

SCO INTERNATIONAL OLYMPIAD

GRADE 12 LIFE SKILLS - SDGs

A question paper for schools, teachers, and students

Designed for Grade 12 learners to apply leadership, ethical reasoning, financial literacy, and SDG thinking in real-world decision-making situations.

- case-based reasoning across local, national, and global sustainability contexts
- sections across Leadership, Finance, Community Engagement, Career Readiness, Innovation, Global Citizenship, and SDGs
- answer keys, explanations, and action-plan reasoning for deeper learning and classroom review

Leadership	Ethics	Finance	Community	Innovation
SDGs	Global	Climate	Career	Life Skills

Grade 12 | Official Question Paper | Objective Type | 40 Questions

Paper Details

Exam Name: SCO International Life Skills - SDGs Olympiad

Grade: 12

Question Type: Objective multiple-choice, case-based, reasoning-focused

Total Questions: 40

Suggested Time: 60 minutes

Skills Assessed: Leadership, ethics, financial literacy, community engagement, global citizenship, innovation, sustainability, and SDG-aligned problem solving

Section Structure

Section	Learning Focus	Question Range
Section A	Leadership, ethics, financial literacy, community engagement, career readiness, innovation, sustainability, and global citizenship	Q1-Q20
Section B	Advanced SDG case analysis across climate resilience, health systems, urban migration, energy transition, supply chains, biodiversity, digital inclusion, ocean governance, and sustainable finance	Q21-Q30
Achievers Section	Extended case reasoning with action plans, KPIs, timelines, governance design, and implementation strategy	Q31-Q40

Section A - Core Life Skills and SDG Decision-Making

Q.1

Leadership & Ethics (SDG 16: Peace, Justice & Strong Institutions)

You are the student leader of a college club that negotiates an annual grant with the university. The university finance office offers your club a modest increase in funds only if you agree to exclude a small student-run program that publicly criticises campus policies. Accepting keeps your club's flagship academic projects running but silences student voices; rejecting the offer risks severe budget cuts that would cancel scholarship workshops for underprivileged students. As a leader committed to fairness, which option most ethically balances your responsibilities to members, vulnerable beneficiaries, and free expression?

- A.** Accept the funds and stop the critical program to secure immediate benefits for the vulnerable students.
- B.** Reject the funds and publicly campaign for alternative funding, keeping the program and protecting free expression even if scholarships are cut.
- C.** Accept the funds but secretly keep the critical program running off-campus to avoid detection.
- D.** Negotiate a compromise: accept partial funding now, propose a formal mediation process with the university, and launch a low-profile awareness campaign about the program's aims while pausing public criticism.

Answer: D

Explanation: Option D is the most ethically balanced. It preserves resources for vulnerable students (duty of care), seeks institutional dialogue (procedural fairness), and protects the club's voice in a measured way. A sacrifices core values for short-term gains; B honours expression but neglects immediate obligations to beneficiaries without a fallback; C is dishonest and risks severe consequences if discovered. D demonstrates principled leadership: protect stakeholders, follow transparent processes, and attempt negotiation before escalation.

Q.2

Financial Literacy (SDG 8: Decent Work & Economic Growth)

You plan to start a small social enterprise selling eco-friendly stationery. You have ₹150,000 savings. Two options: (1) Buy a machine that doubles production but costs ₹130,000 plus ₹10,000 monthly maintenance; (2) Outsource production for ₹25 per unit with no fixed costs. Current demand estimate: 1,500 units/month at launch. Your break-even target is 6 months, and you want to keep risk low while building a reputation for ethical labor practices. Which financial choice best meets your targets?

- A.** Buy the machine to double capacity and lower per-unit cost, accepting maintenance risk to increase margins.
- B.** Outsource production entirely to avoid fixed costs and keep cash for marketing and quality controls.
- C.** Buy the machine but lease it for 3 months to test demand, then decide—if leasing unavailable, outsource.

D. Split production: purchase used equipment for ₹80,000 and outsource the remainder, conserving cash while gaining manufacturing control.

Answer: B

Explanation: With 1,500 units/month, outsourcing at ₹25/unit gives monthly production cost ₹37,500 and no large fixed payments, preserving cash (important when you must break even in 6 months). Buying the new machine ties up nearly all savings and incurs monthly maintenance that could choke cash flow if demand dips. Option D seems creative, but buying used carries unpredictable repair risk and may still drain capital. Option C adds complexity and depends on market for leasing. For early-stage social enterprises prioritizing low risk and reputation, outsourcing allows focus on branding, ethical oversight, and scaling without heavy fixed commitments.

Q.3

**Community Engagement (SDG 11:
Sustainable Cities & Communities)**

Your neighborhood is repeatedly flooded after heavy rains. The municipal office says a drainage project is in the five-year plan but offers no immediate timeline. As a community organiser with limited funds, you can: (1) raise money to hire private contractors for a temporary fix in two hotspots, (2) escalate to social media and local press demanding immediate municipal action, risking strained relations with officials, (3) develop a community-based rainwater harvesting and awareness program that reduces runoff but will take time to show results, or (4) form a joint petition with neighbouring wards and wait for a municipal town-hall. Which approach best balances immediate relief and long-term systemic change?

- A.** Hire private contractors for immediate temporary fixes; worry about long-term later.
- B.** Launch a media campaign to pressure officials for immediate municipal action.
- C.** Start community rainwater harvesting + simultaneous coordinated petition to officials, while organising temporary spot fixes using volunteer labour.
- D.** Wait for the municipal town-hall after forming the joint petition; avoid private spending or media escalation.

Answer: C

Explanation: Option C combines short-term mitigation (volunteer spot fixes), medium-term resilience building (rainwater harvesting reduces runoff), and long-term pressure (coordinated petition). It's a multi-track strategy that minimises dependency on private spending and avoids alienating officials prematurely while still creating visible community action. A provides only temporary relief and could be unsustainable; B may quickly raise attention but risks antagonism and could backfire; D risks inaction. C demonstrates pragmatic, community-centered engagement with both immediate and systemic focus.

Q.4

**Career Readiness (SDG 4: Quality
Education & SDG 8)**

You are a final-year student offered two opportunities before graduation: a paid internship at a high-reputation multinational for 6 months with limited mentorship but a strong CV boost, or a 12-month fellowship at a local NGO that offers deep mentorship, leadership training, and direct community impact but lower pay. Your long-term goal is either a career in global development or

to join a competitive management trainee program in corporate sector in two years. Which option should you choose to maximise both immediate and future career mobility?

- A.** Take the multinational internship to build a recognizable CV and network for corporate programs.
- B.** Choose the NGO fellowship for mentorship and real leadership experience valuable in development and management.
- C.** Decline both and pursue a short online certificate plus freelance projects to build a hybrid profile.
- D.** Accept the multinational internship now and plan to volunteer weekends with local NGOs to gain both experiences.

