to powerful brains to monogamous parenting. But the question of why no species, not even among the fantastically complex and intelligent large parrots, has developed complex, human-like culture is especially compelling in the context of those similarities.

Extracted with edits and revisions from: <https://aeon.co/essays/why-birds-dont-buy-bentleys-and-we-humans-will-never-fly>

7. Why does the author describe birds as “the real quandary”?

- (a) Intelligence should favour deeper culture.
- (b) Longevity removes a major barrier.
- (c) Parental care aids cultural transfer.
- (d) Many advantages still yield limited culture.

8. What does the example of octopodes most specifically show about cultural transmission?

- (a) Communication cannot offset weak bonds between adults.
- (b) Short generational overlap can obstruct knowledge transfer.
- (c) Intelligence loses value when offspring mature independently.
- (d) Reproduction limits learned behaviour in short-lived species.

9. The example of birds most strongly challenges which explanation of human cultural uniqueness?

- (a) Long life is enough to preserve knowledge across generations.
- (b) Parental care naturally produces increasingly complex social systems.
- (c) High intelligence alone can produce a highly cumulative culture.
- (d) Advanced communication eventually produces symbolic economic behaviour.

10. The references to technical manuals, art, markets and Bentleys are meant to:

- (a) make economic behaviour the chief measure of culture.
- (b) question human standards for judging animal culture.
- (c) illustrate the breadth of cumulative human culture.
- (d) show that markets drive other forms of culture.

11. Calling Godfrey-Smith’s question a “counter-exercise” shows that it:

- (a) led the author to doubt the similarities described in his earlier book
- (b) required him to compare birds with animals he had previously ignored
- (c) made him examine a major difference after focusing mainly on similarities
- (d) persuaded him that parrots had been given too much credit for intelligence

12. Which description best fits the type of writing in this passage?

- (a) A scientific report testing whether intelligence causes cultural development
- (b) A philosophical argument denying meaningful cultural behaviour in animals
- (c) A comparative study ranking species by their ability to transmit knowledge
- (d) A popular-science inquiry built around a question the author is exploring

Read the following four views on true-crime media, expressed from the perspectives of a journalist, a victim-rights advocate, a media scholar, and a cultural critic, and answer the questions that follow.

Voice A:

True-crime reporting occupies an uneasy territory between public scrutiny and private catastrophe. Journalism has a legitimate duty to examine institutional negligence, miscarriages of justice, and failures of policing, yet that duty can be corrupted when suffering becomes narrative ornament. The reporter must resist the seduction of lurid detail merely because it enlarges an audience. A victim is not a plot device, nor is a bereaved family an inexhaustible archive of anguish. Public interest requires more than curiosity. It demands proportionality, verification, and restraint. The most responsible account may sometimes be the one that deliberately leaves certain horrors undescribed.

Voice B:

For families whose loss is repeatedly repackaged for strangers, true crime can feel like a second dispossession. The first takes a life; the second appropriates its meaning. Producers may speak of awareness, but awareness offered without consent can resemble intrusion wearing moral language. A murdered person is often remembered through the circumstances of death rather than through the ordinary fullness of a life once lived. I do not argue for silence. Public discussion can expose injustice and revive neglected cases. But survivors should not have to surrender privacy as the price of visibility. Ethical storytelling begins by recognising that access is not the same as entitlement.

Voice C:

The true-crime audience is often described as voyeuristic, but that explanation is too facile. Such narratives offer viewers a temporary architecture for disorder: clues are arranged, motives proposed, timelines reconstructed, and chaos rendered intelligible. The form promises that violence, however appalling, can be narrated into coherence. Yet this promise is also deceptive. Editing creates inevitability where real events contain uncertainty, and retrospective storytelling can make guilt appear obvious long before evidence justified it. The danger lies not only in sensationalism but in narrative authority itself. A polished sequence may persuade audiences that interpretation is fact simply because the story has been made aesthetically complete.

Voice D:

True crime reveals something disquieting about modern spectatorship: we condemn exploitation while consuming it with remarkable appetite. The genre frequently transforms dread into leisure, arranging murder within the familiar comforts of episodes, cliff-hangers, and recommendation algorithms. Yet dismissing the audience as merely morbid misses the genre's peculiar moral theatre. Viewers are invited simultaneously to fear violence, judge institutions, sympathise with victims, and enjoy suspense. That contradiction is not incidental; it is the genre's engine. The crucial question is therefore not whether true crime should entertain, but whether entertainment quietly reorganises our sympathies, making narrative satisfaction more urgent than fidelity to another person's suffering.

13. Why does Voice C reject the idea that true-crime audiences are merely voyeuristic?

- (a) Such narratives make chaotic events feel intelligible.
- (b) Such narratives help viewers judge institutional failures.
- (c) Such narratives preserve uncertainty while satisfying curiosity.
- (d) Such narratives make storytelling more appealing than violence.

14. Which of the following would Voices A, B, and D most likely agree with?

- (a) Public interest can justify retelling painful events without family consent.
- (b) Audience interest can distort the way another person's suffering is presented.
- (c) Sensational detail is the main ethical problem in all true-crime reporting.
- (d) Entertainment should be removed entirely from accounts of real violence.

15. The final sentence of Voice D implies that:

- (a) suspense becomes unethical whenever real victims are involved
- (b) viewers usually value victims less than the institutions being judged

- (c) entertainment may shift attention from suffering to a satisfying story
- (d) audiences should separate emotional response from factual judgment

16. Which statement would Voices A and B most clearly agree with?

- (a) Consent should govern every use of private suffering.
- (b) Survivors should control which painful details are published.
- (c) Public interest can outweigh privacy without further limits.
- (d) Access to suffering does not create unlimited entitlement.

17. Which Voice is most concerned with the risk that coherence produced by storytelling may be mistaken for evidentiary certainty?

- | | |
|-------------|-------------|
| (a) Voice D | (b) Voice C |
| (c) Voice A | (d) Voice B |

18. By calling true crime a “second dispossession,” Voice B suggests that families may:

- (a) relieve grief as publicity repeatedly revisits the death.
- (b) surrender privacy in exchange for wider public attention.
- (c) lose control over how others interpret the loss.
- (d) see the victim reduced to the facts of the crime.

Read the extract given below and answer the following questions:

She had

*A heart, how shall I say? too soon made glad,
Too easily impressed; she liked whate'er
She looked on, and her looks went everywhere.
Sir, 'twas all one! My favour at her breast,
The dropping of the daylight in the West,
The bough of cherries some officious fool
Broke in the orchard for her, the white mule
She rode with round the terrace, all and each
Would draw from her alike the approving speech,
Or blush, at least. She thanked men, good! but thanked
Somehow, I know not how, as if she ranked
My gift of a nine-hundred-years-old name
With anybody's gift. Who'd stoop to blame
This sort of trifling? Even had you skill
In speech, which I have not, to make your will
Quite clear to such an one, and say, "Just this
Or that in you disgusts me; here you miss,
Or there exceed the mark", and if she let
Herself be lessoned so, nor plainly set
Her wits to yours, forsooth, and made excuse,
E'en then would be some stooping; and I choose
Never to stoop. Oh, sir, she smiled, no doubt,
Whene'er I passed her; but who passed without
Much the same smile? This grew; I gave commands;
Then all smiles stopped together. There she stands
As if alive.*

Robert Browning, "My Last Duchess," Dramatic Lyrics (1842)

A Critical View of My Last Duchess by Arthur Symons

Arthur Symons describes *My Last Duchess* as much more than the representation of a passing emotion: "My Last Duchess is a life." He regards the poem as an early and accomplished example of Browning's dramatic monologue. For Symons, the Duke becomes a study in "the jealousy of egoism." Browning does not merely describe such jealousy; he creates a personality in whom pride, cruelty, self-possession, and aesthetic refinement coexist.

Symons sees the Duke as a characteristic Renaissance autocrat, distinguished by his "serene self-composure of selfishness," his uncompromising cruelty, and his genuine devotion to art. The effectiveness of the poem lies partly in the apparent ease with which this character reveals himself. The Duke never formally confesses his moral failure. Instead, small details of his speech expose the attitudes he considers perfectly reasonable.

Symons particularly admires Browning's economy. The scene, the personalities, and the social world emerge through apparently casual remarks, each carrying more significance than the speaker intends. The poem thus achieves an impression of natural conversation while functioning as an intricate psychological portrait. Its finest artistry lies in making the Duke condemn himself through the very speech by which he seeks to justify his conduct.

19. What best describes the Duke as revealed through his complaint about the Duchess?

- (a) A wounded husband troubled mainly by her failure to understand his rank
- (b) A proud aristocrat who resents her giving equal warmth to ordinary pleasures
- (c) A jealous husband who mistakes every act of courtesy for romantic interest
- (d) An art-loving ruler concerned mainly with protecting his family reputation

20. What is the best way to interpret the line, "Then all smiles stopped together"?

- (a) The Duchess was ordered to stop showing equal warmth to other people.
- (b) She withdrew from society after being criticised for her behaviour.
- (c) The Duke's displeasure finally made her change her public manner.
- (d) His commands likely caused her death, though he avoids saying so openly.

21. Why does Symons stress that the Duke "never formally confesses his moral failure"?

- (a) His own casual remarks expose faults that he does not recognise as faults.
- (b) Avoiding confession allows him to keep the worst events legally uncertain.
- (c) Browning wants readers to remain unsure whether the Duke acted wrongly.
- (d) His calm manner prevents the listener from judging his behaviour too quickly.

22. Which statement best sums up Symons's critical view of *My Last Duchess*?

- (a) It is a polished historical portrait valued mainly for its Renaissance setting.
- (b) It is a refined love poem in which jealousy is balanced by devotion to art.
- (c) It is an economical monologue in which the Duke unknowingly condemns himself.
- (d) It is a moral satire in which the Duke openly admits the faults he defends.

