

UG 2026

AMBIT CARD NUMBER

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QUESTION BOOKLET NO: 2026UG07



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 36 (Thirty Six) pages including 2 (Two) 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 OB, 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:- 1 Every winter, as the post-monsoon haze settles over North India, public attention snaps back to air pollution. Newsrooms scramble, governments announce “emergency” measures, and social media briefly unites around familiar indignation. Then, once winds pick up and visibility improves, the urgency evaporates. This seasonal memory loss helps explain why structural reforms remain slow, and why, each year, we are offered a fresh lineup of attention-grabbing fixes. This season’s star is cloud seeding: the idea that artificial rain can wash away particulate matter on command. It joins a familiar supporting cast – smog towers, smog guns, and, more recently, “green crackers” and wearable “air purifiers” – all heavy on optics, light on impact.

Cloud seeding looks decisive, but winter in North India is dominated by dry, stable continental air. Without moisture, there are no rain-bearing clouds to seed. Even when conditions are briefly favourable, any reduction in pollution levels is short-lived. As soon as the rain stops, concentrations rebound because emissions from traffic, construction, waste burning, industry, and heating continue unabated. The science is well understood. Yet some form of such attention-grabbing “solution” resurfaces each season, even if the specific gadget changes. It allows authorities to be seen “doing something,” rather than doing what works: reducing sources of emissions and cleaning up what remains. A smaller segment still has a simpler option: leave Delhi for a few weeks when the air turns grey. It is an effective strategy, available only to those whose livelihoods and resources allow mobility. For everyone else, there is no “winter break” from breathing. There is also a reality that rarely enters formal discussion. In the same city where some of us compare filtration efficiencies, many residents burn discarded cloth or scrap wood at night to stay warm. It is difficult to assign blame when the choice is between heat and hypothermia. Environmental harm arising from deprivation is not primarily about individual behaviour; it reflects gaps in housing, energy access, and social protection. When the state does not provide basic services, survival often requires activities that add to local emissions.

Extracted with edits and revisions from: <https://thewire.in/environment/smog-season-snake-oil-season>

1. Which of the following best captures the meaning of “seasonal memory loss” as used by the author?

- (a) A cognitive disorder affecting urban populations exposed to severe air pollution.
- (b) The tendency of bureaucrats to deliberately delay long-term reforms for electoral gain.
- (c) The inability of policymakers to recall previous failed interventions on pollution.
- (d) A pattern of short-term attention that fades once the immediate crisis appears to pass.

2. The author’s view on cloud seeding as a pollution-control method can best be described as:

- (a) Curious about its potential when supported by consistent climate conditions.
- (b) Optimistic about its short-term benefits in conjunction with emission controls.
- (c) Encouraging all experimental approaches that signal administrative action.
- (d) Skeptical of its feasibility due to meteorological and systemic limitations.

3. The phrase “there is no ‘winter break’ from breathing” is intended to suggest that:

- (a) Most people cannot escape exposure to polluted air.
- (b) The state should declare holidays during peak smog.
- (c) Office workers ought to work remotely in winter.
- (d) Everyone should be allowed to relocate temporarily.

4. Which of the following best supports the author’s argument against symbolic pollution fixes?

- (a) Scientific consensus that structural emissions must be addressed directly.
- (b) Diplomatic conflicts over transboundary air pollution control treaties.
- (c) Lack of year-round political interest in air quality indicators and research.
- (d) Legal restrictions on using water resources for artificial rainfall efforts.

5. The author's reference to "wearable air purifiers" functions primarily as:
- (a) Hyperbole (b) Symbolism (c) Analogy (d) Irony

6. Which of the following best summarizes the passage?
- (a) Artificial rain and smog towers could be effective if implemented during wetter seasons.
 (b) North India's pollution problem persists because of misapplied science and faulty instruments.
 (c) Migration is the only viable solution for surviving urban smog waves.
 (d) Seasonal pollution responses are more about political optics than structural reform.

Passage:- 2 Millions of casualties. Years of bloody attrition warfare. When Vietnamese communists toppled French colonial rule in 1954 despite massive U.S. military aid, the Geneva Accords temporarily divided Vietnam into two zones until free elections could be held in 1956 to unify the country. However, those elections never happened. Within a few years, terrorism and firefights began. The ensuing civil war would last for two decades. But why? "It was not because [policymakers] were greatly confident that fighting on would lead to victory," says Christian G. Appy, professor of history at the University of Massachusetts Amherst and the author of three books about the Vietnam War. Instead, the lengthy war hinged on factors like ideology, public sentiment, and the agendas of powerful individuals—with devastating results for North and South Vietnam and their allies. This Indochina war, the second after defeating the French, pitted North and South Vietnamese armies against each other, divided over leadership and politics. Soon, the conflict spread across several countries as a seemingly endless proxy war, exacting a bitter cost for all involved. Congress may not have made an official declaration, but in Vietnam this is called the "American War" or the "War Against the Americans to Save the Nation."

Cold War ideology—the struggle between the opposing systems of capitalism and communism post-World War II—fueled the battle, with Vietnam split in two: the Democratic Republic of Vietnam (north) and the Republic of Vietnam (south). The North Vietnamese communist forces with their southern allies the Vietcong (a nickname derived from the term "Vietnamese communist" that was widely used to refer to members of the People's Liberation Armed Forces or PLAF), were bolstered by support from the U.S.S.R. and China. South Vietnam was supported by the United States, France, and other anti-communist allies. Ho Chi Minh was president of North Vietnam from 1945 until his death in 1969. A longtime communist and revolutionary, he was resistant to all colonial powers. While many saw him as a champion for independence, others disapproved of his complicity in war crimes and the idolatry of him as a leader.

Extracted with edits and revisions from: <https://www.nationalgeographic.com/history/article/vietnam-war-protests-history>

7. Which of the following best reflects the author's interpretation of the Vietnam War's longevity?
- (a) The war dragged on due to unwavering faith in America's military superiority.
 (b) The war endured because public and political pressures overshadowed military certainty.
 (c) The war's duration stemmed from a tactical miscalculation of Vietnamese geography.
 (d) The war was prolonged by North Vietnam's failure to comply with international agreements.
8. In the context of the passage, the term "idolatry" most nearly implies:
- (a) Reverence that blinds judgment and rationality about a political figure
 (b) Celebration of national icons to unite a fractured political landscape
 (c) Religious symbolism attached to the revolutionary goals of communism
 (d) Cultural storytelling used to elevate resistance leaders into myths
9. Which of the following statements best captures the author's description of Vietnam's geopolitical positioning?
- (a) Vietnam became a flashpoint where colonial legacy and ideological rivalry violently collided.
 (b) Vietnam emerged as a neutral ground where global superpowers avoided direct confrontation.
 (c) Vietnam retained sovereignty by balancing its allegiance between East and West.
 (d) Vietnam's internal politics isolated it from broader Cold War ideological currents.
10. The passage's portrayal of Ho Chi Minh is best characterized as:

- (a) A revered revolutionary figure presented without meaningful ethical dispute surrounding his actions.
- (b) A national independence leader whose legacy invites both admiration and critical moral reflection.
- (c) A reluctant symbolic personality whose prominence resulted largely from external ideological promotion.
- (d) A marginal historical participant whose influence was overshadowed by dominant international forces.

11. Which of the following is most nearly opposite in meaning to “attrition” as used in the passage?

- (a) Escalation
- (b) Mobilization
- (c) Regeneration
- (d) Blitz

12. Which of the following best summarizes the author’s insight into the Vietnam War’s global impact?

- (a) The war served as a cautionary tale of military overreach and diplomatic miscalculation.
- (b) The war exposed the fragility of Asian alliances in resisting communism.
- (c) The war exemplified how localized civil disputes could remain regionally contained.
- (d) The war enabled France and the U.S. to maintain long-term influence in Southeast Asia.

Passage:- 3 Sometimes the menace is to the crop itself - a menace that remains as long as the insecticide contamination is in the soil. Some insecticides affect sensitive plants such as beans, wheat, barley, or rye, retarding root development or depressing growth of seedlings. The experience of the hop growers in Washington and Idaho is an example. During the spring of 1955 many of these growers undertook a large-scale program to control the strawberry root weevil, whose larvae had become abundant on the roots of the hops. On the advice of agricultural experts and insecticide manufacturers, they chose heptachlor as the control agent. Within a year after the heptachlor was applied, the vines in the treated yards were wilting and dying. In the untreated fields there was no trouble; the damage stopped at the border between treated and untreated fields. The hills were replanted at great expense, but in another year the new roots, too, were found to be dead. Four years later the soil still contained heptachlor, and scientists were unable to predict how long it would remain poisonous, or to recommend any procedure for correcting the condition. The federal Department of Agriculture, which as late as March 1959 found itself in the anomalous position of declaring heptachlor to be acceptable for use REALMS OF THE SOIL on hops in the form of a soil treatment, belatedly withdrew its registration for such use. Meanwhile, the hop growers sought what redress they could in the courts. As applications of pesticides continue and the virtually indestructible residues continue to build up in the soil, it is almost certain that we are heading for trouble. This was the consensus of a group of specialists who met at Syracuse University in 1960 to discuss the ecology of the soil. These men summed up the hazards of using "such potent and little understood tools" as chemicals and radiation: "A few false moves on the part of man may result in destruction of soil productivity and the arthropods may well take over." Extracted with edits and revisions from: *Silent Spring* by Rachel Carson

13. Which of the following best summarizes the central message of the passage?

- (a) Regulatory loopholes in pesticide testing have allowed long-standing damage to spread.
- (b) Improperly stored insecticides are the primary cause of agricultural failure worldwide.
- (c) Short-term fixes in agriculture often come at the cost of lasting ecological harm.
- (d) Farmers should return to traditional practices to avoid modern chemical errors.

14. The primary implication of the Department of Agriculture's late withdrawal of heptachlor is that:

- (a) It acted swiftly to safeguard environmental and public interests.
- (b) It continued supporting harmful chemicals even after their dangers were evident.
- (c) It coordinated effectively with scientists to resolve chemical contamination.
- (d) It lacked the authority to act against large pesticide manufacturers.

15. The phrase “virtually indestructible residues” is best interpreted to mean that:

- (a) Some pesticide effects fade slowly but disappear through seasonal soil cycles.
- (b) Remnants of chemical use dissolve naturally after several crop rotations.
- (c) Such pesticide residues are now rare due to improved regulation in farming.
- (d) Certain toxic substances stay active in soil beyond expected timeframes.

16. What does the hop growers' experience primarily illustrate in the context of the passage?
- Farmers can reverse ecological damage by switching to newer pesticide formulations.
 - Large-scale pest control can be successfully achieved by combining expert advice with local knowledge.
 - Blind trust in institutional recommendations can expose agricultural systems to irreversible harm.
 - Crop failure due to natural pests often outweighs the dangers posed by chemical treatments.
17. Which of the following is most strongly implied by the scientists' inability to determine how long the soil would remain poisonous?
- The chemical's long-term harm may exceed human predictive and corrective capacity.
 - Soil may eventually recover naturally through repeated planting cycles over time.
 - The uncertainty concerned farmers' replacement strategies rather than chemical effects.
 - The toxicity was likely temporary, overstated due to limited testing knowledge.
18. Which of the following conclusions would best align with the author's overarching warning in the passage?
- Human intervention through chemicals, if uninformed, may irreparably destabilize soil health.
 - Once pesticide residues become visible, they can be safely extracted from affected ecosystems.
 - Agricultural losses are best handled by replanting crops with stronger genetic resistance.
 - Insecticides should be replaced regularly to avoid building long-term chemical tolerance.

Passage:- 4 Step into the Massachusetts Institute of Technology (MIT) Media Lab in Cambridge, US, and the future feels a little closer. Glass cabinets display prototypes of weird and wonderful creations, from tiny desktop robots to a surrealist sculpture created by an AI model prompted to design a tea set made from body parts. In the lobby, an AI waste-sorting assistant named Oscar can tell you where to put your used coffee cup. Five floors up, research scientist Nataliya Kosmyna has been working on wearable brain-computer interfaces she hopes will one day enable people who cannot speak, due to neurodegenerative diseases such as amyotrophic lateral sclerosis, to communicate using their minds.

Kosmyna spends a lot of her time reading and analysing people's brain states. Another project she is working on is a wearable device – one prototype looks like a pair of glasses – that can tell when someone is getting confused or losing focus. Around two years ago, she began receiving out-of-the-blue emails from strangers who reported that they had started using large language models such as ChatGPT and felt their brain had changed as a result. Their memories didn't seem as good – was that even possible, they asked her? Kosmyna herself had been struck by how quickly people had already begun to rely on generative AI. She noticed colleagues using ChatGPT at work, and the applications she received from researchers hoping to join her team started to look different. Their emails were longer and more formal and, sometimes, when she interviewed candidates on Zoom, she noticed they kept pausing before responding and looking off to the side – were they getting AI to help them, she wondered, shocked. And if they were using AI, how much did they even understand the answers they were giving?