Answer: B

Explanation: The NGO fellowship (B) gives substantive leadership, project ownership, and mentorship — transferable to both global development and corporate management roles. Many competitive corporate programs increasingly value demonstrated impact and leadership, not only brand names. Option A gives prestige but limited growth in the short term; D tries to combine but may lead to burnout and shallow NGO involvement. C is risky without the guaranteed mentorship and structured growth the fellowship provides. For long-term mobility across sectors, deep experience plus mentorship is often more valuable than a short brand-name stint.

Q.5

Innovation & Sustainability (SDG 9: Industry, Innovation & Infrastructure; SDG 12: Responsible Consumption)

A startup you advise designs a biodegradable packaging film that currently costs 40% more than conventional plastic but reduces landfill impact. A large retailer is open to a pilot if you can hit price parity within 12 months. Your options: (1) scale production now with investor capital to reduce cost by volume, (2) license the formula to several manufacturers to spur competition and accelerate cost drops but lose some IP control, (3) focus on premium niche markets where customers pay more and delay mass scaling, or (4) form a coalition with NGOs and the retailer to secure market incentives (tax rebates or co-funding) to offset price differences. Which path best balances sustainability mission, financial viability, and control?

- A.** Scale now with investor capital to force down costs quickly.
- B.** License the formula to multiple manufacturers to speed adoption.
- C.** Target premium niches first to retain control and validate product.
- D.** Build a coalition for shared incentives while piloting in premium niches.

Answer: D

Explanation: D is the most balanced: coalition building can secure policy or commercial offsets (reducing cost pressure), retain strategic control, and piloting in premium niches validates performance and brand while generating revenue. A risks dilution of mission and dependence on investor timelines; B sacrifices IP and long-term control which may undermine mission-driven quality standards; C alone delays broader environmental impact. D combines policy, market, and staged scaling — a strategic, mission-aligned approach.

Q.6

Global Citizenship (SDG 17: Partnerships for the Goals; SDG 10: Reduced Inequalities)

You're part of an international student exchange planning virtual and in-person activities on cultural sensitivity. A proposed workshop includes a role-play where students simulate a historical conflict; some host country students find it potentially retraumatizing while exchange partners say it's crucial for candid learning. As the coordinator responsible for program inclusivity, what is the best way to proceed?

- A. Postpone the role-play indefinitely to avoid harm and focus on lectures.
- B. Proceed with the role-play because honest confrontation builds resilience and understanding.
- C. Redesign the activity into facilitated storytelling and testimony sessions with informed consent and trauma-informed moderators; offer opt-out and alternative assignments.
- D. Run the role-play but restrict participants to those who volunteer and sign consent forms.

Answer: C

Explanation: C is inclusive and ethically sound: it preserves learning objectives (understanding conflict) while mitigating harm through trauma-informed facilitation, consent, and alternatives. A avoids risk but sacrifices deep learning; B ignores potential harm; D allows consent but lacks professional safeguards and alternatives. Good global citizenship balances critical engagement with empathy and protection for vulnerable participants.

Q.7

Leadership & Ethics + Financial Literacy (SDG 1 & 16)

As treasurer of a student relief fund for disaster-affected families, you discover an accounting discrepancy: ₹50,000 appears unallocated. The advisor suggests quietly reallocating it to an urgent but unofficial hardship program to avoid delays; the official process would take weeks. If you reallocate now, you help people immediately but breach finance rules and risk audit consequences; if you follow process, people may suffer in the meantime. What should you do?

- A. Reallocate immediately and document the decision internally, prioritising urgent help.
- B. Follow the official process; escalate the urgency to officials and expedite approvals.
- C. Use ₹25,000 now for emergency aid and reserve ₹25,000 pending formal approval, informing the advisor.
- D. Freeze all spending until a full audit clarifies the discrepancy, then act based on audit results.

Answer: B

Explanation: B is correct because as treasurer you must maintain fiduciary integrity; formally escalating urgency is the right ethical route and preserves the fund's long-term ability to help. A risks misuse and future loss of funding trust; C is a half-measure that still bypasses procedures and can create liability; D prioritises process over people unnecessarily. Proper escalation, transparent communication, and seeking emergency provisional approval are the responsible leadership choice.

Q.8

Career Readiness + Innovation (SDG 8 & 9)

You're offered a role at an early-stage climate tech startup as product lead with equity but low salary, or a stable senior analyst position at a research firm with a good salary and learning opportunities. The startup could accelerate your leadership trajectory and impact but may fail; the research job offers safety and transferable skills. You need to fund a family obligation in 9 months. What decision best balances immediate financial responsibility and long-term career impact?

- A.** Join the startup for potential future upside and leadership growth.
- B.** Accept the research firm job to secure income and build skills; pursue side projects in climate tech.
- C.** Negotiate with the startup for a higher salary, accepting the job only if they meet your financial needs.
- D.** Take the research job but sign a deferment agreement with your family to delay the obligation.

Answer: C

Explanation: C is the most pragmatic—try to secure financial viability while pursuing impactful work. If startup can't meet your short-term needs, option B becomes the fallback: stable income plus side projects still builds credibility. A risks family obligation and personal stress; D may not be feasible or fair to family. Negotiation preserves options and demonstrates professional leadership; if unsuccessful, choose stability with a planned transition.

Q.9

**Community Engagement + Global
Citizenship (SDG 3: Good Health & Well-
being; SDG 10)**

A transnational public health campaign proposes mobile clinics in underserved rural districts. Local community leaders fear outsiders will impose solutions that don't respect cultural practices, while the campaign team insists on standardized protocol for quality and safety. As project manager, how do you design the rollout to respect local agency and meet public-health standards?

- A.** Enforce the standardized protocol strictly to ensure consistent quality and safety across sites.
- B.** Fully localise the program: hand full control to local leaders and abandon standardized measures.
- C.** Co-create protocols with local leaders and health workers: pilot a hybrid model with measurable safety benchmarks and community feedback loops before scaling.
- D.** Limit the intervention to urban areas where regulation and oversight are easier, postponing rural work.

Answer: C

Explanation: C integrates quality standards with local legitimacy. Co-creation ensures cultural fit and buy-in, pilots allow iterative improvement with measurable safety outcomes, and feedback loops maintain accountability. A risks cultural resistance and poor uptake; B can compromise safety; D abandons the most vulnerable. This balanced approach respects global citizenship principles and achieves health objectives.

Q.10**Innovation & Sustainability +
Financial Literacy (SDG 7: Affordable &
Clean Energy; SDG 12)**

A community co-op can invest ₹1 million to install a hybrid microgrid (solar + battery) serving 200 households. Two financing models: (i) upfront co-op payment so households pay minimal fees and the co-op recoups in 7 years; (ii) a pay-as-you-go metering model with a third-party financier covering capital, at higher long-term per-kWh costs but lower entry price. Some low-income members cannot afford any upfront cost. Which model best supports equitable access and long-term sustainability for the community?

