

NEXT IAS

PTS (GS): CSE 2026

PTS (जी.एस.): सिविल सेवा परीक्षा 2026

GENERAL STUDIES

Test Code: 02122625

Paper-I | Sectional Test-12

DATE : 26/10/2025

Environment and Ecology & Current Affairs
(January 2025 - Till Date)

Test Booklet Series

B

परीक्षण पुस्तिका अनुक्रम

सामान्य अध्ययन

पेपर-I | सेक्शनल टेस्ट-12

पर्यावरण और पारिस्थितिकी तथा करेंट अफेयर्स (जनवरी 2025 - आज तक)

Time Allowed: Two Hours

Maximum Marks: 200

Before attempting paper please read the instructions given on page no. 2 or 3 carefully and follow them.

समय: दो घण्टे

पूर्णांक: 200

कृपया प्रश्न-पत्र हल करने से पहले पृष्ठ संख्या 2 अथवा 3 पर दिए गए अनुदेशों को ध्यानपूर्वक पढ़े तथा उनका अनुसरण करें।

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जब तक आपको यह परीक्षण पुस्तिका खोलने को न कहा जाए तब तक न खोलें।

अ नु दे श

- परीक्षा प्रारम्भ होने के तुरन्त बाद आप इस परीक्षण पुस्तिका की पड़ताल अवश्य कर लें कि इसमें कोई बिना छपा, फटा या छूटा हुआ पृष्ठ अथवा प्रश्नांश आदि न हो। यदि ऐसा है, तो इसे सही परीक्षण पुस्तिका से बदल लें।
- कृपया ध्यान रखें कि OMR उत्तर-पत्रक में उचित स्थान पर रोल नम्बर और परीक्षण पुस्तिका अनुक्रम A या B को ध्यान से एवं बिना किसी चूक या विसंगति के भरने और कूटबद्ध करने की जिम्मेदारी उम्मीदवार की है। किसी भी प्रकार की चूक/विसंगति की स्थिति में उत्तर-पत्रक निरस्त कर दिया जाएगा।
- इस परीक्षण पुस्तिका पर साथ में दिए गए कोष्ठक में आपको अपना अनुक्रमांक लिखना है। परीक्षण पुस्तिका पर और कुछ न लिखें।
- इस परीक्षण पुस्तिका में 100 प्रश्नांश (प्रश्न) दिए गए हैं। प्रत्येक प्रश्नांश हिन्दी और अंग्रेज़ी दोनों में छपा है। प्रत्येक प्रश्नांश में चार प्रत्युत्तर (उत्तर) दिए गए हैं। इनमें से एक प्रत्युत्तर को चुन लें, जिसे आप उत्तर-पत्रक पर अंकित करना चाहते हैं। यदि आपको ऐसा लगे कि एक से अधिक प्रत्युत्तर सही हैं, तो उस प्रत्युत्तर को अंकित करें जो आपको सर्वोत्तम लगे। प्रत्येक प्रश्नांश के लिए केवल एक ही प्रत्युत्तर चुनना है।
- आपको अपने सभी प्रत्युत्तर अलग से दिए गए उत्तर-पत्रक पर ही अंकित करने हैं। उत्तर-पत्रक में दिए गए निर्देश देखें।
- सभी प्रश्नांशों के अंक समान हैं।
- इससे पहले कि आप परीक्षण पुस्तिका के विभिन्न प्रश्नांशों के प्रत्युत्तर उत्तर-पत्रक पर अंकित करना शुरू करें, आपको प्रवेश प्रमाण-पत्र के साथ प्रेषित अनुदेशों के अनुसार कुछ विवरण उत्तर-पत्रक में देने हैं।
- आप अपने सभी प्रत्युत्तरों को उत्तर-पत्रक में भरने के बाद तथा परीक्षा के समापन पर केवल उत्तर-पत्रक अधीक्षक को सौंप दें। आपको अपने साथ परीक्षण पुस्तिका ले जाने की अनुमति है।
- कच्चे काम के लिए पत्रक, परीक्षण पुस्तिका के अन्त में संलग्न हैं।
- गलत उत्तरों के लिए दण्ड:**
सभी प्रश्नों में उम्मीदवार द्वारा दिए गए गलत उत्तरों के लिए दण्ड दिया जाएगा।
 - प्रत्येक के लिए चार वैकल्पिक उत्तर हैं। उम्मीदवार द्वारा प्रत्येक के लिए दिए गए एक गलत उत्तर के लिए हेतु नियत किए गए अंकों का एक-तिहाई दण्ड के रूप में काटा जाएगा।
 - यदि कोई उम्मीदवार एक से अधिक उत्तर देता है, तो इसे गलत उत्तर माना जाएगा, यद्यपि दिए गए उत्तरों में से एक उत्तर सही होता है, फिर भी उस के लिए उपर्युक्तानुसार ही उसी तरह का दण्ड दिया जाएगा।
 - यदि उम्मीदवार द्वारा कोई हल नहीं किया जाता है अर्थात् उम्मीदवार द्वारा उत्तर नहीं दिया जाता है, तो उस के लिए कोई दण्ड नहीं दिया जाएगा।
- प्रश्नों से संबंधित चुनौती/आपत्ति:** यदि छात्रों को लगता है कि या तो प्रश्न/उत्तरों को संशोधित करने की आवश्यकता है या स्पष्टीकरण की आवश्यकता है, तो वे pts@nextias.com पर ई-मेल कर सकते हैं।

जब तक आपको यह परीक्षण पुस्तिका खोलने को न कहा जाए तब तक न खोलें।

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES *NOT* HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series A or B carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/kdiscrepancy will render the Answer Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet
in the box provided alongside.
4. This Test Booklet contains **100** items (Questions). Each item is printed in **Hindi** and **English** only. Each item comprises four responses (Answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate answer sheet provided. See directions in the Answer Sheet.
6. **All** items carry equal marks.
7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the invigilator **only the Answer Sheet**. You are permitted to take away with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.

10. Penalty for wrong answers:

THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE.

- (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
 - (iii) If question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.
11. **CHALLENGE THE QUESTION:** If students feel that either the question(s)/kanswer(s) needs to be modified or require clarification, they can email at pts@nextias.com

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

1. निम्नलिखित कथनों पर विचार कीजिए:

कथन-I:

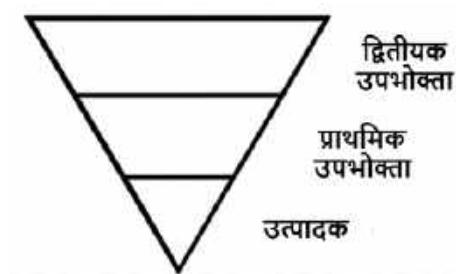
शीत जलवायु में स्तनधारियों के अंग और कण सामान्यतः उष्ण जलवायु के स्तनधारियों की तुलना में छोटे होते हैं।

कथन-II:

छोटे अंग बाह्य वातावरण के संपर्क में आने वाले पृष्ठीय क्षेत्रफल को कम कर देते हैं।

उपर्युक्त कथनों के संदर्भ में, निम्नलिखित में से कौन-सा एक सही है?

- (a) कथन-I और कथन-II दोनों सही हैं तथा कथन-II, कथन-I की सही व्याख्या करता है।
 - (b) कथन-I और कथन-II दोनों सही हैं, किंतु कथन-II, कथन-I की सही व्याख्या नहीं करता है।
 - (c) कथन-I सही है, किंतु कथन-II गलत है।
 - (d) कथन-I गलत है, किंतु कथन-II सही है।
- 2. निम्नलिखित पारिस्थितिक पिरामिड पर विचार कीजिए:**



उपर्युक्त आरेख निम्नलिखित पारिस्थितिक पिरामिडों में से संभवतः किसका प्रतिनिधित्व करता है?

- (a) घासभूमि पारितंत्र में जैवभार का पिरामिड
 - (b) वन पारितंत्र में ऊर्जा का पिरामिड
 - (c) समुद्री पारितंत्र में जैवभार का पिरामिड
 - (d) घासभूमि पारितंत्र में संचया का पिरामिड
- 3. संयुक्त राष्ट्र उच्च सागर संधि के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:**

1. इसमें किसी देश की तटरेखा से 200 समुद्री मील तक फैले समुद्री जल में जैव-विविधता का संरक्षण शामिल है।
2. इसमें अंतर्राष्ट्रीय जलक्षेत्र में मत्स्यन गतिविधियों पर प्रतिबंध लगाने का प्रस्ताव है।

- 3. यह उच्च समुद्र में खोजे गए समुद्री आनुवंशिक संसाधनों से होने वाले सभी मौद्रिक लाभ को देशों के संप्रभु अधिकार के रूप में मान्यता देता है।**

उपर्युक्त में से कितने कथन सही हैं?