With some MIT colleagues, Kosmyna set up an experiment that used an electroencephalogram to monitor people's brain activity while they wrote essays, either with no digital assistance, or with the help of an internet search engine, or ChatGPT. She found that the more external help participants had, the lower their level of brain connectivity, so those who used ChatGPT to write showed significantly less activity in the brain networks associated with cognitive processing, attention and creativity. In other words, whatever the people using ChatGPT felt was going on inside their brains, the scans showed there wasn't much happening up there.

Extracted with edits and revisions from: <https://www.theguardian.com/technology/2025/oct/18/are-we-living-in-a-golden-age-of-stupidity-technology>

19. Which of the following statements are true according to the passage about the MIT Media Lab's AI research?
- Statement I: Researchers at the lab have built AI tools that help interpret human brain signals.
- Statement II: ChatGPT use led to increased mental activity among essay writers in lab studies.
- Statement III: Kosmyna noticed behavioral changes in people who relied heavily on generative AI.
- Statement I and II
 - Statement II and III
 - Statement I and III
 - All three statements

20. In the context of the passage, the word "connectivity" most nearly refers to:

- (a) coordinated communication among separate regions within neural processing systems
- (b) physical linkage between brain tissue formed by structural growth over time
- (c) emotional bonding processes that influence long-term affective memory responses
- (d) instinctive reaction pathways guided by automatic survival-oriented brain centers

21. Which of the following statements best expresses the author's concern about heavy reliance on AI?

- (a) It may cause a decline in user curiosity and the motivation to explore new technologies independently.
- (b) It could lead to increased emotional detachment in everyday interpersonal communication.
- (c) It risks weakening the user's own cognitive effort, understanding, and mental engagement.
- (d) It can accelerate a user's overconfidence by providing overly simplified factual responses.

22. The author's writing style throughout the passage can best be described as:

- (a) Narrative
- (b) Skeptical
- (c) Abstract
- (d) Investigative

23. The phrase "whatever the people using ChatGPT felt was going on inside their brains, the scans showed there wasn't much happening up there" most nearly implies that:

- (a) Users consistently overestimated the intellectual rigor of tasks completed using AI support
- (b) Emotional experiences during AI use were more intense than analytical brain activity
- (c) Participants believed their understanding improved, but performance proved otherwise
- (d) Brain imaging revealed gaps between self-perception and actual mental engagement

24. Kosmyna's experiment revealed that using ChatGPT led to

- (a) improved attention and more sustained creative thinking, especially in writing tasks
- (b) enhanced brain connectivity across regions associated with problem-solving and memory
- (c) reduced neural activity in areas linked to attention, creativity, and cognitive processing
- (d) more efficient brain function while switching between tasks and accessing digital help

Section - B : Current Affairs including General Knowledge

Passage:- 1 Any aggression by Pakistan in the Sir Creek area will be met with a resounding response that will change both history and geography,” warned Defence Minister Rajnath Singh on October 2, 2025. Celebrating Vijayadashami with the troops stationed in the Indian Air Force (IAF) base in Bhuj, Mr. Singh cautioned Islamabad against any misadventures in the long strip of water bodies i.e. an estuary, which has been under dispute since 1914. The two nations have been recalibrating their naval strategies since India launched Operation Sindoor in May 2025, hitting terror and military sites inside Pakistan and Pakistan-occupied Kashmir (PoK). Focus on the strategically significant Sir Creek has renewed since then, as experts believe Pakistan has a perceived military edge in that region.

The marshlands in Sir Creek is the largest fishing grounds in Asia and is home to untapped petroleum, minerals, oil and gas reserves. Apart from the economic and strategic significance of the creek, the water body is ecologically sensitive. India and Pakistan have laid claims to the Territorial Sea, Exclusive Economic Zone, and Continental Shelf in Sir Creek. In 1908, the Kutch Darbar and the Sind administration laid disputes over a small sector in the western portion of Rann. However, the dispute was settled by the British administration after its Bombay government passed a resolution on February 24, 1914, delineating the borders between the two Provinces. In 1956, the Prime Ministers of India and Pakistan agreed to entrust the demarcation of the entire western boundary to the Central Surveys of India and Pakistan as a matter of the highest priority. However, the survey was never done. After the 1965 India-Pakistan war, both nations agreed to establish a UN tribunal for final determination of the boundary between Kutch and Sindh.

[Extracted with edits and revisions from <https://www.thehindu.com/news/national/sir-creek-timeline-of-the-india-pakistan-dispute-over-a-96-km-long-creek/article70124092.ece>]

25. What is the total length of Sir Creek, the tidal estuary forming part of the India–Pakistan boundary in the Rann of Kutch region?

- (a) 96 km (b) 80 km (c) 90 km (d) 70 km

26. What is the term used for the border line separating India and Pakistan at Nadabet village in the Rann of Kutch, Gujarat?

- (a) Control Line Border (b) Ceasefire Line Border (c) International Trade Border (d) Zero Line Border

27. What percentage of the disputed Rann of Kutch territory was awarded to India by the UN tribunal after the 1965 India–Pakistan war?

- (a) 65% (b) 75% (c) 80% (d) 90%

28. Which administrative entity had jurisdiction over the Sir Creek region during the colonial period after its territorial division between Sind and Kutch?

- (a) Bengal Presidency (b) Madras Presidency (c) Bombay Presidency (d) Punjab Province

29. Consider the following statements about Sir Creek, the estuary forming part of the India–Pakistan boundary:

I. It separates the Rann of Kutch in Gujarat’s western border from Pakistan’s Sindh Province in its southwestern border.

II. It was originally known as Ban Ganga and later named Sir Creek after a British representative during the colonial years.

III. It flows eastward into the Bay of Bengal.

Which of the above statements is/are correct?

- (a) Only I and III (b) Only II and III (c) Only I and II (d) All I, II, and III

30. Which water body does Sir Creek, originally known as ‘Ban Ganga’, ultimately flow into?

- (a) Bay of Bengal (b) Arabian Sea (c) Gulf of Kutch (d) Lakshadweep Sea

Passage:- 2 India's next chapter in the world's southernmost continent, Antarctica, is all set to unfold. The Finance Ministry has granted approval for Maitri II — the country's newest research station proposed to come up in Antarctica. Once built and readied by January 2029. The plan for Maitri II was first proposed in late 2023. The in-principle approval was granted on October 4 this year. Maitri II will be built in eastern Antarctica. It has a financial outlay of about ₹2,000 crore, for over seven years.

Tentatively, the sea voyage between South Africa and Antarctica lasts anywhere between one to three weeks, depending on the route. If weather permits, ships can reach Maitri in a week but the journey to Bharati takes longer. Summer and winter expeditions see participation by India's meteorologists, atmospheric scientists, geologists, glaciologists, botanists, zoologists and seismologists. India has been conducting research in Antarctica since the early 1980s. Spread across 14 million sq. km, about 98 percent of the continent is covered by thick ice sheets believed to have formed 25 million years ago. The icy landmass holds nearly 75 percent of the earth's freshwater reserves. As the world's fifth-largest continent, Antarctica offers unique wildlife and extreme weather — cold, dry, and windy — making it one of the most sought-after research destinations for unexplored terrains.

The main building offers regulated power supply, automated heating, incinerator toilets, cold storage, as well as living, dining, lounge, and laboratory spaces. Maitri can accommodate between 25 and 40 scientists, depending on mission requirements and season. It was originally built with a design life of 10 years.

[Extracted with edits and revisions from <https://indianexpress.com/article/long-reads/decks-cleared-for-maitri-ii-india-set-to-chart-new-frontiers-in-antarcticas-icy-wilderness-10303286/>]

31. Which number of research base will Maitri II become for India on the Antarctic continent?

- (a) Second (b) Third (c) Fifth (d) Fourth

32. Which of the following about India's polar research operations is correct?

- (a) ISRO and DRDO together coordinate all India's polar research programs.
 (b) The Geological Survey of India manages India's Arctic and Antarctic studies.
 (c) The Goa-based NCPOR under MoES leads India's Arctic and Antarctic missions.
 (d) The Indian Institute of Science directs India's polar and ocean research work.

33. Which of the following was India's first scientific research base established in Antarctica?

- (a) Dakshin Gangotri Station (b) Maitri Antarctic Base (c) Bharati Polar Centre (d) Himadri Arctic Station

34. Which of the following locations serves as the setting for India's Maitri research station in East Antarctica?

- (a) Queen Maud Land (b) Schirmacher Oasis (c) Princess Elizabeth Land (d) Ross Ice Shelf

35. Which of the following figures represents the approximate number of research stations currently operating across Antarctica?

- (a) 59 (b) 69 (c) 79 (d) 89

Passage:- 3 This 2025 Global Multidimensional Poverty Index (MPI) report, for the first time, overlays data on climate hazards and multidimensional poverty to assess how exposed poor people are to environmental shocks. The report highlights that most people in poverty are exposed to at least one climate hazard; many confront several at the same time. By the end of this century, the countries projected to face the steepest temperature increases are those already burdened with higher levels of multidimensional poverty. The results show that 1.1 billion of 6.3 billion people live in acute multidimensional poverty, over half of them children. Common deprivations include a lack of clean cooking fuel, housing, sanitation, nutrition, and electricity.

The intertwining of climate and poverty risks is likely to intensify in the future, and the report makes a compelling case for addressing a double burden that may only worsen. The study provides the first measured global analysis at this scale examining how many multidimensionally poor people are affected by war, fragility and low peacefulness. We found that the level of poverty in conflict-affected areas is far higher. In countries at war, over one in three people are poor (34.8%) whereas, in non-conflict-affected countries, according to the Uppsala Conflict Data Program, it's one in nine (10.9%). And, sadly, poverty reduction is slower in conflict settings which means

that the poor in conflict settings are being left behind. These numbers compel a response: we cannot end poverty without investing in positive peace.

[Extracted with edits and revisions from

<https://www.ox.ac.uk/news/2024-10-17-research-finds-11-billion-people-multidimensional-poverty-nearly-half-billion>]

36. Which of the following statements according to the global Multidimensional Poverty Index (MPI) 2025, is correct?

- (a) The MPI is jointly released by UNDP and OPHI at the University of Oxford.
- (b) The MPI is jointly compiled by the IMF and World Bank in Washington DC.
- (c) The MPI is annually issued by UNESCO and WHO from Geneva, Switzerland.
- (d) The MPI is regionally prepared by NITI Aayog and MoSPI in New Delhi, India.

37. Which of the following states is NOT among the five most populous states that represented 65% of India's extreme poor in 2011–12?

- (a) Uttar Pradesh
- (b) Maharashtra
- (c) Bihar
- (d) Gujarat

38. Which country, according to the global Multidimensional Poverty Index (MPI) report, recorded the fastest absolute reduction in poverty during the assessment period?

- (a) Uganda
- (b) Kenya
- (c) Benin
- (d) Nepal

39. Which of the following correctly represents the total number of indicators used to assess multidimensional poverty across conflict and non-conflict settings?

- (a) Eight
- (b) Nine
- (c) Eleven
- (d) Ten

40. Which publication from the World Bank highlights global trends in poverty, shared prosperity, and inequality across over 100 developing countries?

- (a) Poverty and Equity Briefs
- (b) Global Development Outlook
- (c) World Economic Indicators
- (d) International Poverty Review

Passage:- 4 Five beaches in Maharashtra have received the international Blue Flag certification. This information was announced by Maharashtra Women and Child Development Minister Aditi Tatkare. The evaluation covers aspects such as environmental education, water quality, safety, environmental management, and public amenities. To earn the Blue Flag, beaches must maintain high water quality free from pollution and implement robust safety measures, including trained lifeguards and rescue equipment. They must provide environmental education programmes for visitors and ensure cleanliness through waste management and plastic-free initiatives. Adequate public facilities such as clean restrooms and drinking water stations are mandatory, along with efforts to protect natural habitats and biodiversity.

This recognition enhances Maharashtra's reputation as a sustainable tourism destination. It reinforces eco-friendly tourism practices, attracts domestic and international visitors, and supports the government's ongoing coastal management initiatives. The certification also raises environmental awareness among local communities and encourages responsible tourism development. Blue Flag certification is expected to boost local tourism revenue, create employment opportunities in hospitality, security, and environmental education, and benefit small businesses. Environmentally, it promotes better waste disposal, improved water treatment, and marine ecosystem preservation. The initiative fosters community involvement in conservation and responsible coastal management. Blue Flag certification is expected to boost local tourism revenue, create employment opportunities in hospitality, security, and environmental education, and benefit small businesses. Environmentally, it promotes better waste disposal, improved water treatment, and marine ecosystem preservation. The initiative fosters community involvement in conservation and responsible coastal management. Maintaining the Blue Flag status demands continuous monitoring, investment in infrastructure, and capacity building. Challenges such as climate change, pollution, and waste management remain key areas of focus.

