

UG 2027

ADMIT CARD NUMBER

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

QUESTION BOOKLET NO: 2027UG20



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

DO NOT OPEN TILL 2PM

Section A: English Language

Passage: ‘Antes dos portugueses descobrirem o Brasil, o Brasil tinha descoberto a felicidade,’ or ‘Before the Portuguese discovered Brazil, Brazil had already discovered happiness.’ So wrote Oswald de Andrade in his Manifesto Antropófago (1928), shifting the point from which history is told, and challenging a foundational assumption that colonialism had made to feel like common sense: that European culture was the natural standard against which everything else should be measured. That idea had shaped Brazilian intellectual life for generations. Andrade’s manifesto refused that premise. Not through rejection or imitation, but through transformation.

A poet and activist, Andrade was born in 1890 into a prosperous São Paulo family with roots that extended far beyond Brazil’s capital. His mother came from the port city of Óbidos, in the Amazon – descended from one of the founding families of the state of Pará. Though she had moved south long before Andrade was born, she filled his childhood with stories of what she had left behind: rivers that seemed to have no end, jaguars moving through the cacao trees at night, a landscape that was alive in ways São Paulo was not. The Amazon he grew up with was not a place he had visited, but one carried in his mother’s voice.

São Paulo was transforming rapidly – industrialising, filling with immigrants, pulling hard toward Europe. Its literary culture was shaped by Parnassianism, a movement that prized formal elegance and looked to France as its model, treating European refinement as the only legitimate model for ‘serious’ art. Andrade began his career as a journalist within this world. But in 1912, at 22, he made his first trip to Europe and something shifted. He returned home, carrying, he said: ‘a new dimension in his soul – he had known freedom.’ Andrade had grown up in a Catholic household whose moral architecture – its hierarchy, its guilt, its claim to universal authority – shaped everything around him. Europe loosened that grip. But it was his return, marked by his mother’s death and a crisis of faith, that broke it entirely.

In time, Andrade would come to believe that God exists not as a benevolent father but as the adversary of man: a limit to be encountered rather than obeyed – a formulation he found in Kierkegaard and Proudhon, but also, in Indigenous cosmology. The Catholic and the colonial authority were, for Andrade, the same kind of problem.

Back in São Paulo, he became a central figure in the Semana de Arte Moderna of 1922 – a week of concerts, readings and exhibitions that met with booing and outrage from an audience expecting something more respectable. Andrade was delighted. Provocation, for him, was not a side-effect of the argument. It was the argument.

Extracted with edits and revisions from: <https://aeon.co/essays/anthropophagy-art-flips-the-cannibal-worries-of-colonialism>

1. Which interpretation best captures the reversal achieved by Andrade’s opening statement?
 - (a) Pre-colonial happiness proves that European institutions were unnecessary.
 - (b) Brazil possessed its own value before Europe assumed authority to define it.
 - (c) Portuguese arrival damaged a stable social order already established in Brazil.
 - (d) Colonial judgment failed because Europeans misunderstood Indigenous happiness.
2. The childhood Amazon episode complicates a purely intellectual account of Andrade’s later outlook because:
 - (a) inherited attachment preceded his conscious challenge to European authority.
 - (b) maternal stories introduced the Indigenous cosmology behind his later theology.
 - (c) distance from the Amazon weakened his confidence in European culture.
 - (d) São Paulo’s industrial growth transformed family memory into political opposition.
3. Why is Parnassianism important to the passage’s account of São Paulo’s literary culture?

- (a) Imported standards made European refinement the measure of serious art.
- (b) Brazilian experimentation gradually reshaped formal literary conventions.
- (c) Journalism gained prestige through its association with French models.
- (d) Local writers weakened European influence by adapting foreign forms.

4. Andrade's European journey is presented as a turning point primarily because it:

- (a) established Europe as the intellectual standard he would later adapt to Brazil.
- (b) began loosening inherited restraints that later experiences would break further.
- (c) replaced his Catholic upbringing with the philosophies of European thinkers.
- (d) converted literary dissatisfaction into immediate opposition to formal aesthetics.

5. Andrade's pleasure at the hostile reception of the Semana de Arte Moderna indicates that:

- (a) audience resistance confirmed the correctness of the movement's artistic claims.
- (b) scandal was valuable when it disturbed accepted standards of respectability.
- (c) public hostility mattered more to him than the substance of modernist art.
- (d) provocation functioned chiefly as a means of securing wider public attention.

6. Which of the following best explains why Andrade's intellectual development cannot be reduced to a simple rejection of Europe?

- (a) His early journalism continued to follow French literary standards.
- (b) European travel remained the main source of his later political beliefs.
- (c) Some of his later ideas still drew upon European thinkers alongside other traditions.
- (d) His modernism depended on combining European form with Brazilian subject matter.

Passage: Signs of civilizational "decline or even collapse" show up in every morning's headline, every evening's newscast: mass killings in big cities and suburban shopping malls; children gunned down in elementary and high school classrooms. America's democracy is divided resentfully against itself across the frontiers of race, gender, ethnicity, and class. Vicious slander streams through the hydra-headed portals of the internet, goading quorums of non-law-abiding citizens to hate instead of help, love, or talk to one another.

Reports of turmoil in society come in concert with news of worldwide environmental and geopolitical catastrophe: -Covid-19 claiming one million American lives, six million elsewhere in the world. Rising sea levels on the coasts of California and Japan; the sperm whale under threat of extinction in the Atlantic, the giant sea bass in the Pacific; Australia's northern hairy-nosed wombat on the list of endangered species with the California redwood and the Texas poppy mallow. Climate change burns the Amazon rainforest, melts the Arctic ice. Chinese gunboats encircle Taiwan, the Russian invasion of Ukraine annihilates city, citizen, and town, unlimbering the weapons of mutually assured nuclear destruction.

The uncivil behavior of both man and nature mounts the makers of America's elite opinion on the pulpits of the media to promote a fear of the future with top-of-the-hour terror alerts—war, disease, flood, and famine fast approaching at all points of everybody's compass. The keepers of the nation's conscience meanwhile tour the think-tank and Sunday-talk-show circuits to tell sad stories of the death of kings, mourn the perishing from the earth of the ideals set forth in Abraham Lincoln's Gettysburg Address, lament the absence of Teddy Roosevelt's snow-white teeth. The self-pitying cries of Old Testament alarm convert the signs of American decline into foretellings of the end of the world. The doomsday news attracts advertisers, yet we are confronted not with the Beast of the Apocalypse but with severe power outages imposed by the laws of thermodynamics and entropy on the worlds of mind and spirit created and re-created by mortal men.

The first law of thermodynamics states that energy cannot be created or destroyed. It can only change forms. Life on Earth springs from the light and heat of the sun. For all intents and purposes the massive radiance of the star is

immortal. It cannot be deplatformed, at least not for another five billion years. What it can and does do is to be gainfully employed or uselessly squandered, which is the second law of thermodynamics—the tendency of entropy to increase as energy changes forms. The sun’s energy makes its way on Earth through a never-ending series of transformations. Matter into mind, mind into matter, acorn into oak tree, oak tree into log, log into fire, fire into smoke and ashes.

Extracted with edits and revisions from: <https://www.laphamsquarterly.org/energy/power-outage>

7. The phrase “hydra-headed portals” sharpens the depiction of online slander by suggesting that its circulation is:

- (a) difficult to trace once it enters wider social conflict.
- (b) resilient because each platform reproduces identical hostility.
- (c) capable of turning scattered users into organised civic groups.
- (d) dispersed through numerous outlets that amplify hostility at once.

8. Why does the author place mass shootings, climate threats, disease and war in rapid succession?

- (a) To show that social problems have become harder to separate from natural disasters.
- (b) To argue that different crises now arise from one common civilizational failure.
- (c) To prove that modern societies face more dangers than earlier civilizations did.
- (d) To recreate the flood of crises through which decline is publicly perceived.

9. Which qualification most accurately captures the author’s criticism of media narratives of decline?

- (a) Serious crises are transformed into a broader rhetoric of approaching apocalypse.
- (b) Accurate reporting becomes harmful because repeated crises produce public indifference.
- (c) Commercial incentives distort which genuine threats receive the greatest attention.
- (d) National decline is real, but commentators misunderstand its underlying material causes.

10. Which of the following phrases from the passage contains an allusion?

- (a) “top-of-the-hour terror alerts”
- (b) “severe power outages”
- (c) “the Beast of the Apocalypse”
- (d) “the massive radiance of the star”

11. Which of the following is NOT consistent with the author’s thermodynamic analogy?

- (a) Energy may persist even when the systems using it weaken.
- (b) Decline need not imply that every source of renewal has vanished.
- (c) Human-created worlds depend on how available energy is transformed.
- (d) Social systems must recover because energy itself cannot be destroyed.

12. What is the principal effect of mentioning the Gettysburg Address alongside “Teddy Roosevelt’s snow-white teeth”?

- (a) National decline is reduced to disputes over presidential reputations.
- (b) Political ideals become secondary to memories of presidential image.
- (c) Nostalgia turns unlike losses into evidence of national decline.
- (d) Present crises are displaced by memories of former political leaders.

Read the extract given below and answer the questions:

A Grammarian’s Funeral

Yea, but we found him bald too, eyes like lead,

Accents uncertain:

“Time to taste life,” another would have said,

"Up with the curtain!"
This man said rather, "Actual life comes next?
Patience a moment!
Grant I have mastered learning's crabbed text,
Still there's the comment.

Let me know all! Prate not of most or least,
Painful or easy!
Even to the crumbs I'd fain eat up the feast,
Ay, nor feel queasy."
Oh, such a life as he resolved to live,
When he had learned it,
When he had gathered all books had to give!
Sooner, he spurned it.

Image the whole, then execute the parts—
Fancy the fabric
Quite, ere you build, ere steel strike fire from quartz,
Ere mortar dab brick!

That before living he'd learn how to live—
No end to learning:
Earn the means first—God surely will contrive
Use for our earning.
Others mistrust and say, "But time escapes:
Live now or never!"
He said, "What's time? Leave Now for dogs and apes!
Man has Forever."

Robert Browning, Men and Women (1855)

A Critical View of "A Grammarian's Funeral"

Literary scholar George Monteiro identifies a fundamental difficulty in interpreting Browning's grammarian: the poem seems to leave readers between admiration for an uncompromising pursuit of knowledge and suspicion that scholarship has consumed the very life it was meant to illuminate. That ambiguity is intensified because the grammarian's story reaches us through an admiring disciple. The speaker praises his master's refusal of immediate satisfaction, yet details such as the failing body, the endlessly deferred beginning of "actual life," and the insistence on mastering even the "crumbs" of knowledge allow a less heroic judgment to emerge.