- (a) केवल एक
- (b) केवल दो
- (c) सभी तीन
- (d) कोई नहीं

4. घड़ियाल और मगर के बीच अंतर के संदर्भ में, निम्नलिखित कथनों में से कौन-सा एक सही है?

- (a) घड़ियाल की थूथन चौड़ी होती है, जबकि मगर की थूथन पतली और लंबी होती है।
- (b) घड़ियाल सामान्यतः धीमी गति से प्रवाहित होने वाले और उथले जल निकायों में रहना पसंद करते हैं, जबकि मगर गहरे और तेज़ प्रवाहित होने वाले जल में रहना पसंद करते हैं।
- (c) घड़ियाल एक लवणीय जल का मगरमच्छ है, जबकि मगर एक अलवणीय या ताज़े जल की प्रजाति है।
- (d) उपर्युक्त में से कोई भी नहीं

5. केल्प वनों के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. केल्प वन जल के नीचे उगने वाले विशाल वृक्ष हैं, जो विस्तृत तटीय वनों का निर्माण करते हैं।
2. ये मुख्यतः उष्णाकटिबंधीय तटरेखाओं पर पाए जाते हैं, जहाँ प्रवाल भित्तियाँ प्रचुर मात्रा में होती हैं।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

6. निम्नलिखित में से कौन-से 'वन्यजीव (संरक्षण) अधिनियम, 1972' के तहत संरक्षित क्षेत्र के प्रकार के रूप में मान्यता प्राप्त नहीं हैं?

1. जैवमंडल निचय (Biosphere Reserves)
2. वन्यजीव अभयारण्य (Wildlife Sanctuaries)
3. हाथी आरक्षित क्षेत्र (Elephant Reserves)
4. संरक्षण आरक्षित क्षेत्र (Conservation Reserves)

1. Consider the following statements:

Statement I:

Limbs and ears of mammals are generally shorter in cold climates than in warm climates.

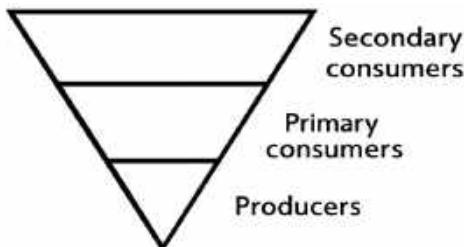
Statement II:

Shorter limbs reduce the surface area exposed to the external environment.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct but Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

2. Consider the following ecological pyramid:



The above diagram most likely represents which one of the following ecological pyramids?

- (a) Pyramid of biomass in a grassland ecosystem
- (b) Pyramid of energy in a forest ecosystem
- (c) Pyramid of biomass in a sea ecosystem
- (d) Pyramid of numbers in a grassland ecosystem

3. With reference to the UN High Seas Treaty, consider the following statements:

- 1. It includes the protection of biodiversity in oceanic waters extending up to 200 nautical miles from a country's coastline.
- 2. It proposes to prohibit fishing activities in international waters.

- 3. It recognizes the sovereign rights of countries to retain all monetary benefits from marine genetic resources explored in the high seas.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

4. Which of the following statements is correct regarding the difference between Gharial and Mugger?

- (a) Gharial has a broad snout, whereas Mugger has a thin and long snout.
- (b) Gharial generally prefers slow-moving and shallow water bodies, while Mugger prefers deep and fast flowing waters.
- (c) Gharial is a saltwater crocodile, whereas Mugger is a freshwater species.
- (d) None of the above

5. Consider the following statements regarding Kelp forests:

- 1 Kelp forests are large underwater trees that form extensive coastal forests.
- 2 They are found mainly along tropical coastlines where coral reefs are abundant.

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

6. Which of the following are *not* recognized as types of protected areas under the Wildlife (Protection) Act, 1972?

- 1. Biosphere Reserves
- 2. Wildlife Sanctuaries
- 3. Elephant Reserves
- 4. Conservation Reserves

- नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:
- केवल 1 और 3
 - केवल 1 और 4
 - केवल 2 और 3
 - केवल 3 और 4
7. निम्नलिखित में से किन जैव-भू-रासायनिक चक्रों का मुख्य भंडार पृथ्वी की पर्फटी है?
- नाइट्रोजन चक्र
 - काबन चक्र
 - फॉस्फोरस चक्र
 - सल्फर चक्र
- नीचे दिए गए कूटों का प्रयोग कर सही उत्तर चुनिए:
- केवल 1 और 2
 - केवल 2 और 3
 - केवल 3 और 4
 - केवल 1, 3 और 4
8. जब दो निकट संबंधी प्रजातियाँ एक ही आवास में समान संसाधनों के लिए प्रतिस्पर्धा करती हैं, तो गॉस के स्पर्धी अपवर्जन (Competitive Exclusion) सिद्धांत के अनुसार सबसे संभावित परिणाम कौन-सा है?
- एक प्रजाति अंततः दूसरी प्रजाति को समाप्त कर देगी।
 - दोनों प्रजातियाँ समान संसाधनों को साझा करके अनिश्चित काल तक सह-अस्तित्व बनाए रखेंगी।
 - दोनों प्रजातियाँ अपने 'निकेत (Niches)' का विस्तार करके नए संसाधनों को शामिल करेंगी।
 - दोनों प्रजातियों के बीच प्रतिस्पर्धा उनकी जनसंख्या को प्रभावित किए बिना धीरे-धीरे समाप्त हो जाएंगी।
9. भारतीय वन अधिनियम, 1927 के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
- आरक्षित वन (Reserved Forests) वे वन क्षेत्र होते हैं, जहाँ सभी गतिविधियाँ निषिद्ध होती हैं, जब तक कि उन्हें अनुमति न दी जाए।
 - संरक्षित वन (Protected Forests) वे वन क्षेत्र होते हैं, जहाँ सभी गतिविधियाँ अनुमत होती हैं, जब तक कि उन्हें निषिद्ध न किया गया हो।
- उपर्युक्त में से कौन-सा/से कथन सही है/हैं?
- केवल 1
 - केवल 2
 - 1 और 2 दोनों
 - न तो 1, न ही 2

10. एक पारिस्थितिकी तंत्र में विभिन्न प्रकार की समस्तियों की पारस्परिक क्रियाओं के संदर्भ में, निम्नलिखित युग्मों पर विचार कीजिए:

समस्ति की पारस्परिक क्रिया	प्रजातियों पर प्रभाव
स्पर्धा (Competition)	एक प्रजाति को लाभ होता है और दूसरी को हानि।
सहभोजिता (Commensalism)	एक प्रजाति को लाभ होता है, दूसरी को न तो लाभ होता है और न ही हानि।
परजीविता (Parasitism)	एक प्रजाति को हानि होती है, दूसरी अप्रभावित रहती है।
अंतर-जातीय परजीविता (Amensalism)	दोनों प्रजातियों को हानि होती है।

उपर्युक्त युग्मों में से कितने सही हैं?

- केवल एक युग्म
- केवल दो युग्म
- केवल तीन युग्म
- कोई भी युग्म नहीं

11. कभी-कभी सुखियों में रहने वाला "अवाजा प्रोग्राम ऑफ एक्शन (APOA)" निम्नलिखित में से किससे संबंधित है?

- अल्प विकसित देश (LDC)
- छोटे द्वीपीय विकासशील देश (SIDS)
- स्थलरुद्ध विकासशील देश (LLDC)
- विश्व व्यापार संगठन के अंतर्गत सर्वाधिक तरजीही राष्ट्र (MFN) सिद्धांत

12. सायनोबैक्टीरिया (Cyanobacteria) के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

- अपने नाम के विपरीत, ये बैक्टीरिया नहीं बल्कि एक प्रकार की शैवाल (Algae) हैं।
- ये प्रकाश संश्लेषक स्वपोषी हैं और ऑक्सीजन उत्पन्न करने में सक्षम हैं।
- इनमें से कुछ वायुमंडलीय नाइट्रोजन (Atmospheric Nitrogen) को स्थिरीकृत (Fix) कर सकते हैं।

उपर्युक्त में से कौन-से कथन सही हैं?