23. Which of the following is the closest synonym of "officious" as used in the poem?

- | | |
|---------------|----------------|
| (a) Dutiful | (b) Meddlesome |
| (c) Attentive | (d) Obliging |

24. Which figure of speech is most evident in "My gift of a nine-hundred-years-old name"?

- | | |
|---------------|---------------------|
| (a) Metonymy | (b) Synecdoche |
| (c) Hyperbole | (d) Personification |

Section B: Current Affairs including General Knowledge

Passage: Indian physicist Deepak Dhar has been named a recipient of the 2026 Dirac Medal, one of the major international honours in theoretical physics. The award is presented by the Abdus Salam International Centre for Theoretical Physics (ICTP) and this year recognises pioneering work in statistical mechanics and its applications beyond the field's traditional boundaries.

Dhar shares the 2026 honour with Bernard Derrida, Marc Mézard and Haim Sompolsky. The award citation highlights their contributions to equilibrium and non-equilibrium statistical mechanics and the extension of these ideas to optimisation, theoretical neuroscience and artificial intelligence. Their collective work demonstrates how methods developed to study large systems of interacting particles can also illuminate complex behaviour in biological, computational and social systems.

Dhar is especially known for his work on the Abelian sandpile model and self-organised criticality. By identifying a mathematical structure in the model's "toppling" operations, he helped make it exactly solvable and deepened understanding of how simple local rules can generate large, unpredictable events. Similar ideas have been applied to phenomena ranging from earthquakes and traffic congestion to fluctuations in financial markets.

Dhar is an INSA Distinguished Professor at the International Centre for Theoretical Sciences and has spent much of his career working on statistical physics and stochastic processes. His earlier honours include the Padma Bhushan, the Boltzmann Medal and the Shanti Swarup Bhatnagar Prize. The Dirac Medal, established in 1985, commemorates physicist Paul A. M. Dirac and recognises significant contributions to theoretical physics. It is traditionally announced each year on Dirac's birthday.

[Extracted with edits and revisions from <https://www.ictp.it/news/2026/8/ictp-announces-2026-dirac-medal-ipients>]

25. The institution that awards the Dirac Medal was founded under the leadership of Nobel Laureate Abdus Salam. Salam shared the 1979 Nobel Prize in Physics with which of the following pair of physicists?

- | | |
|--|--|
| (a) Gerard 't Hooft and Martinus J. G. Veltman | (b) Sheldon L. Glashow and Steven Weinberg |
| (c) Carlo Rubbia and Simon van der Meer | (d) Chen Ning Yang and Tsung-Dao Lee |

26. The International Atomic Energy Agency is one of the three institutions involved in the governance framework of ICTP. The IAEA jointly received the 2005 Nobel Peace Prize with which of the following individuals?

- | | |
|------------------|---------------------------|
| (a) Hans Blix | (b) Mohamed ElBaradei |
| (c) Yukiya Amano | (d) Rafael Mariano Grossi |

27. The Wolf Prize in Physics is awarded by the Wolf Foundation. In which country is the Foundation based?

- | | |
|-----------------|-----------------|
| (a) Switzerland | (b) Israel |
| (c) Sweden | (d) Netherlands |

28. Deepak Dhar is associated with the International Centre for Theoretical Sciences of the Tata Institute of Fundamental Research. TIFR functions under the umbrella of India's Department of Atomic Energy. In which year was the Department of Atomic Energy established?

- | | |
|----------|----------|
| (a) 1948 | (b) 1954 |
| (c) 1958 | (d) 1962 |

29. Which Indian physicist became the first Asian to receive a Nobel Prize in any branch of science, after being awarded the 1930 Nobel Prize in Physics?

- | | |
|-------------------------|--------------------|
| (a) Satyendra Nath Bose | (b) Meghnad Saha |
| (c) C. V. Raman | (d) Homi J. Bhabha |

30. Before receiving the 2026 Dirac Medal, Deepak Dhar shared the 2022 Boltzmann Medal with John J. Hopfield. Hopfield subsequently shared the 2024 Nobel Prize in Physics with whom?

- | | |
|---------------------|--------------------|
| (a) Yoshua Bengio | (b) Yann LeCun |
| (c) Geoffrey Hinton | (d) Demis Hassabis |

Passage: The Agasthyamalai landscape in southern India has become the centre of a significant conflict between forest conservation, removal of encroachments and the statutory rights of forest-dependent communities. The dispute intensified after judicial directions called for a detailed survey of protected forests, wildlife habitats and tiger-reserve areas and for action against unauthorised non-forest activities. Subsequent eviction measures in parts of Tamil Nadu raised concern over whether all affected residents had first been screened through the procedures mandated by the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

The Forest Rights Act was enacted to recognise rights that remained unrecorded despite generations of dependence on forests. It covers individual occupation in eligible cases as well as community rights relating to access, use, conservation and management of customary forest resources. A key procedural safeguard is that forest-dwelling Scheduled Tribes and other traditional forest dwellers cannot be removed from land under their occupation until the process of recognition and verification of their claims has been completed.

The controversy therefore involves more than a simple choice between conservation and habitation. Authorities are required to distinguish unlawful encroachment from legally recognisable forest occupation, while also protecting ecologically sensitive habitats. The Agasthyamalai litigation has consequently highlighted the importance of accurate surveys, transparent claim verification, rehabilitation where legally required, and coordination between forest authorities, district administrations and local institutions. It also illustrates the continuing challenge of reconciling biodiversity protection with legally recognised livelihood and tenure interests in India's protected forest landscapes.

[Extracted with edits and revisions from <https://tribal.nic.in/ResourcesHindi/Livelihoodh.aspx>]

31. With reference to India's National Forest Policy, consider the following statements:

1. The 1988 Policy envisages a national goal of at least one-third of the country's total land area under forest or tree cover.
2. For hills and mountainous regions, the corresponding goal is two-thirds of the area under such cover.

Which of the statements given above is/are correct?

- | | |
|------------------|---------------------|
| (a) Only 1 | (b) Only 2 |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

32. Parts of the Agasthyamalai landscape are also components of the Western Ghats UNESCO World Heritage property. The Western Ghats were inscribed on the World Heritage List under which natural heritage criteria?

- | | |
|-------------------------------|------------------------------|
| (a) Criteria (vii) and (viii) | (b) Criteria (viii) and (ix) |
| (c) Criteria (ix) and (x) | (d) Criteria (vii) and (x) |

33. The Agasthyamalai controversy involves questions concerning the legal treatment of forest land. In which Supreme Court case was it held that the term "forest" for the purposes of the Forest (Conservation) Act must be understood according to its dictionary meaning and include areas recorded as forest irrespective of ownership?

- | | |
|---|------------------------------|
| (a) Vellore Citizens' Welfare Forum v. Union of India | (b) M.C. Mehta v. Kamal Nath |
|---|------------------------------|

- (c) T.N. Godavarman Thirumulpad v. Union of India
- (d) Narmada Bachao Andolan v. Union of India

34. The benefit-sharing issues illustrated by traditional knowledge cases such as the Kani-Jeevani arrangement are closely associated with the international regime on access to genetic resources. At which meeting of the Conference of the Parties to the Convention on Biological Diversity was the Nagoya Protocol adopted?

- (a) COP-6
- (b) COP-8
- (c) COP-10
- (d) COP-11

35. The statute historically known as the Forest (Conservation) Act, 1980 underwent a change in its short title through an amendment effective from December 1, 2023. What is its present statutory title?

- (a) Van Evam Paryavaran Sanrakshan Adhiniyam, 1980
- (b) Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980
- (c) Bharatiya Van Sanrakshan Adhiniyam, 1980
- (d) Van Paristhitiki Sanrakshan Adhiniyam, 1980

36. The Forest Rights Act gives the Gram Sabha an important role in recognition and governance of forest rights. In a related framework for tribal self-governance, Parliament enacted PESA to extend Part IX of the Constitution to Scheduled Areas. The constitutional authority for such extension is contained in:

- (a) Article 244(1)(b)
- (b) Article 243M(4)(b)
- (c) Article 275(1)(b)
- (d) Article 338A(5)(b)

Passage: The Taxation and Other Laws (Amendment) Bill, 2026 forms part of the government's effort to encourage investment, manufacturing and digital financial activity while modifying selected tax and payment-system rules. The Bill replaces the Income-tax (Amendment) Ordinance, 2026 and makes changes to the Income-tax Act, 2025, the Finance Act, 2026 and the Payment and Settlement Systems Act, 2007.

A major component concerns foreign participation in Indian government securities. Specified foreign institutional investors and the Bank for International Settlements receive income-tax exemptions on certain interest and capital gains arising from government securities. The legislation also seeks to make India more attractive for global fund management by relaxing conditions applicable to eligible offshore investment funds while retaining safeguards against tax avoidance.

The Bill provides incentives for electronics manufacturing and related supply chains. It extends tax concessions for eligible foreign companies involved in contract manufacturing and permits specified benefits involving electronic components stored in customs-bonded facilities. Similar concessions are provided for certain transactions involving rough diamonds.

Another set of amendments concerns business trusts such as REITs and InvITs. Dividend income received by eligible unit holders is exempted, while the surcharge applicable to certain special purpose vehicles is increased.

For data-centre services, the Bill removes some approval and notification requirements and extends benefits to leased facilities operated by Indian companies. It also changes the payment-system framework by enabling the Central Government to permit charges on specified electronic payment modes, potentially altering the earlier zero-charge regime. These measures collectively link taxation policy with investment and infrastructure.