The poem thus turns scholarship into a paradox. The grammarian wishes to understand life completely before beginning to live it, but because learning has "no end," preparation threatens to replace experience altogether. His desire to "Image the whole" before executing its parts expresses formidable intellectual ambition, yet it also exposes the impossibility of complete knowledge preceding action. Browning does not easily resolve whether such devotion represents greatness or waste. Instead, the tension between the disciple's praise and the circumstances he describes forces the reader to decide how far intellectual aspiration can justify postponing ordinary life.

13. According to the critical view, the disciple's admiration complicates interpretation chiefly by:
- (a) concealing evidence that would openly condemn the grammarian's choices.
 - (b) requiring readers to separate his praise from implications of the details narrated.

- (c) transforming the grammarian's failures into deliberate acts of intellectual sacrifice.
- (d) making physical deterioration secondary to the scholar's declared intentions.

14. The grammarian's statement, "Man has Forever," is best interpreted as:

- (a) Human beings should delay action until knowledge becomes complete.
- (b) Intellectual work belongs to a realm larger than immediate earthly time.
- (c) Ordinary experience matters less because human life continues indefinitely.
- (d) Learning can defeat the limits that death places upon human achievement.

15. The building metaphor in "Image the whole, then execute the parts" suggests that the grammarian assumes:

- (a) practical action gains value only through useful knowledge.
- (b) partial understanding makes immediate experience unreliable.
- (c) complete conception can precede practical engagement.
- (d) intellectual work should imitate physical construction.

16. By refusing distinctions of "most or least" and "painful or easy," the grammarian treats knowledge as:

- (a) valuable chiefly when difficult enough to justify prolonged study.
- (b) ordered according to each detail's contribution to larger truths.
- (c) worth pursuing without ranking its parts by importance or difficulty.
- (d) meaningful only after every available fragment has been mastered.

17. Which of the following is the closest antonym of "spurned" as used in the poem?

- (a) Endured
- (b) Embraced
- (c) Pursued
- (d) Preserved

18. The paradox in the grammarian's method arises most decisively from his attempt to:

- (a) use books as preparation while doubting their ability to explain life.
- (b) pursue complete knowledge while accepting bodily decline as inevitable.
- (c) postpone present pleasure while expecting later experience to compensate.
- (d) finish preparation before living when learning itself has no endpoint.

Passage: Frogs; newts; small fish such as minnows and sticklebacks; dragonflies; water boatmen and water snails: these are just a few of the hundreds of animal species that make their homes in Britain's ponds alongside diverse wetland plants, some of which are endangered. Yet while small bodies of water are cherished by hobbyists as well as scientists, they have startlingly few protections – even at a time when the polluted state of rivers, lakes and coastlines is a key focus of environmentalists.

With a clean water bill expected soon, this official neglect of ponds should soon be consigned to the past. While rewilding projects have overseen the rediscovery of older "ghost ponds" as well as the creation of new, and householders are encouraged to create miniature ones in their gardens, charities including the specialist Freshwater Habitats Trust point to the growing body of international research that testifies to their ecological importance. In 1996 the first-ever national survey estimated that there were 228,900 ponds in Britain. Thirty years on would be an apt moment to grant them enhanced status.

The decline of ponds is part of a wider story of damage to the UK's waterways by a combination of intensive agriculture, building development, pollution and the failure to manage it. One local study in Leicestershire has found an average 1% species loss every year for 15 years. But unlike rivers, many of which disappeared underground when they were culverted by the Victorians, around two-thirds of ancient ponds in England and Wales have vanished altogether either through drainage or infilling for farmland. When horses were replaced by tractors, it was wrongly thought that these pools had served their purpose.

To the extent that ponds have been legally shielded, this has been largely due to great-crested newts – a protected species since 1981 and one that cannot thrive in rivers with large fish. These rare amphibians even had the dubious honour of becoming an anti-red-tape trope, with Angela Rayner, the housing and communities secretary, among senior politicians to have suggested that rules were overly tilted towards wildlife. Increasing heat and drought, and the stress they impose on natural systems, make the presence of water in landscapes all the more urgent. Ministers should heed calls to add targets for ponds to the plans that govern England’s 10 river basin districts. They should also embrace a broader lifting of ambition, whereby the target of high ecological status would be set for a limited number of streams, rivers and lakes.

Extracted with edits and revisions from: <https://www.theguardian.com/commentisfree/2026/jul/24/the-guardian-view-on-ponds-these-freshwater-havens-need-a-law-of-their-own>

19. How does the opening paragraph strengthen the charge of “official neglect” of ponds?

- (a) Rich biodiversity receives surprisingly little protection.
- (b) Public enthusiasm exceeds scientific concern.
- (c) Private restoration has replaced government action.
- (d) Endangered species survive only in ponds.

20. Why does the author refer to the 1996 national pond survey?

- (a) To show that restoration programmes now require national regulation.
- (b) To suggest that further surveys are no longer necessary.
- (c) To mark thirty years as an appropriate moment for stronger protection.
- (d) To show that pond policy has been continuously monitored since 1996.

21. The comparison between culverted rivers and vanished ponds primarily sharpens the distinction between:

- (a) habitats altered out of sight and habitats physically eliminated.
- (b) urban water management and agricultural conversion of natural land.
- (c) Victorian engineering practices and later mechanised farming methods.
- (d) potentially reversible river damage and permanently irreversible pond loss.

22. The great-crested newt example qualifies the idea that ponds have been “legally shielded” because such protection has often been:

- (a) politically weakened whenever conservation conflicts with housing policy.
- (b) stronger where ponds contain habitats unavailable in larger rivers.
- (c) dependent on proving that development threatens rare amphibians.
- (d) indirect, arising from species protection rather than pond status itself.

23. By introducing heat and drought after discussing biodiversity and legal neglect, the author extends the argument by suggesting that:

- (a) conservation law should shift from species protection towards water storage.
- (b) recent pond losses result increasingly from climate rather than land use.
- (c) pond conservation also supports landscape resilience under climatic stress.
- (d) ponds deserve priority because they retain water better than rivers.

24. The structure of the author’s final policy proposal is best captured as:

- (a) strengthen pond protection before extending identical standards to larger waterways.
- (b) replace species-led safeguards with one comprehensive freshwater protection regime.
- (c) restore vanished ponds while keeping basin plans focused on rivers and lakes.
- (d) integrate ponds into basin planning while raising standards selectively elsewhere.

Section B: Current Affairs including General Knowledge

Passage: Indian Grandmaster R. Praggnanandhaa created history, becoming the first Indian to win the Grand Chess Tour after staging a stunning comeback to defeat defending champion Fabiano Caruana 15-13 in the final at St. Louis in the US last night. Praggnanandhaa started the final day six points behind Caruana but won both rapid games to take the lead.

He then held his ground in the four blitz games to seal a 15-13 victory, claim 2 lakh dollar first prize and also secure a guaranteed spot in next year's Grand Chess Tour. In the third-place match, Wesley So also made a strong comeback against Vincent Keymer. After the players shared the rapid games, So won all four blitz games to seal an 18-12 victory. Earlier, Praggnanandhaa had lost the first classical game to Caruana 6-0 but drew the second game 3-3, keeping his hopes alive.

[Extracted with edits and revisions from <https://newsonair.gov.in/r-praggnanandhaa-creates-history-becomes-1st-indian-to-win-grand-chess-tour/>]

25. Consider the following statements regarding the evolution of the Grand Chess Tour:

1. Rapid and blitz tournaments formed part of the Tour's inaugural season in 2015.
2. The inaugural Tour comprised three classical tournaments conducted under identical formats and conditions.

Which of the statements given above is/are correct?

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

26. Who became India's first chess Grandmaster after receiving the title in 1988?

- | | |
|--------------------|------------------------|
| (a) Dibyendu Barua | (b) Viswanathan Anand |
| (c) Pravin Thipsay | (d) Krishnan Sasikiran |

27. Under the FIDE title regulations, what rating must a player have achieved at some point to satisfy the rating component of the Grandmaster title requirements?

- | | |
|----------|----------|
| (a) 2400 | (b) 2450 |
| (c) 2500 | (d) 2550 |

28. India won the gold medal in both the Open and Women's sections for the first time at which Chess Olympiad?

- | | |
|----------------------------------|-----------------------------------|
| (a) 44th Chess Olympiad, Chennai | (b) 45th Chess Olympiad, Budapest |
| (c) 44th Chess Olympiad, Batumi | (d) 45th Chess Olympiad, Baku |

29. In which year did FIDE publish its first official rating list based on the system associated with Arpad Elo?

- | | |
|----------|----------|
| (a) 1971 | (b) 1965 |
| (c) 1978 | (d) 1982 |

30. Which format was used for both the Open and Women's Candidates Tournaments held in Toronto in 2024?

- | | |
|--|--|
| (a) Sixteen-player single-elimination knockout | (b) Twelve-player single round-robin |
| (c) Eight-player double round-robin | (d) Eight-player Swiss-system tournament |

Passage: On 26 August 2026, a major flash flood struck Nepal's northern border region, severely affecting Rasuwa and downstream settlements along the Bhote Koshi and Trishuli river corridors. The flood carried an unusually heavy mixture of water, sediment, rock and large boulders, damaging homes, bridges, roads, hydropower facilities and important cross-border connectivity infrastructure. Hydrological observations recorded a rapid rise in river levels at downstream monitoring stations, illustrating how quickly a high-mountain hazard can develop into a wider river-basin emergency. Scientists from the International Centre for Integrated Mountain Development and

partner institutions began examining satellite imagery, field reports and video footage to identify the trigger. Preliminary assessments indicated that a large ice-rock avalanche may have entered the Lhende Khola, temporarily obstructing the channel before releasing a powerful surge downstream. Experts cautioned that the precise sequence required further scientific assessment and that individual extreme events should not be attributed to climate change without sufficient evidence. The disaster also disrupted several hydropower projects, leaving workers trapped or missing and making rescue operations difficult because roads, communication links and power infrastructure had been damaged. Nepal deployed security personnel and emergency teams, while international assistance supported search, rescue and relief operations. The episode again highlighted the vulnerability of Himalayan settlements to cascading hazards involving ice, rock, steep terrain and fast-flowing rivers. It also strengthened calls for improved high-altitude monitoring, stronger early-warning networks, resilient infrastructure and closer cross-border information-sharing in mountain river basins. Such systems are especially important where hazards can move across administrative and international boundaries.

[Extracted with edits and revisions from <https://www.icimod.org/press-release/major-flash-flood-sweeps-through-nepals-rasuwa-district-raising-fears-of-further-downstream-flooding/>]

31. The Narayani River of Nepal is generally known by which name after it enters India?

- | | |
|--------------|--------------|
| (a) Kosi | (b) Gandak |
| (c) Ghaghara | (d) Ramganga |

32. Consider the following Indian states:

1. Uttar Pradesh
2. Bihar
3. West Bengal
4. Arunachal Pradesh

Which of the above share a border with Nepal?