[Extracted with edits and revisions from <https://www.travelturtle.world/news/five-maharashtra-beaches-awarded-blue-flag-certification>]

41. Which of the following beaches is not among those nominated from Maharashtra for the internationally recognised Blue Flag certification?

- (a) Shrivardhan Beach (b) Nagaon Beach (c) Guhagar Beach (d) Tarkarli Beach

42. Which of the following correctly represents the full form of BEAMS, launched by MoEF&CC to promote sustainable and pollution-free beaches?

- (a) Beach Marine Study Services (b) Beach Mission Support Services
(c) Beach Management Services (d) Beach Monitoring Support Services

43. Which country first launched the Blue Flag initiative in 1985, which has since evolved into a globally recognised symbol of sustainable tourism and environmental excellence?

- (a) Denmark (b) France (c) Sweden (d) Netherlands

44. What is the total number of Blue Flag certified beaches in India as of 2025, including the five newly added ones?

- (a) 15 (b) 16 (c) 18 (d) 20

45. In which year did India officially join the globally recognised Blue Flag programme promoting clean and sustainable beaches?

- (a) 2018 (b) 2015 (c) 2020 (d) 2012

46. Consider the following statements about the Blue Flag certification:

- I. It is managed by the United Nations Environment Programme (UNEP) to promote coastal sustainability.
 II. It evaluates beaches and marinas based on 33 parameters.
 III. The Blue Flag certification is awarded by the Foundation for Environmental Education (FEE), Denmark, based on environmental, educational, safety, and accessibility standards.

Which of the above statements is/are correct?

- (a) Only I and II (b) Only I and III (c) Only II and III (d) All I, II, and III

Passage:- 5 The doors of the world's grandest museum had been opened to the public for just 30 minutes when two burglars were lifted up onto a second-floor balcony on the building's south side. Their faces concealed, they rode a monte-meubles, a truck-mounted electric ladder that is a common sight on the streets of Paris, where it is used to ferry bulky furniture through the windows of apartments.

Once there, they used grinders to break a window, setting off the security alarms, and burst inside the Louvre Museum, where a prized collection of royal jewels and crown diamonds is held in a succession of cases. The burglars went back down the ladder to a road shouldering the Seine and made their getaway with two waiting members of their team on motor scooters. In all, it took no more than seven minutes.

It was the most brazen — and possibly the most costly — theft ever staged at the Louvre, which houses the country's most prized art collections. French politicians publicly mourned the loss and railed against those they deemed responsible, loudly demanding to know how such a thing could happen at the world's most famous museum at 9:30 on a Sunday morning. Investigators were poring through evidence that included objects abandoned by the thieves and security camera footage.

The robbery bore the hallmarks of a team of veteran criminals, given its precision and speed.

At the moment of the break-in, the museum was already full of visitors. Five museum staff members were either in or near the gilded Apollo Gallery. Following the Louvre's security protocol, they contacted the police, prioritizing the protection of people, according to a statement by the French ministry of culture.

[Extracted with edits and revisions from <https://www.nytimes.com/2025/10/19/world/europe/louvre-paris-robbery.html>]

47. Which section of the Louvre Museum did the thieves reportedly enter from during the daylight robbery in October 2025?

- (a) Apollo Gallery (b) Renaissance Hall (c) Gallery of Antiquities (d) Napoleon Courtyard

48. Who commissioned the construction of the original Louvre Palace as a fortress to defend Paris in the late 12th to early 13th century?

- (a) King Louis IX (b) King Francis I (c) King Philip II (d) King Charles V

49. Consider the following statements about the recent theft of France's crown jewels:

- I. Eight pieces were stolen, including a necklace and earrings once gifted by Napoleon I to Empress Marie-Louise.
II. The sapphire suite associated with Queen Marie-Amélie was among the stolen items.
III. The sapphire suite consisted of a tiara, necklace, and single earring set with eight sapphires and 631 diamonds.

Which of the above statements is/are correct?

- (a) Only I and II (b) Only II and III (c) Only I and III (d) All I, II and III

50. Which of the following stolen items from France's crown jewels was known for its unique historical design and belonged to Empress Eugénie?

- (a) Pearl pendant (b) Emerald necklace (c) Reliquary brooch (d) Sapphire bracelet

51. Which famous artwork was stolen from the Louvre Museum in 1911 by an Italian employee and recovered two years later?

- (a) Mona Lisa (b) The Last Supper (c) The Starry Night (d) The Birth of Venus

52. Which French ruler's wife was historically associated with the stolen crown from the Louvre's jewellery collection?

- (a) King Louis XVI (b) Emperor Napoleon I (c) Emperor Napoleon III (d) King Charles X

Section - C : Legal Reasoning

Passage:- 1 A contract is a legally binding agreement, and its discharge means the termination of the contractual relationship so that rights, duties, and obligations between the parties come to an end and the agreement ceases to be legally enforceable. Discharge most commonly occurs by performance: when each party fulfills the promises stipulated, the contract is extinguished. Actual performance requires both parties to perform, with personal representatives liable to perform if a promisor dies, unless the law provides otherwise. Attempted (or tendered) performance discharges the promisor when a genuine offer to perform is refused by the promisee.

Discharge may also occur by mutual agreement. Parties may substitute or alter the original terms or rescind altogether. Novation under Section 62 requires a valid reason, the consent of all parties, and substitution before expiry or breach; a later substitution does not discharge the earlier breach. Remission under Section 63 allows the promisee to remit performance wholly or in part, extend time, or accept a different mode of performance. Alteration changes one or more terms with mutual consent, forming a new agreement and discharging the old. Rescission dissolves the contract by agreement without creating a new one. Waiver is the intentional abandonment of a contractual right, releasing the other party. A merger occurs when an inferior right merges into a newly acquired superior right concerning the same subject matter, thereby discharging the former contract.

A contract may be discharged by lapse of time when performance is not completed within the prescribed period, potentially constituting a breach. Discharge by operation of law arises where legal provisions prevent performance, such as death, insolvency, or merger that legally incapacitates fulfillment. Supervening impossibility (doctrine of frustration) discharges a contract that becomes impossible or unlawful after formation, e.g., destruction of the subject matter, supervening illegality, death or personal incapacity in contracts requiring personal skill, or a radical change of circumstances defeating the contract's commercial purpose.

Discharge by breach frees the non-breaching party and enables remedies. An actual breach occurs at the time of performance (or during performance) by refusal or failure, express or implied. An anticipatory breach (Section 39) arises when, before performance is due, a party declares non-performance or disables itself from performing. Certain events do not discharge a contract: mere difficulty in performance, commercial hardship or unprofitability, strikes or civil unrest absent a termination clause, self-induced incapacity, or failures by relied-upon third parties. In *Manohur Koyal v. Thakur Das* (1888), a new bond executed after breach did not amount to novation; the discharge was by breach. In *United India Insurance Co. Ltd. v. M.K.J. Corporation* (1996), the Supreme Court emphasized continuing utmost good faith and barred material alterations without mutual consent.

[Extracted with edits and revisions from <https://www.drishti judiciary.com/ttp-indian-contract-act/discharge-of-contract>]

53. Ramesh agreed to paint a portrait of Sita by March 15, 2024. On March 10, 2024, Ramesh called Sita and genuinely offered to complete the portrait and deliver it. However, Sita refused to accept it, stating she no longer wanted the portrait. Ramesh is now concerned about his contractual obligations and whether he remains liable for non-performance if Sita later changes her mind and demands the portrait. Sita, on the other hand, argues that since Ramesh has not actually completed the painting and handed it over physically, he cannot claim discharge from his obligations and must continue to remain available to perform until March 15, 2024.

What is the legal status of Ramesh's obligation under the contract?

- (a) Ramesh remains liable as he did not actually complete the performance before Sita's refusal.
- (b) Ramesh is discharged from his obligation as he made a genuine offer to perform which was refused.
- (c) Ramesh must seek mutual agreement to rescind the contract before he can be discharged from liability.
- (d) Ramesh is liable for anticipatory breach as he called before the due date of performance.

54. A contract was executed between Company X and Company Y in January 2023, with Company Y owing ₹10 lakhs to Company X. In June 2023, Company Y committed a material breach by delivering defective goods. In September 2023, the parties executed a new contract wherein Company Y agreed to pay ₹12 lakhs and deliver fresh goods. Company X now seeks to claim damages for the June 2023 breach while also enforcing the September 2023 contract. Company Y contends that by entering into the new contract with modified terms and enhanced

consideration, both parties impliedly agreed to substitute the old contract with the new one, thereby discharging all previous breaches and obligations under the doctrine of novation.

What is the effect of the September 2023 contract on Company Y's June 2023 breach?

- (a) The new contract operates as novation and discharges the previous breach by Company Y completely.
- (b) The new contract discharges both parties from all past obligations including the previous breach.
- (c) The breach remains undischarged as novation requires substitution before any breach has occurred.
- (d) The new contract operates as remission and extinguishes Company Y's liability for the past breach.

55. Vikram, a renowned classical singer, entered into a contract to perform at a music festival on December 20, 2024. On December 1, 2024, Vikram suffered a severe throat infection that permanently damaged his vocal cords, making it medically impossible for him to sing professionally ever again. The festival organizers claim Vikram is in breach and liable for damages, while Vikram contends the contract stands discharged. The organizers argue that Vikram should have taken better care of his health and that the infection could have been prevented with proper precautions, making this a case of self-induced impossibility. Vikram maintains that the infection was a supervening event beyond his control and that contracts requiring personal skill are automatically discharged when such incapacity arises.

Under which ground would Vikram's contract be discharged?

- (a) Discharge by operation of law as Vikram is legally incapacitated from fulfilling the obligation.
- (b) Discharge by anticipatory breach as Vikram disabled himself from performing before the due date.
- (c) Discharge by lapse of time as the performance could not be completed within the period.
- (d) Discharge by supervening impossibility due to personal incapacity in a contract requiring personal skill.

56. Priya lent ₹5 lakhs to Arun under a written contract requiring repayment by June 30, 2024. On June 15, 2024, Priya called Arun and told him that she was voluntarily giving up her right to receive ₹2 lakhs of the debt and would only accept ₹3 lakhs as full settlement. Arun did not respond to this communication but simply remained silent. Priya now seeks legal advice on whether she can later claim the full ₹5 lakhs if Arun only pays ₹3 lakhs. Arun argues that this was an alteration of the contract terms requiring his mutual consent, which he never provided, and therefore the original obligation of ₹5 lakhs remains intact. Priya contends that as the promisee, she has the unilateral right to reduce the debt without requiring Arun's consent or agreement.

What is the legal effect of Priya's statement on the contract?

- (a) This constitutes remission under Section 63, partially discharging Arun's obligation to pay ₹2 lakhs.
- (b) This constitutes waiver, releasing Arun entirely from his obligation to repay the full amount.
- (c) This constitutes alteration, creating a new agreement for ₹3 lakhs and discharging the old contract.
- (d) This constitutes rescission as Priya agreed to dissolve part of the original contractual obligation.

57. Sunita contracted with Builder Ltd. to construct a commercial building by December 2024. In October 2024, a new law was enacted that made the specific type of construction planned in the contract illegal. Both parties wish to understand their position. Builder Ltd. argues that since the law came after contract formation, they should be compensated for preparation costs, while Sunita contends the contract simply stands discharged without any liability. Builder Ltd. further argues that the enactment of a new law is a legal provision that prevents performance and should be classified as discharge by operation of law rather than supervening impossibility. The company has incurred significant expenses in procurement of materials and hiring of specialized labor before the law was enacted.

How is the contract between Sunita and Builder Ltd. affected?

- (a) The contract is discharged by operation of law as the legal provisions prevent performance.
- (b) The contract is discharged by supervening impossibility due to supervening illegality after formation.
- (c) The contract is discharged by lapse of time as performance cannot be completed legally.
- (d) The contract remains enforceable as mere difficulty in performance does not discharge contracts.

58. ABC Corporation had a contract to supply 1,000 tons of wheat to XYZ Ltd. by September 30, 2024. On September 20, 2024, ABC Corporation's CEO sent a formal letter to XYZ Ltd. stating, "We will not be supplying the wheat as agreed. We have decided to sell our entire stock to another buyer." XYZ Ltd. is contemplating whether to wait until

September 30 to see if ABC performs or to immediately treat the contract as discharged and seek alternative suppliers while claiming damages. ABC Corporation argues that since the due date has not yet arrived and they still have ten days to potentially change their decision and perform, no actionable breach has occurred. XYZ Ltd. contends that the clear declaration of non-performance before the due date entitles them to immediate remedies without waiting for the performance date to arrive.