[Extracted with edits and revisions from <https://prsindia.org/billtrack/the-taxation-and-other-laws-amendment-bill-2026>]

37. The Bank for International Settlements, connected with the government-securities provisions of the taxation measure, was established partly to administer German reparations contemplated under which plan?

- | | |
|------------------|---------------------|
| (a) Young Plan | (b) Marshall Plan |
| (c) Schuman Plan | (d) Morgenthau Plan |

38. The taxation measure contains provisions relating to trade in rough diamonds, bringing the Kimberley Process Certification Scheme into focus. Before assuming the Kimberley Process Chair in 2026, India had previously chaired it in which two years?

- | | |
|-------------------|-------------------|
| (a) 2007 and 2018 | (b) 2009 and 2020 |
| (c) 2010 and 2022 | (d) 2008 and 2019 |

39. The regulatory consolidation that ultimately created the FPI framework followed recommendations of SEBI's Committee on Rationalization of Investment Routes and Monitoring of Foreign Portfolio Investments. Who chaired this committee?

- | | |
|-------------------|------------------------|
| (a) U.K. Sinha | (b) K.M. Chandrasekhar |
| (c) Harun R. Khan | (d) Bimal Jalan |

40. The Bank for International Settlements was established in which year?

- | | |
|----------|----------|
| (a) 1919 | (b) 1925 |
| (c) 1930 | (d) 1944 |

41. Tax incentives concerning data centres connect the taxation measure with India's wider digital-regulatory framework. Which Supreme Court decision unanimously recognised privacy as a constitutionally protected fundamental right in 2017?

- | | |
|---|--------------------------------------|
| (a) Justice K.S. Puttaswamy (Retd.) v. Union of India | (b) Shreya Singhal v. Union of India |
| (c) Anuradha Bhasin v. Union of India | (d) PUCL v. Union of India |

Passage: The Supreme Court has widened the significance of its earlier interim protection around the Asan Wetland Conservation Reserve by indicating that comparable safeguards should operate for wetland and community conservation reserves elsewhere in India. The issue arose while considering mining activity near Asan, a protected wetland in Uttarakhand whose ecological importance has attracted both domestic and international recognition.

In February 2024, the Court directed that mining within ten kilometres of the notified boundary of the reserve could not proceed without prior clearance from the competent wildlife or environment authorities. The dispute later acquired an inter-State dimension when mining projects in neighbouring Himachal Pradesh were said to fall within the prescribed radius. The State sought clarification on whether an order framed in relation to a reserve located in Uttarakhand could automatically affect activities within its territory.

In August 2026, the Court observed that similarly situated conservation reserves should receive comparable treatment and asked the competent expert authorities to determine the factual position concerning the Asan boundary and the location of affected mining sites. The development is significant because India's wetland-regulation framework does not itself impose a uniform nationwide distance-based mining prohibition around every wetland.

The proceedings therefore highlight the interaction between judicial environmental protection, scientific assessment, wildlife clearance and State-level regulatory powers. They also illustrate how ecological boundaries may extend beyond administrative borders, making coordinated decision-making important where mining, river systems, migratory habitats and conservation landscapes overlap. Such disputes may influence scrutiny of extractive projects near ecologically sensitive reserves across India.

[Extracted with edits and revisions from <https://www.thehindu.com/news/national/supreme-court-says-10-km-radius-buffer-for-mining-extends-to-all-wetland-reserves/article71304647.ece>]

42. Which of the following is correct about the Montreux Record associated with the Ramsar Convention?

- (a) It records wetlands permanently removed from the Ramsar List.
- (b) It records Ramsar Sites undergoing adverse ecological change.
- (c) It contains wetlands proposed exclusively as UNESCO sites.
- (d) It lists transboundary wetlands jointly administered by States.

43. Which of the following enactments is NOT listed in Schedule I to the National Green Tribunal Act, 2010?

- (a) Environment (Protection) Act, 1986
- (b) Biological Diversity Act, 2002
- (c) Wild Life (Protection) Act, 1972
- (d) Forest (Conservation) Act, 1980

44. Which pair constituted India's first wetlands designated as Ramsar Sites?

- (a) Wular Lake and Loktak Lake
- (b) Chilika Lake and Keoladeo National Park
- (c) Harike Wetland and Sambhar Lake
- (d) Bhoj Wetland and Deepor Beel

45. The Supreme Court's significant 4 December 2006 directions concerning proposals for Eco-Sensitive Zones around National Parks and wildlife sanctuaries arose in which case?

- (a) M.C. Mehta v. Kamal Nath
- (b) Vellore Citizens Welfare Forum v. Union of India
- (c) Goa Foundation v. Union of India
- (d) Indian Council for Enviro-Legal Action v. Union of India

46. The Convention on Wetlands derives its commonly used name "Ramsar Convention" from a city situated in which country?

- (a) Azerbaijan
- (b) Iran
- (c) Iraq
- (d) Türkiye

47. Which of the following is NOT included within the statutory definition of a "protected area" under the Wild Life (Protection) Act, 1972?

- (a) National Park
- (b) Conservation Reserve
- (c) Community Reserve
- (d) Biosphere Reserve

Passage: The Cauvery water dispute is one of India's longest-running inter-State river conflicts, involving Karnataka, Tamil Nadu, Kerala and the Union Territory of Puducherry. Its modern legal history developed from disagreements over irrigation expansion, reservoir construction and the sharing of river flows among upper- and lower-riparian regions. Earlier arrangements between the former governments of Mysore and Madras also formed part of the historical background examined during later adjudication.

After negotiations failed to produce a lasting settlement, the Union Government constituted the Cauvery Water Disputes Tribunal under the Inter-State River Water Disputes Act, 1956. The Tribunal delivered its final decision in 2007, and the award was subsequently published in the Gazette of India in 2013. The participating States challenged aspects of the allocation before the Supreme Court, which delivered a major judgment in February 2018 and modified the distribution of Cauvery waters.

Following the judgment, the Central Government framed the Cauvery Water Management Scheme, 2018. The scheme created the Cauvery Water Management Authority and the Cauvery Water Regulation Committee to

supervise implementation, reservoir operations and releases in accordance with the adjudicated framework. The Tribunal was later dissolved after its award merged with the Supreme Court's final decision.

The dispute remains significant because rainfall variability, reservoir storage, irrigation requirements and drinking-water needs can create recurring tensions during deficient monsoon years. Beyond water allocation, the Cauvery basin also has deep historical, agricultural and engineering importance, making the dispute a major case study in Indian federalism, river-basin governance and cooperative water management in contemporary India.

[Extracted with edits and revisions from <https://indialegallive.com/constitutional-law-news/courts-news/cauvery-water-dispute-supreme-court-directs-tamil-nadu-to-raise-grievance-before-cwma/>]

48. The Cauvery dispute operates within a special constitutional framework for adjudication of inter-State river-water disputes. Which Article of the Constitution empowers Parliament to provide for such adjudication and also to exclude the jurisdiction of courts over such disputes?

- | | |
|-----------------|-----------------|
| (a) Article 131 | (b) Article 246 |
| (c) Article 262 | (d) Article 263 |

49. The Cauvery was harnessed for one of India's earliest major hydroelectric projects at Shivanasamudram in 1902. The bulk of the electricity initially generated there was transmitted primarily to which industrial centre?

- | | |
|-------------------------------------|------------------------------|
| (a) Bhadravati Iron and Steel Works | (b) Kolar Gold Fields |
| (c) Bangalore Cotton Mills | (d) Mysore Railway Workshops |

50. Further downstream, the Cauvery is associated with Kallanai or the Grand Anicut, one of the world's oldest functioning water-regulation structures. Which ruler is traditionally credited with constructing it?

- | | |
|----------------------|------------------------|
| (a) Rajaraja Chola I | (b) Rajendra Chola I |
| (c) Karikala Chola | (d) Kulottunga Chola I |

51. In litigation arising from the Cauvery dispute, the Supreme Court held that a Karnataka Ordinance seeking to nullify a tribunal's interim order also had impermissible extra-territorial operation. Which constitutional provision concerning the territorial extent of State legislative power was invoked in this context?

- | | |
|--------------------|--------------------|
| (a) Article 245(1) | (b) Article 249(1) |
| (c) Article 252(1) | (d) Article 254(2) |

52. The Cauvery originates in the Brahmagiri range, which forms part of the Western Ghats. In which year were the Western Ghats inscribed on UNESCO's World Heritage List?

- | | |
|----------|----------|
| (a) 2008 | (b) 2010 |
| (c) 2012 | (d) 2014 |

Section C: Legal Reasoning

Passage: Industrial applicability is a threshold requirement under Indian patent law because a patentable invention must operate beyond a theoretical proposal. Section 2(1)(j) of the Patents Act, 1970 defines an invention as a new product or process involving an inventive step and capable of industrial application. Section 2(1)(ac) provides that an invention is capable of industrial application when it can be made or used in an industry. The enquiry is functional: the claimed product or process must permit practical making, use and technical operation.

“Industry” is not confined to factories or heavy manufacturing. It may include pharmaceutical activity, biotechnology, engineering, electronics, technical systems and commercial technical processes. Industrial applicability, however, does not override Section 3. A workable claim may remain excluded as a method of agriculture or horticulture, method of treatment, plant or animal other than a micro-organism, computer programme per se or algorithm. Conversely, a claim outside Section 3 may fail when its utility is speculative, unsupported or non-operational.

Commercial success is not required. An applicant need not establish profitability, market demand or likely sales. The relevant question is whether the invention can be made or used in industry and whether the specification supports its practical operation. Industrial applicability is distinct from novelty and inventive step. A product or process may be new and non-obvious but remain unpatentable if it cannot be practically implemented.