- केवल 1 और 2
- केवल 2 और 3

- Select the correct answer using the codes given below:
- 1 and 3 only
 - 1 and 4 only
 - 2 and 3 only
 - 3 and 4 only
7. Which of the following biogeochemical cycles have the Earth's crust as their main reservoir?
- Nitrogen cycle
 - Carbon cycle
 - Phosphorus cycle
 - Sulphur cycle
- Select the correct answer using the codes given below:
- 1 and 2 only
 - 2 and 3 only
 - 3 and 4 only
 - 1, 3 and 4 only
8. When two closely related species compete for the same resources within the same habitat, which one of the following outcomes is most likely to occur according to Gause's Competitive Exclusion Principle?
- One species will eventually eliminate the other.
 - Both species will coexist indefinitely by sharing identical resources.
 - Both species will expand their niches to include new resources.
 - Competition between the two species will gradually cease without affecting their populations.
9. With reference to the Indian Forest Act, 1927, consider the following statements:
- Reserved Forests are the forest areas where all activities are prohibited unless permitted.
 - Protected Forests are the forest areas all activities are permitted unless prohibited.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
10. Consider the following pairs regarding various types of population interactions in an ecosystem:
- | | <i>Population interaction</i> | <i>Impact on species</i> |
|----|-------------------------------|---|
| 1. | Competition | One species is benefitted and the other is harmed. |
| 2. | Commensalism | One species benefits, the other is neither benefited nor harmed |
| 3. | Parasitism | One species is harmed, the other is unaffected |
| 4. | Amensalism | Both species are harmed |
- How many of the pairs given above are correct?
- Only one pair
 - Only two pairs
 - Only three pairs
 - None of the pairs
11. The "Awaza Programme of Action (APoA)", sometimes seen in the news, is associated with which of the following?
- Least Developed Countries (LDCs)
 - Small Island Developing States (SIDS)
 - Landlocked Developing Countries (LLDCs)
 - Most-Favoured-Nation (MFN) principle under the WTO
12. Consider the following statements regarding Cyanobacteria:
- Contrary to their name, they are not bacteria but a type of algae.
 - They are photosynthetic autotrophs capable of producing oxygen.
 - Some of them can fix atmospheric nitrogen.
- Which of the statements given above are correct?
- 1 and 2 only
 - 2 and 3 only

- (c) केवल 1 और 3
 (d) 1, 2 और 3
- 13.** भारत में बाघ संरक्षण प्रयासों के संदर्भ में निम्नलिखित में से कौन-सा कथन सही नहीं है?
- 'प्रोजेक्ट टाइगर' भारत सरकार द्वारा प्रारंभ की गई एक केंद्र प्रायोजित योजना (Centrally Sponsored Scheme - CSS) है।
 - राष्ट्रीय बाघ संरक्षण प्राधिकरण (NTCA) एक वैधानिक निकाय है, जिसकी स्थापना जैव विविधता अधिनियम, 2002 के अंतर्गत की गई थी।
 - वर्तमान में भारत में विश्व की जंगली बाघ आबादी का लगभग 75% हिस्सा मौजूद है।
 - बाघ अभ्यारण्यों के कोर क्षेत्र (Core Areas) को राष्ट्रीय उद्यान या वन्यजीव अभ्यारण्य का कानूनी दर्जा प्राप्त होता है।
- 14.** जैव-विविधता संरक्षण की निम्नलिखित विधियों पर विचार कीजिए:
- पवित्र उपवन
 - वनस्पति उद्यान
 - प्राणि उद्यान
 - बीज बैंक
 - जीन बैंक
 - राष्ट्रीय उद्यान
- उपर्युक्त में से कितनी जैव-विविधता संरक्षण की बाह्य स्थाने विधियाँ हैं?
- केवल दो
 - केवल तीन
 - केवल चार
 - केवल पाँच
- 15.** भारत में पर्यावरणीय शासन के संदर्भ में, निम्नलिखित युगमों पर विचार कीजिए:

	प्राधिकरण/ संगठन	अधिनियम के तहत गठित
1.	केंद्रीय चिड़ियाघर प्राधिकरण	वन्यजीव (संरक्षण) अधिनियम, 1972
2.	वन्यजीव अपराध नियंत्रण ब्यूरो	पशुओं के प्रति क्रूरता का निवारण अधिनियम, 1960
3.	राष्ट्रीय वन्यजीव बोर्ड	पर्यावरण (संरक्षण) अधिनियम, 1986



उपर्युक्त युगमों में से कौन-सा/से सही सुमेलित है/हैं?

- केवल 1
- केवल 1 और 2
- केवल 1 और 3
- केवल 2 और 3

- 16.** मेघ प्रस्फोट (Cloudburst) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

- भारतीय मौसम विज्ञान विभाग के अनुसार, मेघ प्रस्फोट का तात्पर्य लगभग 20 से 30 वर्ग किलोमीटर के क्षेत्र में 100 मिलीमीटर प्रति घंटे से अधिक की चरम वर्षण की घटना से है।
- पर्वतों की ऊँचाई मेघ प्रस्फोट की परिघटना में योगदान देने वाला एक प्रमुख कारक है।
- मेघ प्रस्फोट सामान्यतः एक ही स्थान तक सीमित रहता है और कम समय में दूसरे स्थान पर नहीं पहुँच सकता।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- केवल 1
- केवल 1 और 2
- केवल 2 और 3
- 1, 2 और 3

- 17.** हाल ही में सुर्खियों में रहा मिग ला दर्दा निम्नलिखित में से किस क्षेत्र में अवस्थित है?

- अरुणाचल प्रदेश
- सिक्किम
- लद्दाख
- हिमाचल प्रदेश

- 18.** हाल ही में सुर्खियों में देखे गए राजकोषीय स्वास्थ्य सूचकांक के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

- इसे भारतीय रिजर्व बैंक द्वारा भारतीय राज्यों के राजकोषीय प्रदर्शन का आकलन करने हेतु विकसित किया गया है।
- ओडिशा राजकोषीय स्वास्थ्य सूचकांक वर्ष 2025 में प्रथम स्थान पर रहा।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- केवल 1
- केवल 2
- 1 और 2 दोनों
- न तो 1, न ही 2

- (c) 1 and 3 only
 (d) 1, 2 and 3
- 13.** Which of the following statements is *not* correct regarding the tiger conservation efforts in India?
- 'Project Tiger' is a Centrally Sponsored Scheme (CSS) launched by the Government of India.
 - National Tiger Conservation Authority (NTCA) is a statutory body established under the Biological Diversity Act, 2002.
 - India currently harbors around 75% of the world's wild tiger population.
 - Core areas in the tiger reserves have the legal status of a national park or a sanctuary.
- 14.** Consider the following methods of biodiversity conservation:
- Sacred groves
 - Botanical gardens
 - Zoological parks
 - Seed banks
 - Gene banks
 - National parks
- How many of the above are *ex-situ* methods of biodiversity conservation?
- Only two
 - Only three
 - Only four
 - Only five
- 15.** In the context of environmental governance in India, consider the following pairs:

	<i>Authority/ Organisation</i>	<i>Constituted under the Act</i>
1.	Central Zoo Authority	Wild Life (Protection) Act, 1972
2.	Wildlife Crime Control Bureau	Prevention of Cruelty to Animals Act, 1960
3.	National Board for Wildlife	Environment (Protection) Act, 1986

Which of the pairs given above is/are correctly matched?

- 1 only
- 1 and 2 only
- 1 and 3 only
- 2 and 3 only

- 16.** Consider the following statements with regard to cloudburst :

- According to India Meteorological Department, a cloudburst refers to an extreme precipitation event of more than 100 mm per hour over an area of about 20 to 30 square kilometres.
- The height of the mountains is a major factor that contributes to the phenomena of cloudbursts.
- Cloudbursts are usually confined to one place and cannot move to another location in a short time.

Which of the statements given above is/are correct ?

- 1 only
- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3

- 17.** The Mig La Pass, recently in the news, is located in which one of the following regions?

- Arunachal Pradesh
- Sikkim
- Ladakh
- Himachal Pradesh

- 18.** Consider the following statements regarding the Fiscal Health Index, recently seen in the news:

- It has been developed by the Reserve Bank of India to assess the fiscal performance of Indian States.
- Odisha ranked first in the Fiscal Health Index 2025.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

19. घरेलू हिंसा से महिलाओं के संरक्षण अधिनियम, 2005 के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
1. यह सिर्फ पत्नियों और माताओं को ही नहीं, बल्कि लिव-इन संबंधों में रहने वाली महिलाओं को भी सुरक्षा प्रदान करता है।
 2. यह शारीरिक और यौन शोषण को शामिल करता है, लेकिन मौखिक और भावनात्मक शोषण को बाहर करता है।
 3. इसमें पीड़ितों की सहायता के लिए प्रत्येक जिले में संरक्षण अधिकारियों की नियुक्ति का प्रावधान है।
- उपर्युक्त में से कौन-सा/से कथन सही है/हैं?
- (a) केवल 1 और 2
 - (b) केवल 3
 - (c) केवल 1 और 3
 - (d) 1, 2 और 3
20. “सामाजिक न्याय की स्थिति, 2025” रिपोर्ट हाल ही में निम्नलिखित में से किस संगठन द्वारा जारी की गई?
- (a) संयुक्त राष्ट्र विकास कार्यक्रम (UNDP)
 - (b) अंतर्राष्ट्रीय श्रम संगठन (ILO)
 - (c) विश्व बैंक
 - (d) आर्थिक सहयोग और विकास संगठन (OECD)
21. निम्नलिखित में से कौन-सी अंतर्राष्ट्रीय क्रियाविधि, जैव संवर्धित जीवों (LMOs), जिनका जैव-विविधता पर प्रतिकूल प्रभाव पड़ सकता है, के सुरक्षित स्थानांतरण, प्रहस्तन और उपयोग से संबंधित है?
- (a) जैव सुरक्षा पर कार्टाजेना प्रोटोकॉल
 - (b) पहुँच और लाभ साझाकरण पर नागोया प्रोटोकॉल
 - (c) लुप्तप्राय प्रजातियों के अंतर्राष्ट्रीय व्यापार पर अभिसमय
 - (d) बॉन कन्वेंशन
22. वन्य जीव-जंतुओं और वनस्पतियों की लुप्तप्राय प्रजातियों के अंतर्राष्ट्रीय व्यापार पर अभिसमय (CITES) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
1. यह एक कानूनी रूप से बाध्यकारी अंतर्राष्ट्रीय संधि है।
 2. CITES प्रजातियों को उनकी आवश्यक सुरक्षा के आधार पर तीन परिशिष्टों में वर्गीकृत करता है।

3. परिशिष्ट I के अंतर्गत सूचीबद्ध प्रजातियों का व्यापार सभी परिस्थितियों में पूर्णतः प्रतिबंधित है।
4. भारत CITES का एक पक्षकार है।

उपर्युक्त में से कितने कथन सही हैं?