- | | |
|---------------------|-----------------------|
| (a) Only 1 and 2 | (b) Only 1, 2 and 3 |
| (c) Only 2, 3 and 4 | (d) All 1, 2, 3 and 4 |

33. The Nepal Himalayas are traditionally regarded as extending between which two rivers?

- | | |
|----------------------|-----------------------|
| (a) Indus and Satluj | (b) Satluj and Kali |
| (c) Kali and Teesta | (d) Teesta and Dihang |

34. Rasuwa district, which was severely affected by the recent Nepal flash floods, forms part of which province of Nepal?

- | | |
|----------------------|----------------------|
| (a) Gandaki Province | (b) Bagmati Province |
| (c) Koshi Province | (d) Karnali Province |

35. The recent Rasuwa disaster has renewed attention to glacial hazards. Which of the following correctly describes a Glacial Lake Outburst Flood (GLOF)?

- | | |
|--|---|
| (a) Sudden release of water stored in a glacial lake | (b) Gradual overflow of a monsoon-fed river basin |
| (c) Coastal flooding caused by an intense cyclone | (d) Flooding caused by failure of an irrigation canal |

36. Following the devastating 2015 Nepal earthquake, India launched which disaster-relief operation?

- | | |
|------------------------|------------------------|
| (a) Operation Karuna | (b) Operation Maitri |
| (c) Operation Sahayata | (d) Operation Himalaya |

Passage: Prime Minister Narendra Modi, Chinese President Xi Jinping, Russian President Vladimir Putin and other world leaders are set to meet in Kyrgyzstan's capital, Bishkek, today for the 26th Shanghai Cooperation Organisation summit.

The two-day summit, being held on August 31 and September 1, will take place as the grouping marks 25 years of its existence. The meeting is expected to focus on regional security, terrorism and transnational threats, alongside trade, energy, transport connectivity and digital cooperation. The ongoing conflict in West Asia, Ukraine war and regional developments are also expected to feature in the leaders' discussions. PM Modi arrived in Bishkek on Sunday after concluding a two-day visit to Uzbekistan. He was received at the airport by Adylbek Kasymaliev, chairman of the Cabinet of Ministers of Kyrgyzstan, and was welcomed with a traditional Kyrgyz dance performance.

Ministry of External Affairs spokesperson Randhir Jaiswal said on X that PM had arrived to participate in the SCO summit.

[Extracted with edits and revisions from <https://www.indiatoday.in/world/story/sco-summit-bishkek-pm-modi-xi-putin-other-world-leaders-kyrgyzstan-sco-summit-agenda-2983289-2026-08-31>]

37. Which SCO body is principally responsible for adopting the organisation's annual budget and addressing major questions of economic cooperation?

- | | |
|---|------------------------------------|
| (a) Council of Ministers of Foreign Affairs | (b) Council of Heads of Government |
| (c) Council of National Coordinators | (d) Council of Heads of State |

38. Which Indian city became the first Tourism and Cultural Capital of the SCO for the period 2022–23?

- | | |
|---------------|---------------|
| (a) Varanasi | (b) Jaipur |
| (c) Hyderabad | (d) Ahmedabad |

39. The SCO Treaty on Long-Term Good-Neighbourliness, Friendship and Cooperation was signed at which summit?

- | | |
|--------------------------|---------------------------|
| (a) Astana Summit, 2005 | (b) Shanghai Summit, 2006 |
| (c) Bishkek Summit, 2007 | (d) Dushanbe Summit, 2008 |

40. Which of the following correctly identifies the states holding observer status in the SCO as of 2026?

- | | |
|-----------------------------|------------------------------|
| (a) Afghanistan and Armenia | (b) Afghanistan and Mongolia |
| (c) Mongolia and Nepal | (d) Armenia and Mongolia |

41. Consider the following statements regarding decision-making in the SCO:

1. SCO bodies ordinarily adopt decisions by agreement without voting, provided that no member raises an objection.
2. A decision to suspend or expel a member requires the affirmative concurrence of the member state concerned.

Which of the statements given above is/are correct?

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

Passage: India's engagement with the Arctic is no longer limited to scientific curiosity. Rapid warming in the polar region can influence global sea levels, atmospheric circulation, extreme weather and the Himalayan cryosphere, making Arctic change relevant to India's climate and water security. New Delhi's Arctic Policy, released in 2022, therefore links scientific research with environmental protection, economic development, connectivity, international cooperation and capacity building. India also engages with the Arctic Council. India has maintained a

scientific presence in the region through the Himadri research station at Ny-Ålesund in Svalbard. Indian researchers study atmospheric processes, glaciers, marine systems and climate linkages, while recent efforts have aimed at sustaining operations for much of the year. Such research is important because changes in Arctic ice, oceans and weather systems can have consequences far beyond the polar zone. At the same time, climate change is making parts of the Arctic more accessible for shipping and resource exploration. Shorter maritime routes between Europe and Asia could alter global trade patterns, while deposits of critical minerals and hydrocarbons have increased economic interest in the region. These opportunities, however, are accompanied by environmental risks and growing strategic competition among major powers. For India, the challenge is to combine climate science with a clearer geopolitical approach. Its Arctic engagement must protect scientific cooperation and ecological interests while also considering shipping, energy security, critical minerals and emerging strategic alignments. A coherent long-term strategy would help India respond to a region whose environmental transformation increasingly carries global economic and security consequences.

[Extracted with edits and revisions from <https://www.orfonline.org/research/introducing-the-arctic-as-a-strategic-geopolitical-pillar-for-india>]

42. The Arctic Council was formally established through which of the following instruments?

- | | |
|---------------------------|------------------------|
| (a) Ottawa Declaration | (b) Helsinki Final Act |
| (c) Reykjavik Declaration | (d) Tromsø Convention |

43. Which country holds the Chairship of the Arctic Council for the 2025–2027 period?

- | | |
|------------------------|-------------------|
| (a) Canada | (b) Norway |
| (c) Kingdom of Denmark | (d) United States |

44. Which pair of Arctic Council states became members of NATO in 2023 and 2024 respectively?

- | | |
|-------------------------|------------------------|
| (a) Finland and Sweden | (b) Norway and Denmark |
| (c) Iceland and Finland | (d) Sweden and Norway |

45. Which of the following countries is NOT one of the eight member states of the Arctic Council?

- | | |
|-------------|-------------|
| (a) Finland | (b) Iceland |
| (c) Germany | (d) Sweden |

46. The International Tribunal for the Law of the Sea, relevant to disputes arising under UNCLOS, is headquartered in which city?

- | | |
|----------------------|-------------------------|
| (a) Hamburg, Germany | (b) Geneva, Switzerland |
| (c) Vienna, Austria | (d) Brussels, Belgium |

47. Consider the following statements regarding the Arctic Council:

1. All eight Arctic states are members of the Council.
2. Indigenous peoples' organisations may participate in the Council as Permanent Participants.

Which of the statements given above is/are correct?

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

Passage: India's sugar market came under pressure in 2026 as retail prices rose sharply ahead of the festive season, prompting the Union Government to intervene to protect consumers and maintain adequate supplies. Official data showed that the retail price of sugar increased from ₹48.18 per kg on 20 July to ₹55.70 per kg on 20 August 2026.

The Government attributed the increase to a combination of lower-than-expected domestic output, stronger seasonal demand, weather-related crop damage, tightening global supplies, and speculative stocking. Sugar

production for the current season was estimated at about 306 lakh metric tonnes, below the earlier projection of around 343 lakh metric tonnes. Crop diseases such as red rot and top borer, along with waterlogging in some producing regions, affected cane yields.

To stabilise the market, the Government imposed stock-holding restrictions on dealers and bulk consumers, strengthened physical verification of stocks, and permitted duty-free imports of raw sugar. It also advised mills and states to begin the next crushing season earlier so that additional supplies could reach the market during the festive period.

The Government rejected claims that ethanol production was principally responsible for the price rise. It stated that the proportion of sugar diverted for ethanol had declined in recent years and that grains, particularly maize, now account for a substantial share of domestic ethanol output. The episode highlighted the close relationship between agricultural production, consumer prices, sugar-mill finances, biofuel policy and government management of essential food supplies. These pressures revived debate over long-term pricing and supply reforms.

[Extracted with edits and revisions from
<https://www.pib.gov.in/FactsheetDetails.aspx?ModuleId=16&NoteId=150971&id=150971&lang=1®=6&utm>
 m]

48. The ICAR-Sugarcane Breeding Institute, an important centre for sugarcane varietal improvement in India, is situated at which of the following places?

- | | |
|--------------|----------------|
| (a) Ludhiana | (b) Pune |
| (c) Meerut | (d) Coimbatore |

49. The Ethanol Blended Petrol (EBP) Programme was formally launched in India in which year?

- | | |
|----------|----------|
| (a) 2001 | (b) 2006 |
| (c) 2003 | (d) 2008 |

50. The major reforms leading to the partial decontrol of India's sugar sector in 2013 were based on the recommendations of which committee?

- | | |
|----------------------------|-----------------------------|
| (a) Abhijit Sen Committee | (b) C. Rangarajan Committee |
| (c) Shanta Kumar Committee | (d) Ramesh Chand Committee |

51. According to recent official Government of India data, India holds which position globally in sugarcane production?

- | | |
|-----------|------------|
| (a) First | (b) Second |
| (c) Third | (d) Fourth |

52. The Minimum Selling Price (MSP) mechanism for sugar, introduced by the Central Government in 2018, primarily applies to which of the following?

- | | |
|---|---|
| (a) Purchase of sugarcane from farmers | (b) Factory-gate sale of sugar by mills |
| (c) Retail sale of sugar through ration shops | (d) Import of raw sugar by refiners |

Section C: Legal Reasoning

Passage: The Digital Personal Data Protection Act, 2023 (“Act”) regulates digital personal data. A Data Fiduciary determines the purpose and means of processing; a Data Processor processes data on its behalf, while the Data Principal is the individual to whom the data relates. The Act applies to data collected digitally in India and to non-digital data digitised later. It also reaches processing outside India when connected with offering goods or services to Data Principals within India. It excludes processing for personal or domestic purposes and personal data made publicly available by the Data Principal herself or by another person legally required to publish it.

Processing must be for a lawful purpose and based on consent or a recognised legitimate use. Consent must be free, specific, informed, unconditional and unambiguous, expressed through clear affirmative action, and confined to data necessary for the specified purpose. Before seeking consent, the Data Fiduciary must provide a clear notice describing the data and purpose. Withdrawal must be as easy as giving consent; it does not invalidate earlier processing, but future consent-based processing must cease unless another legal basis applies. Legitimate uses include responding to medical emergencies and taking measures during disasters or breakdowns of public order.

A Data Fiduciary remains responsible for processing performed on its behalf by a Data Processor. It must adopt reasonable security safeguards and notify both the Data Protection Board of India (“Board”) and affected Data Principals of a personal data breach. Affected Data Principals must be informed without delay, while specified details must reach the Board within seventy-two hours unless additional time is allowed. The Act generally requires verifiable parental consent before processing a child’s data and restricts tracking or behavioural monitoring of children. The Rules, however, permit necessary location tracking by a transport provider engaged by an educational institution for children’s safety during their journey.