Section 10 requires the complete specification to describe the invention fully and particularly, including its operation or use and the method by which it is performed. It must disclose the best method known to the applicant and conclude with claims defining the scope of protection. The claims must be clear, succinct and fairly based on the disclosed matter. A claim expressed through a desired function may be insufficient when the specification does not explain the mechanism, materials, steps, conditions or technical result necessary for its performance. An invention that is frivolous or contrary to well-established natural laws may be excluded under Section 3(a). A claim that cannot perform what it promises may also fail industrial applicability or sufficiency. For chemical, pharmaceutical and biotechnology inventions, identifying a compound, sequence or material does not independently establish industrial use. The specification must disclose a specific, credible and identifiable use, while the exclusions under Section 3 and disclosure requirements under Section 10 continue to apply.

[Extracted with edits and revisions from <https://www.intepat.com/blog/the-requirements-of-industrial-applicability-under-the-indian-patent-law>]

53. Aarav applies for a patent over a generator that allegedly produces an uninterrupted supply of electricity without fuel, sunlight, stored energy or any external input. The specification states that the machine continually recycles its own output without energy loss. Independent engineers construct the apparatus in accordance with the drawings, but it stops once the initially stored energy is exhausted. Aarav nevertheless establishes that no earlier patent describes the same arrangement and argues that novelty should justify a grant while further testing continues. The examiner concludes that the promised operation conflicts with well-established natural laws and has not been practically demonstrated. Which conclusion is most consistent with the passage?

- (a) The application may proceed because novelty and inventive step cure defects in practical operation.
- (b) The application may proceed because industrial applicability requires a stated industrial objective alone.
- (c) The claim may fail because its promised operation conflicts with natural laws and remains unworkable.
- (d) The claim may fail because energy inventions require evidence of established commercial market demand.

54. Beryl Engineering develops a machine that separates mixed textile fibres through a reproducible mechanical process. Several independent technicians manufacture the machine from the specification and operate it successfully in textile-recycling units. However, the machine consumes substantially more electricity than competing equipment, costs twice as much to manufacture and has received no commercial orders. The examiner accepts that the machine works as described and identifies no exclusion under Section 3. A competitor argues that the absence of buyers and weak prospects of profitability demonstrate that the machine lacks industrial applicability. Which conclusion is most appropriate?

- (a) The machine may satisfy industrial applicability despite weak profitability and limited market interest.
- (b) The machine fails industrial applicability because industrial use must remain commercially economical.

- (c) The machine satisfies patentability because practical operation establishes the remaining statutory requirements.
- (d) The machine fails patentability because absent buyers make its technical operation legally irrelevant.

55. Celestia Research claims a compact device for extracting drinking water from dry air. The claimed arrangement is accepted as new and non-obvious over the available prior art. However, the specification states that the device uses an “ambient energy gradient” without describing the required materials, energy-transfer mechanism, temperature range or condensation process. Engineers following the specification cannot produce water, and the applicant has not constructed a functioning prototype. No evidence establishes that the proposal contradicts natural laws; the objection is that the disclosed arrangement does not presently operate. Celestia argues that novelty and inventive step are sufficient because engineering details can be developed after grant. Which conclusion follows from the passage?

- (a) The claim may proceed because inventive step permits later development of operating details.
- (b) The claim may proceed because engineering classification supplies the missing practical operation.
- (c) The claim may fail because commercially untested devices lack industrial applicability by definition.
- (d) The claim may fail because novelty cannot substitute for supported and workable operation.

56. Dhruv AgroTech develops a reproducible method of cultivating rice in which soil sensors determine the exact sequence for irrigation, fertiliser placement and seed spacing. Field trials establish that the method reliably increases crop yield, and the specification describes each cultivation step with precision. Dhruv claims the agricultural method itself rather than a new sensor, machine or manufactured product. The applicant argues that automation, repeatability and substantial commercial value establish industrial applicability. The examiner accepts that the method is workable but invokes the statutory exclusion covering methods of agriculture. Which conclusion is most consistent with the passage?

- (a) The claim is patentable because reliable field use satisfies the industrial-applicability requirement.
- (b) The claim is excluded because industrial workability does not override the agricultural-method bar.
- (c) The claim is patentable because automated operation displaces the relevant Section 3 exclusion.
- (d) The claim is excluded because patentable inventions must operate within manufacturing facilities.

57. Elara Biotech identifies and synthesises a previously unknown peptide sequence. Its patent application provides the sequence and a method for producing it but states that the peptide “may potentially assist medicine, crop science, environmental monitoring or biochemical research.” The specification identifies no biological function, target condition, technical effect or experiment supporting any proposed use. During examination, Elara offers to conduct further research and amend the description if a practical function is discovered. The examiner accepts that the sequence is new and that it is not claimed as a prohibited plant or animal. Which conclusion is most appropriate?

- (a) The claim may fail because its stated utility is speculative rather than specific and credible.
- (b) The claim may proceed because identifying the sequence establishes industrial application by itself.
- (c) The claim may proceed because later research can supply the practical use after filing.
- (d) The claim may fail because biotechnology materials lack industrial use outside manufacturing.

58. FerroShield Ltd. claims “a composition capable of preventing corrosion on metal structures for fifty years under coastal conditions.” The specification repeats this desired result but does not identify the composition’s ingredients, their proportions, the preparation process, the coating method or the conditions needed to obtain the claimed protection. It states that suitable materials may be selected by future users through routine experimentation. Tests using commonly known coating materials do not reproduce the fifty-year effect. FerroShield argues that the claim is clear because it precisely states the function and duration of protection sought. Which conclusion best applies Section 10?

- (a) The disclosure is sufficient because the claim precisely identifies the desired technical result.
- (b) The disclosure is sufficient because users may select suitable materials after patent grant.
- (c) The disclosure is deficient because result-based language does not enable the promised performance.
- (d) The disclosure is deficient because claims must state expected revenue and probable market size.

59. GridRoute Solutions develops software that sorts delivery orders according to distance, customer priority and available vehicle capacity. The application claims the sorting algorithm and program code as such, without linking them to a new machine, sensor or independently claimed technical apparatus. The program performs its intended calculations, has been licensed to several delivery companies and has generated substantial revenue. GridRoute

argues that proven commercial use establishes industrial applicability and therefore makes the claim patentable. The examiner accepts that the program works but concludes that the claim falls within the exclusion for a computer programme per se and an algorithm. Which conclusion follows from the passage?

- (a) The claim is patentable because commercial deployment establishes industrial application and removes the exclusion.
- (b) The claim is patentable because operational software qualifies as an industrial product under Section 2.
- (c) The claim is excluded because software inventions require manufacturing rather than commercial technical use.
- (d) The claim is excluded because industrial applicability cannot override the programme-per-se and algorithm bar.

Passage: Subject to the limited threshold scrutiny permitted to a court, an objection to arbitral jurisdiction need not first be judicially determined. The doctrine of Kompetenz-Kompetenz enables an arbitral tribunal to rule on its own jurisdiction, including objections concerning the existence or validity of the arbitration agreement. Section 16 of the Arbitration and Conciliation Act, 1996 also permits the tribunal to consider a plea that it is exceeding the scope of its authority. The tribunal ordinarily conducts the first full jurisdictional inquiry, subject to judicial scrutiny in the manner provided by the Act. An arbitration clause has a legal existence separate from the contract containing it. Section 16 treats such a clause as an agreement independent of the contract's other terms. Consequently, termination, discharge, frustration or breach of the underlying contract does not, by itself, extinguish the arbitration clause. A tribunal's decision that the contract is null and void also does not entail ipso jure the invalidity of the clause. However, the parties may expressly agree to terminate the arbitration agreement itself.

Jurisdictional objections must be raised within the prescribed time. A plea that the tribunal lacks jurisdiction shall be raised not later than the submission of the statement of defence. Participation in appointing an arbitrator does not prevent a party from raising the plea. An objection that the tribunal is exceeding its authority shall be raised as soon as the allegedly unauthorised matter arises during the proceedings. A delayed plea may nevertheless be admitted if the tribunal considers the delay justified. If the tribunal rejects the plea, it shall continue the proceedings and make an award. The aggrieved party may challenge that award under Section 34. No immediate appeal under Section 37 lies merely against rejection of the plea. Conversely, an order accepting a plea under Section 16(2) or Section 16(3) is appealable under Section 37.

Section 5 reinforces the principle of limited judicial intervention. At the appointment stage, Section 11(6A), whose proposed omission has not been brought into force, confines the court to a prima facie examination of the existence of a written arbitration agreement. The court should not conduct a contested or laborious inquiry; deeper determination ordinarily belongs to the tribunal. However, reference cannot be ordered where prima facie consent is not established, particularly when credible material places the arbitration agreement itself under grave doubt on an allegation of forgery or fabrication.

[Extracted with edits and revisions from <https://blog.ipleaders.in/all-you-need-to-know-about-the-doctrine-of-kompetenz-kompetenz/>]

60. Farah Ali engaged Devendra Joshi's transport firm under an agreement containing an arbitration clause covering freight, delay, detention and physical damage, but excluding consequential loss. Farah initially claimed ₹32 lakh for garments damaged in transit. A footnote mentioned that the overseas buyer had cancelled its order, but expressly stated that no compensation was then being claimed for the cancellation. During the final hearing, Farah added a claim of ₹18 lakh for lost profit. Devendra examined her accountant and completed his closing submissions without objecting. He questioned the tribunal's authority over the added claim only after the hearing had ended. Was his plea raised within the prescribed period?

- (a) Yes, because a plea filed before the arbitral award remains timely.
- (b) No, because the earlier cancellation footnote commenced the objection period.
- (c) Yes, because Devendra could await completion of the quantum evidence.
- (d) No, because he should have objected when the additional claim arose.