- A.** Upfront co-op payment to minimise long-term costs and foster collective ownership.
- B.** Pay-as-you-go so low-income households can access energy immediately without capital burden.
- C.** Hybrid approach: co-op funds a core share to guarantee baseline access for low-income homes and use pay-as-you-go for additional usage and optional upgrades.
- D.** Delay the project until external grants can fully finance it so no household pays.

Answer: C

Explanation: C ensures immediate access for low-income households (equity) while leveraging PAYG to expand services and share risk. Pure upfront (A) risks excluding the poorest; pure PAYG (B) increases long-term costs and dependency on financier; waiting for full grants (D) may never materialise and delays benefits. The hybrid model balances ownership, affordability, and scalability — a sustainable social finance solution aligned with SDGs.

Q.11**Leadership & Ethics (SDG 16: Peace,
Justice & Strong Institutions)**

Your college is selecting a student ombuds committee to handle sensitive complaints. The selection panel asks you—an elected student rep—to nominate two peers. You know one candidate is widely respected but has close family ties with a faculty member who might be implicated in future complaints; the other candidate is less experienced but has a strong record of impartial mediation. Nominating the respected candidate could increase committee credibility but raise perceived conflicts; nominating the less experienced candidate could lower initial trust but ensure perceived impartiality. Which nomination is the better ethical choice?

- A.** Nominate the widely respected candidate to maximise public trust and assume any conflict can be managed later.
- B.** Nominate the less experienced but impartial candidate to prioritise conflict-of-interest avoidance and build capacity.
- C.** Nominate both and publicly disclose the family tie, letting the selection panel decide.
- D.** Refuse to nominate anyone and request the panel use an open call to avoid personal bias.

Answer: B

Explanation: B prioritises impartiality and the integrity of a complaints mechanism — essential for justice and trust. While credibility matters, perceived conflicts can undermine the committee's legitimacy. A assumes conflicts are manageable but risks bias. C exposes the issue but still pushes a candidate whose impartiality is questionable; it defers responsibility. D avoids decision-making and delays an important process. Choosing

the less experienced but clearly impartial person supports ethical safeguards and can be paired with mentoring to build credibility.

Q.12

Financial Literacy (SDG 8: Decent Work & Economic Growth)

You've been offered a part-time role that pays more hourly but is irregular (no guaranteed hours) and another role with lower hourly pay but guaranteed 20 hours/week and employee benefits. You are saving for tuition and need predictable monthly cashflow, but you also want to maximise short-term income to pay down a small loan. Which choice best balances cashflow predictability and debt repayment speed?

- A. Take the higher-pay irregular role and work extra when available to maximise income.
- B. Take the guaranteed hours role for steady cashflow and benefits, accepting slower loan repayment.
- C. Split time between both roles, prioritising guaranteed hours and filling remaining time with the higher-pay job.
- D. Choose the irregular role now, and switch to guaranteed work only once the loan is paid.

Answer: C

Explanation: C balances predictability (guaranteed hours) with income maximisation (higher-pay job) and reduces risk of income shortfalls. A risks gaps that could hamper tuition payments; B sacrifices speed of debt repayment and potential higher income; D is risky because the irregular gig may not consistently cover tuition or loan obligations. Splitting prioritises stability while still accelerating repayments.

Q.13

Community Engagement (SDG 11 & 6: Sustainable Cities & Clean Water)

A river cleanup initiative you lead faces a dilemma: a corporate sponsor offers substantial funds but requests prominent branding and a VIP launch that looks promotional; local residents worry this will co-opt the volunteer spirit. Alternatively, grassroots donors cover only 30% of the budget and would require intensive local fundraising which could delay work during monsoon season. Which approach best serves community ownership while ensuring project effectiveness?

- A. Accept corporate sponsorship to secure funds and speed implementation despite branding concerns.
- B. Rely solely on grassroots funds to preserve community ownership, delaying until funds are raised.
- C. Accept the corporate funds but insist on limited branding and a community-led launch co-designed with residents.
- D. Split sites: use corporate funds for high-impact, non-controversial areas and grassroots funds for community-sensitive locations.

Answer: C

Explanation: C preserves urgency and resources while protecting community ownership through co-design and limits on branding. A risks alienation and perceived greenwashing; B delays critical work and may allow pollution to worsen; D complicates logistics and could create inequities between sites. Co-design balances legitimacy, speed, and accountability.

Q.14

Career Readiness (SDG 4 & 8)

You are preparing for job placements: one path emphasises deep technical certification (6 months full-time study) that boosts employability in specialised roles; the other emphasises building a portfolio of short internships and soft-skill workshops over six months, which may suit leadership tracks. You have only six months before placements; which path gives you the best chance at flexible, resilient career options?

- A. Do the technical certification to become a specialist with clear job prospects.
- B. Build the portfolio of internships and soft skills to be adaptable across roles.
- C. Split time: pursue a shorter technical micro-credential while doing one internship and soft-skill workshops.
- D. Delay further training and apply immediately to placements using existing qualifications.

Answer: C

Explanation: C hedges bets: a micro-credential provides evidence of technical competence while internships and soft skills demonstrate adaptability and leadership potential. A locks you into a specialist route that may limit sector flexibility; B may lack the depth some employers seek; D wastes the investment window and lowers chances. A mixed approach increases overall employability across career paths.

Q.15

Innovation & Sustainability (SDG 7 & 12)

A campus canteen plans to eliminate single-use cutlery. Two options: provide subsidised reusable metal cutlery that students must return to borrow, or offer compostable single-use cutlery at higher price. Reusables require a robust washing/distribution system and initial capital; compostables fit current workflow but create higher recurring costs and partial waste streams. Which option best aligns with sustainability and practical campus operations?

- A. Introduce subsidised reusable cutlery and invest in washing infrastructure immediately.
- B. Switch to compostable single-use cutlery to avoid system changes and keep convenience.
- C. Pilot reusable cutlery in one canteen while offering compostables campus-wide, then scale based on results.
- D. Keep current single-use plastic but run a student awareness campaign to reduce use.

Answer: C

Explanation: C uses a pilot to test logistics and student compliance before heavy investment, while compostables reduce plastic harm in the short term. A is ideal long-term but risky without tested systems; B preserves convenience but locks in recurring costs and potential composting contamination; D avoids meaningful change. Piloting balances practicality with ambition and reduces implementation risk.

Q.16**Global Citizenship (SDG 10 & 17)**

Your university partners with an overseas campus on a joint research program. Funding rules require equal publication credit for both institutions, but local researchers argue their fieldwork constituted most of the effort and deserve lead authorship. International partners insist on equal credit to meet their institutional metrics. How do you reconcile fair recognition with partnership commitments?

- A.** Insist on lead authorship for local researchers to acknowledge effort, risking the partnership.
- B.** Accept equal authorship to preserve the partnership, despite local resentment.
- C.** Establish transparent contribution statements on each paper, rotate lead authorship across outputs, and document workload in partnership agreements.
- D.** Split publications into separate papers so local researchers can lead one and partners lead another.