The Digital Personal Data Protection Rules, 2025 introduced phased commencement. As of 11 September 2026, definitions and provisions establishing and administering the Board are in force, but substantive duties, inquiries and penalties are scheduled to commence later. The Board’s existence does not make an uncommenced duty enforceable. Once the relevant provisions operate, the Board may inquire into contraventions and impose monetary penalties after giving the affected person an opportunity to be heard, with appeals lying to the Telecom Disputes Settlement and Appellate Tribunal.

[Extracted with edits and revisions from the Digital Personal Data Protection Act, 2023, the Commencement Notification, and the Digital Personal Data Protection Rules, 2025.]

53. On 1 September 2026, FinCart collects customers’ digital personal data without giving the prescribed notice. The Board, which had already been established, conducts an inquiry and imposes a penalty under the Act. FinCart accepts that its conduct would violate the notice requirement once that requirement becomes operative. It nevertheless challenges the penalty. Is FinCart likely to succeed?

- (a) No, because notification of the Rules completed implementation.
- (b) No, because the Board had already been legally established.
- (c) Yes, because the relevant duties and penalties remained uncommenced.
- (d) Yes, because the Board’s powers are confined to directions.

54. In June 2027, EuroMatch, a company based in France, offers paid matchmaking services to persons located in India and processes their account information on servers in France. It also copies professional details from a webpage that Meera herself made freely accessible to the public. Which of the following most accurately describes the Act’s application?

- (a) Both sets are excluded because the servers are abroad.
- (b) Both sets are covered because the processing is commercial.
- (c) Paid-profile data are excluded; public-profile data are covered.
- (d) Paid-profile data are covered; public-profile data are excluded.

55. HealthSquare decides that patient records will be analysed to predict missed appointments. It determines the categories of data, the purpose of analysis and the retention period. It hires AlgoServe, which selects suitable software but processes the records under HealthSquare’s instructions. A breach occurs on AlgoServe’s systems despite a contract requiring appropriate safeguards. Which conclusion is most accurate?

- (a) HealthSquare remains responsible as the Data Fiduciary.

- (b) AlgoServe becomes responsible because it selected the software.
- (c) Both become Data Fiduciaries because each influenced processing.
- (d) HealthSquare transfers responsibility through the safeguards clause.

56. PixelFix obtains valid consent to process users' photographs and shares the photographs with a processor for editing. Riya later withdraws her consent using the prescribed method. PixelFix stops processing new photographs but instructs the processor to continue analysing previously submitted photographs for six weeks. There is no other legal basis for that analysis. Which conclusion is most appropriate?

- (a) Processing before and after withdrawal becomes unlawful.
- (b) Earlier processing remains lawful, but later analysis must cease.
- (c) Earlier processing becomes unlawful, but later analysis may continue.
- (d) Processing before and after withdrawal remains lawful.

57. An unconscious cyclist is brought to a hospital following an accident. The hospital accesses information on her phone to identify a serious drug allergy and provide immediate treatment. After she recovers, the hospital uses her telephone number to advertise paid rehabilitation packages without obtaining consent. Which conclusion is most appropriate?

- (a) Both uses are permitted because the data arose during treatment.
- (b) Neither use is permitted without the cyclist's express consent.
- (c) Treatment requires consent, while advertising is a legitimate use.
- (d) Treatment is a legitimate use, while advertising needs another basis.

58. Assume that the relevant provisions of the Act and Rules are in force. A Data Fiduciary discovers a personal data breach at 9 a.m. on Monday and immediately informs the affected Data Principals. Although it has sufficient information to send the initial intimation to the Board, it deliberately waits forty-eight hours because it believes that all reporting can be completed within seventy-two hours. It submits the required detailed information seventy hours after discovering the breach. Has it complied with the reporting requirements?

- (a) Yes, because submitting complete details within seventy-two hours satisfies both Board-reporting obligations.
- (b) Yes, because immediate notification to affected individuals permits postponing the initial Board intimation.
- (c) No, because timely submission of complete details does not cure the delayed initial intimation.
- (d) No, because complete details were required alongside the initial intimation rather than subsequently.

59. A school engages RideSafe to transport its students. RideSafe tracks each child's location during the journey for safety purposes and continues tracking the child on weekends to improve future transport routes. It does not obtain verifiable parental consent for either activity. Which conclusion most accurately follows from the Rules?

- (a) Both activities are permitted because tracking began during school transport.
- (b) Travel tracking is permitted, but weekend tracking falls outside the exception.
- (c) Travel tracking is restricted, but weekend tracking serves operational efficiency.
- (d) Both activities require consent because RideSafe is independent of the school.

Passage: The Medical Termination of Pregnancy Act, 1971, as amended in 2021 and read with the Rules, permits a registered medical practitioner to terminate a pregnancy when its continuance would endanger the pregnant woman's life, cause grave injury to her physical or mental health, or involve a substantial risk of serious foetal abnormality. Up to 20 weeks, one practitioner's good-faith opinion is required. Pregnancy alleged to result from rape is presumed to cause grave mental injury; the same presumption applies to contraceptive failure involving any woman or her partner. Where pregnancy exceeds 20 weeks but does not exceed 24 weeks, two practitioners must form the required opinion, and the woman must fall within a Rule 3B category. These include survivors of sexual assault, rape or incest; minors; women whose marital status changes during pregnancy; women with specified physical disabilities or mental illness; serious foetal malformation cases; and pregnancies in government-declared humanitarian, disaster or emergency settings. In *X v. Principal Secretary* (2022), the Supreme Court held that Rule 3B cannot exclude unmarried women merely because their relationship was not a marriage; abandonment by a partner may be treated as a change of relationship status. Doctors may consider the woman's actual or reasonably foreseeable circumstances and cannot demand family consent, documentary proof or judicial authorisation not required by law.

After 24 weeks, the statutory route is narrower: the gestational ceiling does not apply where termination is necessitated by substantial foetal abnormalities diagnosed by a State or Union Territory Medical Board. The Board

must give its opinion within three days; if it advises termination, the procedure should be completed within five days, subject to medical safeguards. Separately, when a practitioner in good faith considers immediate termination necessary to save the pregnant woman's life, the Act relaxes the gestational, additional-opinion and approved-place requirements. Consent remains distinct from medical eligibility. A competent adult's own consent is required, and a husband, partner or family member has no veto; for a minor or mentally ill person, the guardian's written consent is required. Outside the life-saving exception, termination must occur in a government hospital or approved place. A practitioner may not reveal the woman's name or particulars except to a person authorised by law, and unlawful disclosure may attract imprisonment, a fine, or both.

[Extracted with edits and revisions from the Medical Termination of Pregnancy Act, 1971, the Medical Termination of Pregnancy (Amendment) Act, 2021, the Medical Termination of Pregnancy Rules, and *X v. Principal Secretary*.]

60. Tara, an unmarried adult, is exactly 20 weeks pregnant following the failure of a contraceptive method used by her partner. One registered medical practitioner concludes in good faith that continuing the pregnancy would gravely injure her mental health, and Tara gives her consent. The practitioner performs the termination at a private clinic that has not been approved under the Act. There is no medical emergency. Which conclusion is most appropriate?

- (a) The termination is lawful because Tara's consent and the contraceptive-failure presumption cure the clinic's lack of approval.
- (b) The termination is unlawful because the contraceptive-failure presumption does not apply to an unmarried pregnant woman.
- (c) The termination is unlawful because a pregnancy of exactly 20 weeks requires two practitioners and Rule 3B eligibility.
- (d) The termination is unlawful because the valid medical opinion does not remove the independent approved-place requirement.

61. Aisha, an unmarried adult, is 22 weeks pregnant from a consensual relationship. Her partner abandoned her after learning about the pregnancy. Two registered medical practitioners conclude that continuing the pregnancy would gravely injure her mental health. An approved government hospital nevertheless demands her parents' consent and a marriage or divorce certificate before admitting her. Is the hospital justified?

- (a) The hospital is justified because an unmarried adult requires family confirmation before obtaining termination after twenty weeks.
- (b) The hospital is unjustified because abandonment may qualify and neither family consent nor extra-legal documents may be demanded.
- (c) The hospital may waive the documents but must obtain a third medical opinion because Aisha is unmarried.
- (d) The hospital may refuse termination because pregnancy from a consensual relationship remains outside Rule 3B despite abandonment.

62. Kavita, aged 17, is 19 weeks pregnant and alleges that the pregnancy resulted from rape. Her guardian gives written consent, and one registered medical practitioner forms the required good-faith opinion. Although the procedure would occur at an approved government hospital, its administrator demands both a registered police complaint and the opinion of a second practitioner. Which conclusion is most appropriate?

- (a) The termination may proceed because one medical opinion and guardian consent suffice without the additional conditions demanded.
- (b) A second medical opinion is required because minors fall within Rule 3B irrespective of the pregnancy's duration.
- (c) A police complaint is required because the rape presumption operates after the allegation has been officially verified.
- (d) The police complaint may be waived, but the rape allegation makes a second medical opinion legally necessary.

63. At 25 weeks and four days, diagnostic tests reveal that Radhika's foetus has a substantial abnormality. The State Medical Board examines her and gives an opinion recommending termination on the third day after receiving her application. The hospital refuses to schedule the procedure within the following five days because it wants two independent registered medical practitioners to confirm the Board's findings. Is the hospital's position correct?

- (a) The hospital is correct because two independent medical opinions remain necessary whenever pregnancy has exceeded twenty weeks.

- (b) The hospital is correct because a Medical Board's recommendation removes the ceiling after a court confirms its findings.
- (c) The hospital is incorrect because the Board's diagnosis activates the exception and its advice should be implemented within five days.
- (d) The hospital is incorrect because referral to the Medical Board permits termination before the Board gives its final opinion.

64. At 27 weeks, Farah develops sudden internal bleeding at a rural treatment centre that is not an approved place under the Act. Transfer to a government hospital would, in the registered medical practitioner's good-faith assessment, create an immediate danger to Farah's life. The practitioner terminates the pregnancy without obtaining another opinion or consulting a Medical Board. Which conclusion is most appropriate?

- (a) The termination is unlawful because post-24-week procedures require a Medical Board's diagnosis of substantial foetal abnormality.
- (b) The termination is lawful after another practitioner retrospectively confirms that immediate intervention was medically necessary.
- (c) The termination is unlawful because the emergency provision relaxes medical opinions but retains the approved-place requirement.
- (d) The termination is lawful if the practitioner genuinely considered it immediately necessary to save Farah's life.

65. Leena is 23 weeks pregnant. Her husband abandoned her during the pregnancy, and divorce proceedings are pending. Two registered medical practitioners conclude that continuing the pregnancy would gravely injure her mental health. Leena consents to termination at an approved hospital, but her husband sends the hospital a written objection. The hospital consequently refuses to perform the procedure. Is its refusal justified?