61. A tribunal was constituted to decide a dispute over unpaid consultancy fees between Suresh Nair and Manish Bansal. Their signed agreement contained an arbitration clause. Manish admitted signing the agreement but

alleged that the inclusion of the clause had been misrepresented to him. He did not allege that the agreement was forged or fabricated. Instead of raising the objection before the tribunal, Manish sought a prior judicial ruling on the clause's validity. Which view is supported by the passage?

- (a) The tribunal may examine validity first, subject to later statutory review.
- (b) The court may determine validity first because consent precedes arbitral authority.
- (c) The tribunal may decide fees while the court separately examines validity.
- (d) The court and tribunal may conduct parallel inquiries into clause validity.

62. Two years after Poonam Bedi's company agreed to store goods belonging to Arvind Sethi's business, the parties signed a settlement memorandum. It stated that the storage agreement stood discharged and that all disclosed accounts had been settled. The memorandum made no reference to the arbitration clause covering storage charges and related accounts. An internal audit later revealed three invoices allegedly omitted from the settlement ledger. When Poonam invoked arbitration for their recovery, Arvind argued that the settlement had also terminated the arbitration clause. Can his objection succeed merely because the storage agreement was discharged?

- (a) Yes, because discharge ended every term contained in the storage agreement.
- (b) No, because discharge alone did not extinguish the independent arbitration clause.
- (c) Yes, because subsequently discovered invoices fell outside the discharged relationship.
- (d) No, because omitted invoices kept the substantive agreement partly operative.

63. Neelam Rao and Harish Gupta placed two apparently regular signed versions of the same supply agreement before a court. Neelam's copy contained an arbitration clause, while Harish's copy did not. Neither party alleged that either copy was forged or fabricated, and the clause-bearing copy was not facially unreliable. Resolving which version represented their final agreement would require detailed oral and documentary evidence. The issue arose while Neelam's application for appointment of an arbitrator was being considered. What course should the court adopt?

- (a) Appointment should await conclusive judicial resolution of the competing contractual versions.
- (b) The court should conduct a complete evidentiary inquiry into subsequent performance.
- (c) The court should make a prima facie inquiry and leave detailed determination to the tribunal.
- (d) Appointment should follow the clause-bearing copy without considering the conflicting version.

64. Consider the following Assertion (A) and Reason (R):

Assertion (A): An order rejecting a jurisdictional objection may be appealed immediately under Section 37 before the tribunal makes its award.

Reason (R): An order accepting a plea referred to in Section 16(2) or Section 16(3) is appealable under Section 37.

- (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.

Passage: On 1 July 2026, the Supreme Court in *Chandrikaben Kishor Dafda v. State of Gujarat* clarified that municipal election affidavits are governed by local-body election law, not by the Representation of the People Act, 1951. The ruling is important because false disclosure in a councillor election may still be criminal, but the charging provision must come from the correct legal source.

Section 2(d) of the 1951 Act defines "election" as an election to fill a seat in Parliament or in a State Legislature. This definition limits the Act's electoral offences to those elections. Therefore, Section 125A, which punishes failure to furnish information, false information, or concealment in affidavits connected with Section 33A nominations, cannot be mechanically invoked for municipal elections. A municipal candidate cannot be prosecuted under Section 125A merely because the allegation concerns an election affidavit.

Municipal elections stand on a separate constitutional footing. Article 243ZA gives the State Election Commission superintendence, direction and control over preparation of electoral rolls and conduct of municipal elections, subject to State law. The State Legislature may frame municipal election statutes and rules prescribing nomination papers, affidavits, asset disclosure, scrutiny and election offences. Where those rules require an affidavit, the candidate must comply with the prescribed form.

The disclosure duty is substantive, not ornamental. If the form requires details of assets of the candidate, spouse and dependents, the spouse's separately owned property must also be disclosed. A comma separating "myself, my spouse and dependents" does not restrict disclosure to jointly held assets. The word governing the list applies to every listed category. Non-disclosure of spouse's independent assets may therefore create a prima facie false-affidavit issue.

Absence of a special municipal penalty does not create immunity. If municipal law requires an affidavit but omits a specific punishment for false declaration, general criminal law may apply. Under the Indian Penal Code framework applicable to old proceedings, false statement in connection with an election, omission to give legally bound information to a public servant, false evidence, and use of false evidence may be relevant, depending on facts. Under present criminal law, corresponding provisions must be applied according to the date of the alleged offence.

Cognizance is taken of an offence, not merely of the section number written in the order. A Magistrate's use of a wrong penal provision at the initial cognizance stage may be a curable irregularity if the court had power to take cognizance, the complaint disclosed an offence, and no failure of justice occurred. Section 465 of the Code of Criminal Procedure protects orders from reversal for errors, omissions or irregularities unless actual prejudice is shown.

[Extracted with edits and revisions from <https://www.livelaw.in/top-stories/representation-of-people-act-doesnt-apply-to-municipal-elections-supreme-court-539537>]

65. Rishabh contests an election to a municipal council. State municipal rules require him to submit an affidavit disclosing his assets, liabilities and criminal antecedents. The returning officer later alleges that Rishabh concealed material information. The complaint invokes Section 125A of the Representation of the People Act, 1951, without referring to the municipal statute or general criminal law. Which conclusion is most appropriate?

- (a) Section 125A applies because a sworn electoral disclosure falls within the 1951 Act despite the office being municipal.
- (b) Section 125A does not apply because the statutory definition confines the relevant elections to parliamentary and legislative seats.
- (c) Section 125A applies because Article 243ZA places municipal elections within the penal framework governing legislative elections.
- (d) Section 125A does not apply because inaccuracies in municipal affidavits cannot support criminal proceedings under another applicable law.

66. The prescribed affidavit for a municipal election requires details of the assets "of myself, my spouse and dependents." A separate note states that jointly owned assets must identify the extent of joint ownership. Naina discloses property registered jointly in her and her husband's names but omits an apartment owned independently by her husband. She argues that the form addresses joint property and that the comma after "myself" restricts the remaining categories. Which conclusion is most consistent with the passage?

- (a) Naina complied because independently owned spousal property falls outside a form referring to the candidate, spouse and dependents.
- (b) Naina complied because the listing comma confines disclosure to assets jointly held with the candidate or her dependents.
- (c) Naina failed only if the authorities establish that she exercised beneficial control over her husband's separate apartment.
- (d) Naina may have filed a false affidavit because the prescribed list covers independently owned assets of each category.

67. Consider the following statements:

- i. Article 243ZA places the conduct of municipal elections under the State Election Commission, subject to State legislation.
- ii. A municipal affidavit resembling an affidavit under Section 33A automatically attracts Section 125A of the 1951 Act.
- iii. Absence of a special municipal penalty necessarily prevents prosecution under applicable provisions of general criminal law.

iv. The criminal provisions governing a false municipal affidavit depend partly on the date of the alleged conduct. Which combination is correct?

- (a) Statements i and iv are correct; statements ii and iii are incorrect.
- (b) Statements i and ii are correct; statements iii and iv are incorrect.
- (c) Statements ii and iii are correct; statements i and iv are incorrect.
- (d) Statements iii and iv are correct; statements i and ii are incorrect.

68. Farah allegedly concealed information that municipal election rules required her to disclose in an affidavit filed on June 20, 2024. A criminal complaint based on the omission is instituted in August 2026. The complainant argues that the Bharatiya Nyaya Sanhita must govern because the proceedings commenced after it replaced the IPC. Farah argues that Section 125A of the 1951 Act should instead govern because the document was an election affidavit. Which position follows from the passage?

- (a) The BNS governs because the date on which criminal proceedings begin determines the applicable substantive penal law.
- (b) Section 125A governs because an affidavit submitted during nomination attracts the national election statute despite the municipal office.
- (c) The IPC may govern because the alleged omission preceded the BNS, while Section 125A remains inapplicable to municipal elections.
- (d) The BNS governs because replacement of the IPC requires pending allegations to be examined under the current penal provisions.

69. A Magistrate competent to try general criminal offences receives a complaint alleging that a municipal candidate knowingly filed a false affidavit required by State rules. The complaint describes facts potentially attracting provisions concerning legally bound information and false evidence. The Magistrate takes cognizance under Section 125A of the 1951 Act, which does not apply to municipal elections. At this preliminary stage, the candidate shows no impairment in understanding or answering the factual allegations. Which conclusion is most appropriate?

- (a) The proceedings must end because the inapplicability of Section 125A prevents cognizance of an offence disclosed by the same facts.
- (b) The error may be cured through fresh cognizance under applicable law if the court is competent and no prejudice occurred.
- (c) Section 125A may be retained because Section 465 permits continuation under a substantively inapplicable penal provision without correction.
- (d) General criminal law may be considered only after the State Legislature inserts a corresponding penalty into the municipal statute.

70. Additional Principle: Under Section 216 of the Code of Criminal Procedure, 1973, a court may alter or add to a charge at any time before judgment is pronounced. The altered or added charge must be read and explained to the accused. If immediate continuation is likely to prejudice the accused or the prosecution, the court may adjourn the trial or direct a new trial. The provision does not dispense with jurisdiction or procedural fairness.

In proceedings concerning a municipal affidavit filed in 2018, the Magistrate initially cited Section 125A of the 1951 Act. After reconsidering the matter, the Magistrate takes cognizance under applicable IPC provisions. Before judgment, the court concludes that the charge should be altered to reflect more accurately the false-evidence offence disclosed by the complaint. The court reads the altered charge to the accused and offers an adjournment to prepare a defence. The accused argues that the original reference to Section 125A permanently prevents alteration of the charge. Which conclusion is most appropriate?

- (a) The charge cannot be altered because a charge differing from the initial cognizance order exceeds the court's procedural authority.
- (b) The charge may be altered without explanation because the underlying allegations appeared in the original municipal election complaint.
- (c) The charge may be altered after judgment if the appellate court later concludes that the accused experienced no prejudice.
- (d) The charge may be altered before judgment because it was explained and an adjournment was offered against possible prejudice.