- (a) केवल एक
- (b) केवल दो
- (c) केवल तीन
- (d) सभी चार

23. अंतर्राष्ट्रीय व्हेलिंग आयोग (International Whaling Commission - IWC) के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

1. IWC ने वाणिज्यिक व्हेलिंग (Commercial whaling) पर प्रतिबंध लगाया है।
2. IWC स्वदेशी समुदायों द्वारा की जाने वाली आदिवासी निर्वाह व्हेलिंग (Aboriginal subsistence whaling) की अनुमति देता है।

नीचे दिए गए कूट का प्रयोग करके सही उत्तर चुनिए:

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

24. निम्नलिखित में से वह कौन-सा पद (Term) है जो उन प्रजातियों को संदर्भित करता है जिनकी उपस्थिति, अनुपस्थिति या प्रचुरता किसी विशेष पर्यावरणीय परिस्थिति का संकेत देती है?

- (a) की-स्टोन प्रजाति (Keystone species)
- (b) फ्लैगशिप प्रजाति (Flagship species)
- (c) संकेतक प्रजाति (Indicator species)
- (d) आधारभूत प्रजाति (Foundation species)

25. गाँधी सागर वन्यजीव अभ्यारण्य हाल ही में निम्नलिखित में से किस कारण से चर्चा में रहा है?

- (a) इसे भारत द्वारा प्राकृतिक श्रेणी के तहत यूनेस्को विश्व धरोहर स्थल सूची में शामिल करने के लिए नामित किया गया है।
- (b) इसे चीतों के लिए भारत का दूसरा आवास माना जा रहा है।
- (c) इसे हाल ही में बाघ अभ्यारण्य के रूप में नामित किया गया है।
- (d) इसे हाल ही में रामसर स्थल के रूप में मान्यता दी गई है।

19. With reference to the Protection of Women from Domestic Violence Act, 2005, consider the following statements:

1. It provides protection to women in live-in relationships, in addition to wives and mothers.
2. It covers physical and sexual abuse but excludes verbal and emotional abuse.
3. It provides for the appointment of Protection Officers in each district to assist victims.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

20. “The State of Social Justice 2025” report was recently launched by which of the following organisations?

- (a) United Nations Development Programme (UNDP)
- (b) International Labour Organization (ILO)
- (c) World Bank
- (d) Organisation for Economic Co-operation and Development (OECD)

21. Which of the following international mechanisms deals with the safe transfer, handling and use of living modified organisms (LMOs) that may have adverse effects on biodiversity?

- (a) Cartagena Protocol on Biosafety
- (b) Nagoya Protocol on Access and Benefit Sharing
- (c) Convention on International Trade in Endangered Species
- (d) Bonn convention

22. With reference to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), consider the following statements:

1. It is a legally binding international treaty.
2. CITES classifies species into three Appendices based on the degree of protection they require.

3. Trade in species listed under Appendix I is completely prohibited under all circumstances.

4. India is a party to CITES.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

23. Which of the following statements is/are correct regarding the International Whaling Commission (IWC)?

1. IWC has put a moratorium on commercial whaling.
2. IWC permits aboriginal subsistence whaling conducted by indigenous communities.

Select the correct answer using the code given below:

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

24. Which of the following terms refers to species whose presence, absence, or abundance indicates specific environmental conditions?

- (a) Keystone species
- (b) Flagship species
- (c) Indicator species
- (d) Foundation species

25. Gandhi Sagar Wildlife Sanctuary has been recently in the news for which of the following reasons?

- (a) It has been nominated by India for inclusion in the UNESCO World Heritage Site list under the natural category.
- (b) It is being considered as India's second habitat for cheetahs.
- (c) It has been recently designated as a tiger reserve.
- (d) It has been recently recognized as a Ramsar site.

26. अपघटन (Decomposition) में शामिल निम्नलिखित प्रक्रियाओं पर विचार कीजिए:

1. अपचय
2. निक्षालन
3. ह्यूमीभवन (निर्माण)
4. खनिजीभवन

निम्नलिखित में से कौन-सा इन प्रक्रियाओं के सही क्रम को दर्शाता है?

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

27. गम्बूसिया एफिनिस और लेपिडोपाइगोप्सिस टाइपस, जो कभी-कभी समाचारों में दिखाई देते हैं, किसके प्रकार हैं:

- (a) पौधे
- (b) सरीसृप
- (c) मछली
- (d) परुषकवची (क्रस्टेशियन)

28. निम्नलिखित में से कौन-सा रामसर अभिसमय के तहत अंतर्राष्ट्रीय महत्व की आर्द्धभूमियों की पहचान के लिए एक मानदंड है?

1. यदि आर्द्धभूमि सुभेद्य (Vulnerable), संकटग्रस्त (Endangered) या गंभीर रूप से संकटग्रस्त (Critically Endangered) प्रजातियों या संकटग्रस्त पारिस्थितिक समुदायों का समर्थन करती है।
2. यदि आर्द्धभूमि नियमित रूप से 20,000 या उससे अधिक जलपक्षियों का समर्थन करती है।
3. यदि आर्द्धभूमि नियमित रूप से जलपक्षी की एक प्रजाति या उप-प्रजाति की आबादी के 1% का समर्थन करती है।

नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1 और 3
- (d) 1, 2 और 3

29. मानव शरीर की प्रतिरक्षा प्रणाली (Immune System) के संबंध में निम्नलिखित कथनों पर विचार कीजिए :

1. परिधीय प्रतिरक्षा सहिष्णुता (Peripheral immune tolerance) प्रतिरक्षा प्रणाली को शरीर के अपनी ऊतकों (tissues) पर हमला करने से रोकती है।

2. नियामक टी कोशिकाएँ (Regulatory T cells) ऑटोइम्यून प्रतिक्रियाओं (autoimmune responses) को दबाकर स्व-सहिष्णुता (self-tolerance) बनाए रखने में मदद करती हैं।

उपर्युक्त कथनों में से कौन सा/ से सही हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

30. राइजोटोप परियोजना, जिसमें अवैध शिकार को रोकने के लिए जीवित गैंडे के सींगों में रेडियोधर्मी पदार्थ का इंजेक्शन लगाया जाता है, किसके द्वारा शुरू की गई है:

- (a) अंतर्राष्ट्रीय प्रकृति संरक्षण संघ
- (b) असम सरकार
- (c) दक्षिण अफ्रीका सरकार
- (d) वल्ड वाइड फंड फॉर नेचर

31. सुपोषण के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

कथन-I:

सुपोषण के परिणामस्वरूप महासागरीय अम्लीकरण हो सकता है।

कथन-II:

अतिरिक्त पादप पदार्थ के अपघटन से बड़ी मात्रा में कार्बन डाइऑक्साइड (CO_2) उत्पन्न होती है।

उपर्युक्त कथनों के संदर्भ में, निम्नलिखित में से कौन-सा एक सही है?

- (a) कथन-I और कथन-II दोनों सही हैं तथा कथन-II, कथन-I की सही व्याख्या करता है।
- (b) कथन-I और कथन-II दोनों सही हैं, किंतु कथन-II, कथन-I की सही व्याख्या नहीं करता है।
- (c) कथन-I सही है, किंतु कथन-II गलत है।
- (d) कथन-I गलत है, किंतु कथन-II सही है।

32. जैविक वर्गीकरण के अनुसार, निम्न में से कौन-सी वास्तविक मछली (True Fish) मानी जाती है?