- (a) The refusal is unjustified because Leena's consent controls and her husband has no veto after the other requirements are met.
- (b) The refusal is justified because a husband may withdraw consent for termination while the marriage legally continues.
- (c) The refusal is unjustified because one medical opinion becomes sufficient once matrimonial proceedings have been instituted.
- (d) The refusal is justified until a divorce decree formally changes Leena's marital status during the pregnancy.

66. After lawfully terminating Priya's pregnancy, a registered medical practitioner makes two disclosures. First, she supplies Priya's identified medical record to a State authority expressly empowered by law to receive it. Second, she supplies the same record to Priya's university under its internal attendance policy, although no law authorises the university to receive such information. Which conclusion is most appropriate?

- (a) Both disclosures are permissible because each recipient requested the information for an administrative purpose.
- (b) Both disclosures breach confidentiality because the protection of the woman's identity continues after termination.
- (c) The first disclosure is permissible, while the second breaches confidentiality because the university lacks legal authorisation.
- (d) The first disclosure breaches confidentiality, while the second is permitted by the university's legitimate institutional interest.

Passage: Article 14 of the Constitution guarantees every person equality before the law and equal protection of the laws. It prohibits class legislation but does not require identical treatment of persons whose circumstances materially differ. Persons similarly situated in relation to a law's purpose should ordinarily be treated alike, while differential treatment may be used to address relevant social, economic or practical differences.

A classification is reasonable when it satisfies two connected requirements. First, it must rest on an intelligible differentia that clearly distinguishes those included in the class from those excluded. Secondly, that differentia must have a rational nexus with the legislation's stated objective. A class may be based on factors such as age, occupation, geography, economic condition or the nature of an activity, but the distinction must be real rather than artificial or evasive. A clearly identifiable class may still be unconstitutional if the characteristic defining it does not advance the law's purpose.

Classification need not attain mathematical precision. A legislature may address a problem by degrees, introduce a measure in selected areas or extend relief initially to the group considered most affected. Such under-inclusion does not by itself violate Article 14 when the selection has a reasonable connection with the objective. Courts generally presume legislation to be constitutional, and the challenger ordinarily bears the burden of showing that no reasonable basis supports the distinction. This presumption does not save a classification that is shown to lack a reasonable basis.

The modern understanding of Article 14 also reaches arbitrary State action. A measure may therefore fail even when the government attaches a formal label to two groups, if the distinction is capricious, rests on unguided discretion or lacks a determining principle. Equality is substantive rather than merely formal: treating differently situated persons identically may preserve existing disadvantage. Accordingly, a broader welfare class may be sub-classified when reliable material reveals different levels of disadvantage and the preference bears a rational connection to equitable distribution. For example, medical recovery leave may distinguish employees who undergo childbirth from other new parents if its object is physical recovery; however, the same distinction may require separate justification where the object is solely infant care.

[Extracted with edits and revisions from “Doctrine of reasonable classification”, Article 14 of the Constitution of India, and the Supreme Court’s decision in *State of Punjab v. Davinder Singh*.]

67. A State enacts a Flood Displacement Relief Act whose stated object is to provide temporary accommodation to every resident whose home becomes uninhabitable after a notified flood. The Act grants rental assistance to registered owners of affected houses but excludes tenants living in the same houses, even when they produce registered leases and proof of displacement. The State argues that property ownership creates a clear and administratively convenient class. Is the classification constitutionally valid?

- (a) The classification is valid because ownership creates a definite class, which satisfies the requirements of Article 14.
- (b) The classification is valid because the legislature may initially assist owners while postponing comparable relief for tenants.
- (c) The classification is invalid because ownership is identifiable but has no rational connection with sheltering every displaced resident.
- (d) The classification is invalid because owners and tenants must receive identical benefits whenever the same flood displaces them.

68. To evaluate a new electric-bus programme, Parliament initially offers subsidies to five cities selected through published data showing the highest combined levels of air pollution, passenger congestion and available charging capacity. Several other polluted cities are excluded during the two-year pilot phase but may be included after its evaluation. An excluded city argues that limiting the programme geographically violates Article 14. Which conclusion is most appropriate?

- (a) The scheme is likely valid because measurable need and operational capacity rationally support the limited geographical rollout.
- (b) The scheme is likely invalid because the affected cities are similarly situated and equal protection requires simultaneous coverage.
- (c) The scheme is likely invalid because geographical lines are insufficient to constitute intelligible differentia under Article 14.
- (d) The scheme is likely valid because the presumption of constitutionality prevents review of the cities selected by government.

69. A State law permits the Education Minister to waive regulatory fees for “innovative educational institutions” to encourage measurable improvements in classroom learning. The law neither defines “innovative” nor specifies criteria, evidence or reasons for selecting institutions. The Minister grants waivers to some institutions while rejecting others offering substantially similar programmes. The State argues that “innovative institutions” form a distinct class connected with the statutory objective. Is the exemption scheme valid?

- (a) The exemption is valid because encouraging innovation supplies a legislative objective capable of supporting differential treatment.
- (b) The exemption is valid because courts must presume that the Minister will identify innovative institutions fairly.

- (c) The exemption is invalid because fiscal benefits for educational institutions require uniform treatment among comparable institutions.
- (d) The exemption is invalid because the undefined standard and unguided discretion permit arbitrary selection without an ascertainable class.

70. A State creates a cyclone-insurance subsidy for fishing households residing within ten kilometres of its coastline. Inland fishing households are excluded. Government studies show that coastal households face substantially greater losses from storm surges, although cyclones may also cause rainfall damage farther inland. An inland fisher challenges the law merely by asserting that all applicants pursue the same occupation. How should the challenge be decided?

- (a) The classification is invalid because coastal and inland applicants share the occupation of fishing and therefore form one class.
- (b) The classification is valid because location reflects storm-surge exposure and the challenger has shown no irrationality in that distinction.
- (c) The classification is invalid because a ten-kilometre boundary lacks mathematical proof that exposure changes at that precise point.
- (d) The classification is valid because geographical distinctions supported by legislative judgment fall outside substantive judicial examination.

71. A public-employment rule provides six weeks of paid medical recovery leave to an employee who physically undergoes childbirth. Employees who become parents through adoption receive separate childcare leave but cannot claim this medical recovery leave. An adoptive parent challenges the distinction, arguing that both groups assume responsibility for a newborn child. The State responds that the disputed leave is intended to facilitate physical recovery from pregnancy and childbirth. Is the distinction valid?

- (a) The distinction is invalid because employees becoming parents are similarly situated for benefits associated with a newborn child.
- (b) The distinction is invalid because using childbirth as the criterion creates an artificial classification between categories of parents.
- (c) The distinction is valid because undergoing childbirth creates a relevant physical condition connected with the objective of medical recovery.
- (d) The distinction is valid because the legislature may differentiate biological and adoptive parenthood without connecting that distinction to its object.

72. A scholarship scheme benefits students belonging to a broadly recognised disadvantaged class. A government survey, however, shows that certain subgroups within that class have school-completion rates below thirty per cent and have received very few scholarships under earlier schemes. The State gives those subgroups first preference while allowing remaining students to compete for unfilled scholarships. Other members challenge the preference on the ground that the recognised class must be treated as a single unit. Is the preference valid?

- (a) The preference is invalid because recognition as one disadvantaged class prevents further division for distributing the same benefit.
- (b) The preference is invalid because a sub-classification requires removal of the remaining members from the welfare programme.
- (c) The preference is valid because an objective numerical threshold satisfies Article 14 without examination of its legislative purpose.
- (d) The preference is valid because evidence of greater internal disadvantage supports a distinction connected with equitable distribution.

Passage: Article 44 of the Constitution, a Directive Principle of State Policy, directs the State to endeavour to secure a uniform civil code for citizens throughout India. Although Article 44 is not directly enforceable in court, marriage, divorce, adoption, wills, intestacy, succession and other personal-law matters fall within Entry 5 of the Concurrent List, allowing both Parliament and State Legislatures to legislate. Where a State enactment conflicts with an existing parliamentary law, Article 254 ordinarily gives the parliamentary law priority; a conflicting State law may prevail within that State if reserved for and assented to by the President, though Parliament may later override it.

Against this constitutional background, the Assam Legislative Assembly passed the Uniform Civil Code Bill, 2026, on May 27, 2026. The Bill proposes a common framework for marriage, divorce, succession and live-in relationships across religious communities, while exempting Scheduled Tribes to preserve their customary

practices. It allows marriages to be solemnised through existing religious ceremonies, including Nikah, Anand Karaj, Vedic rites and Ahom Chaklong, but subjects their civil consequences to common rules. Polygamy is prohibited, while grounds such as cruelty, desertion and mutual consent are recognised for divorce.

The Bill requires a marriage memorandum to be submitted to the sub-registrar within 60 days and makes registration of marriages and divorces compulsory; deliberate failure may attract a fine of ₹10,000. Live-in partners must register their relationship within 30 days. A child born from such a relationship is treated as legitimate, and a deserted partner may seek maintenance through court. For intestate succession, the proposed order of heirs gives equal preference to the deceased's spouse, children and parents, while an adult of sound mind may dispose of property through a written and witnessed will.

Supporters describe the measure as advancing gender equality, legal certainty and Article 44's constitutional objective. Critics question the regulation of intimate relationships, the effect on religious freedom under Article 25, and whether an exemption for Scheduled Tribes is consistent with the claim of uniformity. Article 25 is subject to public order, morality, health and other fundamental rights, but Article 44 does not itself displace enforceable rights under Articles 14, 21 and 25. Further, Assembly passage does not by itself establish that a Bill has received every required assent or commenced; those matters depend on the subsequent constitutional and notification process.

[Extracted with edits and revisions from the Constitution of India, "Assam passes Uniform Civil Code Bill amid Opposition protests," The Economic Times, and "Assam Assembly passes UCC Bill with ban on polygamy, live-in registration rules," The Times of India.]

73. After the proposed Assam Uniform Civil Code validly comes into force, Farhan and Sana, neither of whom belongs to a Scheduled Tribe, solemnise their marriage through Nikah. They do not submit the required marriage memorandum within sixty days. Farhan subsequently contracts another marriage without dissolving his marriage with Sana. He argues that the first marriage cannot attract the statutory prohibition on polygamy because it was performed through a religious ceremony and was not registered within the prescribed period. Which of the following is the most accurate conclusion?

- (a) Farhan may contract the second marriage because an unregistered Nikah does not create a marital relationship under the Code.
- (b) The Nikah remains a recognised ceremony, while delayed registration does not remove the common statutory prohibition on polygamy.
- (c) Religious solemnisation preserves the applicable personal law, although Farhan may incur a penalty for delayed registration.
- (d) The Nikah must first be converted into a civil marriage before the provisions concerning polygamy can apply.