Passage: Nuisance is an unreasonable interference with private enjoyment of land or with a public right. The wrong is judged by the legal effect of the activity on others rather than the defendant's convenience. A useful activity may still constitute nuisance if it causes actionable injury, obstruction, danger or annoyance.

Private nuisance protects a claimant's proprietary or possessory interest in land. The claimant must establish unreasonable interference with the use or enjoyment of property, or physical damage to property. Noise, smoke, smell, vibration, leakage and emissions may amount to private nuisance when they exceed ordinary neighbourhood inconvenience. Obstruction of light may constitute nuisance where a legally protected right, such as an easement, is affected. A complaint arising from unusual sensitivity is insufficient unless the interference would also affect an ordinary reasonable occupier in that locality.

Reasonableness depends on locality, duration, intensity, timing, continuity, malice, social utility and the practicability of prevention. Conduct tolerable in an industrial area may be unreasonable in a residential locality. Temporary inconvenience may be tolerated, while recurring or continuous interference strengthens liability. Physical damage is assessed more strictly than personal discomfort and is less dependent upon the character of the locality.

Public nuisance affects the public or a class of the public. Section 270 of the Bharatiya Nyaya Sanhita, 2023 applies where an act or illegal omission causes common injury, danger or annoyance to the public or nearby occupants, or causes injury, obstruction, danger or annoyance to persons using a public right. A common nuisance is not excused because it produces some convenience or advantage.

Private nuisance concerns an occupier's enjoyment of land, while public nuisance affects public rights such as roads, health, safety, water, air or passage. A private person suing independently for public nuisance must ordinarily prove special damage different in kind from the general public injury. However, Section 91 CPC permits the Advocate-General, or two or more persons with the court's leave, to seek a declaration, injunction or other appropriate relief against conduct affecting or likely to affect the public, even without special damage. Remedies include injunction, damages, abatement and prosecution where a statutory offence is established. Abatement permits proportionate removal of a continuing nuisance without excessive force or unnecessary damage. Prior notice is generally required where entry upon the wrongdoer's land is necessary, subject to circumstances of urgency. Statutory authority and consent may operate as defences. In private nuisance, a prescriptive right may arise where the actionable interference has continued openly, peaceably and as of right for the prescribed period. Negligence need not invariably be proved, and coming to the nuisance is not a complete defence.

[Extracted with edits and revisions from <https://blog.ipleaders.in/what-you-need-to-know-about-public-and-private-nuisance/>]

71. MapleCare Clinic operates in a quiet residential lane. Three nights each week, it tests a backup generator from 11.30 p.m. until 1 a.m. The generator ensures continuity of medical services, but its sound and vibration regularly prevent occupants of adjoining houses from sleeping. Noise-reducing equipment is available, although installing it would increase the clinic's operating costs. Asha purchased the adjoining house after the clinic had begun using the generator. Which conclusion is most appropriate?

- (a) No nuisance arises because the clinic's medical utility makes residential disturbance reasonable when its activity benefits patients.
- (b) No nuisance arises because Asha purchased her property after the generator had become part of existing conditions.
- (c) Nuisance may arise because recurring night-time interference affects ordinary residential occupation despite utility and prior operation.
- (d) Nuisance requires physical property damage because personal discomfort from a socially useful activity cannot support liability.

72. Kiaan operates a laboratory in a warehouse district. His research depends on an exceptionally sensitive instrument that requires near-perfect freedom from vibration. A neighbouring company runs a conveyor for twenty minutes each afternoon during normal business hours. The vibration causes no structural damage and would not materially disturb an ordinary warehouse occupier, but it disrupts Kiaan's instrument readings. Which conclusion is most consistent with the passage?

- (a) The claim likely fails because sensitive equipment is affected without interference with ordinary occupation in that locality.
- (b) The claim likely succeeds because recurring interference becomes actionable whenever it disrupts the claimant's chosen commercial activity.
- (c) The claim likely succeeds because the conveyor's usefulness cannot justify measurable interference reaching Kiaan's neighbouring premises.
- (d) The claim likely fails because vibration can constitute private nuisance only when it produces visible structural damage.

73. An event organiser places barriers across a public access road for three days without lawful authority. Members of the public must take a longer route but suffer no other loss. Imran owns a food-storage unit abutting the blocked section. The barriers prevent him from reaching its only entrance, causing refrigerated goods inside to spoil. Acting alone and without proceeding under Section 91 CPC, Imran brings an action against the organiser. Which conclusion is most appropriate?

- (a) Imran cannot sue independently because road obstruction may be challenged only through the procedure prescribed under Section 91.
- (b) Imran may sue independently only if he proves that the organiser intended the barriers to target his business.
- (c) Imran cannot sue independently because the spoiled goods resulted from the same obstruction experienced by other road users.
- (d) Imran may sue independently because property loss is special damage different in kind from the public's additional travel.

74. A company announces that it will permanently close a public footbridge to expand its private storage yard. The threatened closure would inconvenience residents generally, but no individual has yet suffered distinct personal loss. Two residents obtain the court's leave and jointly seek a declaration and injunction under Section 91 CPC. The company argues that their suit is premature because neither resident can prove special damage. Which conclusion follows from the passage?

- (a) The suit fails because each resident must establish special damage before invoking the procedure provided by Section 91.
- (b) The suit may proceed because two persons with court permission may seek relief without establishing special damage.
- (c) The suit may proceed after prosecution establishes that the proposed closure constitutes a punishable public nuisance.
- (d) The suit fails because Section 91 applies to completed public obstruction rather than conduct threatening public rights.

75. A pipe attached to Rohan's building projects over the boundary and repeatedly discharges wastewater into Tara's courtyard. Tara gives Rohan written notice requesting its removal, but he refuses to act. During Rohan's absence, Tara enters the adjoining strip peacefully and removes the projecting portion of the pipe. She does not damage the wall or disturb any part beyond what is required to stop the discharge. Which conclusion is most appropriate?

- (a) Tara's conduct is unjustified because nuisance can be remedied through injunction or damages rather than direct physical intervention.
- (b) Tara's conduct is unjustified because abatement requires prior permission from a court or designated public authority.
- (c) Tara's conduct may be justified because notice was given and the removal was necessary, peaceful and proportionate.
- (d) Tara's conduct establishes Rohan's consent because his refusal to remove the pipe authorised corrective action.

76. **Additional Principle:** Statutory authority is a defence to nuisance where the interference is the inevitable consequence of carrying out an activity authorised by legislation despite the exercise of reasonable care and skill. It does not protect interference caused by negligent execution, avoidable operational choices or conduct extending beyond the statutory authority.

A statute authorises a transport corporation to construct and operate a freight terminal at a specified location near a residential area. The statute does not prescribe the terminal's hours or methods of operation. The corporation leaves freight engines idling throughout the night and uses poorly maintained warning alarms. Evidence shows

that functioning silencers and revised loading schedules could substantially reduce the disturbance without preventing terminal operations. Residents bring a nuisance action, while the corporation relies on statutory authority. Which conclusion is most appropriate?

- (a) Statutory authority is not a complete defence because reasonable precautions could reduce interference while preserving authorised operations.
- (b) Statutory authority is a complete defence because legislative approval of the location protects the resulting operational disturbance.
- (c) Liability follows from recurring disturbance because proof of physical damage is unnecessary within a residential locality.
- (d) Liability depends on proof of malice because the terminal performs a socially useful and legislatively authorised function.

Passage: The Bharatiya Nyaya Sanhita, 2023 (“BNS”) recognises distinct principles of collective criminal liability under Section 3(5) and Section 190. Section 3(5) attributes liability on the basis of common intention, whereas Section 190 attributes liability on the basis of membership of an unlawful assembly and its common object.

Section 3(5) provides that when a criminal act is done by several persons in furtherance of the common intention of all, each such person is liable for that act in the same manner as if it were done by him alone. The provision does not constitute an independent substantive offence. It determines the liability of persons who participate in the commission of another offence pursuant to a common intention.

For the application of Section 3(5), the prosecution must establish a criminal act done by several persons, participation of the accused in that act and the existence of a common intention in furtherance of which the act was done. Common intention requires a meeting of minds, but it need not result from prolonged deliberation or prior planning. It may develop immediately before or during the occurrence. Its existence may be inferred from the conduct of the accused, the nature of the weapons carried, allocation of roles, selection of the victim, prevention of escape, coordinated pursuit and conduct during or after the offence. Mere presence, relationship or association with the principal offender is insufficient. However, liability does not require every participant personally to inflict the resulting injury.

Section 189(1) provides that an assembly of five or more persons is an unlawful assembly where its common object is to overawe the Government, Parliament, a State Legislature or a public servant by criminal force; resist the execution of law or legal process; commit mischief, criminal trespass or another offence; obtain possession of property or deprive a person of a right by criminal force; or compel a person to do what he is not legally bound to do, or omit what he is legally entitled to do. An assembly that was lawful when constituted may subsequently become unlawful.

Under Section 189(2), a person becomes a member of an unlawful assembly when, being aware of the facts rendering it unlawful, he intentionally joins or continues in it. Section 190 applies where an offence is committed by a member of such assembly in prosecution of its common object, or is an offence which the members knew was likely to be committed in prosecution of that object. Every person who was a member of the same assembly when the offence was committed is then guilty of that offence. A separate overt act by every member is unnecessary, but conscious membership cannot be inferred from mere presence.

Derived from Sections 3(5), 189 and 190 of the Bharatiya Nyaya Sanhita, 2023.