What type of breach has occurred and what is XYZ Ltd.'s position?

- (a) No breach has occurred yet as the performance date has not arrived and ABC can still perform.
- (b) Attempted performance has been made, and ABC Corporation is discharged as XYZ Ltd. can refuse the offer.
- (c) Actual breach has occurred, and XYZ Ltd. can claim remedies only after September 30, 2024.
- (d) Anticipatory breach has occurred under Section 39, and XYZ Ltd. can immediately treat the contract as discharged.

Passage:- 2 Judicial review is the power of the courts to test legislative and executive action against the Constitution and invalidate what is unconstitutional, thereby protecting citizens' rights and preserving constitutional supremacy. Rooted in an independent judiciary, it functions as a check on arbitrary governance and a guarantor of the rule of law. Historically, Indian judicial review drew inspiration from the U.S. model but was adapted to Indian conditions. Early amendment cases framed its contours: in *Shankari Prasad* (1951) the Court treated Parliament's amending power broadly; in *Golaknath* (1967) it held that Fundamental Rights could not be amended; in *Kesavananda Bharati* (1973) it settled that while Parliament may amend, it cannot damage the Constitution's basic structure.

The scope of judicial review is wide. Courts examine the validity of laws and executive measures and enforce Fundamental Rights through five writs: Habeas Corpus to secure release from unlawful detention, Mandamus to compel performance of a public duty, Prohibition to prevent lower courts or tribunals from exceeding jurisdiction, Certiorari to quash orders of such bodies, and Quo Warranto to test the legal authority to hold a public office. The process typically begins with a petition by an aggrieved party, proceeds through preliminary scrutiny for admissibility, continues to hearings where both sides are heard, culminates in a reasoned judgment, and ends with implementation, striking down an unconstitutional measure or upholding it when valid. This staged scrutiny reflects the judiciary's role in constitutional governance.

Judicial review is not unbounded. Constitutional immunities and privileges limit inquiry into certain acts of the President, Governors, and superior court judges except in their personal capacity. Courts ordinarily refrain from interfering with executive policy unless it violates the Constitution, and they do not assess the wisdom of policy choices made within constitutional limits. Its significance is foundational: judicial review maintains the balance among legislature, executive, and judiciary; secures adherence to constitutional limitations; and ensures that changing circumstances do not dilute protected rights. Landmark applications include *Maneka Gandhi* (1978), which expanded due process under Article 21, and *Vishaka* (1997), which recognized workplace sexual harassment as a rights violation and laid down binding guidelines.

The institution faces criticisms. Detractors point to unelected judges overruling elected branches, risks of judicial overreach into policy domains, delays and expense, perceived deficits in accountability due to the appointment process, and limited subject-matter expertise in complex policy areas. Nonetheless, supporters argue that, within constitutional limits, judicial review remains indispensable to protect Fundamental Rights and keep all state power subject to the Constitution.

[Extracted with edits and revisions from <https://www.centurylawfirm.in/blog/judicial-review-in-india/>]

59. The President of India issued an executive order directing all state governments to implement a specific economic policy within their jurisdictions. Several states challenged this order, arguing it violated the federal structure enshrined in the Constitution and exceeded the President's executive powers. The Union government contends that courts cannot review executive policy decisions as they fall within the domain of political questions and executive discretion. The petitioner states argue that while policy wisdom is not justiciable, constitutional validity must be examined. The matter reaches the Supreme Court, which must decide whether it can exercise judicial review over this executive order.

Can the Supreme Court exercise judicial review over the President's executive order in this case?

- (a) No, because courts ordinarily refrain from interfering with executive policy decisions under all circumstances.
- (b) Yes, but only to examine whether the order violates the Constitution, not to assess policy wisdom.
- (c) No, because constitutional immunities protect all acts of the President from judicial scrutiny completely.
- (d) Yes, because courts have unlimited power to review all executive actions including policy choices.

60. Parliament passed the Constitutional Amendment Act of 2025, which sought to abolish the right to equality under Article 14 and replace it with a discretionary system where the executive could grant or deny equal treatment based on administrative convenience. The government argued that since Article 368 grants Parliament the power to amend the Constitution, this amendment is valid and courts cannot interfere with Parliament's constituent power. A group of citizens challenged this amendment, arguing that while Parliament can amend the Constitution, certain fundamental features cannot be destroyed. The Supreme Court must now determine the validity of this amendment and the extent of Parliament's amending power.

What is the legal position regarding Parliament's power to amend the Constitution in this manner?

- (a) Parliament can amend any provision including Fundamental Rights as it has unlimited constituent power under Article 368.
- (b) Parliament cannot amend Fundamental Rights at all as established in Golaknath and this remains binding law.
- (c) Parliament may amend the Constitution but cannot damage its basic structure as held in Kesavananda Bharati.
- (d) Parliament's amending power is subject only to procedural requirements and not substantive constitutional limitations.

61. Rajesh Kumar was detained by the state police under a preventive detention law without being informed of the grounds of his detention or given an opportunity to make representations. His family filed a petition in the High Court seeking his immediate release, arguing that the detention violated his fundamental right to personal liberty under Article 21 and was arbitrary. The state government contended that the detention was lawful under the statute and that courts should not interfere with executive measures taken for public order and state security. The petitioners seek an appropriate constitutional remedy to secure Rajesh's release from what they claim is unlawful detention.

Which writ would be most appropriate for securing Rajesh Kumar's release from detention?

- (a) Certiorari, as it quashes the detention order passed by authorities exceeding their jurisdiction or power.
- (b) Prohibition, as it prevents the detaining authority from continuing to hold the person beyond legal limits.
- (c) Mandamus, as it compels the state to perform the public duty of releasing unlawfully detained persons.
- (d) Habeas Corpus, as it secures release of a person from unlawful detention by the state authorities.

62. Aisha, a government school teacher, reports persistent sexual harassment by the headmaster but finds no internal redressal mechanism in place. The State Education Department claims that since no statutory law then existed on the subject, it is not obligated to intervene. Aisha files a writ petition asserting that constitutional rights to equality and dignity require the Court to lay down enforceable norms to protect women at workplaces. The State argues that such judicial directions would amount to legislating from the bench. The Court must decide whether it can issue binding guidelines to safeguard women's rights.

Should the Court issue binding guidelines in this case?

- (a) No, because the absence of legislation prevents the Court from creating enforceable obligations.
- (b) Yes, because judicial directions can fill constitutional gaps to protect fundamental rights.
- (c) No, because only Parliament can define workplace harassment and remedies under law.
- (d) Yes, because every complaint of misconduct in service automatically attracts constitutional protection.

63. The Governor of a state, while performing his constitutional functions, issued an order dissolving the state legislative assembly on the advice of the Chief Minister, despite opposition parties claiming they had majority support. Opposition parties challenged this order in the High Court, arguing that the Governor acted arbitrarily and in violation of constitutional provisions governing assembly dissolution. The Governor's office contends that all acts performed by the Governor in his official capacity enjoy complete constitutional immunity from judicial scrutiny. The petitioners argue that while certain immunities exist, they are not absolute and courts can examine whether constitutional provisions were followed.

Can the High Court examine the validity of the Governor's order dissolving the state assembly?

- (a) Yes, because immunities limit inquiry except regarding whether constitutional provisions were properly followed.
- (b) No, because the passage states courts cannot review any executive action by constitutional authorities.
- (c) Yes, because constitutional immunities for Governors are completely absent under the Indian Constitution always.
- (d) No, because all acts of Governors enjoy absolute immunity from judicial review under all circumstances.

Passage:- 3 In actions for nuisance, unlike the general defenses available against a number of wrongs, there are specific defences peculiar to this wrong that are classified as effectual defences and ineffectual defences, and their content and limits are as follows. The first effectual doctrine is the prescriptive right to commit nuisance, which recognizes that a right to do an act that would otherwise be a nuisance may be acquired by prescription; if a person has continued an activity on the land of another for 20 years or more, the prescriptive right to continue it can be acquired, but the period cannot commence to run until the act complained of begins to be a nuisance. In *Sturges v. Birdman* (1879), an injunction was granted against a confectioner because his claim for a prescriptive right failed when the interference had not been an actionable nuisance for the preceding 20 years. The second effectual doctrine is statutory authority, under which an authority of statute is a complete defence for acts done by it; where nuisance is necessarily incidental to what the statute authorizes, there is no liability, as illustrated by a railway company authorized to run trains not being liable if, in spite of due care, sparks from an engine set fire to adjoining property (*Vaughan v. Taff Vail Rail Co.* (1860)).

Turning to ineffectual defences, the doctrine concerning nuisance due to the act of others rejects the plea that one defendant's act alone could not cause damage when several independent acts cumulatively create the nuisance; liability may be pursued against those actors, and the defence that an individual act was insufficient in itself fails (*Thorpe v. Burmfit*, 1873). The public good doctrine is likewise ineffectual, because asserting that what is a nuisance to a particular plaintiff benefits the public is no defence; in *Adams v. Ursell* (1913), an injunction restrained a fried fish shop in a residential street notwithstanding alleged hardship to the defendant and customers.

The reasonable care doctrine is also ineffectual, since the use of reasonable care to prevent nuisance is generally no defense; in *Rapier v. London Tramways Co.*, a stench from stables built to accommodate 200 horses amounted to nuisance despite claims of maximum possible care. The plaintiff coming to nuisance doctrine is ineffectual as well, because it is no defense that the plaintiff moved to the place where the nuisance existed; in *Bills v. Hall*, liability followed for "Diverse noisome, noxious, and offensive vapour, fumes, smell, and strenches" from the defendant's tallow-chandlery. In sum, the law accepts prescriptive right and statutory authority as effectual, while rejecting act of others, public good, reasonable care, and plaintiff coming to nuisance, thus defining the scope and boundaries of defensive pleading in nuisance.

[Extracted with edits and revisions from <https://lawbhoomi.com/defenses-against-nuisance-under-law-of-torts/>]

64. Mr. Sharma has been operating a brick kiln on his property since 1995, producing smoke and fumes that drift onto his neighbor Mr. Verma's land. Mr. Verma purchased his property in 2010 and initially did not complain. However, in 2018, the brick kiln's operations significantly expanded, with production tripling and the smoke becoming much denser and more frequent, causing considerable discomfort to Mr. Verma. In 2024, Mr. Verma filed a nuisance action seeking an injunction. Mr. Sharma defends by claiming he has acquired a prescriptive right to continue the brick kiln operations since he has been running it for nearly 30 years, well beyond the 20-year requirement. Mr. Verma argues that the prescriptive period cannot include years before the activity became a nuisance.

Can Mr. Sharma successfully claim a prescriptive right to continue the brick kiln operations as a defence?

- (a) Yes, because the 20-year period commenced in 1995 when he first started the brick kiln operations.
- (b) No, because prescriptive rights cannot be claimed for activities that cause environmental pollution or health hazards.
- (c) Yes, because he has continuously operated the brick kiln for 30 years, exceeding the 20-year requirement.
- (d) No, because the prescriptive period begins only when the act becomes a nuisance, not from initial operations.

65. A railway company was authorized by a specific statute to construct and operate railway lines through a residential area. Despite exercising utmost care and employing the most advanced technology available to prevent sparks, the railway company's trains occasionally emit sparks that have caused minor fires on adjoining properties. Property owners have filed nuisance actions seeking damages and an injunction to stop the railway operations. The railway company defends by invoking statutory authority, arguing that the statute specifically authorized railway operations and that sparks are an inevitable and necessarily incidental consequence of operating trains, even with maximum care. The plaintiffs argue that since damage has occurred, the company should be held liable regardless of statutory authorization or the care exercised.

Can the railway company successfully invoke statutory authority as a defence to the nuisance action?

- (a) Yes, because statutory authority provides complete defence where nuisance is necessarily incidental to authorized activity.
- (b) No, because causing damage to adjoining properties can never be justified by statutory authorization alone.
- (c) Yes, but only if the railway company can prove it exercised reasonable care in preventing sparks.
- (d) No, because the doctrine of statutory authority does not apply to activities causing fire hazards.

66. Five independent factories operate in an industrial area, each emitting moderate levels of pollutants. Individually, each factory's emissions remain within permissible limits and would not constitute a nuisance. However, the combined emissions from all five factories create significant air pollution that causes respiratory problems and property damage to residents in a nearby residential colony. The residents file a nuisance action against all five factories. Factory A defends itself by arguing that its emissions alone are insufficient to cause any actionable harm and that it should not be held liable when four other independent actors contribute to the cumulative problem. Factory A further contends that holding it liable when its individual contribution is minimal and lawful would be unjust.