Answer: C

Explanation: C creates transparency and long-term fairness: contribution statements clarify credit, rotating leads balances institutional needs, and documenting expectations prevents future disputes. A risks damaging collaboration; B undermines local morale and equity; D may fragment research and feel like gaming the system. C aligns with SDG partnerships and equitable recognition.

Q.17**Leadership & Ethics + Community
Engagement (SDG 16 & 11)**

During a municipal consultation, your youth group uncovers evidence that a public consultation report omitted several community objections. The council claims it was an oversight; activists suspect deliberate exclusion. Revealing the omission publicly may mobilise support but could sour relationships and close future consultative channels. What should you do?

- A.** Publicly expose the omission immediately to force transparency.
- B.** Quietly meet council officials with documented evidence and demand corrections before going public.
- C.** Collect more community testimonials to strengthen the case and then either negotiate or expose depending on response.
- D.** Accept the council's explanation to preserve relationships and work within the system.

Answer: C

Explanation: C builds a stronger evidence base (testimonials) and gives room for negotiation while maintaining leverage. A risks burning bridges without exhausting remedies; B is reasonable but may lead to inaction if council resists—collecting testimonials strengthens negotiation. D sacrifices accountability. C balances principled advocacy with strategic escalation.

Q.18**Financial Literacy + Innovation (SDG 9 & 8)**

You're leading a student co-op developing an app to match volunteers with local NGOs. The dev team estimates building a fully featured app will take a year and significant hosting costs; a basic MVP could launch in two months using free tools but lack polish. Your funder expects measurable impact within six months. Which product strategy best balances credibility, impact, and fiscal responsibility?

- A.** Build the full app to ensure long-term quality despite missing the funder's six-month expectation.
- B.** Launch the MVP quickly to meet impact timelines and iterate based on feedback.
- C.** Use the MVP for six months and concurrently raise funds or apply for grants for the full app.
- D.** Delay work until sufficient funds are secured to build the full product properly.

Answer: C

Explanation: C meets short-term expectations with an MVP while actively pursuing resources to scale—this manages funder relations, demonstrates impact, and is fiscally prudent. A ignores time commitments; B meets timelines but may leave scaling uncertain without fundraising plans; D delays impact and risks losing funder confidence. C shows strategic product management and financial planning.

Q.19**Career Readiness + Global Citizenship (SDG 4 & 10)**

You're applying for a fellowship that requires a one-year placement abroad in a low-income region. The fellowship covers living costs but suspends your domestic scholarship and campus mentorships. The fellowship could deepen intercultural skills and networks but delays your planned postgraduate application and removes local supports. Which choice best serves long-term objectives of global career readiness and equity?

- A.** Accept the fellowship to gain unique international experience and postpone postgraduate plans.
- B.** Decline and pursue postgraduate applications on schedule, preserving campus mentorship and scholarship.
- C.** Negotiate a deferred start for the fellowship or remote mentorship so you can maintain scholarship and phased commitments.
- D.** Accept but arrange strong remote mentorship and a tailored plan to keep postgraduate applications alive.

Answer: C

Explanation: C seeks structural flexibility, preserving both opportunities. Negotiation may allow deferral or hybrid arrangements that reduce trade-offs. A sacrifices local supports and scholarship; B loses the global edge; D is pragmatic but may not be possible without formal agreements. Attempting to negotiate aligns with strategic career planning and protects equity considerations.

Q.20

**Innovation & Sustainability +
Financial Literacy (SDG 13 & 7)**

A community school considers investing a small fund in rooftop solar. Two vendor quotes: Vendor A offers a turnkey system with a 10-year warranty and predictable maintenance fees; Vendor B offers a lower upfront price but with performance guarantees only if the school signs a multi-year maintenance contract at variable rates. The fund is limited and must cover both installation and a three-year operational buffer. What procurement decision best protects the school's sustainability goals and limited finances?

- A. Choose Vendor A for predictable total cost and warranty security.
- B. Choose Vendor B to minimise upfront cost and negotiate maintenance later.
- C. Negotiate with Vendor A for phased payments or with Vendor B for fixed maintenance for three years, then decide.
- D. Postpone the project until the school can raise a larger fund to avoid vendor uncertainty.

Answer: C

Explanation: C prioritises negotiation to align vendor terms with the school's finance constraints and sustainability aims. A could be fine but may exceed short-term budget flexibility; B risks unclear future costs; D delays benefits. Negotiation can secure phased payments or a fixed short-term maintenance agreement that fits the three-year buffer and protects long-term performance.

Section B - Advanced Global SDG Case Analysis

Q.21

**Climate Resilience & Food Security
(SDG 2 & 13)**

An international development consortium will fund a drought-prone region to increase food security. Three interventions are proposed: (1) subsidise drought-resistant seed adoption across 70% of farms, (2) build regional water reservoirs and irrigation infrastructure, or (3) invest in a blended program: 30% seed subsidies, decentralised solar-powered water pumps for vulnerable farms, plus farmer training in regenerative practices. Each has trade-offs: seeds scale quickly but may not suit socio-ecological contexts; big infrastructure gives long-term supply but is capital-heavy and slow; blended is complex to coordinate but spreads risk. If the consortium's KPI is to reduce seasonal crop failure rate by 50% within 4 years while ensuring community ownership, which option best meets the KPI and why?

- A. Mass seed subsidy—rapid adoption will immediately lower failure risk.
- B. Large reservoirs and irrigation—structural water access is the most durable solution.
- C. Blended program—diversified interventions targeting short-term coverage and long-term resilience.
- D. Fund a market stabilization program (price supports) instead—economic buffers will protect livelihoods irrespective of yield.

Answer: C

Explanation: The blended program spreads risk across technology, agronomy, and capacity building—immediate gains from seeds + targeted pumps for the most vulnerable + regenerative training to improve soil moisture and long-term resilience. Outcomes: faster reductions in crop failure where pumps and seeds align;

durable decreases where training changes practices. Risks: coordination complexity and higher transaction costs. Measure success by crop failure rate, percent of farms using blended interventions, pump uptime, and farmer retention of practices. Pure seed programs can fail where water or soils are limiting; reservoirs are durable but too slow to meet a 4-year KPI alone. Market supports protect incomes but don't reduce crop failure.

Q.22

Global Health Systems (SDG 3 & 17)

A consortium aims to reduce maternal mortality in a set of low-resource countries by improving emergency obstetric care. Options: (1) centralise resources into regional referral hospitals with advanced obstetric suites, (2) decentralise by training and equipping community birthing centers with telemedicine links, or (3) build a hybrid referral network: strengthen primary-level detection and transport systems plus upgrade three strategic referral centers. The metric is reduce maternal mortality ratio (MMR) by 30% in 5 years. Which design is most likely to meet this outcome equitably?

- A. Centralise—invest in high-quality facilities to treat severe cases efficiently.
- B. Decentralise—bring care closer to communities to reduce delays.
- C. Hybrid referral network—improve early detection, transport, and strategic capacity.
- D. Focus on community health education only—prevention will reduce complications.