77. During a sudden dispute, Raghav directed Manav and Iqbal to restrain Vikram while he assaulted him. Manav held Vikram’s arms, while Iqbal blocked the only exit and returned Raghav’s fallen stick to him. Raghav thereafter caused grievous hurt to Vikram. There was no evidence of any plan before the dispute arose. Which conclusion is most appropriate under Section 3(5) of the BNS?

- (a) Section 3(5) is inapplicable because common intention must exist before the participants reach the place of occurrence.
- (b) Section 3(5) applies only to Manav because physical restraint amounts to direct commission of the resulting offence.
- (c) Section 3(5) may apply to all three because their coordinated conduct indicates a common intention formed during the occurrence.

(d) Section 3(5) is inapplicable to Iqbal because each participant must personally cause some part of the resulting injury.

78. Keshav accompanied three acquaintances who intended to demand repayment of a debt from Arjun. Keshav was unaware that one of them was carrying a knife. During the argument, that person suddenly stabbed Arjun. Keshav immediately stepped away, called an ambulance and neither encouraged nor assisted the assault. The prosecution relies primarily on his arrival and presence with the group. Which conclusion follows from the passage?

- (a) Section 3(5) should not apply without proof that Keshav shared or furthered the intention underlying the stabbing.
- (b) Section 3(5) may apply because Keshav arrived with the group and remained present when the argument commenced.
- (c) Section 3(5) may apply because an intention to demand repayment includes violence subsequently used during the confrontation.
- (d) Section 3(5) should not apply only if Keshav had withdrawn before the group approached Arjun.

79. Six persons assemble to obtain possession of disputed land by criminal force. One member carries petrol and states, in the hearing of the others, that he will burn the occupant's shed if resistance is offered. The remaining members continue surrounding the property. When the occupant refuses to leave, that member sets the shed on fire. Which conclusion is most consistent with Section 190 of the BNS?

- (a) The remaining members avoid liability because destruction of the shed was not expressly agreed upon before the assembly formed.
- (b) The remaining members avoid liability because the common object concerned possession and did not expressly include property damage.
- (c) The remaining members are liable only if each supplied fuel, guarded the shed or otherwise assisted the ignition.
- (d) The remaining members may be liable because they knew that burning the shed was likely while pursuing forcible possession.

80. Seven persons initially gather for a peaceful demonstration. On seeing a court bailiff arrive to execute a possession warrant, they agree to prevent him from entering the property. Five persons block the entrance, while two remain behind them, encourage resistance and direct the bailiff to leave. All seven are aware of the decision to obstruct execution of the warrant. Which conclusion is correct under Section 189 of the BNS?

- (a) The assembly remains lawful because its character is determined by the purpose for which its members initially gathered.
- (b) The assembly may become unlawful because the common object to resist legal process arose and all seven knowingly continued.
- (c) Only the five persons blocking the entrance become members because the other two committed no physical obstructive act.
- (d) The assembly remains outside Section 189 because an unlawful common object cannot arise after the original gathering.

81. Consider the following statements:

- i. Common intention under Section 3(5) may develop during the occurrence.
- ii. Section 190 requires proof of a separate overt act by every member.
- iii. An initially lawful assembly may subsequently become an unlawful assembly.
- iv. Presence near an unlawful assembly necessarily establishes conscious membership.

Which statements are correct?

- (a) Statements i and ii only
- (b) Statements ii and iv only
- (c) Statements i and iii only
- (d) Statements iii and iv only

Directions (Questions 82–84): Answer the questions solely on the basis of the facts provided. Select the proposed rule that most accurately explains the specified outcome. Do not rely on prior legal knowledge.

Fact Scenario I

Asha owned an antique watch valued at ₹3,00,000. She gave the watch to Nikhil, a courier, with instructions to deliver it to a buyer. Nikhil accepted the sealed parcel and initially intended to complete the delivery.

During the journey, Nikhil opened the parcel and discovered the watch. He then decided to sell it to a collector and retain the money. Nikhil completed the sale and falsely informed Asha that the parcel had been lost during transportation.

82. Which proposed rule best supports holding Nikhil criminally liable?

- (a) A person is liable whenever another person loses possession of property.
- (b) A person lawfully receiving property becomes liable upon dishonest personal conversion.
- (c) A person is liable only when possession initially lacked owner consent.
- (d) A person receiving property becomes liable if agreed delivery remains incomplete.

Fact Scenario II

Consider the same facts, except that shortly after Nikhil accepted the parcel, Asha's office mistakenly sent him a signed electronic instruction from her verified account. The instruction identified the correct parcel number and stated that ownership of the watch had been transferred to Nikhil, who could keep or sell it.

The instruction was intended for another transaction. Nikhil had no reason to suspect this error. Reasonably believing that the watch now belonged to him, he sold it to a collector.

83. Which proposed rule best supports finding Nikhil not criminally liable?

- (a) Initial lawful receipt generally prevents liability for later disposal of property.
- (b) A mistaken ownership belief excuses disposal whenever another person confirms transfer.
- (c) A person avoids liability when disposal follows reasonable honest ownership belief.
- (d) A person avoids liability if no payment preceded the property's disposal.

Fact Scenario III

Consider the same facts as Scenario II, except that Asha telephoned Nikhil before he sold the watch. She explained that the transfer instruction had been sent by mistake and directed him to complete the original delivery. Nikhil acknowledged the correction and promised to deliver the parcel.

Nikhil nevertheless sold the watch several hours later and retained the money. He then claimed that he had relied upon the earlier transfer instruction.

84. Which proposed rule best supports holding Nikhil criminally liable?

- (a) Later knowledge defeats an earlier honest belief before dishonest conversion occurs.
- (b) Initial consent generally prevents liability for any later property disposal thereafter.
- (c) A corrected message creates liability only after the owner files proceedings.
- (d) Property disposal remains innocent whenever initial possession was lawfully obtained beforehand.

Section D: Logical Reasoning

Directions for Questions 85-90:

Six researchers Aditi, Bhavin, Chetan, Disha, Eshan and Farah are scheduled for one review session each on six consecutive dates from Monday, 28 February 2028, to Saturday, 4 March 2028. The year 2028 is a leap year. Exactly one session is held each day, and the six starting times 1:10, 2:40, 3:20, 4:50, 7:20 and 10:40 are used exactly once. For every starting time, the smaller angle between the hour hand and minute hand of an ordinary 12-hour clock is considered. Eshan's session is held on the only date in this schedule that occurs only in a leap year. Aditi's session is on the day immediately after Eshan's, and Farah's is on the day immediately after Aditi's. Disha's session is exactly two days after Farah's, while Chetan's session occurs after Farah's but before Disha's. Of the six starting times, Bhavin's produces the greatest smaller angle and Eshan's produces the least. The smaller angle at Aditi's starting time is exactly four times the smaller angle at Eshan's starting time. Farah's smaller angle is exactly 20° greater than Aditi's, while Disha's smaller angle exceeds 150° but is not the greatest of the six.

85. Who is scheduled on 28 February 2028?

- | | |
|------------|------------|
| (a) Bhavin | (b) Eshan |
| (c) Aditi | (d) Chetan |

86. At what time does Farah's session begin?

- | | |
|-----------|----------|
| (a) 4:50 | (b) 7:20 |
| (c) 10:40 | (d) 2:40 |

87. What is the difference between the smaller clock angles at the sessions held on 29 February and 2 March?

- | | |
|----------------|-----------------|
| (a) 60° | (b) 70° |
| (c) 80° | (d) 100° |

88. Which researcher has the 1:10 session?

- | | |
|------------|------------|
| (a) Disha | (b) Aditi |
| (c) Bhavin | (d) Chetan |

89. How many of the sessions held in March begin at a time when the smaller angle between the clock hands is acute?

- | | |
|-----------|----------|
| (a) Two | (b) One |
| (c) Three | (d) Four |

90. Which researcher is scheduled exactly midway, by date, between Eshan and Disha, and at what time does that researcher's session begin?

- | | |
|-------------------|-------------------|
| (a) Aditi – 10:40 | (b) Farah – 7:20 |
| (c) Chetan – 1:10 | (d) Bhavin – 2:40 |

Directions for Questions 91-96:

Ten members of a Aman, Bina, Chetan, Diya, Eshan, Farah, Gaurav, Hina, Iqbal and Jiya are standing at different points on an open ground. Aman is married to Bina, and they have exactly three children: Chetan, Diya and Eshan. Chetan is married to Farah and has two children, Gaurav and Hina. Diya is married to Iqbal and they have one daughter, Jiya. Eshan is unmarried. Aman is taken as the reference point. Bina stands 6 metres west of Aman. Gaurav's father stands 8 metres north of Aman. The wife of Gaurav's father stands 6 metres east of her husband. Gaurav stands 4 metres north of his mother, while his sister stands 4 metres east of their mother. Gaurav's paternal aunt stands 8 metres west of his paternal grandfather. Her husband stands 6 metres south of her, and their

daughter stands 4 metres east of her father. Gaurav's unmarried paternal uncle stands 8 metres south of Gaurav's paternal grandfather. All directions are with respect to the same fixed north-south and east-west axes.

91. Which of Hina's relatives stands exactly 10 metres west of her?

- | | |
|------------------------|------------------------------|
| (a) Her paternal uncle | (b) Her brother |
| (c) Her father | (d) Her paternal grandfather |

92. In which direction is Jiya from her unmarried maternal uncle?

- | | |
|----------------|----------------|
| (a) South-East | (b) South-West |
| (c) North-East | (d) North-West |

93. Starting from Jiya's position, a person moves 4 metres west, then 6 metres north and finally 8 metres east. Whom does the person reach?