Can Factory A successfully defend itself by arguing that its individual act alone is insufficient to cause the nuisance?

- (a) Yes, because each factory's individual emissions are within permissible limits and cause no harm alone.
- (b) No, because the defence that an individual act was insufficient fails when cumulative acts create nuisance.
- (c) Yes, because Factory A cannot be held liable for the independent acts of other unrelated factories.
- (d) No, but only if Factory A is proven to have the highest level of emissions among all five factories.

67. Mr. Kapoor operates a chemical processing plant in an industrial zone that has been functioning for 15 years. The plant produces strong chemical odors and occasional toxic fumes, but Mr. Kapoor has invested heavily in state-of-the-art filtration systems, emission controls, and safety measures, exercising the highest degree of care possible with current technology. Despite these elaborate precautions, some odors and fumes inevitably escape and affect neighboring properties. Mrs. Reddy, who owns an adjacent warehouse, files a nuisance action seeking damages and an injunction. Mr. Kapoor defends by demonstrating that he has employed every technologically feasible measure to prevent emissions, has exceeded all regulatory requirements, and has exercised a level of care far beyond what any reasonable person would consider necessary.

Can Mr. Kapoor successfully defend the nuisance action by proving he exercised maximum reasonable care?

- (a) Yes, because exercising reasonable care beyond regulatory requirements provides a complete defence to nuisance.
- (b) Yes, but only if he can prove the chemical plant serves an important public or economic purpose.
- (c) No, because the use of reasonable care to prevent nuisance is generally no defence in nuisance actions.
- (d) No, but he may reduce liability if he demonstrates care exceeded industry standards significantly.

68. In 2010, Mr. Patel established his residence in a quiet suburban area. In 2015, Mr. Shah purchased adjacent land and constructed a large tannery that processes animal hides, producing persistent foul odors, noxious fumes, and offensive stench that pervade Mr. Patel's property, making it difficult to use his house comfortably. The tannery operates 24 hours a day, and the smell is particularly intense during hot weather. In 2024, Mr. Patel files a nuisance action seeking an injunction to shut down the tannery. Mr. Shah defends by arguing that Mr. Patel voluntarily chose to continue living in the area after the tannery began operations in 2015 and could have relocated elsewhere, and that since Mr. Patel came to and remained in the location where the nuisance already existed, he assumed the risk and should not now be permitted to complain.

Can Mr. Shah successfully defend by arguing that Mr. Patel came to the nuisance?

- (a) Yes, because Mr. Patel could have relocated after the tannery began operations in 2015 but chose to stay.
- (b) No, because it is no defence that the plaintiff moved to or remained at the place where nuisance existed.
- (c) Yes, because Mr. Patel assumed the risk by continuing to live near the tannery for nine years.
- (d) No, but only because Mr. Patel's residence was established before Mr. Shah started the tannery operations.

Passage:- 4 Search, seizure, and arrest in criminal investigation are governed by general procedural law, though special statutes sometimes modify how investigations and searches are conducted. The classification between serious and minor offences defines the extent of police initiative: serious offences allow arrest without prior judicial authorization and direct registration of a complaint, whereas minor offences require prior permission before arrest. This distinction determines the immediacy of police powers.

The process of recording an initial complaint establishes when and how an investigation begins. Any person may report a serious offence, and a complaint must be registered even if the act occurred outside the local jurisdiction. Except for grave crimes such as murder or sexual assault, courts have directed that a preliminary enquiry should precede registration. Once recorded, the complaint initiates an investigation that ends either in prosecution or closure.

Judicial oversight and urgency are balanced through the framework governing searches with or without prior approval. Authorized searches ensure judicial supervision, while warrantless searches are permitted in urgent situations where evidence might be lost or destroyed. Law also permits entry into premises where an accused is believed to be hiding. Certain special laws confer additional or modified powers that work alongside or substitute ordinary procedures.

Procedural safeguards are essential during any search: the officer must allow free access to the premises and provide reasonable facilities; two respectable local witnesses should be present; searches should, as far as possible, occur in daylight; and both the party and witnesses should submit to personal search. Women observing seclusion must be protected, and the personal search of a woman must be conducted by another woman with strict regard to decency. A written record listing articles and locations of recovery must be prepared on the spot and distributed to the occupant, supervising officer, and the local records.

This record serves as factual support for evidence later produced in court. It must faithfully record what the witnesses saw or heard, be signed by them, and be accompanied by a list of seized articles and an order stating the officer's belief that the goods are liable to confiscation. Such "reasons to believe" must have a rational connection to the legal purpose and are subject to judicial scrutiny.

Electronic records retrieved during searches are treated as documents and become admissible only when properly certified. Finally, arrest memoranda must record the grounds and timing of arrest, notification to a nominated person, and safeguards for medical safety. Overall, the framework grants essential investigative powers but confines them through procedural checks, documentation, evidentiary standards, and the requirement of reasoned belief.

[Extracted with edits and revisions from <https://sikkimjudicialacademy.nic.in/sites/default/files/PPTs/Search%20%26%20Seizure%20of%20Criminal%20cases%20v1.0.pdf>]

69. Police Officer Ramesh receives credible information at 11:00 PM that a suspect wanted for a dacoity case is hiding in a residential house in his jurisdiction. He immediately proceeds to the location with two constables. Upon reaching the house, he finds the main door locked. The family inside refuses to open the door, claiming they have no knowledge of any suspect. Officer Ramesh believes the suspect might escape through a back exit if he waits to obtain judicial authorization for entry. He forcibly enters the premises, searches the house, and apprehends the suspect who was indeed hiding in an upstairs room. The suspect's lawyer later challenges the legality of the entry and arrest, arguing that forcible entry without prior judicial approval violates procedural safeguards.

Is Officer Ramesh's forcible entry into the premises legally justified?

- (a) Yes, because law permits entry into premises where an accused is believed to be hiding even without warrant.
- (b) No, because forcible entry into any premises always requires prior judicial authorization regardless of circumstances.

(c) No, because the family's refusal to open the door negates the officer's authority to enter without judicial approval.

(d) Yes, but only because dacoity is classified as a serious offence allowing warrantless action in all situations.

70. A citizen named Mohan witnesses a violent street brawl involving weapons in a busy marketplace at 2:00 PM. He sees one person severely injure another with a knife, causing profuse bleeding. Mohan immediately goes to the local police station, which is located in the same district, to report the incident. However, upon narrating the incident, the duty officer tells Mohan that since Mohan is not a direct victim and the incident occurred in a different police station's jurisdiction (though within the same district), he should go to the jurisdictionally correct police station to file the complaint. Mohan argues that he has the right to report the serious offence at any police station and that the complaint must be registered regardless of jurisdictional boundaries. The duty officer refuses to register the complaint and directs Mohan to the other police station.

Is the duty officer's refusal to register Mohan's complaint legally justified?

(a) Yes, because only direct victims or their legal representatives have the legal standing to file complaints for serious offences.

(b) No, but only because the incident involved weapons making it mandatory to register at any police station immediately.

(c) Yes, because complaints must always be filed at the police station having territorial jurisdiction over the crime location.

(d) No, because any person may report a serious offence and complaint must be registered even if act occurred outside local jurisdiction.

71. Police Inspector Verma obtains credible intelligence at 10:00 PM that a large quantity of smuggled electronic goods is stored in a warehouse owned by suspect Rajiv Kumar. Inspector Verma believes that if he waits until morning to obtain a search warrant from the magistrate, Rajiv will likely remove or destroy the evidence overnight based on past patterns of behavior. He proceeds immediately to the warehouse with two officers and conducts a thorough search at 11:00 PM, during which he discovers and seizes contraband electronics worth several lakhs. Rajiv's lawyer challenges the search, arguing that conducting the search at night without prior judicial authorization violates mandatory procedural requirements, renders the search illegal, and makes the seized evidence inadmissible. The prosecution defends the search as an urgent warrantless search necessitated by the risk of evidence destruction.

Is Inspector Verma's warrantless nighttime search of the warehouse legally justified?

(a) No, because searches must occur in daylight hours as far as possible and nighttime searches require prior judicial authorization always.

(b) Yes, because warrantless searches are permitted in urgent situations where evidence might be lost or destroyed despite timing.

(c) No, because the urgency exception for warrantless searches applies only to searches of persons not premises or property.

(d) Yes, but only because the suspected offence involves smuggling which is always exempt from warrant requirements completely.

72. Police Sub-Inspector Sharma conducts a search of suspect Deepak's residence pursuant to a valid search warrant. During the search at 2:00 PM, SI Sharma is accompanied by only one local witness instead of the required two witnesses. He searches the house and discovers incriminating documents hidden in a cupboard. He prepares a search memo on the spot listing the recovered documents and their location, signs it himself, and gets it signed by the single witness present. He provides a copy to Deepak and retains copies for official records. Later in court, Deepak's defense lawyer challenges the validity of the search and the admissibility of the seized documents, arguing that fundamental procedural safeguards were violated during the search. The prosecution argues that since a written record was prepared on the spot and provided to all parties, the search was substantially compliant with requirements.

Is the search legally valid despite having only one witness instead of two?

- (a) Yes, because preparing a written search memo on the spot with signatures substantially complies with all essential requirements.
- (b) Yes, because having at least one witness satisfies the minimum requirement for search validity in all circumstances.
- (c) No, because two respectable local witnesses should be present during search as a mandatory procedural safeguard always.
- (d) No, but only because the suspect Deepak himself was not made a witness to the search proceedings and recoveries.

73. During a raid on a suspected cybercrime operation, police seize a laptop, external hard drives, and mobile phones containing extensive electronic data including emails, chat logs, financial records, and incriminating photographs. The investigating officer prepares a proper seizure memo listing all the electronic devices and transfers them to the police station. At trial, the prosecution seeks to present printouts of emails and chat logs from the seized devices as evidence against the accused. The defense counsel objects, arguing that electronic records cannot be treated as documents and should be excluded from evidence. The prosecution argues that since the devices were properly seized with documentation, all data contained in them is automatically admissible as evidence. The trial court must determine the admissibility of the electronic records.

What is the correct legal position regarding the admissibility of electronic records seized during the search?

- (a) Electronic records retrieved during searches become admissible only when properly certified as required by law.
- (b) Electronic records are automatically admissible once the devices containing them are properly seized with documentation.
- (c) Electronic records cannot be treated as documents and are inadmissible in court proceedings under any circumstances.
- (d) Electronic records are admissible if the seizure memo specifically lists the content of each electronic file individually.

74. Rohit, a 26-year-old factory worker, is arrested at midnight in connection with an alleged theft from his workplace. The arresting officer does not record the exact time or the reasons for arrest in the memorandum, nor does he inform Rohit's family or any nominated person. The next morning, Rohit's relatives learn about his arrest from local news and file a petition alleging violation of mandatory procedural safeguards. The police defend their action by citing urgency and public order concerns, arguing that the documentation could be completed later. The matter reaches the High Court to determine whether such omissions invalidate the arrest despite the seriousness of the offence. The Court must now decide if the procedural failures are fatal to the legality of arrest. Should the Court uphold the legality of Rohit's arrest?

- (a) Yes, because procedural errors do not affect the legality of an arrest made in urgent circumstances.
- (b) No, because omission of grounds and timing of arrest violates procedural safeguards of arrest.
- (c) Yes, because public safety considerations justify omission of formal requirements of record.
- (d) No, because the absence of notice to family and medical safeguards renders the arrest unlawful.

Passage:- 5 Indian criminal procedure distinguishes between cognizable and non-cognizable offenses, a foundational classification that determines investigation, arrest, and trial forum while shaping police discretion and individual rights. The cognizable-offense principle covers serious crimes for which the police may arrest without a warrant and commence investigation without prior judicial permission. These are treated as grave offenses such as murder, rape, robbery, or causing bodily harm, reflecting the need for immediate action to prevent further injury or secure the accused.

The non-cognizable-offense principle pertains to less serious crimes in which the police lack authority to arrest without a warrant and cannot investigate without a magistrate's approval. This framework introduces judicial oversight and delayed initiation consistent with the lower urgency of such matters. The rule of first information reporting requires that when a serious offense is brought to the notice of the police, a formal complaint must be recorded, which serves as the official trigger for investigation. This mechanism ensures procedural immediacy for

grave crimes while excluding minor ones from automatic investigation, thus preserving a balance between responsiveness and restraint.