Answer: C

Explanation: Maternal mortality often results from delays: (1) recognizing complications, (2) reaching care, (3) receiving adequate treatment. The hybrid model addresses all three: detection at primary level, reliable transport reduces delay 2, and upgraded referral centers handle complications. Outcomes: faster emergency transfers, increased facility deliveries, lower third-delay rates. Risks: requires systems coordination, investment in ambulances/transport and communication. Pure centralisation can leave rural women with access delays; pure decentralisation may lack capacity for severe cases; education alone is necessary but insufficient to treat emergency complications.

Q.23

**Global Migration & Urban Integration
(SDG 11 & 10)**

A rapidly growing city is absorbing large numbers of climate migrants. The municipal government can (1) formalise migrant settlements into planned neighbourhoods with tenure security and basic services, (2) enforce eviction of informal settlements to discourage further influx and protect urban order, or (3) implement a social compact: legalise core informal settlements, invest in shared services, and set regional incentives for rural adaptation to stabilise flows. The outcome target: reduce informal settlement growth rate and improve access to water, sanitation, and schooling for migrant children within 3 years. Which approach best balances rights, integration, and system capacity?

- A. Formalise core settlements—grant tenure and basic services to stabilise communities.
- B. Enforce evictions—discourage illegal settlement and preserve city planning.
- C. Social compact—legalisation + services + regional incentives for origin areas.

D. Do nothing—wait for national policy guidance; municipal action may be unsustainable.

Answer: C

Explanation: The social compact recognises multi-scalar causes of migration and links urban integration with regional adaptation incentives—reducing push factors while improving urban services. Outcomes: slower informal growth, better child schooling and sanitation, stronger governance legitimacy. Risks: complex coordination across governments and donors; political pushback. Formalising alone helps current residents but doesn't tackle inflows; evictions violate rights, worsen vulnerability, and often increase disease spread. Measuring success: settlement growth rates, service access statistics, school enrolment, and migration flow trends.

Q.24

Global Energy Transition (SDG 7 & 13)

A group of island nations seeks to transition from diesel to renewables while avoiding energy price shocks. They can (1) rapidly deploy renewables with concessional finance and guaranteed fuel price stabilisers, (2) staggered transition prioritising large anchor loads (hospitals, ports) first, or (3) regional energy pooling—create inter-island transmission to balance variable renewables. The aim: cut fossil fuel use for electricity by 60% in 6 years without raising average household energy bills. Which strategy most feasibly meets the aim?

- A. Rapid deployment with concessional finance and price stabilisers—aggressive scaling with protections.
- B. Staggered anchor-first approach—secure critical services early and scale later.
- C. Regional energy pooling—leverage geographic diversity to stabilise supply and reduce storage needs.
- D. Continue diesel but invest in efficiency—reduce consumption gradually.

Answer: A

Explanation: The fastest way to cut 60% is aggressive deployment combined with financial instruments that shield households from transitional cost pressures. However, regional pooling (C) is a powerful complementary strategy for balancing variability and lowering storage costs. Outcomes: quick fossil displacement, stable consumer bills (if subsidies/stabilisers are managed), and reduced import expenditure. Risks: subsidy fiscal burden, grid integration challenges. Staggered anchor-first is conservative and slower; pooling may be limited by transmission costs and geopolitics. Measure success by percent fossil generation replaced, average household bill changes, fuel import bills, and RE capacity installed.

Q.25

Global Supply Chains & Ethical Sourcing (SDG 8 & 12)

A multinational brand sources a critical commodity from a region with documented labour abuses. Options: (1) immediately suspend sourcing until audits confirm remediation, (2) stay and invest in supplier capacity building and worker protections, or (3) shift sourcing to another region with better standards but higher costs, potentially harming local economies reliant on the brand. The corporate KPI is eliminate confirmed child labour from supply chain within 2 years while maintaining livelihoods. Which approach best aligns with rights and outcomes?

- A. Suspend sourcing—cut ties until suppliers pass independent audits.
- B. Invest in remediation—work with suppliers, NGOs, and local unions to improve conditions.
- C. Move sourcing to safer regions to protect brand and avoid complicity.
- D. Apply a phased sourcing shift while investing remaining revenue into local social programs.

Answer: B

Explanation: Working with suppliers and local stakeholders is more likely to remove child labour while preserving livelihoods—abrupt suspension or relocation can worsen community poverty and push child labour into informal markets. B outcomes: formalised employment, worker protections, and audited supply chains. Risks: slow remediation, reputational risk if progress is inadequate. A and C are politically easier but can cause harm to dependent communities. D (phased shift + investment) can be used if suppliers fail to remediate in set milestones. Metrics: incidence of child labour found in audits, wage levels, supplier compliance rates, and alternative livelihood programs funded.

Q.26

Pandemic Preparedness & Global Equity (SDG 3 & 17)

Following a global health shock, wealthy countries secured advanced vaccines first. To avoid future inequities, an alliance proposes (1) a global pooled procurement and distribution mechanism guaranteeing equitable access, (2) national self-reliance via domestic manufacturing capacity in each region, or (3) a hybrid: regional mRNA hubs plus a global allocation fund. The target: ensure 90% vaccine coverage in low- and middle-income countries within 12 months of a future pandemic vaccine approval. Which architecture most reliably reaches the target?

- A. Global pooled procurement—centralised buying and allocation.
- B. National self-reliance—each region builds capacity to avoid dependency.
- C. Hybrid—regional manufacturing hubs with a global fund for surge allocation.
- D. Rely on charitable donations and bilateral deals—market-driven charity will fill gaps.

Answer: C

Explanation: Regional hubs speed production and reduce export restrictions, while a global fund ensures surge allocation and pooled purchasing power. Outcomes: faster local supply, reduced export bottlenecks, and equitable allocation. Risks: hubs require technology transfer, IP arrangements, and financing. Pure centralisation suffers from chokepoints and geopolitics; pure national self-reliance is costly and slow; charity (D) repeats past failures. Measure by time-to-dose in LMICs, percent coverage within 12 months, production lead times, and delivery equity indices.

Q.27

Biodiversity & Development Trade-offs (SDG 15 & 1)

A country with high biodiversity and extreme rural poverty is offered a major mining concession promising jobs and revenue but threatening a critical habitat. Alternatives: (1) allow controlled mining with strict biodiversity offsets and revenue-sharing with local communities, (2) reject mining and invest in ecotourism and payments for ecosystem services (PES), or (3) a moratorium while conducting a strategic environmental assessment (SEA) and consulting Indigenous

peoples. The target: raise rural incomes by 40% within 6 years without net loss to critical habitats. Which pathway best balances outcomes?

- A. Controlled mining with offsets and revenue-sharing—rapid income gains with mitigation.
- B. Invest in ecotourism and PES—sustainable livelihoods with conservation.
- C. Moratorium and SEA—evidence-based path that may find alternative development.
- D. Allow mining unrestricted to prioritise immediate poverty alleviation.