- (a) शार्क
- (b) जेलिफ़िश (जेलीफ़िश)
- (c) व्हेल
- (d) डॉल्फिन

- 26.** Consider the following processes involved in decomposition:
- Catabolism
 - Leaching
 - Humification
 - Mineralisation
- Which one of the following represents the correct sequence of these processes?
- 1-2-3-4
 - 2-1-3-4
 - 1-3-2-4
 - 2-4-1-3
- 27.** *Gambusia affinis* and *Lepidopygopsis typus*, sometimes seen in the news, are types of:
- Plants
 - Reptiles
 - Fish
 - Crustaceans
- 28.** Which of the following constitutes a criteria for identification of Wetlands of International Importance under the Ramsar Convention?
- If the wetland supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
 - If the wetland regularly supports 20,000 or more waterbirds.
 - If the wetland regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.
- Select the correct answer using the code given below:
- 1 and 2 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
- 29.** Consider the following statements regarding the immune system of the human body:
- Peripheral immune tolerance prevents the immune system from attacking the body's own tissues.
 - Regulatory T cells help maintain self-tolerance by suppressing autoimmune responses.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 30.** The Rhisotope Project, which involves injection of radioactive material into the horns of live rhinoceros to curb poaching, is launched by the:
- International Union for Conservation of Nature (IUCN)
 - Government of Assam
 - Government of South Africa
 - World Wide Fund for Nature (WWF)
- 31.** Consider the following statements regarding eutrophication:
- Statement-I:*
- Eutrophication may result in ocean acidification.
- Statement-II:*
- Decomposition of excess plant matter produces large amounts of CO_2 .
- Which one of the following is correct in respect of the above statements?
- Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
 - Both Statement-I and Statement-II are correct, but Statement-II is not the correct explanation for Statement-I
 - Statement-I is correct, but Statement-II is incorrect
 - Statement-I is incorrect, but Statement-II is correct
- 32.** Which one of the following is considered a true fish according to biological classification?
- Shark
 - Jellyfish
 - Whale
 - Dolphin

33. मरुस्थलीकरण से निपटने के लिए संयुक्त राष्ट्र अभिसमय (United Nations Convention to Combat Desertification – UNCCD) के संबंध में निम्नलिखित कथनों पर विचार कीजिए -

1. यह 1992 के संयुक्त राष्ट्र पर्यावरण और विकास सम्मेलन (United Nations Conference on Environment and Development) से उत्पन्न तीन रियो अभिसमयों (Rio Conventions) में से एक है।
2. यह मरुस्थलीकरण से निपटने के लिए स्थापित एकमात्र विधिक रूप से बाध्यकारी (Legally binding) अभिसमय है।
3. “ग्रेट ग्रीन वॉल इनिशिएटिव (Great Green Wall Initiative)” एशिया में मरुस्थलीकरण से निपटने हेतु UNCCD द्वारा संचालित एक कार्यक्रम है।

उपर्युक्त में से कौन-से कथन सही हैं?

- (a) केवल 1 और 2
- (b) केवल 1 और 3
- (c) केवल 2 और 3
- (d) 1, 2 और 3

34. हाल ही में समाचारों में प्रायः देखे जाने वाले शब्द ‘ग्रीनवॉशिंग (Greenwashing)’ का सबसे उपयुक्त वर्णन निम्नलिखित में से कौन-सा है?

- (a) वह प्रक्रिया जिसमें कंपनियाँ वास्तव में अपने पर्यावरणीय प्रभाव को कम करने के लिए सतत् (Sustainable) प्रथाओं में भारी निवेश करती हैं।
- (b) वह विपणन रणनीति (Marketing strategy) जिसमें कंपनियाँ उपभोक्ताओं को गुमराह करने के लिए अपने उत्पादों या नीतियों को मिथ्या रूप में पर्यावरण के अनुकूल दर्शाती हैं।
- (c) वह प्रक्रिया जिसमें सरकारें कॉर्पोरेट पर्यावरणीय उत्तरदायित्व सुनिश्चित करने के लिए कड़े नियम लागू करती हैं।
- (d) वह सहयोगात्मक प्रयास जिसमें कंपनियाँ वैश्विक स्तर पर पर्यावरण संरक्षण परियोजनाओं को वित्तपोषित करती हैं।

35. सलखान जीवाश्म पार्क (Fossil Park), जिसे हाल ही में यूनेस्को की विश्व धरोहर स्थलों की अनंतिम सूची में शामिल किया गया है, निम्नलिखित में से किस राज्य में स्थित है?

- (a) मध्य प्रदेश
- (b) ओडिशा

- (c) झारखण्ड
- (d) उत्तर प्रदेश

36. जैव-विविधता धरोहर स्थलों (BHS) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. इन्हें जैव-विविधता अधिनियम, 2002 के तहत मान्यता प्राप्त है।
2. राज्य सरकार, स्थानीय निकायों के परामर्श से, जैव-विविधता महत्व के क्षेत्रों को BHS के रूप में अधिसूचित कर सकती है।
3. BHS के निर्माण से स्थानीय समुदायों की पारंपरिक प्रथाओं और उपयोगों पर कोई प्रतिबंध नहीं लगाया जा सकता है।

उपर्युक्त कथनों में से कौन-से सही हैं?

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1 और 3
- (d) 1, 2 और 3

37. निम्नलिखित में से कौन-से गर्म रक्त वाले (Warm-blooded) जीव हैं?

1. स्तनधारी (Mammals)
2. पक्षी (Birds)
3. सरीसृप (Reptiles)
4. उभयचर (Amphibians)

नीचे दिए गए कूट का प्रयोग करके सही उत्तर चुनिए:

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1, 2 और 3
- (d) 1, 2, 3 और 4

38. नाइट्रोजन चक्र (Nitrogen Cycle) के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

1. अधिकांश जीवधारी वायुमंडल से नाइट्रोजन गैस का प्रत्यक्ष उपयोग करते हैं।
2. वायुमंडल में नाइट्रोजन गैस को प्राकृतिक प्रक्रियाओं जैसे कि बिजली (Lightning) और ज्वालामुखी गतिविधि (Volcanic Activity) द्वारा स्थिरीकृत किया जाता है।
3. औद्योगिक नाइट्रोजन स्थिरीकरण (Industrial Nitrogen Fixation) उच्च तापमान और दबाव पर वायुमंडलीय नाइट्रोजन को अमोनिया में परिवर्तित करता है।

33. Consider the following statements regarding the United Nations Convention to Combat Desertification (UNCCD):

1. It is one of the three Rio Conventions that emerged from the 1992 United Nations Conference on Environment and Development.
2. It is the only legally binding framework set up to address desertification.
3. “Great Green Wall Initiative” is a UNCCD - led programme to combat desertification in Asia.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

34. Which of the following best describes the term ‘greenwashing’ often seen in the news?

- (a) The practice of companies investing heavily in sustainable practices to genuinely reduce their environmental impact.
- (b) A marketing strategy where companies falsely portray their products or policies as environmentally friendly to mislead consumers.
- (c) The process of governments implementing strict regulations to ensure corporate environmental responsibility.
- (d) A collaborative effort among corporations to fund environmental conservation projects globally.

35. Salkhan Fossil Park, recently added to the UNESCO Tentative List of World Heritage Sites, is located in which one of the following States?

- (a) Madhya Pradesh
- (b) Odisha

(c) Jharkhand

(d) Uttar Pradesh

36. With reference to Biodiversity Heritage Sites (BHS), consider the following statements:

1. They are recognised under the Biological Diversity Act, 2002.
2. State Government, in consultation with the local bodies, can notify the areas of biodiversity significance as BHS.
3. Creation of BHS may not put any restriction on the prevailing practices and usages of the local communities.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

37. Which of the following are warm-blooded animals?

1. Mammals
2. Birds
3. Reptiles
4. Amphibians

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 3 only
- (d) 1, 2, 3 and 4

38. With reference to the Nitrogen Cycle, consider the following statements:

1. Most living organisms directly utilize nitrogen gas from the atmosphere.
2. Nitrogen gas in the atmosphere is fixed by natural processes such as lightning, and volcanic activity.
3. Industrial nitrogen fixation converts atmospheric nitrogen into ammonia at high temperatures and pressures.