The power of arrest without warrant allows the police to act swiftly in serious cases where there is reasonable belief that an offense has been or is about to be committed. Judicial interpretation, however, insists that this power must not be exercised arbitrarily but only on credible grounds connected to the alleged crime. In contrast, the process for non-cognizable matters requires prior authorization from a magistrate before investigation begins. The law allows the police to record information but forbids them from proceeding further without such permission. Judicial decisions have reaffirmed that arrest and investigation in such cases depend strictly on the magistrate's approval, though once granted, the police are obliged to investigate with due diligence. The trial framework further distinguishes forums and consequences. Serious offenses are tried before higher criminal courts, whereas minor ones are handled by lower magistrates, ensuring that procedural rigor and punishment correspond to the gravity of the charge.

Finally, the rights-and-discretion balance defines the systemic effects of this classification. Accused persons in serious cases face immediate arrest and rapid investigation, while those involved in minor matters enjoy protection through warrant and authorization safeguards. Victims of grave crimes receive prompt institutional response through registration and investigation, whereas victims of lesser offenses may experience delay pending judicial sanction.

[Extracted with edits and revisions from <https://www.advdharmendraassociates.in/post/what-is-the-difference-between-cognizable-and-non-cognizable-offenses>]

75. Police Constable Rajesh is patrolling a residential area at 11:00 PM when he witnesses two individuals engaged in a heated argument on the street. During the altercation, one person, Amit, slaps the other person, Suresh, on the face causing minor redness but no bleeding or serious injury. Suresh immediately complains to Constable Rajesh and demands that Amit be arrested on the spot. Constable Rajesh knows that simple assault causing minor harm without serious bodily injury is classified as a non-cognizable offense under the relevant provisions of the criminal code. However, Suresh insists that since he witnessed the offense and a police officer is present at the scene, immediate arrest is mandatory regardless of the classification. Constable Rajesh is uncertain whether his presence at the scene and direct witnessing of the act creates an exception to the usual warrant requirement for non-cognizable offenses. Can Constable Rajesh lawfully arrest Amit without a warrant based on the witnessed assault?

- (a) Yes, because a police officer who directly witnesses any offense being committed has authority to arrest without warrant.
- (b) No, because non-cognizable offenses do not permit police to arrest without warrant even when directly witnessed by officer.
- (c) Yes, because the presence of the victim demanding arrest creates an exception to warrant requirements for minor offenses.
- (d) No, but only because the assault did not result in visible bleeding or hospitalization requiring immediate medical intervention.

76. At 2:00 AM, police receive an anonymous phone call reporting that a person named Vikram is planning to commit a robbery at a jewelry store later that morning. The caller provides specific details about Vikram's appearance, his location, and the intended target. Police Sub-Inspector Mehta immediately proceeds to the location mentioned and finds Vikram matching the description, carrying a bag containing tools that could potentially be used for breaking locks. SI Mehta believes based on the anonymous tip and the presence of suspicious tools that Vikram is about to commit a serious cognizable offense. Without obtaining a warrant, SI Mehta arrests Vikram at 2:30 AM before any robbery has actually occurred. Vikram's lawyer later challenges the arrest, arguing that since no offense had actually been committed at the time of arrest, the police lacked authority to arrest without a warrant. The prosecution defends the arrest as a lawful exercise of preventive powers under the cognizable offense framework. Is SI Mehta's warrantless arrest of Vikram legally justified based on the reasonable belief that a cognizable offense is about to be committed?

- (a) Yes, because the power of arrest without warrant extends to situations where offense is about to be committed.
- (b) No, because warrantless arrest authority exists only after a cognizable offense has actually been committed and completed.

- (c) Yes, because anonymous tips about planned serious crimes automatically authorize immediate arrest without any warrant requirement.
- (d) No, because reasonable belief must be based on direct eyewitness accounts rather than anonymous information and circumstantial evidence.

77. Ramesh files a complaint at the local police station alleging that his neighbor Sunil has committed criminal trespass by entering his property without permission and damaging a boundary wall, causing property damage worth ₹5,000. The Station House Officer (SHO) records Ramesh's complaint in the station diary at 3:00 PM, noting all the details of the alleged offense including the date, time, nature of the act, and extent of damage. After recording the information, the SHO informs Ramesh that since criminal trespass causing damage under ₹10,000 is classified as a non-cognizable offense under the relevant criminal code provisions, he cannot immediately register a First Information Report or commence investigation without first obtaining permission from the magistrate. The SHO advises Ramesh to approach the magistrate with an application seeking authorization for police investigation. Ramesh argues that since he has provided all details and the police have recorded his complaint, the formal FIR must be registered immediately and investigation must commence, as any delay would allow Sunil to tamper with evidence.

Is the SHO's refusal to immediately register an FIR and commence investigation legally justified?

- (a) No, because the rule of first information reporting requires formal complaint registration for all offenses reported to police.
- (b) No, because recording the complaint in station diary is legally equivalent to FIR registration requiring immediate investigation commencement.
- (c) Yes, because non-cognizable offenses cannot be investigated without magistrate's approval and automatic registration applies only to serious offenses.
- (d) Yes, but only because the damage amount is below ₹10,000 threshold creating special exemption from investigation requirements.

78. Kiran, a local shop owner, files a complaint alleging that her neighbor illegally expanded his shop and encroached on the common pathway, causing obstruction to public access. The police register the information but, without obtaining prior permission from the magistrate, proceed to inspect the premises and seize construction materials. The accused challenges the investigation as unlawful, claiming that the matter involves a non-cognizable offense under the penal code and thus required judicial sanction before any action. The police argue that they acted in good faith to prevent further nuisance and damage. The Court must decide whether the investigation conducted without prior approval was lawful.

Should the Court uphold the police investigation in this case?

- (a) Yes, because the police may investigate a non-cognizable offense without judicial permission if the situation demands urgency.
- (b) No, because investigation and arrest in non-cognizable cases strictly depend on the magistrate's prior approval.
- (c) Yes, because the police are duty-bound to maintain peace even if the matter is non-cognizable in nature.
- (d) No, because the absence of prior sanction vitiates any subsequent investigation or seizure made by the police.

79. Late one night, the police receive information that a man has stabbed his neighbour during an altercation. Without seeking a warrant, they immediately enter his house, seize the weapon, and arrest him. The accused challenges the arrest, claiming that the police acted unlawfully by not obtaining prior judicial permission. The prosecution contends that the offense involved a grave act of physical violence demanding immediate intervention to prevent escape and destruction of evidence. The defence argues that procedural safeguards were ignored and the arrest was arbitrary. The Court must decide whether the arrest without a warrant was valid in law given the nature of the offence and urgency of response.

Should the Court uphold the validity of the arrest?

- (a) No, because even grave offences require prior judicial permission before arrest.
- (b) Yes, because the offence involved bodily harm and warranted immediate police action.
- (c) No, because the failure to obtain a warrant renders the arrest procedurally defective.

(d) Yes, because every criminal complaint empowers the police to act without limitation.

Passage:- 6 The Public Trust Doctrine is a foundational principle under environmental jurisprudence that treats elements of natural heritage not as possessions but as assets held by government in trust for the collective welfare. Rooted in Roman antiquity, refined in English common law, and influential in environmental law, it asserts that watery expanses, coastlines, and submerged territories rest with the government acting as fiduciary so that continuity is secured for present and future generations. The first essential principle is the doctrine itself, which imposes custodianship over vital resources and frames access and preservation as public rights rather than private dominion. The second is the fiduciary duty of government, which requires the State to function as trustee by safeguarding public resources and balancing commerce and industry with conservation. The third is the balancing principle, which directs decision-makers to harmonize economic pursuits with environmental protection by upholding public access while mitigating ecological repercussions, and by considering the consequences of resource management choices. The fourth is the scope-expansion principle, by which a doctrine once focused on navigable waters, shorelines, and submerged lands now extends to other resources, including air and wildlife, with modern advocates urging inclusion of rights such as a stable climate and untainted air. The fifth is the water-bodies protection principle, which recognizes water sources as held in trusteeship, obliges government oversight to ensure fair and equal access, and demands safeguards against pollution through policies that regulate use, promote conservation, and address contamination and excessive extraction.

A sixth is the public trust over land principle, which emphasizes protecting public trust lands through sustainable land-use practices, prevention of unauthorized development, and designation of conservation areas to balance human development with preservation of ecologically sensitive zones. The seventh is the conflict-resolution principle, which acknowledges challenges when the centre asserts dominion over resources historically governed by state laws and calls for nuanced resolution to maintain doctrinal coherence and effective management. The eighth is the trans-jurisdictional coordination principle, which arises where migratory species or air quality cross state boundaries and requires collaborative frameworks that uphold core public trust commitments.

Judicial applications underscore these principles: in *M.C. Mehta v. Kamal Nath* the Supreme Court decreed that government, as trustee, must shield and enhance the environment; and in *Vellore Citizens Welfare Forum v. Union of India* the Court broadened the doctrine to air and water quality and tied a wholesome environment to the right to life. Internationally, nations adapt public trust ideas, employ differing oversight models, and participate in collaborative agreements such as the Paris Agreement, reflecting mutual obligation to preserve resources for humanity. In sum, the Public Trust Doctrine furnishes a trustee-based, access-protective, and expansive architecture that balances economic activity with environmental preservation across domestic and transboundary settings.

[Extracted with edits and revisions from <https://www.manupatracademy.com/legalpost/public-trust-doctrine>]

80. A state government grants a private real estate developer exclusive rights to construct a luxury resort on a pristine beachfront property extending from the high-tide line to several hundred meters inland. The development plan includes private beaches with restricted public access, construction of sea-facing villas on the shoreline, and exclusive recreational facilities for resort guests. The developer obtains all necessary environmental clearances and argues that since the land was purchased from private owners who held valid title deeds, and all statutory permissions have been secured, the project represents legitimate exercise of property rights and economic development. Local fishermen and environmental groups challenge the grant, arguing that the coastline and beach areas fall within the ambit of the Public Trust Doctrine and cannot be alienated for exclusive private use regardless of clearances obtained. The developer contends that the doctrine applies only to submerged lands and navigable waters, not to beach areas above the high-tide line.

Does the Public Trust Doctrine prevent the state government from granting exclusive private rights over the beachfront property?

(a) Yes, because coastlines rest with government as fiduciary assets requiring preservation of public access regardless of clearances.

(b) No, because the doctrine applies only to navigable waters and submerged lands not to beach areas above high-tide line.

- (c) Yes, but only because the fishermen's traditional livelihood rights create special exemption from private property development.
- (d) No, because obtaining valid environmental clearances satisfies all public interest requirements for beachfront property development.

81. The central government announces a national policy under which several large rivers flowing through multiple states will be inter-linked through massive canal projects to address water scarcity in drought-prone regions and boost agricultural productivity. The project involves diverting significant water flows from rivers in water-abundant states to water-deficient states, constructing dams and reservoirs, and creating new canal networks. The central government claims exclusive authority over inter-state rivers under constitutional provisions and argues that the national economic benefits and addressing of regional water scarcity justify the project. Several state governments whose rivers will be diverted object, arguing that these water bodies have historically been governed by state laws, that the Public Trust Doctrine gives them custodial responsibility over rivers within their territories, and that the central government cannot unilaterally assert dominion over these resources. Environmental groups support the states' position, adding concerns about ecological impacts on river ecosystems, displacement of communities, and disruption of natural water flows.

Does the Public Trust Doctrine resolve this conflict between central government authority and state custodial responsibilities over river water resources?

- (a) Yes, the doctrine grants states exclusive custodial rights over all water resources within their territories barring central intervention.
- (b) No, the doctrine calls for nuanced conflict resolution to maintain doctrinal coherence when centre asserts dominion over resources governed by state laws.
- (c) Yes, the doctrine automatically invalidates all central government projects affecting water resources historically governed by state authorities.
- (d) No, the doctrine permits unlimited central government authority over inter-state resources to ensure national economic development goals.

82. A state government in a rapidly industrializing region faces severe air quality deterioration due to emissions from factories, vehicles, and construction activities. Citizens file a public interest litigation seeking enforcement of the Public Trust Doctrine to compel the government to implement stringent air quality controls, phase out polluting industries, and establish emission-free zones. The state government argues that while the Public Trust Doctrine historically applied to water bodies, coastlines, and submerged lands, it does not extend to air quality, which is governed by separate environmental legislation and regulations. The government further contends that air is fundamentally different from water bodies and land resources because it is not a discrete resource that can be held in trust, and that imposing public trust obligations regarding air quality would create unmanageable judicial oversight of complex industrial and transportation policies. The petitioners argue that modern environmental jurisprudence recognizes air as a public trust resource essential to collective welfare and future generations.

Can the Public Trust Doctrine be invoked to impose governmental obligations regarding air quality protection?

- (a) No, because the doctrine historically applied only to water bodies and land resources and cannot extend to atmospheric resources.
- (b) No, because air quality is governed exclusively by separate environmental legislation making public trust doctrine inapplicable to atmospheric concerns.
- (c) Yes, because the doctrine now extends to air through scope expansion with courts tying wholesome environment to right to life.
- (d) Yes, but only in cases where air pollution directly affects water bodies or coastal areas covered under the original doctrine.