Answer: C

Explanation: A moratorium plus SEA and Indigenous consultation delays harm, produces robust evidence on trade-offs, and can design revenue mechanisms or alternatives. Mining with offsets often fails to achieve true biodiversity equivalence; offsets and revenue sharing can mitigate but not eliminate habitat loss. Ecotourism/PES (B) can be viable but may not scale fast enough for 40% income growth across the region. The moratorium allows for planning—if SEA identifies responsible mining zones with enforceable offsets and real community revenue, then a controlled approach could be accepted; otherwise, invest in scalable PES/ecotourism. Metrics: habitat integrity indicators, rural income changes, employment stats, and compliance with SEA recommendations.

Q.28

Digital Inclusion & Democracy (SDG 9 & 16)

A coalition wants to close the digital divide to strengthen civic participation. Interventions: (1) mass deployment of low-cost internet access without content controls, (2) invest in digital literacy programs plus community access points that include civic education, or (3) partner with platforms to promote civic content while rolling out access. The goal: increase meaningful civic engagement (measured by informed participation in local consultations and voter turnout among underserved demographics) by 25% in 3 years. Which approach is most likely to achieve informed, equitable civic participation?

- A. Universal access—focus on connectivity and let civic outcomes follow.
- B. Digital literacy + community access with civic education—build skills and context.
- C. Platform partnerships—leverage platforms to push civic content at scale.
- D. Restrict access to vetted civic portals to avoid misinformation.

Answer: B

Explanation: Connectivity alone is necessary but insufficient; digital literacy and civic education equip citizens to use information critically and participate constructively. Platform partnerships (C) can supplement but risk bias and dependency. Restricting access (D) undermines rights and may backfire. Outcomes: higher local consultation participation with quality inputs, increased voter turnout, and reduced spread of misinformation. Measure via turnout data, consultation attendance and quality (e.g., number of evidence-based inputs), and digital literacy assessments.

Q.29

Ocean Governance & Fisheries (SDG 14 & 2)

An oceanic region shared by several coastal states suffers from overfishing by industrial fleets and declining small-scale fishers' incomes. Policy options: (1) impose strict regional catch limits and vessel tracking with binding enforcement, (2) create co-management zones giving communities exclusive access while subsidising sustainable gear, or (3) implement market measures—certification and preferential market access for sustainably sourced fish—to shift incentives. The outcome target: increase small-scale fishers' incomes by 30% and recover fish stocks to sustainable biomass levels within 8 years. Which approach best aligns with both ecological recovery and fisher livelihoods?

- A. Regional catch limits with enforcement—top-down ecological management.
- B. Community co-management—local stewardship with exclusive access rights.
- C. Market measures and certification—use consumer demand to encourage sustainability.
- D. Combine strict regional limits with community co-management and market incentives.

Answer: D

Explanation: Fisheries are common-pool resources requiring combined regulatory, local, and market solutions. Enforcement (A) is necessary to curb industrial overfishing; co-management (B) rebuilds local stewardship and ensures equitable access; market incentives (C) help sustain income through price premiums. The combination (D) aligns enforcement to protect stock, local rights to rebuild livelihoods, and market mechanisms to sustain premium incomes. Risks: requires governance coordination, monitoring, and investments. Measure recovery by biomass indicators, income surveys, compliance rates, and certified market share.

Q.30

Global Finance for Sustainable Development (SDG 1, 8 & 13)

To finance a low-carbon transition in emerging economies, development banks propose three instruments: (1) concessional loans tied to strict emission reduction milestones, (2) blended finance that mixes concessional funds with private capital and risk guarantees, or (3) a global green grant fund prioritising the poorest countries. The objective: mobilise \$200 billion in sustainable investments over 6 years while ensuring projects benefit low-income populations. Which financing architecture most reliably mobilises capital at scale and protects equity?

- A. Concessional loans—direct public finance with strong conditionality.
- B. Blended finance—leverage private capital with concessional buffers to crowd in commercial investors.
- C. Global grant fund—pure grants to the poorest to ensure equity.
- D. A dual track: blended finance for bankable large projects plus targeted grants for equity-sensitive social components.

Answer: D

Explanation: Blended finance (B) mobilises scale but can overlook equity without targeted grants. A dual track combines private capital mobilisation for large infrastructure with grants to ensure benefits reach low-income groups (e.g., subsidies for poorest households, capacity building). Outcomes: higher total investment, inclusive project design, and measurable poverty reduction. Risks: complexity, ensuring grants aren't crowding out private responsibility, and strong governance required. Measure total capital mobilised, share reaching low-income beneficiaries, emission reductions, and poverty/benefit distribution metrics.

Achievers Section - Strategic Reasoning, Action Plans, and KPIs

Q.31

Climate Finance & Smallholder Resilience (SDG 2 & 13)

Case: A coalition will provide a \$5 million fund for climate resilience in a region of 120,000 smallholder farmers prone to flash droughts. Local leaders propose two models: (A) distribute microgrants for drought-tolerant inputs and short courses to 20,000 farmers now; (B) create an agricultural microinsurance program backed by pooled reserves and early-warning services, which requires 12 months to design and pilot. You are the technical lead; the consortium's mandate is maximise reduction in crop-loss incidence within 24 months while ensuring financial sustainability beyond donor funding.

- A.** Prioritise microgrants now to deliver immediate reductions in crop loss.
- B.** Invest in microinsurance + early-warning despite the design delay because it scales financially post-grant.
- C.** Split funds: 60% microgrants for immediate impact, 40% to design a microinsurance pilot.
- D.** Use funds to build large-scale irrigation infrastructure covering 30% of farms.

Answer: C

Explanation: Immediate grants reduce near-term loss but don't create sustainable finance; microinsurance offers sustainability but needs time. Splitting funds balances immediate reduction and building a durable mechanism. Irrigation (D) is capital-intensive and unlikely to cover needed farms within 24 months.

Extended Action Plan: Months 0-3: Deploy microgrants to 12,000 highest-risk farmers (60% of allocation). KPI: number of farmers receiving inputs; baseline crop-loss incidence.

Months 0-12: Design microinsurance + early-warning (stakeholder co-design, actuarial study, reserve rules). KPI: completed pilot design, partner insurer signed.

Months 12-24: Pilot microinsurance with 5,000 farmers (40% funding used for pilot). KPI: pilot uptake %, claims processed within 30 days, reduction in crop-loss incidence among pilot group vs control.

Financial sustainability: model shows break-even or subsidy tapering plan by year 4. Measure: projected premium recovery rate and reserve adequacy.

Outcomes measured by % reduction in crop-loss incidence (target: 30-50% among intervention groups) and a documented path to scale insurance beyond donor funds.

Q.32

Antimicrobial Resistance & Hospital Networks (SDG 3)

Case: A regional health authority detects rising antimicrobial resistance (AMR) in three district hospitals. Two options exist: (A) centralise stewardship—fund one tertiary hospital to be the diagnostic and stewardship hub, training staff remotely; (B) decentralise—equip each district hospital with rapid diagnostics and local stewardship teams. The objective is reduce inappropriate antibiotic use by 40% across the region in 18 months.