- उपर्युक्त में से कितने कथन सही हैं?
- केवल एक
 - केवल दो
 - सभी तीन
 - कोई नहीं
- 39.** हाल ही में भारत सरकार द्वारा लॉन्च की गई PM-SETU योजना का उद्देश्य सबसे उपर्युक्त रूप से निम्नलिखित में से कौन-सा है?
- औद्योगिक परिवहन और रसद के लिए अंतर्राष्ट्रीय जलमार्ग संपर्क बढ़ाना
 - विकेंट्रीकृत सौर कलस्टरों के माध्यम से नवीकरणीय ऊर्जा उत्पादन को बढ़ावा देना
 - उद्योग-उन्मुख कौशल विकास के लिए इंडस्ट्रियल ट्रेनिंग इंस्टिट्यूट्स (ITI) को आधुनिक और उन्नत बनाना
 - फ़सल विविधीकरण और कृषि मूल्य शृंखला अवसरंचना को मज़बूत करना
- 40.** सिंदूर पौधा (*Bixa orellana*) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
- इसकी पर्ण से गहरी लालिमायुक्त नारंगी रंग निकलता है, जो पारंपरिक सिंदूर के रंग जैसा होता है।
 - यह भारतीय उपमहाद्वीप की देशज प्रजाति है।
- उपर्युक्त में से कौन-सा/से कथन सही है/हैं?
- केवल 1
 - केवल 2
 - 1 और 2 दोनों
 - न तो 1, न ही 2
- 41.** किसी पारिस्थितिकी तंत्र में उत्पादकता के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
- प्राथमिक उत्पादकता किसी दिए गए क्षेत्र की पादप प्रजातियों और पर्यावरणीय दशाओं पर निर्भर करती है।
 - द्वितीयक उत्पादकता से तात्पर्य उस दर से है, जिस पर उपभोक्ता खाद्य ऊर्जा को स्वांगीकृत करते हैं।
 - अधिकांश पारिस्थितिक तंत्रों में, द्वितीयक उत्पादकता प्राथमिक उत्पादकता से अधिक होती है।
- उपर्युक्त कथनों में से कौन-से सही हैं?
- केवल 1 और 2
 - केवल 2 और 3
- 42.** वैश्विक जैव-विविधता (Global Biodiversity) के संदर्भ में निम्नलिखित कथनों पर विचार कीजिए:
- विश्व स्तर पर पौधों की तुलना में जंतुओं की प्रजातियों की संख्या अधिक है।
 - सभी जात पशु प्रजातियों में से आधे से अधिक सरीसृप हैं।
- नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:
- केवल 1
 - केवल 2
 - 1 और 2 दोनों
 - न तो 1, न ही 2
- 43.** भारत के निम्नलिखित जैवमंडल आरक्षित क्षेत्रों (Biosphere Reserves) पर विचार कीजिए:
- नीलगिरि (Nilgiri)
 - पंचमढ़ी (Pachmarhi)
 - शेषाचलम (Seshachalam)
 - अचनकमार-अमरकंटक (Achanakmar-Amarkantak)
 - दिहांग-दिबांग (Dehang-Debang)
- उपर्युक्त में से कितने जैवमंडल आरक्षित क्षेत्र भारत के दो से अधिक राज्यों में फैले हुए हैं?
- केवल एक
 - केवल दो
 - केवल तीन
 - केवल चार
- 44.** “डिजिटल अनुक्रम सूचना” पद का प्रयोग वैश्विक चर्चा में कभी-कभी, निम्नलिखित में से किस संदर्भ में किया जाता है?
- ख़तरनाक और ई-अपशिष्ट की सीमा-पार आवाजाही का विनियमन
 - जूनोटिक रोगों के प्रकोप की निगरानी और शीघ्र संसूचन
 - आनुवंशिक संसाधनों तक पहुँच और उनके उपयोग से होने वाले लाभ का साझाकरण
 - अंतर्राष्ट्रीय दूरसंचार संघ (ITU) के तहत डिजिटल डेटा का मानकीकरण
- 45.** अंतर्राष्ट्रीय उष्णकटिबंधीय लकड़ी संगठन (International Tropical Timber Organization – ITTO) के संदर्भ में निम्नलिखित कथनों पर विचार कीजिए:

- How many of the statements given above are correct?
- Only one
 - Only two
 - All three
 - None
- 39.** Which of the following best describes the objective of the PM-SETU scheme recently launched by the Government of India?
- To enhance inland waterway connectivity for industrial transport and logistics
 - To promote renewable energy generation through decentralized solar clusters
 - To modernize and upgrade Industrial Training Institutes for industry-driven skill development
 - To strengthen crop diversification and agricultural value chain infrastructure
- 40.** With reference to the Sindoor plant (*Bixa orellana*), consider the following statements:
- Its leaves produce a deep reddish-orange dye, similar in colour to the traditional vermillion (Sindoor).
 - It is a species native to the Indian subcontinent.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 41.** Consider the following statements regarding productivity in an ecosystem:
- Primary productivity depends on the plant species and environmental conditions of a given area.
 - Secondary productivity refers to the rate at which consumers assimilate food energy.
 - In most ecosystems, secondary productivity is higher than primary productivity.
- Which of the statements given above are correct?
- 1 and 2 only
 - 2 and 3 only
- (c) 1 and 3 only
(d) 1, 2 and 3
- 42.** Consider the following statements regarding the global biodiversity:
- There are more animal species than plant species globally.
 - Reptiles constitute more than half of all known animal species.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- 43.** Consider the following Biosphere Reserves of India:
- Nilgiri
 - Pachmarhi
 - Seshachalam
 - Achanakmar-Amarkantak
 - Dehang-Debang
- How many of the above Biosphere Reserves span across more than two states of India?
- Only one
 - Only two
 - Only three
 - Only four
- 44.** The term “Digital Sequence Information” is sometimes seen in the global discussion in the context of:
- Regulation of transboundary movement of hazardous and e-waste materials
 - Monitoring and early detection of zoonotic disease outbreaks
 - Access and benefit-sharing arising from the use of genetic resources
 - Standardisation of digital data under the International Telecommunication Union (ITU)
- 45.** With reference to the International Tropical Timber Organization (ITTO), consider the following statements:

1. इसका उद्देश्य सतत् रूप से प्रबोधित वनों से प्राप्त उष्णकटिबंधीय लकड़ी के अंतर्राष्ट्रीय व्यापार के विस्तार को बढ़ावा देना है।
2. यह संगठन उष्णकटिबंधीय लकड़ी और लकड़ी उत्पादों के वैश्वक व्यापार का 90 प्रतिशत से अधिक भाग नियंत्रित करता है।
3. भारत इस संगठन का सदस्य है।
- उपर्युक्त में से कितने कथन सही हैं?
- केवल एक
 - केवल दो
 - सभी तीन
 - कोई नहीं
46. पारिस्थितिक संक्रमण क्षेत्र (Ecotones) के संदर्भ में निम्नलिखित कथनों पर विचार कीजिए:
- इकोटोन में कुछ ऐसी प्रजातियाँ हो सकती हैं जो आस-पास के समुदायों में पाई जाने वाली प्रजातियों से पूरी तरह भिन्न हों।
 - किसी पारिस्थितिक संक्रमण क्षेत्र में कुछ प्रजातियों का जनसंख्या घनत्व समीपवर्ती समुदायों की तुलना में अधिक हो सकता है।
 - मैंग्रोव समुद्री और स्थलीय पारितंत्रों के मध्य एक प्राकृतिक पारिस्थितिक संक्रमण क्षेत्र का उदाहरण है।
- उपर्युक्त में से कौन-से कथन सही हैं?
- केवल 1 और 2
 - केवल 2 और 3
 - केवल 1 और 3
 - 1, 2 और 3
47. राष्ट्रीय वन्यजीव बोर्ड (National Board for Wildlife - NBWL) के संबंध में निम्नलिखित कथनों पर विचार कीजिए:
- यह एक वैधानिक (Statutory) निकाय है, जिसकी अध्यक्षता भारत के प्रधानमंत्री द्वारा की जाती है।
 - राष्ट्रीय वन्यजीव बोर्ड की मंजूरी के बिना बाघ अभयारण्य की सीमाओं में परिवर्तन नहीं किया जा सकता।
- उपर्युक्त में से कौन-सा/से कथन सही है/हैं?
- केवल 1
 - केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2
48. मैंग्रोव के संबंध में निम्नलिखित कथनों पर विचार कीजिए:
- मैंग्रोव वन मुख्यतः उष्णकटिबंधीय और उपोष्णकटिबंधीय अंतर्राष्ट्रीय क्षेत्रों में पाए जाते हैं।
 - मैंग्रोव के बीज मूल पौधे से जुड़े रहते हुए ही अंकुरित हो जाते हैं।
 - अंडमान और निकोबार द्वीपसमूह भारत के मैंग्रोव आवरण का सबसे बड़ा हिस्सा रखता है।
- उपर्युक्त में से कौन-से कथन सही हैं?
- केवल 1 और 2
 - केवल 2 और 3
 - केवल 1 और 3
 - 1, 2 और 3
49. 2025 के भौतिकी नोबेल पुरस्कार के संदर्भ में, “मैक्रोस्कोपिक क्वांटम टनलिंग” (Macroscopic Quantum Tunnelling) शब्द किससे संबंधित है?
- उच्च ऊर्जा स्थितियों के तहत घने प्लाज्मा परत के माध्यम से विद्युत चुंबकीय तरंगों की गति।
 - वह घटना जिसमें बड़े पैमाने की प्रणालियाँ एक ऊर्जा अवरोध से होकर गुज़रती हैं जिसे क्लासिकल भौतिकी के अंतर्गत पार करना असंभव है।
 - प्रकाश तरंगों का मुड़ना जब वे अत्यंत छोटी परमाणु दूरी पर परस्पर क्रिया करती हैं।
 - बिना किसी प्रभावी प्रतिरोध के चुंबकीय पदार्थों के माध्यम से इलेक्ट्रॉनों का मार्ग।
50. हाल ही में पश्चिमी राजस्थान के शुष्क रेगिस्तानी इलाके में ‘डेजर्ट सोइलिफिकेशन तकनीक’ का उपयोग करके गेहूँ सफलतापूर्वक उगाया गया है। यह मुख्य रूप से किसमें शामिल है?
- एक हाइड्रोपोनिक खेती प्रणाली, जो बाहरी रूप से उपलब्ध पोषक तत्वों और नियंत्रित पर्यावरणीय परिस्थितियों पर निर्भर करती है।
 - एक स्वदेशी जैव-संरचना, जो रेतीली मिट्टी में जल धारण क्षमता बढ़ाती है और सतत् फ़सल वृद्धि के लिए इसकी संरचना में सुधार करती है।