74. Parliament has enacted a law governing intestate succession. Assam subsequently enacts a Uniform Civil Code containing a provision inconsistent with the Parliamentary law. The State enactment is reserved for the consideration of the President and receives presidential assent. Two years later, Parliament enacts another succession law containing a different rule applicable throughout India. The Assam Government contends that the earlier presidential assent permanently protects the State rule from the later Parliamentary enactment. Which of the following best states the constitutional position?

- (a) The State rule remains applicable because presidential assent places it beyond the scope of subsequent Parliamentary legislation.
- (b) The State rule becomes ineffective because a State Legislature cannot enact laws relating to succession or personal law.
- (c) The State rule may initially prevail in Assam, but Parliament may later override it through an inconsistent enactment.
- (d) The State rule and the later Parliamentary rule apply together because presidential assent removes the inconsistency between them.

75. Consider the following Assertion and Reason:

Assertion: Since Article 44 directs the State to endeavour to secure a Uniform Civil Code, a law enacted for that purpose cannot be challenged for violating privacy or religious freedom.

Reason: Article 44 is a non-justiciable Directive Principle, and legislation enacted in its pursuit remains subject to enforceable fundamental rights.

- (a) Both the Assertion and the Reason are true, and the Reason correctly explains the Assertion.
- (b) Both the Assertion and the Reason are true, but the Reason does not explain the Assertion.
- (c) The Assertion is true, but the Reason is false.
- (d) The Assertion is false, but the Reason is true.

76. Assume that the Assam Uniform Civil Code has validly commenced. Rhea and Aman, neither of whom belongs to a Scheduled Tribe, begin a live-in relationship but apply for its registration on the forty-fifth day. A child is subsequently born from the relationship. Aman later leaves Rhea and refuses to provide financial support. Before initiating proceedings against him, Rhea orally declares before two witnesses how her property should be distributed after her death, but she does not record the declaration in writing. Consider the following statements: The application made on the forty-fifth day complies with the prescribed period for registering a live-in relationship.

The delay in registration does not, by itself, deprive the child of the legitimacy recognised under the Code.

Rhea may seek maintenance on the ground that she was deserted by her live-in partner.

Rhea's oral declaration satisfies the requirements of a will because it was made before two witnesses.

How many of the above statements are correct?

- (a) Only one of the four statements is correct.
- (b) Only two of the four statements are correct.
- (c) Only three of the four statements are correct.
- (d) All four of the given statements are correct.

77. Mariam, a non-tribal resident of Assam, solemnises her marriage according to a recognised Christian ceremony after the proposed Code has validly commenced. She later dies intestate, leaving behind her husband, daughter, mother and brother. Her brother invokes a community custom under which a male collateral relative is preferred over the deceased woman's mother. Her husband separately argues that recognition of their religious ceremony also preserves the community's rules of succession. Which of the following is the most appropriate conclusion?

- (a) The husband, daughter and mother take priority as Class-I heirs, while the asserted custom cannot displace the common succession rule.
- (b) The husband and brother take priority because recognition of the religious ceremony preserves the community's succession practices.
- (c) The daughter and brother inherit together because the Code changes marital rules without altering intestate succession.
- (d) The mother and brother inherit together because customary succession continues unless the deceased leaves a written will.

78. The Assam Legislative Assembly passes the Uniform Civil Code Bill, but no authoritative material establishes that the required assent has been obtained or that the legislation has commenced. A district authority nevertheless directs a non-tribal couple to pay a penalty because they failed to register their marriage within sixty days. The authority argues that the Assembly has approved the Bill, the prescribed period has expired, and Article 44 supports the introduction of a Uniform Civil Code. Which of the following is the strongest response to the authority's decision?

- (a) The penalty is valid because Article 44 makes the registration requirement enforceable after the Assembly approves the Bill.
- (b) The penalty is valid because the couple is not covered by the exemption granted to members of Scheduled Tribes.
- (c) The penalty is invalid because marriage registration may be encouraged but cannot carry a monetary consequence under the Code.
- (d) The penalty is premature because neither Assembly passage nor Article 44 establishes assent and legal commencement of the Bill.

Directions (Questions 79–84): Answer each question solely on the basis of the rules and facts provided. Do not rely on any prior legal knowledge.

Rules

1. An agent's authority may be express or implied. An agent authorised to perform an act has authority to perform every lawful act necessary for completing it. An agent authorised to conduct a business

transaction also has authority to perform lawful acts ordinarily undertaken in the course of such a transaction.

2. In an emergency, an agent has authority to perform all acts reasonably necessary to protect the principal from loss, provided that a person of ordinary prudence would have acted similarly while protecting their own property in comparable circumstances.
3. A contract entered into by an agent within the scope of the agent's authority binds the principal in the same manner as if the principal had personally entered into the contract.
4. When an agent exceeds the given authority, but the authorised part of the transaction can be separated from the unauthorised part, the principal is bound only by the authorised part.
5. When an agent exceeds the given authority and the authorised part cannot be separated from the unauthorised part, the principal is not bound by any part of the transaction.
6. When a principal, through words or conduct, causes a third party to believe that an agent possesses certain authority, the principal is bound by acts performed within the apparent scope of that authority if the third party acts on that belief.

Facts

Aarunya Furnishings Ltd was preparing furniture for a new hotel. The company appointed Dev as its agent to procure moisture-resistant bamboo panels from GreenGrid Materials.

Dev's written authority permitted him to purchase exactly 100 panels at a price not exceeding ₹3,000 per panel. It expressly prohibited him from purchasing machinery or exceeding the prescribed quantity or price without Aarunya's written approval. GreenGrid received a copy of this authority before negotiations began.

In the furniture trade, suppliers ordinarily do not arrange the transportation of such panels. A procurement agent acting for the buyer usually books insured road transport from the supplier's warehouse. Dev agreed to purchase 100 panels at ₹2,900 per panel and booked an insured carrier at the prevailing market rate.

During transportation, a landslide unexpectedly closed the road. The covering over the panels began to tear, and heavy rainfall was expected within an hour. The panels were likely to suffer substantial water damage if they remained outside. Dev repeatedly attempted to contact Aarunya but received no response. The only nearby covered warehouse charged ₹45,000 for two days, considerably more than the ordinary rate. After confirming that the road would remain closed, Dev hired the warehouse. The panels were stored safely and suffered no damage.

79. Was Dev authorised to book insured road transport for the panels?

- (a) No, because his written authority referred only to purchasing the panels.
- (b) Yes, because such transportation was ordinarily incidental to the authorised purchase.
- (c) No, because implied authority cannot operate where written authority already exists.
- (d) Yes, but only because GreenGrid accepted Dev as Aarunya's authorised representative.

80. Was Dev authorised to hire the warehouse for ₹45,000 during the road closure?

- (a) No, because the storage charge was considerably higher than the ordinary rate.
- (b) Yes, because an agent may incur any expense whenever the principal is unavailable.
- (c) No, because the panels had not yet suffered any actual damage from the rain.
- (d) Yes, because an ordinarily prudent owner would have protected the panels similarly.

81. Applying Rules 1, 2 and 3 together, which statement is the most accurate?

- (a) Aarunya is bound by both service contracts because each was within Dev's authority.
- (b) Aarunya is bound by the carrier's contract but not by the warehouse agreement.
- (c) Aarunya is bound by the warehouse agreement but not by the carrier's contract.
- (d) Aarunya is not bound by either contract unless it subsequently approves both agreements.

Modified Facts I

After agreeing to purchase 100 panels, Dev amended the order to include 20 additional panels at the same price of ₹2,900 per panel. The amended order separately stated the number and price of the panels. GreenGrid agreed that any number of panels could be delivered and invoiced independently. GreenGrid knew that Dev's written authority was limited to 100 panels.

82. To what extent is Aarunya bound by the amended order for 120 panels?

- (a) Aarunya is not bound by any part because Dev exceeded the permitted quantity.
- (b) Aarunya is bound by all 120 panels because the individual price remained permitted.
- (c) Aarunya is bound by 100 panels because the additional 20 panels are separable.
- (d) Aarunya is bound by all 120 panels because GreenGrid accepted the amended order.

Modified Facts II

Assume instead that, before entering into any agreement for the panels, Dev accepted a package offered by GreenGrid. The package contained 100 bamboo panels and one industrial cutting machine for an indivisible price of ₹5,50,000. The agreement did not assign separate prices to the panels and the machine, and GreenGrid refused to sell either component separately.

83. Is Aarunya bound by any part of the package transaction?

- (a) Yes, because purchasing 100 panels was expressly authorised by Aarunya.
- (b) No, because the authorised and unauthorised components cannot be separated.
- (c) Yes, but only to the independently estimated market value of the panels.
- (d) No, because an agent cannot enter into any transaction containing multiple items.

Modified Facts III

Assume a further modification. GreenGrid was never shown Dev's written authority. Instead, before negotiations began, Aarunya's Managing Director told GreenGrid in Dev's presence:

"Dev is handling the entire procurement. He may revise the quantity according to the project's requirements, and Aarunya will honour whatever order he finalises." Aarunya did not disclose the private restriction limiting Dev to 100 panels. Relying on the Managing Director's statement, GreenGrid accepted Dev's order for 120 panels at ₹2,900 per panel.

84. Is Aarunya bound by Dev's order for all 120 panels?

- (a) No, because Dev's private written authority remained limited to 100 panels.
- (b) Yes, but only if Dev honestly believed that his authority had been increased.
- (c) No, because apparent authority cannot arise from an oral representation alone.
- (d) Yes, because Aarunya represented that Dev could revise the ordered quantity.

Section D: Logical Reasoning

Passage: History shows that technology is inherently paradoxical. That is, it creates new jobs and opportunities, rendering traditional practices obsolete. Steam-powered mechanisation during the First Industrial Revolution (IR) transformed textile production and transportation. This transformation laid the foundation for new industries and new factory-based employment, which reshaped the economy and ushered in the modern industrial age.

Similar concerns resurfaced during the Digital Revolution. When computers spread across workplaces during the 1960-1970s, a worldwide debate started that computerisation and automation would eliminate millions of office/factory jobs, leading to mass unemployment. But soon, a new era began to unfold. The Internet, IT, software, programming, and a host of new digital services and opportunities appeared on the scene. This created millions of new jobs, adding trillions of dollars to the global economy.

Now we are on the cusp of an AI-driven world, seen as the 4th major IR in human history. It is blending physical, digital, and biological worlds and transforming cognitive labor. AI is like setting the cat among the pigeons. It is disrupting industries, reshaping labour markets and occupations. The new jobs that are coming up, displacing existing ones, require vastly different skills. From automating routine and manual jobs, AI is developing complex algorithms that can predict consumer behaviour.

The real concern is that AI can increasingly perform cognitive and creative tasks, and will eventually perform physical tasks as smoothly as humans. Studies indicate that AI is likely to affect almost all jobs and transform a large share of them, substantially adding to the existing unemployment.