- A.** Centralise diagnostics and stewardship for efficiency and expertise concentration.
- B.** Decentralise diagnostics to each hospital for faster bedside decisions.
- C.** Central hub + a rapid-response mobile diagnostics unit that visits district hospitals weekly.
- D.** Run a public-awareness campaign aimed at patients to reduce demand for antibiotics.

Answer: C

Explanation: A pure centralised model delays decision-making at bedside; pure decentralisation may be costly and inconsistent. A hybrid (C) leverages central expertise, brings diagnostics closer through mobile units, and supports local stewardship. Public campaigns help but are insufficient alone.

Extended Action Plan: Months 0-2: Establish central stewardship hub and hire mobile diagnostics team. KPI: hub staff trained; mobile unit procurement.

Months 2-8: Weekly mobile diagnostics visits + teleconsultation for local clinicians. KPI: average turnaround time for diagnostics <48 hours.

Months 8-18: Implement audit & feedback loops, prescriber training, and local antibiotic use dashboards. KPI: % inappropriate antibiotic prescriptions (baseline vs monthly), target 40% reduction by month 18.

Monitoring: AMR prevalence trends, length of hospital stay, patient outcomes. Risk mitigation: supply-chain continuity for diagnostics, clinician buy-in measured by attendance and prescription behaviour change.

Q.33

Urban Heat & Vulnerable Populations (SDG 11 & 3)

Case: A megacity faces increasingly severe heatwaves. Budget allows one of three programs: (A) plant urban canopy in 20% of low-income neighbourhoods (long-term cooling), (B) install community cooling centres with AC and backup power (immediate relief), or (C) retrofit 10,000 low-income homes with passive cooling (insulation, shading) plus a public education campaign. Mandate: reduce heat-related morbidity among the city's poorest by 50% within 3 years.

- A.** Urban canopy planting to provide durable cooling and co-benefits.
- B.** Community cooling centres for immediate life-saving relief.
- C.** Home retrofits plus education to reduce household exposure.
- D.** Invest only in early-warning systems and heat-health alerts.

Answer: C

Explanation: Cooling centres (B) save lives but require travel/access and may not reach all. Canopy (A) is valuable long-term but slow. Home retrofits reach households directly, reduce exposure continuously, and combined with education produce measurable morbidity reductions within 3 years.

Extended Action Plan: Months 0-6: Target vulnerability mapping; select 10,000 homes. KPI: vulnerability index produced.

Months 6-24: Retrofit implementation (material procurement, local workforce training). KPI: #homes retrofitted/month; indoor temperature reduction per home (target 3-5°C).

Months 0-36: Public education on hydration, cooling behaviours; coordinate with health clinics. KPI: heat-related ER visits and morbidity rates (target 50% reduction).

Co-benefits: reduced energy bills, job creation for retrofit teams. Monitor hospital admissions, mortality, and household thermal comfort surveys.

Q.34

Transboundary Water Cooperation (SDG 6 & 16)

Case: Three countries share an upstream dam causing downstream communities to lose irrigation water seasonally. Diplomatic talks are stalled. International funders offer mediation if

one country accepts compensated flow-sharing. Options: (A) accept compensation and legally bind seasonal releases; (B) escalate to international arbitration risking political backlash; (C) form a trilateral technical commission to co-manage flows and jointly invest in efficient irrigation downstream. Goal: restore reliable irrigation water to downstream smallholders within 4 years.

- A.** Compensated flow-sharing with legal binding.
- B.** International arbitration.
- C.** Trilateral technical commission + joint investment.
- D.** Build local water storage downstream funded by donors to reduce dependency.

Answer: C

Explanation: Arbitration (B) is adversarial and slow; compensated flow (A) can work but relies on enforcement and may not build trust. A trilateral technical commission (C) builds trust, technical solutions (scheduling, infrastructure), and joint investment ensures shared ownership.

Extended Action Plan: Months 0-6: Establish commission with agreed ToR and data-sharing protocols. KPI: signed MoU and data dashboards.

Months 6-24: Jointly design release schedules, water-efficient irrigation pilot projects downstream, and shared monitoring. KPI: flow reliability (days/month of required irrigation flow).

Months 24-48: Scale storage & efficiency projects co-funded by parties and donors. KPI: % of cropland with reliable irrigation (target: restoration to baseline or better), increased cropping intensity and farmer incomes.

Governance: dispute-resolution clause, independent monitoring to ensure compliance.

Q.35

Forced Migration & Labour Markets (SDG 8 & 10)

Case: A middle-income country absorbs 500,000 refugees. The government fears local job competition and proposes two options: (A) limit refugee work permits and provide humanitarian aid only, (B) integrate refugees into the formal labour market with conditional work permits tied to local hiring incentives. Your brief must recommend the best policy to protect host livelihoods while enabling refugee self-reliance.

- A.** Restrict work permits to protect local wages.
- B.** Issue conditional work permits with employer incentives and workforce development programs.
- C.** Create refugee-only subsidised public works to avoid competition.
- D.** Provide cash assistance without work rights to prevent displacement of local labor.

Answer: B

Explanation: Conditional work permits paired with incentives and training reduce informal competition, fill labor gaps, and foster economic integration. Restricting permits often pushes refugees into informal markets and undercuts protections; refugee-only works can create segregation and distort markets.

Extended Action Plan: Months 0-6: Map labor demand; design conditional permits (e.g., tied to sectors with shortages). KPI: sectors identified and regulatory framework issued.

Months 6-24: Launch incentives for employers (tax breaks, wage subsidies for 12 months) + vocational training for refugees and host youth. KPI: number of formal jobs filled, employer participation rate.

Months 24-48: Phase out subsidies as local labor markets adjust; monitor wage trends. KPI: local wage index vs baseline (no negative downward trend), refugee employment rate, reduced reliance on aid.

Social cohesion metrics: employer satisfaction surveys, community grievance mechanisms, and shared economic indicators.

Q.36
Circular Economy for Electronics (SDG 9 & 12)

Case: A regional bloc faces rapidly increasing e-waste. A new regulation can either (A) mandate producer take-back with strict recycling quotas and producer responsibility fees, (B) subsidise local refurbishers and formal repair networks, or (C) ban exports of used electronics and e-waste, requiring domestic processing. The policy objective is reduce hazardous e-waste leakage and recover 60% of valuable materials within 5 years.

- A. Producer take-back with quotas and fees.
- B. Subsidise refurbishment and repair networks.
- C. Ban exports and develop domestic processing capacity.
- D. Combine A + B with targeted capacity building for domestic recycling.

Answer: D

Explanation: Producer responsibility ensures upstream accountability and collection; subsidising refurbishment builds jobs and reduces waste generation; combining them creates circular incentives. An outright export ban (C) without domestic capacity risks stockpiling and illegal dumping.

Extended Action Plan: Months 0-12: Implement producer take-back regulation, collect fees into an EPR fund. KPI: producer compliance rate, collection volumes.