1. It aims to promote the expansion of international trade in tropical timber from sustainably managed forests.
2. It accounts for more than 90 percent of the global trade in tropical timber and timber products.
3. India is a member of the organization.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

- 46.** With reference to ecotones, consider the following statements:

1. Ecotones may contain certain species that are entirely different from those found in the adjoining communities.
2. The population density of some species in an ecotone may be higher than in the adjoining communities.
3. Mangroves represent a natural ecotone between marine and terrestrial ecosystems.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

- 47.** Consider the following statements regarding the National Board for Wildlife (NBWL):

1. It is a statutory body chaired by the Prime Minister of India.
2. The boundaries of a tiger reserve cannot be altered without the approval of the National Board for Wildlife.

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

- 48.** Consider the following statements regarding mangroves:

1. Mangrove forests are primarily found in tropical and subtropical intertidal regions.
2. The seeds of mangroves germinate while still attached to the parent plant.
3. Andaman & Nicobar Islands accounts for the largest share of India's mangrove cover.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

- 49.** In the context of the 2025 Nobel Prize in Physics, the term “macroscopic quantum tunnelling” refers to:

- (a) The movement of electromagnetic waves through a dense plasma layer under high energy conditions.
- (b) The phenomenon where large-scale systems pass through an energy barrier impossible to cross under classical physics.
- (c) The bending of light waves when they interact at extremely small atomic distances.
- (d) The passage of electrons through magnetic materials without significant resistance.

- 50.** Recently, wheat has been successfully grown in the arid desert land of western Rajasthan using ‘desert soilification technology’. It primarily involves:

- (a) A hydroponic cultivation system that relies on externally supplied nutrient solutions and controlled environmental conditions.
- (b) An indigenous bioformulation that enhances water retention in sandy soil and improves its structure for sustainable crop growth.

- (c) पारंपरिक सिंचाई विधि, जिसे उत्पादकता बढ़ाने के लिए रासायनिक उर्वरकों के व्यापक उपयोग के साथ जोड़ा गया है।
- (d) रेगिस्टान में बनीकरण तकनीक, जो मृदा अपरदन कम करने और नमी बढ़ाने के लिए बड़े पैमाने पर वृक्षारोपण पर केंद्रित है।

51. निम्नलिखित मानदंडों पर विचार कीजिए:

1. इसमें मूल प्राकृतिक वनस्पति का 30% या उससे कम हिस्सा होना चाहिए।
2. इसमें न्यूनतम 1,500 स्थानिक संवहनी पादप प्रजातियाँ होनी चाहिए।
3. यह किसी विशिष्ट जलपक्षी प्रजाति या उप-प्रजाति की जनसंख्या के न्यूनतम 1% व्यक्तियों का भरण-पोषण करता हो।

जैव-विविधता तप्तस्थल के रूप में अर्ह होने के लिए, उपर्युक्त में से कितने मानदंड आवश्यक हैं?

- (a) केवल एक
 (b) केवल दो
 (c) सभी तीन
 (d) कोई भी नहीं

52. ब्लू राष्ट्रीय स्तर पर निर्धारित योगदान (NDC) चुनौती के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

1. इसे संयुक्त राष्ट्र महासागर सम्मेलन में ब्राजील और प्रांत द्वारा संयुक्त रूप से लॉन्च किया गया था।
2. इसका प्राथमिक उद्देश्य गहरे समुद्र में खनन और समुद्री संसाधन निष्कर्षण के वित्तपोषण के लिए एक वैश्विक कोष का निर्माण करना है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
 (b) केवल 2
 (c) 1 और 2 दोनों
 (d) न तो 1, न ही 2

53. किसी क्षेत्र को किसी देश द्वारा जैव मंडल आरक्षित क्षेत्र (Biosphere Reserve) घोषित किए जाने का सबसे संभावित प्रभाव कौन-सा है?

- (a) जैव-विविधता की सुरक्षा के लिए संपूर्ण मानवीय गतिविधियों पर पूर्ण प्रतिबंध।
 (b) जैव-विविधता और सांस्कृतिक धरोहर को संरक्षित करते हुए सतत् विकास (Sustainable Development) प्रथाओं को बढ़ावा देना

- (c) पूरे क्षेत्र को संरक्षित क्षेत्र में बदलना, जिसमें स्थानीय समुदायों की न्यूनतम पहुँच हो।
 (d) यह क्षेत्र संरक्षण निरीक्षण के लिए राष्ट्रीय सरकार और यूनेस्को के साझा अधिकार क्षेत्र में आता है।

54. निम्नलिखित कथनों पर विचार कीजिए:

1. प्रजाति समृद्धि (Species richness) किसी दिए गए क्षेत्र में किसी प्रजाति से संबंधित कुल व्यक्तियों की संख्या का माप है।
2. प्रजाति समता (Species evenness) किसी समुदाय में उपस्थित विभिन्न प्रजातियों के मध्य व्यक्तियों की सापेक्ष प्रचुरता (Relative abundance) को दर्शाती है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
 (b) केवल 2
 (c) 1 और 2 दोनों
 (d) न तो 1, न ही 2

55. हाल ही में समाचारों में देखी गई AIM4NatuRe पहल के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

1. इस पहल का नेतृत्व खाद्य एवं कृषि संगठन (एफएओ) द्वारा किया जा रहा है तथा इसका वित्तपोषण यूनाइटेड किंगडम द्वारा किया जा रहा है।
2. इसका उद्देश्य देशों को ग्लोबल बायोडायर्सिटी फ्रेमवर्क के तहत 2030 तक 30 प्रतिशत क्षतिग्रस्त पारिस्थितिक तंत्रों को पुनर्स्थापित करने की प्रगति की निगरानी में मदद करना है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
 (b) केवल 2
 (c) 1 और 2 दोनों
 (d) न तो 1, न ही 2

56. कुछ जानवरों द्वारा दिखाई जाने वाली सामान्य अनुकूलताओं के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. शीतनिद्रा (हाइबरनेशन) अत्यधिक ठंड से बचने के लिए निष्क्रियता की स्थिति है, जबकि ग्रीष्मनिद्रा (एस्टीवेशन) गर्मियों के दौरान बढ़ी हुई सक्रियता की स्थिति है।

- (c) A traditional irrigation approach combined with the extensive use of chemical fertilizers to improve productivity.
- (d) A desert afforestation technique that focuses on large-scale tree plantations to reduce soil erosion and increase moisture content.
- 51.** Consider the following criteria:
1. It must have 30% or less of its original natural vegetation.
 2. It must contain at least 1,500 endemic vascular plant species.
 3. It shall support at least 1% of the individuals in the population of a particular waterbird species or subspecies.
- How many of the above constitute the necessary criteria to qualify as a biodiversity hotspot?
- (a) Only one
 (b) Only two
 (c) All three
 (d) None
- 52.** Consider the following statements regarding the Blue Nationally Determined Contributions (NDC) Challenge:
1. It was jointly launched by Brazil and France at the UN Ocean Conference.
 2. Its primary objective is to create a global fund for financing deep-sea mining and ocean resource extraction.
- 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
- 53.** Which of the following is the most likely impact of a region being designated as a Biosphere Reserve by a country?
- (a) Complete restriction on all human activities to preserve biodiversity.
 (b) Promotion of sustainable development practices while conserving biodiversity and cultural heritage.
- (c) Conversion of the entire area into a protected zone with minimal access to local communities.
- (d) Region comes under the shared jurisdiction of the national government and UNESCO for conservation oversight.
- 54.** Consider the following statements:
1. Species richness is a measure of the total number of individuals belonging to a species in a given area.
 2. Species evenness refers to the relative abundance of individuals among the species present in a community.
- 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
- 55.** Consider the following statements regarding the AIM4NatuRe initiative, recently seen in news:
1. The initiative is led by the Food and Agriculture Organization (FAO) and funded by the United Kingdom.
 2. It aims to help countries monitor progress toward restoring 30 percent of degraded ecosystems by 2030 under the Global Biodiversity Framework.
- 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
- 56.** With reference to the common adaptations shown by certain animals, consider the following statements:
1. Hibernation is a state of inactivity to avoid excessive cold, whereas aestivation is a state of increased activity during summer.