- | | |
|---------------------------------|---------------------------------|
| (a) Jiya's maternal grandfather | (b) Jiya's maternal grandmother |
| (c) Jiya's maternal uncle | (d) Jiya's mother |

94. Which of Diya's brothers is situated south-east of her?

- | | |
|------------|------------------------------|
| (a) Chetan | (b) Neither Chetan nor Eshan |
| (c) Eshan | (d) Both Chetan and Eshan |

95. What is the shortest distance between Gaurav and his paternal grandfather?

- | | |
|-------------------------|------------------------|
| (a) $4\sqrt{13}$ metres | (b) $8\sqrt{3}$ metres |
| (c) $10\sqrt{2}$ metres | (d) $6\sqrt{5}$ metres |

96. Which pair of Aman's children are equidistant from Aman and stand in exactly opposite directions from him?

- | | |
|---------------------|----------------------|
| (a) Chetan and Diya | (b) Chetan and Eshan |
| (c) Diya and Eshan | (d) Chetan and Farah |

Directions for Questions 97-102:

Seven consultants Advait, Bina, Chirag, Devika, Eshan, Farid and Gauri are scheduled to present one project each during seven consecutive months from January to July, with exactly one presentation in each month. The seven projects are Atlas, Beacon, Cipher, Delta, Ember, Flux and Grove, and no project is presented more than once. Advait presents exactly two months after Chirag. Gauri presents in the month immediately after Advait. Bina presents after Gauri but before Eshan. Farid presents before Advait but not in January. Devika presents in the month immediately before Eshan. As regards the projects, Gauri presents Flux. Cipher is presented in the month immediately before Atlas, while Flux is presented in the month immediately after Atlas. Delta is presented immediately before Grove, and Beacon is presented sometime after Grove.

97. Who presents in February?

- | | |
|------------|-----------|
| (a) Advait | (b) Gauri |
| (c) Chirag | (d) Farid |

98. Which project is presented by Advait?

- | | |
|------------|-----------|
| (a) Cipher | (b) Atlas |
| (c) Delta | (d) Ember |

99. Who presents the Delta project?

- | | |
|-----------|------------|
| (a) Gauri | (b) Devika |
| (c) Bina | (d) Eshan |

100. Which of the following person-project combinations is correct?

- | | |
|--------------------|--------------------|
| (a) Devika – Grove | (b) Eshan – Delta |
| (c) Farid – Beacon | (d) Chirag – Atlas |

101. Which consultant presents exactly midway between the months in which Cipher and Grove are presented?

- | | |
|------------|-----------|
| (a) Advait | (b) Bina |
| (c) Eshan | (d) Gauri |

102. Which of the following gives the projects presented from February through May, in the correct order?

- | | |
|--------------------------------|--------------------------------|
| (a) Cipher, Flux, Atlas, Delta | (b) Cipher, Atlas, Flux, Delta |
| (c) Atlas, Cipher, Flux, Delta | (d) Cipher, Atlas, Delta, Flux |

Directions for Questions 103-108:

An input-output machine receives the following eight tokens in an unordered pool: 42, MANGO, 17, BRICK, 63, CLOUD, 28 and FABLE. It creates an output row containing eight fixed positions. On every odd-numbered step, the machine selects from the remaining numbers the number having the smallest product of its two digits; if there is a tie, the smaller number is selected. The selected number is placed in the leftmost vacant position. On every even-numbered step, the machine selects from the remaining words the word for which the sum of the alphabetical positions of its first and last letters is greatest; if there is a tie, the word that appears first when the tied words are arranged in reverse alphabetical order is selected.

The selected word is placed in the rightmost vacant position. Before a selected number is displayed, its digits are reversed if their sum is odd; otherwise, it remains unchanged. Before a selected word is displayed, its first letter is shifted to the end if the word contains an odd number of vowels; otherwise, it remains unchanged. The procedure continues until all eight positions are occupied.

103. Which displayed item occupies the seventh position in the final output?

- | | |
|-----------|-----------|
| (a) RICKB | (b) BRICK |
| (c) FABLE | (d) MANGO |

104. Which original token is selected at Step 5?

- | | |
|--------|-----------|
| (a) 63 | (b) 42 |
| (c) 28 | (d) CLOUD |

105. What is the sum of the original numerical tokens that eventually occupy the second and fourth positions of the output row?

- | | |
|---------|---------|
| (a) 91 | (b) 98 |
| (c) 112 | (d) 105 |

106. Which of the following gives all and only the original tokens whose displayed forms change?

- | | |
|------------------|------------------|
| (a) 42 and CLOUD | (b) 63 and BRICK |
| (c) 17 and MANGO | (d) 28 and FABLE |

107. Which two displayed items occupy the fourth and fifth positions respectively in the final output?

- | | |
|------------------|------------------|
| (a) 36 and CLOUD | (b) 63 and CLOUD |
| (c) 36 and FABLE | (d) 28 and CLOUD |

108. Suppose the word-transformation rule were reversed so that the first letter were shifted to the end only when a word contained an even number of vowels. All selection and placement rules, as well as the number-transformation rule, remain unchanged. Which of the following would then occupy positions 5 through 8, respectively?

- (a) CLOUD, FABLE, RICKB, MANGO
(c) LOUDC, ABLEF, BRICK, ANGOM

- (b) LOUDC, FABLE, BRICK, ANGOM
(d) CLOUD, ABLEF, RICKB, ANGOM

Section E: Quantitative Techniques

[Directions for Q.109-Q114]:

Three runners A, B and C participate in a 2,400-metre race on a circular track measuring 400 metres per lap. A and C start from the official starting line, while B receives a head start of 240 metres. Therefore, B has to run only 2,160 metres to reach the official finishing line. All three runners start simultaneously.

Runner A runs the first 1,200 metres at a constant speed of 8 metres per second and the remaining distance at 10 metres per second. Runner B maintains a constant speed of 9 metres per second throughout his run. Runner C also runs at 9 metres per second but remains stationary for 10 seconds immediately after completing each of the first three laps. C does not take any rest after completing the fourth or fifth lap.

Whenever a runner is described as being a certain distance short of the finish, the distance refers to the actual distance that the runner must still cover from that point.

109. When Runner B finishes the race, by how many metres is Runner C farther from the finish than Runner A?

- | | |
|----------------|----------------|
| (a) 210 metres | (b) 180 metres |
| (c) 240 metres | (d) 270 metres |

110. By how much time does Runner A finish the race before Runner C?

- | | |
|----------------|-----------------------------|
| (a) 20 seconds | (b) $26\frac{2}{3}$ seconds |
| (c) 30 seconds | (d) $36\frac{2}{3}$ seconds |

111. After the start of the race, when do Runner A and Runner C first occupy the same point on the circular track?

- | | |
|----------------|----------------|
| (a) 45 seconds | (b) 48 seconds |
| (c) 50 seconds | (d) 54 seconds |

112. After how much time from the start does Runner C begin his fourth lap?

- | | |
|------------------------------|------------------------------|
| (a) $153\frac{1}{3}$ seconds | (b) $156\frac{2}{3}$ seconds |
| (c) 160 seconds | (d) $163\frac{1}{3}$ seconds |

113. How far is Runner C from the finish at the instant Runner A begins his final lap?

- | | |
|----------------|----------------|
| (a) 600 metres | (b) 540 metres |
| (c) 630 metres | (d) 660 metres |

114. Exactly 200 seconds after the start, what is the shorter distance along the circular track between Runner A and Runner C?

- | | |
|----------------|----------------|
| (a) 150 metres | (b) 170 metres |
| (c) 190 metres | (d) 230 metres |

[Directions for Q.115-Q120]:

A water-treatment tank has a capacity of 90,000 litres and is initially filled to 20% of its capacity. Two inlet pipes, P and Q, and one outlet pipe, R, are connected to the tank. At their normal rates, P can fill an empty tank in 10 hours, Q can fill it in 15 hours, and R can empty a full tank in 18 hours.

At the beginning of the operation, Pipe P and outlet R are opened together. Pipe Q is opened exactly 3 hours later. When the tank becomes 70% full, Pipe P closes automatically, while Q and R continue operating. When the tank

becomes 80% full, outlet R also closes, and Q alone continues until the tank is completely full. All changes occur immediately, and the operating rates remain constant.

The operating costs of P, Q and R are ₹150, ₹100 and ₹60 per hour, respectively. A pipe incurs its operating cost for the entire period during which it remains open, including fractional hours.

115. After how much time from the beginning does the tank first become half full?

- | | |
|------------------------|------------------------|
| (a) 4 hours 18 minutes | (b) 4 hours 42 minutes |
| (c) 4 hours 30 minutes | (d) 4 hours 54 minutes |

116. How much water has Pipe Q supplied by the time Pipe P closes automatically?

- | | |
|-------------------|-------------------|
| (a) 18,600 litres | (b) 20,400 litres |
| (c) 19,200 litres | (d) 19,800 litres |

117. What is the total time required to fill the tank completely?

- | | |
|-------------------------|-------------------------|
| (a) 18 hours 18 minutes | (b) 18 hours 6 minutes |
| (c) 17 hours 48 minutes | (d) 18 hours 30 minutes |

118. By the time Pipe P closes automatically, what is the ratio of the total quantity supplied by P and Q together to the total quantity discharged by R?

- | | |
|----------|----------|
| (a) 5:2 | (b) 17:7 |
| (c) 12:5 | (d) 19:8 |

119. What is the ratio of the quantity supplied by Pipe Q while Pipe P is closed to the quantity supplied by Q during the period when P and Q are both open?

- | | |
|-----------|-----------|
| (a) 18:5 | (b) 36:11 |
| (c) 40:11 | (d) 42:11 |

120. What is the total operating cost of all three pipes during the complete operation?

- | | |
|------------|------------|
| (a) ₹3,273 | (b) ₹3,333 |
| (c) ₹3,453 | (d) ₹3,393 |

Rough Work