83. A large metropolitan city faces acute water scarcity during summer months while several wealthy residential colonies and commercial establishments within the city continue to extract unlimited groundwater through private borewells, operate water-intensive landscaping with lush lawns and gardens, and fill private swimming

pools. Municipal water supply is rationed for ordinary residents, with many low-income neighborhoods receiving water only on alternate days or for a few hours daily. The municipal corporation files a public interest case arguing that groundwater is a public trust resource and that the current pattern of extraction and use violates principles of fair and equal access by allowing disproportionate consumption by those with means to sink private borewells while the majority suffers scarcity. The defendants argue that groundwater extraction from land they own or occupy is a property right, that they have obtained required permissions for borewells, and that municipal failure to ensure adequate water supply cannot be remedied by restricting lawful private extraction.

Does the Public Trust Doctrine require the government to regulate groundwater extraction to ensure fair and equal access?

- (a) No, because obtaining required permissions for borewells satisfies all legal requirements for private groundwater extraction and usage.
- (b) Yes, but only if the government can prove that private extraction directly causes complete depletion of municipal water sources.
- (c) No, because groundwater extracted from private property is not subject to public trust obligations unlike surface water bodies.
- (d) Yes, because water sources are held in trusteeship obliging government oversight to ensure fair and equal access and prevent excessive extraction.

84. Two neighboring states share a major river that flows from State A through State B before reaching the ocean. State A, an upstream industrial state, has constructed several manufacturing plants along the river that discharge treated effluents meeting national pollution standards into the river. State B, a downstream agricultural state, reports that despite the effluents meeting national standards when discharged in State A, the cumulative pollution load as the river flows through State B significantly degrades water quality, affecting irrigation, fisheries, and drinking water availability in State B. State B seeks to impose additional pollution controls on industries in State A, arguing that the river is a shared public trust resource requiring coordinated protection. State A objects, arguing that it has sovereign authority to regulate industries within its territory, that its industries comply with national standards, and that State B cannot impose its regulatory preferences on State A's economic activities. Both states appeal to the central government for resolution.

Does the Public Trust Doctrine require coordinated management of the shared river resource despite state sovereignty concerns?

- (a) No, because state sovereignty grants each state exclusive authority over resources and industries within its territorial boundaries always.
- (b) Yes, because trans-jurisdictional coordination principle requires collaborative frameworks where resources cross state boundaries to uphold trust commitments.
- (c) No, because industries meeting national pollution standards in their state of operation cannot be subject to additional regulatory requirements.
- (d) Yes, but only if State B can prove that pollution from State A makes the river completely unusable for any purposes.

Section - D : Logical Reasoning

Passage:- 1 I walk out of my house and onto the street and look around. Not much is different from 10 years ago, except that there is much more traffic. “Crores spent, Smart Cities Mission leaves behind more bills, superficial infrastructure”, reads a headline from a couple of days ago. The report says what is obvious to those who examine what is around them – that a 10-year programme that ended this year has made practically no impact. Now that it is dead and buried and no further promises will be made over it, we can sift through its remains.

The “Smart Cities” mission was set up with a concept note that said the aim was to make cities that would offer “decent living options to every resident”, which would provide a “very high quality of life comparable with any developed European city”, according to the urban development ministry’s concept note on Smart Cities. The government said this would happen by 2020. These Smart Cities were required, Arun Jaitley had informed Parliament in 2014, to service the middle class that Prime Minister Narendra Modi’s economic policies would greatly expand. The following year, 2015, the language was tweaked to make the target more modest and, instead of emulating a European city, we were told that the Smart City of India would provide citizens with adequate water supply, assured electricity supply, sanitation, public transport, affordable housing for the poor, safety of women, health and education. This was, of course, not different from what the municipalities in all cities were focused on in any case. The problem was one of hard governance and not logo and nomenclature alone. This may be why the Modi government’s interest in this waned almost immediately. It was reported in 2021 that the “Smart Cities project had failed to take off, with half of its funds unspent”. The project “should have been on its winning lap come 2020”, the report said, but instead the reality was that by 2019, of the total Rs 48,000 crores “approved” between 2015 and 2019, only half was actually allocated. Of this half, only three-fourth was then actually released, and of what was released a mere 36% was then utilised. While Rs 48,000 crores had been “approved”, only Rs 6,160 crores was actually spent.

The Parliamentary Standing Committee on Urban Development said it was “perplexed about the actual progress made so far under the mission at the ground level” and it also “observed numerous instances of one agency undoing the work of another”. Out of the 35 states and Union Territories, 26 had utilised less than 20% of the funds released. Extracted with edits and revisions from: <https://thewire.in/urban/why-smart-cities-project-never-took-off-in-india-and-was-quietly-shelved>

85. Which of the following most accurately reflects the main argument the author is advancing in the passage?
- India’s Smart Cities Mission demonstrated that infrastructural transformation requires both visionary rhetoric and coordinated public support.
 - A mismatch between urban ambitions and administrative execution rendered the Smart Cities Mission more symbolic than substantial.
 - Funding alone cannot compensate for the lack of enthusiasm among local governments towards national-level development projects.
 - A lack of technical expertise in municipal bodies hindered the operational success of Smart Cities in most Indian states.
86. Which of the following, if true, would most seriously contradict the author’s viewpoint?
- Smart Cities across multiple regions introduced long-term improvements in public safety and access to utilities.
 - A number of states implemented the mission effectively by reallocating resources from other urban programs.
 - The government’s disengagement was a deliberate political strategy to shift focus to rural development initiatives.
 - Many city-level agencies sought private partnerships to accelerate progress after initial delays in central funding.
87. Which of the following, if true, would most strengthen the author’s position that the Smart Cities Mission lacked serious policy commitment?
- Internal audits revealed that central ministries often delayed clearances essential for Smart Cities projects to begin.

- (b) Public surveys indicated that residents in Smart Cities perceived minor aesthetic improvements but no change in essential services.
- (c) Private sector involvement in Smart Cities remained high despite erratic policy direction from the central government.
- (d) Many municipal bodies implemented Smart Cities components without waiting for central disbursements or technical guidelines.

88. All of the following can be inferred from the passage EXCEPT:

- (a) The central government modified the objectives of the Smart Cities Mission during its early stages.
- (b) Substantial portions of sanctioned funds for Smart Cities were left either unused or unspent.
- (c) The Parliamentary Committee concluded that poor coordination among agencies severely restricted progress.
- (d) Some cities succeeded in surpassing the performance targets originally set under the Smart Cities Mission.

89. Based on the author's reasoning, which of the following would be the most effective course correction for future national urban initiatives?

- (a) Integrating global city models and benchmarking best practices for Indian urban development.
- (b) Ensuring symbolic alignment between government slogans and citizen perceptions of reform.
- (c) Shifting from top-down mega-visions to locally-driven programs with clear administrative accountability.
- (d) Replacing long-term planning documents with flexible, quarterly performance metrics for visibility.

90. Which of the following most closely reflects the author's view about the initial promises made under the Smart Cities Mission?

- (a) They were politically strategic declarations meant to generate early enthusiasm without long-term viability.
- (b) They were grounded in economic logic but failed to gain sufficient media traction to influence public perception.
- (c) They were the result of technocratic overreach divorced from ground realities in Indian cities.
- (d) They were framed as achievable milestones but lost relevance once private sector priorities shifted.

Passage:- 2 Every few months, out of curiosity, I red-pill myself. Usually, I start with YouTube. The algorithm is extraordinarily responsive: give a couple of videos a thumbs-up, and your whole feed swerves in a new ideological direction. My political default is center-left, and so the move is to shift it rightward. Find some veterans talking about their experiences during Joe Biden's withdrawal from Afghanistan. By this point, your feed will have expanded beyond politics, and red-pilling will have given way to a broad contrarianism—a sense that it's exciting to rethink your views. People can be contrarian about all sorts of things—fitness, money, history, parenting, the meaning of life—and not all of it is crazy.

Part of the point of red-pilling yourself is to understand where other people are coming from. Your sister-in-law talks a lot about the depredations of identity politics; the guy from the hardware store has put half his savings into crypto, using a strategy based on astrology. Where do they get this stuff? Now you know. There's a diagnostic aspect, too. Just as you go to the doctor once a year to find out if you're fundamentally healthy, a semi-annual algorithmic derangement can help you learn whether your perspective is as immovable as you take it to be. Are you truly an atheist? Are regulations really a good thing? Could under-policing be the real problem? Your views on all sorts of issues might shift.

But there's a twist. The more time you spend having your mind changed online, the more you might sense that there's something odd about the way in which opinions tend to be formed and held today. To any question you can ask, there's apparently already an answer; in fact, there seem to be more answers than questions. Long before you've decided what you want to know, you're told what you should know—everyone's an insider, or has a theory, or knows the score. A decade ago, it was only journalists who offered "explainers," but now—even though everybody hates journalists—everyone's explaining. The Internet pushes us to question everything while foreclosing every question. It's a machine for telling you what to think.

Right now our core political categories are contested. There is, "vigorous disagreement" about the kind of society we want, with "unstable realignments" holding for only brief periods before collapsing. What's true for politics appears to be true in other areas, too: everything is seemingly up for grabs. In theory, a lack of consensus on so

many subjects should mean that we live in a time of widespread intellectual foment, in which we turn over the fundamental questions, exploring them in earnest, searching deeply for durable answers. But is that what we're doing? Or have we mistaken a simulacrum of thinking for the real thing?

Extracted with edits and revisions from: <https://www.newyorker.com/culture/open-questions/should-you-question-everything>

91. Which of the following, if true, would most directly challenge the author's claim that red-pilling oneself online is an insightful way to test the durability of one's beliefs?

- (a) Many users who explore opposing views online often emerge more emotionally reactive than critically reflective in the long term.
- (b) Exposure to diverse ideological material causes confusion rather than clarity in users lacking a strong political foundation.
- (c) Most users seeking contrarian perspectives online ultimately reinforce their existing views after brief experimentation.
- (d) A significant portion of online contrarianism is driven by the desire for visibility and social status rather than truth-seeking.

92. Which of the following must be true if the author's concerns about digital information consumption are to be considered logically consistent?

- (a) The existence of multiple answers online often obscures the original question that initiated the user's inquiry.
- (b) Ideological instability in digital environments can result in short-lived convictions rather than informed beliefs.
- (c) A surplus of competing explanations can reduce the capacity of users to assess the credibility of information.
- (d) Digital discourse often relies more on repetition and visibility than on accuracy or philosophical coherence.

93. Which of the following, if true, would most undermine the author's view that ideological shifts experienced online stem from algorithmic design rather than intrinsic belief reevaluation?

- (a) Users often engage in personal ideological reflection before algorithmic content begins to influence their online preferences.
- (b) Algorithms on major platforms are designed to prioritize advertising revenue rather than political outcomes or ideological change.
- (c) Most users consistently avoid challenging viewpoints even when they are promoted through algorithmic recommendations.
- (d) Several online spaces actively reward independent inquiry and discourage conformity through their engagement incentives.

94. Which of the following is an outcome that the author suggests may result from the dominance of algorithm-driven platforms in public discourse?

- (a) Traditional political categories have grown more rigid as a response to exposure to diverse viewpoints.
- (b) Individuals are shaped by systems that prioritize certainty and speed over depth and intellectual patience.
- (c) Journalistic authority has been restored as a counterbalance to the rise of user-generated commentary.
- (d) Political and social disagreements have been resolved more efficiently through algorithmic interventions.

95. Which of the following is an implicit assumption that underlies the author's concern about the rise of explanatory culture in digital environments?

- (a) The process of explaining has shifted from fostering doubt to reinforcing intellectual certainty and social validation.
- (b) Audiences have become increasingly indifferent to whether explanations originate from experts or amateurs online.
- (c) Public discourse is no longer governed by credibility but by ideological convenience and emotional payoff.
- (d) Explainers are more interested in ideological branding than in encouraging genuine exploration of ideas.

96. Which of the following conclusions can be most reasonably drawn from the author's reflections on the current state of ideological diversity?

- (a) The rise in contrarian content across media platforms signals a cultural shift toward philosophical skepticism and nuance.
- (b) People increasingly seek ideological consistency due to the psychological discomfort caused by intellectual fragmentation.
- (c) Exposure to conflicting views online is gradually replacing traditional institutions as sources of collective knowledge.
- (d) Despite the appearance of open disagreement, much of the discourse online conceals an absence of rigorous intellectual effort.