The technological advances are outpacing job creation, raising doubts about whether new industries and occupations can absorb those displaced. This is particularly serious when the world is already struggling to create enough jobs for a growing workforce. Mastering AI does not automatically translate into employment. With access to AI for millions, the opportunities and breakthroughs would only favour those with skill and expertise. Perhaps technological advances are pushing us to a point where most human needs can be met with less human intervention, making the creation of new jobs increasingly difficult. This situation looks fundamentally different viz-a-viz the earlier Industrial Revolutions.

Under this scenario, schools will continue to play an essential role, particularly during the formative years of a child's life when they need human interaction, guidance, and support. It plays an indispensable role in building academic foundations, instilling discipline and values, developing creativity, and preparing students for careers in higher education.

Extracted with edits and revisions from: <https://www.thehindu.com/education/colleges-must-evolve-in-the-era-of-ai-and-online-education/article71431866.ece>

85. According to the author's final comparison with earlier Industrial Revolutions, which concern makes the present transition appear fundamentally different?

- (a) Emerging occupations may require skills unlike those used in jobs being displaced.
- (b) AI may extend automation from routine work into cognitive and creative activity.
- (c) Wider access to AI may still favour people possessing greater skill and expertise.
- (d) New employment may fail to grow fast enough to absorb workers displaced by AI.

86. Which development most strongly supports the author's concern that AI is widening the range of human work exposed to technological substitution?

- (a) AI is increasingly available to millions while benefits remain linked to skill and expertise.
- (b) New occupations created alongside AI require capabilities different from displaced jobs.

- (c) AI is moving from routine work into cognitive, creative and eventually physical tasks.
- (d) Schools retain an important role because children require human guidance and interaction.

87. Which statement is inconsistent with the author's position on widespread access to AI?

- (a) Wider availability may create opportunities without distributing their benefits equally.
- (b) Skilled users may gain more from AI even when access becomes broadly available.
- (c) Similar access should produce comparable gains despite major differences in user capability.
- (d) Expertise may influence how effectively individuals convert AI access into economic advantage.

88. What follows most reasonably from the author's claim that emerging jobs require "vastly different skills"?

- (a) Displaced workers may need substantial retraining before entering newly created occupations.
- (b) Workers familiar with AI will generally possess the qualifications required by emerging sectors.
- (c) Labour shortages will allow displaced workers to enter new occupations without additional preparation.
- (d) New employment opportunities are likely to compensate automatically for jobs lost to automation.

89. Which situation best illustrates the technological paradox identified by the author?

- (a) Automation reaches more occupations while access to its benefits remains uneven.
- (b) Workers acquire new skills while employers continue to value traditional experience.
- (c) Digital tools spread widely even though expertise determines who benefits most from them.
- (d) New industries generate employment while technological change makes older forms of work obsolete.

90. Which of the following is the strongest conclusion that can be drawn from the author's discussion of schools under expanding AI capability?

- (a) Adaptation may prove easier in schools than workplaces because formative learning requires sustained interpersonal involvement.
- (b) Certain educational functions may endure because human development depends on relationships as well as instruction.
- (c) Improved AI teaching could gradually reduce the importance of schools in discipline, values and social development.
- (d) Career preparation may become schooling's dominant purpose as technological competence acquires greater labour-market value.

Passage: The global economy is entering a period of profound demographic transition. Across advanced economies, declining fertility rates, ageing populations, and shrinking workforces are creating structural labour shortages that curtail economic growth. Healthcare systems are struggling to recruit nurses and caregivers. Infrastructure programmes require skilled technicians and tradespeople. Digital economies continue to demand engineers, coders, and specialised professionals.

India is placed uniquely. For decades, countries have leveraged their natural resources as instruments of economic and geopolitical influence. The Gulf economies used oil. Australia built strength around coal, iron ore, and uranium. China leveraged its control over rare earth minerals. India's greatest strategic resource may well be raw talent. In a rapidly ageing world, India has the largest reservoir of young human capital. There are 450 million Indians currently aged between 18 and 35 years, as per the UN's population estimates. A significant share of this generation is English-speaking, digitally literate, culturally adaptable, and globally connected. Most importantly, they possess a level of collective aspiration unmatched in modern economic history. However, raw talent alone is not enough. Language capability, technical training, certification, cultural preparedness and professional discipline are needed for Indian talent to thrive in global markets.

If India can prepare its youth for global workforce participation, Indian workers can become catalysts of economic growth across ageing societies, through flows of remittances and talent, while simultaneously strengthening

India's soft power and international influence. This is why global skills mobility must now be viewed not simply as migration policy, but as a strategic pillar of economic diplomacy, workforce development, and international cooperation.

The significance of this opportunity is already visible. India received over \$110.47 billion in worker remittances in FY 2025-26, a 26 per cent increase compared to the previous year. The outdated narrative of "brain drain" is increasingly giving way to a more sophisticated reality of "brain circulation". But this opportunity cannot be built on fragmented recruitment systems or opaque intermediaries. The future must rest on trusted institutions, ethical mobility frameworks, worker protection, transparent standards, and international partnerships. None of this can be built without confronting an uncomfortable reality: Political appetite for migration is shrinking in the economies that need workers most. Across much of Europe, parties running on explicitly anti-immigration platforms — from Germany's AfD to Austria's Freedom Party — have moved from the margins into government, and "remigration" has entered political vocabulary.

Extracted with edits and revisions from: https://indianexpress.com/article/opinion/columns/indias-young-can-power-the-worlds-ageing-economies-10869115/?ref=top_opinion

91. What follows most strongly from the sector-specific shortages described by the author and the warning that "raw talent alone is not enough"?

- (a) Large young populations can overcome occupational shortages even without specialised preparation.
- (b) Overseas labour demand reduces the importance of matching workers with particular professional requirements.
- (c) Demographic strength becomes valuable when workers possess the capabilities required by available occupations.
- (d) Broad labour shortages make population size more important than certification or professional discipline.

92. Which development could weaken India's ability to convert workforce preparation into large-scale global mobility?

- (a) Greater remittance flows increase the economic value India receives from overseas employment.
- (b) Ageing economies continue to experience shortages in healthcare, infrastructure and digital sectors.
- (c) Indian workers become better trained, certified and culturally prepared for overseas employment.
- (d) Governments facing labour shortages become increasingly reluctant to admit foreign workers.

93. Which policy would best translate India's demographic advantage into the form of global human capital envisioned by the author?

- (a) Build training, certification, language and cultural-preparation systems around overseas workforce needs.
- (b) Expand international recruitment mainly by promoting India's population size and youthful age structure.
- (c) Prioritise remittance growth before investing substantially in professional preparation and certification.
- (d) Depend on digital literacy and English proficiency to compensate for gaps in specialised occupational skills.

94. What is the principal argumentative role of the remittance statistic cited by the author?

- (a) Dependence of host economies on Indian labour is demonstrated through the scale of funds sent home.
- (b) Existing overseas employment is shown to generate measurable economic returns for the Indian economy.
- (c) Recent growth in remittances is attributed primarily to increasing migration by highly skilled Indian workers.
- (d) Retaining skilled workers domestically is shown to produce fewer national gains than sending them abroad.

95. Which condition does the author regard as essential for skills mobility to produce sustainable strategic benefits?

- (a) Remittance growth must remain the central measure used to evaluate international workforce mobility.
- (b) Overseas recruitment should expand rapidly even if institutional regulation develops more gradually.

(c) Mobility should rest on trusted systems, worker safeguards, transparent standards and international cooperation.

(d) Labour shortages abroad should determine recruitment practices rather than formal mobility frameworks.

96. Why does the author compare India's young population with strategic natural resources possessed by other countries?

(a) Resource-rich economies are presented as models India should follow by limiting the movement of skilled workers.

(b) Remittances are treated as providing India with the same geopolitical leverage created by mineral ownership.

(c) Population size is portrayed as sufficiently valuable to compensate for gaps in professional preparation.

(d) Human talent is framed as a resource that can generate economic value and international influence.

Passage: Nearly 1,000 feet below the sea off the coast of Norway's Svalbard archipelago, on a glass cable the width of a human hair, scientists detect a massive object moving through the water. It's so big that the water it displaces when it moves produces low-frequency waves that radiate outward from its body. These waves ripple away toward the seafloor, where they stretch the tiny glass cable, buried beneath the seabed, almost imperceptibly.

Onshore, laser pulses are fired down the cable, and as the light travels, microscopic imperfections scatter the light in the glass. Often, when researchers get feedback like this, it's a submarine moving over the cable, or even a large ship chugging along the surface above. But today, they've found a blue whale. Typically, to find whales, scientists use a hydrophone, essentially an underwater microphone that can pick up a whale's calls. They're often fixed to the seabed or suspended from research vessels. But in 2020, a team of Norwegian researchers discovered that, from the web of subsea cables that lace their way across global oceans, they could detect whale calls, too; they published a study on this finding in 2022. Recently, some of the same scientists published a new study on how to detect whales using fiber-optic telecommunication cables even when they're not producing any sound at all, in situations when they'd otherwise be out of reach for researchers.

Two discoveries had to be made before this one was possible: the 2022 study that showed scientists could passively detect whale calls using cables, and other experiments that demonstrated how passing ships could be picked up by the cables. The water displaced by their hulls as they move emits low-frequency waves that scientists can measure. These frequencies radiate from the moving object outward, decaying as they go.

Similar to when you drop a rock on the sea surface, you get these beautiful waves. When submarines or other large ships pass over these cables, they stretch the fiber-optic glass cable the same way the blue whale did, but because of Automatic Identification System ship-tracking data, scientists were able to confirm that they were indeed vessels, and could even pinpoint which ones they were.

With the whale, it was a different story. It was vocalizing on the surface, something the Norwegian research team was able to detect from their interrogator station onshore. Then, when the whale dove, they could see the same sort of disturbance they'd previously observed when submarines or ships on the surface motored over the cables. The whale's call allowed them to trace the disturbance to the animal—they could "see" the whale near the cable, even though it was completely silent.

Extracted with edits and revisions from: <https://www.smithsonianmag.com/innovation/the-global-web-of-subsea-cables-that-connects-the-world-can-now-detect-whales-even-when-theyre-silent-180989326/>

97. For movement above the seabed to register through the cable, which link in the sensing process is essential?

(a) AIS records must identify the source before the cable can register any disturbance.

(b) Vocalisation must accompany movement whenever an object passes near the cable.

(c) Water-borne waves must deform the cable in a way reflected in the optical signal.

(d) Vessel movement must occur before biological motion can produce a measurable response.

98. Which contrast best explains why the fibre-optic method expands the possibilities of whale detection beyond conventional hydrophones?

- (a) Fibre-optic cables identify individual whales, whereas hydrophones can detect only unidentified marine sounds.
- (b) Subsea cables operate continuously from shore, whereas hydrophones function only when suspended from research vessels.
- (c) Movement signals reveal a whale's exact location, whereas vocalisations provide no information about its position.
- (d) Cable sensing can register movement without sound, whereas hydrophones ordinarily depend on acoustic signals.