Months 6-36: Subsidise accredited refurbishers & repair centres; launch public awareness campaigns. KPI: refurbished device market share, number of repaired units.

Months 12-60: Invest in domestic recycling facilities for critical material recovery using EPR funds and private co-investment. KPI: % of valuable materials recovered (target 60% by year 5), reduction in hazardous waste exports.

Enforcement: traceability systems, certification of recyclers, and formal jobs created in the sector.

Q.37
Education for Fragile Contexts (SDG 4 & 16)

Case: In a post-conflict region, schools are physically intact but teacher absenteeism and gender gaps persist. Two interventions are proposed: (A) conditional cash transfers (CCTs) to families for girls' attendance and community monitoring; (B) a teacher performance program combining professional development, attendance tracking with incentives, and parental engagement. The goal: raise overall school attendance by 30% and close the gender attendance gap within 2 years.

- A. Implement CCTs focused on girls.
- B. Implement teacher performance & accountability program.
- C. Combine targeted CCTs for girls with teacher performance improvements and community oversight.
- D. Focus only on rebuilding school infrastructure and learning materials.

Answer: C

Explanation: CCTs incent demand-side attendance (especially for girls), while teacher performance addresses supply-side quality and reliability. Combining both tackles root causes holistically. Infrastructure alone won't solve absenteeism or gender gaps.

Extended Action Plan: Months 0-3: Baseline attendance disaggregated by gender; set transfer levels and teacher incentive metrics. KPI: baseline attendance rates.
 Months 3-24: Roll out CCTs for girls with conditionality verified by community monitors; implement teacher PD and attendance-linked incentives. KPI: monthly attendance (target +30%), teacher attendance rate, gender gap reduction.
 Monitoring: learning assessments, retention rates, and community feedback. Risk mitigation: fraud controls, transparent grievance redressal.

Q.38

Ocean Plastics & Coastal Economies (SDG 14 & 8)

Case: A coastal region's fisheries and tourism are threatened by ocean plastics. The proposed intervention choices are: (A) municipal bans on single-use plastics; (B) invest in community-based collection and recycling cooperatives that pay fishers for collected plastic; (C) introduce fee-based port reception facilities and fines on vessels dumping plastics. The mandate: reduce coastal plastic litter by 70% and create 2,000 green jobs within 4 years.

- A. Implement single-use plastics ban across municipalities.
- B. Build collection & recycling cooperatives employing fishers and coastal communities.
- C. Focus on port reception systems and maritime enforcement.
- D. Combine B + C while phasing in regulatory bans.

Answer: D

Explanation: B creates jobs immediately and changes incentives; C tackles the maritime source; bans (A) reduce land-based inputs but need enforcement and alternatives. A combined approach with cooperatives + port systems and phased bans yields the greatest reduction and job creation.

Extended Action Plan: Months 0-6: Establish pilot cooperatives, secure port reception funding, map plastic sources. KPI: #cooperatives operational.
 Months 6-24: Scale collection & recycling, hire and train fishers, implement port reception with fines for non-compliance. KPI: tons of collected plastic/month; jobs created (target 2,000 by year 4).
 Months 24-48: Phase bans on specific single-use items, replace with reusable/compostable alternatives and local supply chains. KPI: coastal litter surveys show 70% reduction; increased incomes for cooperative members.

Q.39

Artificial Intelligence & Responsible Deployment (SDG 9 & 16)

Case: A national education ministry wants to deploy AI tutors in public schools to personalise learning. Risks: bias in learning recommendations, data privacy, and unequal access. Options: (A) rapid roll-out to all schools with vendor-supplied AI, (B) pilot in a representative sample with open-auditable algorithms, data governance, and teacher training, or (C) ban AI until national regulations are in place. The objective: improve learning outcomes in core subjects by 20% within 3 years while safeguarding equity.

- A. Full-scale rapid rollout to capture scale benefits.

- B. Rigorous pilot with transparency, governance, and teacher integration.
- C. Ban until comprehensive regulation exists.
- D. Deploy closed-source vendor solutions but require vendor liability insurance.

Answer: B

Explanation: Piloting with transparency and governance allows testing for bias, building teacher capacity, and designing equitable access. Rapid rollouts risk harms; bans delay potential benefits. Liability alone doesn't prevent bias or data misuse.

Extended Action Plan: Months 0-6: Select representative pilot schools; set data governance framework and open-audit requirements. KPI: pilot school selection and signed governance agreements.

Months 6-24: Deploy AI tutors with teacher training and continuous evaluation (A/B testing against control). KPI: improvement in learning assessments (target 20% gain in pilot schools), bias audit results, data breach incidents (target 0).

Months 24-36: Scale only after meeting equity criteria and compliance; establish affordability plan for under-resourced schools. KPIs: coverage, learning gains disaggregated by socioeconomic status, teacher satisfaction.

Q.40

Global Trade & Small Producer Inclusion (SDG 1, 8 & 12)

Case: A regional trade agreement will lower tariffs on processed agricultural goods, benefitting large agribusiness but risking smallholder exclusion. Policymakers propose (A) carve-outs for processed goods produced by small and medium enterprises (SMEs) with simplified rules of origin, (B) full liberalisation with transition funds for smallholders, or (C) maintain tariffs but create preferential procurement rules for regional small producers. Goal: increase smallholder value-capture from trade by 30% within 5 years without spiking consumer prices.

- A. SME carve-outs with simplified rules of origin to enable small processors.
- B. Full liberalisation plus transition funds for smallholders.
- C. Preferential regional procurement for small producers while keeping tariffs.
- D. Combine A + C: SME carve-outs plus procurement preferences to build local value chains.

Answer: D

Explanation: Carve-outs (A) lower entry barriers for small processors; preferential procurement (C) creates guaranteed demand. Combined they expand smallholder value-capture while managing consumer prices by localizing supply. Full liberalisation (B) risks displacement unless transition funds are massive and well-targeted.

Extended Action Plan: Months 0-12: Define SME thresholds, simplified rules of origin, and procurement criteria. KPI: number of SMEs certified.

Months 12-36: Support SMEs with technical assistance, access to finance, and quality upgrades; launch public procurement windows for regional goods. KPI: SME market share in processed goods (target +30%), smallholder incomes from processing.

Months 36-60: Monitor consumer price impacts; adjust procurement quotas and scale successful SMEs. KPI: consumer price index for staple processed goods (stable), % increase in smallholder value-capture (30% target), jobs created in local processing.

Answer Key

Q No.	Ans.	Q No.	Ans.	Q No.	Ans.	Q No.	Ans.
1	D	11	B	21	C	31	C
2	B	12	C	22	C	32	C
3	C	13	C	23	C	33	C
4	B	14	C	24	A	34	C
5	D	15	C	25	B	35	B
6	C	16	C	26	C	36	D
7	B	17	C	27	C	37	C
8	C	18	C	28	B	38	D
9	C	19	C	29	D	39	B
10	C	20	C	30	D	40	D