Passage:- 3 Recently someone offered me a couple of books on the spiritual healing arts from a respected author—for free. It was the kind of offer I once would have responded positively to, taken them gratefully, and brought them home to sit on my “to be read” shelf. Maybe I would have tried to read them, maybe I would have even completed them. Instead, what I heard myself saying, with unusual frankness, was, “No thanks. I’m sick of self-improvement.” There is a whole cottage industry devoted to helping us achieve better versions of ourselves. I should know: I’m a psychologist and I make my living helping people shed the unnecessary coping strategies and start to live their more authentic selves. And I honestly believe in it, I’ve seen it work, and I’ve experienced it myself. But either because of my advancing age and decreasing physical vitality, or because of what seems like the relentless assault of marketing with people hawking their self-help wares, or because of a certain inner peace—I’m calling a time-out. I want to ask this question: What would it look like for us to stop striving and simply be?

I don’t think this is a radically new notion. Meditation, Eastern philosophy, and much of the perennial wisdom counsels us to be more in process and less striving to achieve results. What I’m trying to peel back here, which at least for me is new, is that even those methodologies, at least as practiced here in the West, can become their own kind of self-improvement treadmills. It’s really pernicious how easy it is to turn anything into another way to try to get better, to try to improve. Or perhaps a simpler way to say it would be: it’s very easy to turn anything into another way to feel badly about oneself. I didn’t finish the books, I read them but didn’t understand them, or I don’t remember what they said. I meditated but didn’t focus enough, I focused but didn’t meditate long enough, I’ve been meditating for a long time but I don’t know if it’s making a difference. That nagging inner voice of “you’re not enough” doesn’t go away through the hard work at self-improvement. It quiets through the relaxation of self-acceptance.

I’ve noticed something interesting each time I say out loud to another person, “I’m sick of self-improvement.” First there’s a laugh of release, then there’s a visible softening in the face of the other. “Oh, you mean I can relax, too? We don’t have to compete with ourselves or each other to be better, to get better, to get anywhere?”

Extracted with edits and revisions from: <https://thewire.in/science/ai-is-changing-our-understanding-of-earthquakes>

97. Which of the following can most reasonably be inferred from the author’s reflection on self-help practices?

- (a) Self-help practices often serve to reinforce internal judgment rather than eliminate it entirely.
- (b) People who resist structured improvement programs are likely to avoid introspection entirely.
- (c) Most individuals involved in spiritual practice show limited commitment to self-exploration.
- (d) Spiritual teachings generally produce emotional clarity if followed with disciplined focus.

98. Which of the following statements would the author most likely reject?

- (a) Certain self-help efforts can intensify personal dissatisfaction even when well-intentioned.
- (b) Seeking emotional peace can turn into another form of self-monitoring and goal setting.
- (c) Pursuing continuous self-improvement is essential to building long-term inner resilience.
- (d) Eastern practices may lose their essence when adapted to Western performance culture.

99. Which of the following best illustrates the paradox implied in the author's reflections on self-improvement?

- (a) Greater knowledge of psychological theories leads to emotional confusion in ordinary decisions.
- (b) Practices meant to ease internal pressure end up reinforcing the very burdens they seek to remove.

- (c) Self-reflection techniques are ineffective unless applied under strict professional supervision.
 (d) The absence of personal ambition may ultimately hinder one's ability to achieve emotional balance.

100. Which of the following is least likely to occur as a result of the mindset critiqued by the author?

- (a) Individuals internalizing guilt for failing to meet abstract spiritual performance goals.
 (b) People experiencing burnout due to the constant pursuit of emotional optimization.
 (c) Communities embracing the value of resting without measuring its productivity.
 (d) Self-help strategies creating pressure to conform to fixed models of growth and success.

101. Which of the following displays flawed reasoning of the kind the author implicitly critiques in relation to self-help practices?

- (a) Concluding that if a method doesn't produce results, it must be because the person failed to apply it properly.
 (b) Believing that methods grounded in tradition are irrelevant because they were not designed for modern challenges.
 (c) Assuming that a technique is universally beneficial just because it has been endorsed by mental health experts.
 (d) Thinking that emotional growth is meaningful only when it can be verified through observable behaviour change.

102. Which of the following courses of action would most appropriately reflect the author's concerns about the consequences of the self-help culture?

- (a) Encouraging the public to engage with curated wellness routines to maintain consistent psychological growth.
 (b) Designing community spaces where individuals can explore stillness without attaching value to measurable outcomes.
 (c) Recommending that individuals consult experts regularly to track their emotional progress over time.
 (d) Promoting the use of mindfulness techniques that incentivize achievement through structured habit-building systems.

Passage:- 4 (Direction for Questions 103-108): Use the table below to code each element. Then apply the conditions in order.

Element	A	E	I	O	U	B	C	D	R	T	1	2	3	4	5
Code	@	&	!	~	*	#	\$	%	+	=	<	>	?	^	-

Condition 1 (C1). If the second from the left and second from the right are both vowels (A, E, I, O, U), interchange their codes.

Condition 2 (C2). If the first element is a vowel and the last element is a consonant (B, C, D, R, T), code both as 'Ø'.

Condition 3 (C3). If the first element is a consonant (B, C, D, R, T) and the last element is an odd digit (1, 3, 5), code them as 'ð' and '§' respectively.

Execute in order: C1 → C2 → C3.

(If none applies, keep the direct codes from the table.)

103. What will be the code for A2RTB?

- (a) Ø>+=Ø (b) @>+=# (c) ð>+=§ (d) Ø=+&Ø

104. What will be the code for CARE3?

- (a) \$&+@? (b) ð&+@§ (c) \$@+&? (d) ð@+&§

105. What will be the code for OATE4?

- (a) ~@=&^ (b) ~&=@^ (c) Ø&=@Ø (d) ~&=@_

106. What will be the code for T103B?

- (a) =<~?% (b) ∂<~?§ (c) =?~<# (d) =<~?#

107. What will be the code for E1B3C?

- (a) &<#?\$ (b) ∂<#?§ (c) ∅<#?∅ (d) &<?#\$

108. What will be the code for T2C45?

- (a) =>\$^_ (b) ∂>\$^§ (c) ∂>\$^_ (d) ∅>\$^∅

Section E: Quantitative Techniques

[Directions for Q.109-Q114]: At the Hyderabad “Safarnama Book Bus” launch, four friends pool money to refurbish an old city bus into a mobile library. Aarav takes a microfinance loan of ₹90,000 at 12% p.a. simple interest for 15 months. He plans to prepay ₹30,000 exactly after 9 months; the lender charges SI on the outstanding principal for each segment separately. Isha parks an advance grant of ₹1,20,000 in a fixed deposit at 7.5% p.a., compounded quarterly, for 2 years, timed to mature exactly on the bus’s second anniversary.

Naman buys a quiet generator on dealer finance: principal ₹50,000 at 10% p.a. compounded annually for 2 years, with a single balloon payment at maturity. Priyanka collects ₹80,000 in annual membership fees mid-year and places it in a special account that pays 6% p.a. simple interest for the first 12 months, then 8% p.a. simple interest for the next 8 months (rate switches without compounding).

To insulate fuel costs, the team also considers a shorter deposit: ₹60,000 at 8% p.a., compounded half-yearly, for 1.5 years. A printing vendor offers two payment options for the brochure batch priced at ₹40,000: Option A: pay now and get a 2% cash discount; or Option B: pay in 60 days with an added 1% per month simple charge on the invoice value.

109. Naman buys a generator on dealer finance: principal ₹50,000 at 10% p.a. compounded annually for 2 years, with a balloon payment at maturity. What amount must he pay at maturity?

- | | |
|-------------|-------------|
| (a) ₹60,500 | (b) ₹60,000 |
| (c) ₹55,500 | (d) ₹61,000 |

110. endor brochure bill is ₹40,000. Option A: pay now with 2% cash discount. Option B: pay in 60 days with 1% per month simple charge on invoice value. Which option is cheaper and by how much?

- | | |
|--------------------------------|--------------------------------|
| (a) Option A cheaper by ₹800 | (b) Option B cheaper by ₹800 |
| (c) Option A cheaper by ₹1,600 | (d) Option B cheaper by ₹1,600 |

111. Aarav borrows ₹90,000 at 12% p.a. simple interest for 15 months, but prepays ₹30,000 exactly after 9 months (SI charged segment-wise). What total interest does he pay?

- | | | | |
|-------------|-------------|-------------|-------------|
| (a) ₹12,600 | (b) ₹12,150 | (c) ₹13,500 | (d) ₹11,700 |
|-------------|-------------|-------------|-------------|

112. The team considers a deposit of ₹60,000 at 8% p.a., compounded half-yearly, for 1.5 years. What is the maturity amount (nearest rupee)?

- | | | | |
|-------------|-------------|-------------|-------------|
| (a) ₹67,200 | (b) ₹67,492 | (c) ₹67,392 | (d) ₹67,560 |
|-------------|-------------|-------------|-------------|

113. Isha invests ₹1,20,000 at 7.5% p.a., compounded quarterly, for 2 years. What is the maturity amount (nearest rupee)?

- | | | | |
|---------------|---------------|---------------|----------------|
| (a) ₹1,39,227 | (b) ₹1,38,900 | (c) ₹1,40,100 | (d) ₹1,37,8887 |
|---------------|---------------|---------------|----------------|

114. Priyanka deposits ₹80,000 in an account that pays 6% p.a. simple interest for the first 12 months, then 8% p.a. simple interest for the next 8 months (no compounding across phases). What is her total interest over the full 20 months?

- | | | | |
|---------------|---------------|---------------|---------------|
| (a) ₹8,800.00 | (b) ₹9,200.00 | (c) ₹9,066.67 | (d) ₹9,333.33 |
|---------------|---------------|---------------|---------------|

[Directions for Q.115-Q120]: At the Udaipur Lakeside Reading Park build, five friends divide tasks to finish before Sunday evening. Walkway tiles: Nihar can lay the entire path in 12 days working 8 hours/day; Sanya alone would need 18 days at the same schedule. They start together on Monday and work 3 full days. From Thursday, Sanya shifts to another task, and rain slows Nihar to 75% of his normal speed for the remaining tiling.

Fence painting: Kabir can paint the whole fence in 10 hours; Mehul needs 15 hours. On Friday morning they paint together for 2 hours. After lunch, Mehul leaves; Kabir continues with a new spray gun that makes him 20% faster than his original rate. Saplings: Tara plants 40 saplings in 5 hours at a steady rate. On Saturday, 3 school volunteers

join for 2 hours, each working at 50% of Tara's speed. After the volunteers leave, Tara plants alone for another 1.5 hours before dusk.

Benches assembly: A kit arrives for 24 benches. When all four (Nihar, Sanya, Kabir, Mehul) work together, they can complete the full set in 8 hours at a constant combined rate. They assemble for 3 hours, then Kabir and Sanya depart for an outreach event; the remaining two continue at their original individual rates. Water tank for drip lines: Inlet Pipe A fills the tank in 6 hours, Pipe B in 9 hours. A small leak alone would empty the full tank in 18 hours. On Saturday night, A and B run with the leak open until the tank is $\frac{5}{6}$ full; then Pipe B is closed, A continues with the leak.

115. In the first 3 days (Mon–Wed), Nihar and Sanya lay tiles together. What fraction of the walkway is completed by Wednesday evening?

- (a) $\frac{5}{12}$ (b) $\frac{1}{3}$ (c) $\frac{7}{18}$ (d) $\frac{1}{2}$

116. On Friday morning, Kabir and Mehul paint together for 2 hours. What fraction of the fence remains after this session?

- (a) $\frac{2}{5}$ (b) $\frac{1}{2}$ (c) $\frac{2}{3}$ (d) $\frac{3}{4}$

117. From Thursday onward Sanya leaves and rain slows Nihar to 75% of his normal tiling speed. How many days from Thursday will Nihar take to finish the remaining walkway?

- (a) $8\frac{2}{3}$ days (b) $9\frac{1}{3}$ days (c) 10 days (d) $7\frac{1}{2}$ days

118. After the 2-hour joint painting, Mehul leaves. Kabir continues with a new spray gun that makes him 20% faster than before. How long will Kabir take to finish the remaining fence?

- (a) 5 h 20 m 20 s (b) 5 h 12 m 20 s (c) 4 h 50 m 20 s (d) 5 h 33 m 20 s

119. Water tank: With leak open, pipes A (fills in 6 h) and B (fills in 9 h) run together until the tank is $\frac{5}{6}$ full; then B is closed and A continues with the leak. How long from start until the tank is completely full?

- (a) 5 h 15 m (b) 5 h 30 m (c) 4 h 45 m (d) 6 h 00 m

120. Suppose instead Nihar could work at 80% (not 75%) of his normal tiling speed after Thursday. By how many hours earlier would he finish compared to the 75% case?

- (a) 12 hours (b) 10 hours (c) 14 hours (d) 16 hours

Rough Work