99. A researcher observes one blue whale using the cable system and concludes that every whale species can be identified with equal reliability. What is the main flaw?

- (a) The conclusion assumes that whales can only be detected when they remain close to the sea surface.
- (b) A result involving one observed animal is generalised to all whale species and identification conditions.
- (c) The argument assumes that AIS tracking was responsible for identifying the whale during its dive.
- (d) Similar disturbances from ships are treated as evidence that whales cannot be distinguished from vessels.

100. What enabled researchers to attribute the later silent disturbance specifically to the whale rather than merely to an unidentified moving object?

- (a) Its earlier vocalisation connected the subsequent movement signal with the same animal.
- (b) Low-frequency waves weakened in a predictable manner while moving towards the seafloor.
- (c) Passing ships had previously produced comparable disturbances along the fibre-optic cable.
- (d) Microscopic imperfections in the glass scattered the laser pulses travelling through the cable.

101. What function did AIS data perform in the earlier experiments involving ships?

- (a) It measured the amount of strain produced in the cable as individual ships passed overhead.
- (b) It transmitted the optical measurements recorded through the cable to researchers onshore.
- (c) It distinguished movement-generated signals from the acoustic calls produced by nearby whales.
- (d) It allowed researchers to match observed cable disturbances with particular passing vessels.

102. Which finding would most weaken the inference that the low-frequency disturbance observed during the whale's dive was caused by its movement?

- (a) Whale calls are detectable through fibre-optic cables while the animal remains near the surface.
- (b) Comparable disturbances frequently occur when no large moving object is present near the cable.
- (c) Waves generated by moving ships weaken as they travel away from the source through the water.
- (d) The whale had been vocalising shortly before the researchers observed its underwater movement.

Passage: Popular wisdom holds that we can 'rewire' our brains: after a stroke, after trauma, after learning a new skill, even with 10 minutes a day on the right app. The phrase is everywhere, offering something most of us want to believe: that when the brain suffers an assault, it can be restored with mechanical precision. But 'rewiring' is a risky metaphor. It borrows its confidence from engineering, where a faulty system can be repaired by swapping out the right component; it also smuggles that confidence into biology, where change is slower, messier and often incomplete. The phrase has become a cultural mantra that is easier to comprehend than the scientific term, neuroplasticity – the brain's ability to change and form new neural connections throughout life.

But what does it really mean to ‘rewire’ the brain? Is it a helpful shorthand for describing the remarkable plasticity of our nervous system or has it become a misleading oversimplification that distorts our grasp of science?

After all, ‘rewiring your brain’ sounds more like a metaphor. It implies an engineering project: a system whose parts can be removed, replaced and optimised. The promise is both alluring and oddly mechanical. The metaphor actually did come from engineering. To an engineer, rewiring means replacing old and faulty circuits with new ones. As the vocabulary of technology crept into everyday life, it brought with it a new way of thinking about the human mind.

Medical roots of the phrase trace back to 1912, when the British surgeon W Deane Butcher compared the body’s neural system to a house’s electrical wiring, describing how nerves connect to muscles much like wires connect appliances to a power source. By the 1920s, the Harvard psychologist Leonard Troland was referring to the visual system as ‘an extremely intricate telegraphic system’, reinforcing the comparison between brain function and electrical networks. The metaphor of rewiring also draws strength from changing theories in developmental neuroscience. The brain was thought to be largely static after childhood, becoming a fixed network of circuits, much like a hardwired radio. But beginning in the 1960s, researchers showed that the brain was far more adaptable. Stroke patients could regain function by recruiting new areas of the brain.

These findings revolutionised rehabilitation medicine. They also gave rise to an idea that would quickly leap beyond the clinic: if brains can rewire, then people can change. In studies of stroke recovery, clinicians often observe increased activation in brain regions adjacent to or distant from the area of damage. This is interpreted as the brain ‘rewiring’ itself to restore lost function. Popular science writers have embraced the metaphor as well, using it to explain everything from trauma healing to learning a second language.

Extracted with edits and revisions from: <https://aeon.co/essays/what-the-metaphor-of-rewiring-gets-wrong-about-neuroplasticity>

103. The author’s criticism of the term “rewiring” depends most strongly on which assumption?

- (a) Historical use of electrical comparisons makes modern neurological language scientifically outdated.
- (b) Familiar metaphors become misleading whenever readers do not know their technical origins.
- (c) Engineering language can carry expectations that do not accurately describe biological change.
- (d) Popular explanations of neuroplasticity are useful only when they avoid technological vocabulary.

104. What does the discussion of stroke recovery most strongly suggest about the limits of taking “rewiring” literally?

- (a) Recovery can involve altered activity across brain regions rather than simple replacement of damaged parts.
- (b) Mechanical precision provides the best model for explaining how lost functions are restored.
- (c) Adult neural systems remain largely fixed despite temporary changes following neurological injury.
- (d) Damaged regions alone determine whether a lost function can eventually be regained.

105. Why does the author contrast the earlier view of the brain as a “hardwired radio” with research beginning in the 1960s?

- (a) To establish that electrical metaphors became scientifically accurate after the 1960s
- (b) To suggest that stroke research replaced technological comparisons in neuroscience
- (c) To show that childhood development remains the main period of meaningful neural change
- (d) To show how evidence of adult adaptability challenged an older model of neural fixity

106. Which finding would most weaken the author’s criticism of describing neuroplasticity as “rewiring”?

- (a) Neural adaptation often varies between individuals and may require prolonged rehabilitation or practice.

- (b) Targeted interventions can reliably produce rapid, precise and repeatable changes in specific neural systems.
- (c) Recovery after brain injury may involve increased activity in regions distant from the damaged area.
- (d) Familiar metaphors help non-specialists understand that the adult brain remains capable of change.

107. What can most reasonably be inferred from the movement of “rewiring” from stroke rehabilitation to the broader idea that “people can change”?

- (a) Rehabilitation findings establish that all forms of personal change arise from the same neural process.
- (b) Medical evidence retains the same meaning when applied to learning, trauma and personal development.
- (c) Scientific ideas can acquire broader cultural meanings after moving beyond their original setting.
- (d) Clinical origins make later popular uses of a scientific metaphor equally well supported by evidence.

108. What role do the early references to wiring and telegraphy play in the author’s argument?

- (a) Earlier researchers are shown to have already understood the full extent of adult neuroplasticity.
- (b) Electrical comparisons establish that brain function operates according to engineering principles.
- (c) Changing scientific theories explain why technological language eventually disappeared from neuroscience.
- (d) Historical examples trace how technological imagery entered descriptions of neural systems.

Section E: Quantitative Techniques

[Directions for Q.109-Q114]:

A sports complex has a stadium-shaped playing field. The field consists of a rectangular portion measuring 84 metres in length and 56 metres in breadth, together with two semicircular portions constructed on the shorter sides of the rectangle. The diameter of each semicircular portion is equal to the breadth of the rectangle.

A uniform running track, 3.5 metres wide, is constructed outside the entire boundary of the playing field. Consequently, the radius of each outer semicircular boundary is greater than the radius of the corresponding inner semicircular boundary by 3.5 metres. The lengths of the two outer straight portions remain 84 metres each.

The outer boundary of the running track is fenced, except for an entrance gate measuring 6 metres. The cost of surfacing the running track is ₹320 per square metre, while fencing costs ₹450 per metre.

No area of the playing field is included in the running track. Use $\pi = 22/7$ for all calculations.

109. What is the total area of the stadium-shaped playing field?

- | | |
|-------------------------|-------------------------|
| (a) 7,088 square metres | (b) 7,168 square metres |
| (c) 7,248 square metres | (d) 7,328 square metres |

110. What is the length of the boundary of the playing field?

- | | |
|----------------|----------------|
| (a) 332 metres | (b) 336 metres |
| (c) 340 metres | (d) 344 metres |

111. What is the area of the running track?

- | | |
|---------------------------|-------------------------|
| (a) 1,242.5 square metres | (b) 1,260 square metres |
| (c) 1,277.5 square metres | (d) 1,295 square metres |

112. What length of fencing is required along the outer boundary?

- | | |
|----------------|----------------|
| (a) 354 metres | (b) 357 metres |
| (c) 360 metres | (d) 363 metres |

113. What is the total cost of surfacing the running track?

- | | |
|---------------|---------------|
| (a) ₹3,92,000 | (b) ₹3,97,600 |
| (c) ₹4,03,200 | (d) ₹4,08,800 |

114. What is the combined cost of surfacing the track and fencing its outer boundary?

- | | |
|---------------|---------------|
| (a) ₹5,42,000 | (b) ₹5,48,800 |
| (c) ₹5,54,400 | (d) ₹5,59,600 |

[Directions for Q.115-Q120]:

A company allocated an annual advertising budget of ₹96,00,000 among four channels: television, digital media, print media and outdoor advertising. The allocation was made in the ratio 5:4:2:1, respectively. No amount was transferred from one channel to another during the year.

The company utilised 75% of the television allocation, 87.5% of the digital-media allocation, 62.5% of the print-media allocation and 50% of the outdoor-advertising allocation. The remaining amount under each channel was treated as unspent budget.

For the following year, the company decided to reduce the television allocation by 10%, increase the digital-media allocation by 25%, increase the print-media allocation by 20%, and increase the outdoor-advertising allocation by 50%. Each percentage change is calculated on the respective original allocation.

The company expects the utilisation percentage of each channel to remain unchanged in the following year. The revised allocations are independent, and the unspent amount from the previous year is not included in the revised budget.

115. How much of the original budget was allocated to digital media?

- | | |
|----------------|----------------|
| (a) ₹28,80,000 | (b) ₹30,40,000 |
| (c) ₹31,20,000 | (d) ₹32,00,000 |

116. What is the ratio of the actual expenditure on television to the actual expenditure on digital media?

- | | |
|-----------|-----------|
| (a) 15:14 | (b) 14:13 |
| (c) 16:15 | (d) 17:16 |

117. What percentage of the total original budget was actually utilised?

- | | |
|-----------|------------|
| (a) 72.5% | (b) 73.75% |
| (c) 75% | (d) 76.25% |

118. What is the ratio of the unspent print-media budget to the unspent outdoor-advertising budget?

- | | |
|---------|---------|
| (a) 5:3 | (b) 3:2 |
| (c) 4:3 | (d) 5:4 |

119. What is the company's total revised advertising budget for the following year?

- | | |
|------------------|------------------|
| (a) ₹1,04,80,000 | (b) ₹1,05,60,000 |
| (c) ₹1,06,40,000 | (d) ₹1,07,20,000 |

120. By approximately what percentage is the total actual expenditure expected to increase in the following year?

- | | |
|------------|------------|
| (a) 11.11% | (b) 10.50% |
| (c) 11.67% | (d) 12.50% |

Rough Work