2. शीतनिद्रा के दौरान चयापचय की दर धीमी हो जाती है, जबकि ग्रीष्मनिद्रा के दौरान यह बढ़ जाती है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

57. “यह दुनिया का सबसे लंबा उड़ने वाला पक्षी है, जो मुख्यतः धूसर (Grey) पंखों, नग्न लाल सिर और ऊपरी गर्दन, तथा हल्के लाल पैरों से पहचाना जाता है। यह उत्तर प्रदेश का राज्य पक्षी है और मनुष्यों के निकट रहकर जीवित रहने की अपनी क्षमता के लिए जाना जाता है।”

उपर्युक्त में किस पक्षी का वर्णन किया गया है?

- (a) एमू (Emu)
- (b) ग्रेट इंडियन बस्टर्ड (Great Indian Bustard)
- (c) सारस क्रेन (Sarus Crane)
- (d) ग्रेटर फ्लेमिंगो (Greater Flamingo)

58. महाविविधता (मेगाडाइवर्स) वाले देशों के संदर्भ में, निम्नलिखित में से कौन-सा कथन सही है?

1. महाविविधता वाले देशों के पास न्यूनतम 5,000 ऐसे पादप होने चाहिए, जो प्राकृतिक रूप से केवल उन देशों की सीमाओं के भीतर ही पाए जाते हों।
2. महाविविधता वाले देशों में समुद्री पारिस्थितिकी तंत्र अवश्य होना चाहिए।
3. वर्तमान में महाविविधता वाले देशों में विश्व की लगभग 70% जैव-विविधता विद्यमान है।

नीचे दिए गए कूट का प्रयोग करके सही उत्तर चुनिए:

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1 और 3
- (d) 1, 2 और 3

59. “सिल्वर इकोनॉमी” के इर्द-गिर्द बढ़ती चर्चाएँ प्रत्यक्ष तौर पर निम्नलिखित में से किस जनसांख्यिकीय प्रवृत्ति से जुड़ी हैं?

- (a) विकासशील देशों में बढ़ती जन्म दर
- (b) वृद्ध आबादी के अनुपात में वृद्धि

- (c) ग्रामीण से शहरी पलायन में वृद्धि
- (d) युवा आश्रित अनुपात में वृद्धि

60. आईयूसीएन ग्रीन स्टेट्स ऑफ़ स्पीशीज के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. यह प्रजातियों की आबादी की बहाली का आकलन करने और उनके संरक्षण की सफलता को मापने के लिए एक उपकरण प्रदान करता है।
2. ग्रीन सूची में शामिल प्रजातियों को अब संरक्षण की आवश्यकता नहीं रह जाती।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

61. हाल ही में केंद्रीय कोयला मंत्रालय द्वारा लॉन्च किए गए RECLAIM फ्रेमवर्क के उद्देश्य का वर्णन कौन-सा सबसे अच्छे तरीके से करता है?

- (a) औद्योगिक विस्तार के लिए परित्यक्त कोयला खानों का वाणिज्यिक पुनः उपयोग को बढ़ावा देना
- (b) खदान बंद करने और पुनः उपयोग के दौरान समुदाय की भागीदारी और सतत् विकास सुनिश्चित करना
- (c) कोयला खनन और निष्कर्षण परियोजनाओं में विदेशी निवेश आकर्षित करना
- (d) कोयला ब्लॉकों के निजीकरण के लिए राष्ट्रीय नीति स्थापित करना

62. जलीय जीवों (Aquatic Organisms) के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

1. नेक्टन ऐसे जीव हैं जो सक्रिय तैराक होते हैं तथा जल की गतिविधियों से स्वतंत्र रूप से गति कर सकते हैं।
2. प्राणिप्लक्ट (Zooplankton) सूक्ष्म पौधे हैं जो जल धाराओं के साथ बहते हैं।

उपरोक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

2. The rate of metabolism slows down during hibernation, while it increases during aestivation.

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

57. “It is the tallest flying bird in the world, characterized by predominantly grey plumage, a naked red head and upper neck, and pale red legs. It is the State Bird of Uttar Pradesh and is known for its ability to live in close association with humans.”

Which one of the following birds is being described above?

- (a) Emu
- (b) Great Indian Bustard
- (c) Sarus Crane
- (d) Greater Flamingo

58. With reference to the Megadiverse countries, which of the following statements are correct?

1. Megadiverse countries must possess at least 5,000 plants that occur naturally only within its borders.
2. Megadiverse countries must have a marine ecosystem.
3. The Megadiverse countries presently host approximately 70% of the world's biodiversity.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

59. Growing discussions around the “Silver Economy” are most directly associated with which one of the following demographic trends?

- (a) Rising fertility rates in developing countries
- (b) Increasing proportion of the elderly population

- (c) Rising rural-to-urban migration
- (d) Growing youth dependency ratio

60. With reference to the IUCN Green Status of Species, consider the following statements:

1. It provides a tool for assessing the recovery of species' populations and measuring their conservation success.
2. A species assessed on a Green list is no longer in need of conservation.

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

61. Which of the following best describes the objective of the RECLAIM Framework recently launched by the Union Ministry of Coal?

- (a) To promote commercial reuse of abandoned coal mines for industrial expansion
- (b) To ensure community engagement and sustainable development during mine closure and repurposing
- (c) To attract foreign investment in coal mining and extraction projects
- (d) To establish a national policy for privatization of coal blocks

62. Consider the following statements regarding aquatic organisms:

1. Nekton are organisms that are active swimmers and can move independently of water movements.
2. Zooplankton are microscopic plants drifting with water currents.

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

63. निम्नलिखित युगमों पर विचार कीजिए:

रामसर साइट	राज्य/केंद्र-शासित प्रदेश
1. गोकुल जलाशय	बिहार
2. किचन	असम
3. मेनार	जम्मू और कश्मीर

उपर्युक्त में से कितने युगम सही सुमेलित हैं?

- (a) केवल एक
- (b) केवल दो
- (c) सभी तीन
- (d) कोई नहीं

64. निम्नलिखित में से कौन-सी प्रजातियाँ भारत में आक्रमणकारी विदेशी प्रजातियाँ (Invasive Alien Species) मानी जाती हैं?

- 1. सकरमाउथ कैटफिश (Suckermouth Catfish)
- 2. कांग्रेस घास (Congress Grass)
- 3. अफ़्रीकी कैटफिश (African Catfish)
- 4. लैंटाना कैमारा (Lantana Camara)

नीचे दिए गए कूट का प्रयोग करके सही उत्तर चुनिए:

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1, 2 और 3
- (d) 1, 2, 3 और 4

65. पर्यावरणीय प्रभाव मूल्यांकन (Environmental Impact Assessment - EIA) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

- 1. पर्यावरण (संरक्षण) अधिनियम, 1986 के तहत बड़े परियोजनाओं के लिए EIA अनिवार्य है।
- 2. श्रेणी 'B2' की परियोजनाओं के लिए पर्यावरणीय प्रभाव मूल्यांकन (EIA) रिपोर्ट की आवश्यकता नहीं होती।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

66. "प्रोजेक्ट चीता" (Project Cheetah) के संदर्भ में निम्नलिखित कथनों पर विचार कीजिए:

- 1. चीता स्वतंत्र भारत में विलुप्त होने वाली एकमात्र बड़ी मांसाहारी प्रजाति है।

- 2. एशियाई चीतों (Asiatic Cheetahs) को कूनों राष्ट्रीय उद्यान में पुनः बसाया गया है।
- 3. प्रोजेक्ट चीता का कार्यान्वयन राष्ट्रीय बाघ संरक्षण प्राधिकरण (NTCA) द्वारा किया जा रहा है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1 और 3
- (d) 1, 2 और 3

67. निम्नलिखित में से किन क्षेत्रों को प्राथमिक पारिस्थितिक अनुक्रमण (Primary Ecological Succession) के स्थल के रूप में वर्गीकृत किया जा सकता है?

- 1. जला हुआ वन (Burned forest)
- 2. ऊँचे उठे समुद्री निक्षेप (Uplifted marine deposits)
- 3. बाढ़ग्रस्त भूमि (Flooded lands)
- 4. परित्यक्त कृषि भूमि (Abandoned farmlands)
- 5. बालू के टीले (Sand dunes)
- 6. नई ठंडी हुई लावा भूमि (Newly cooled lava)
- 7. नग्न चट्टानें (Bare rocks)

नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:

- (a) केवल 1, 3 और 4
- (b) केवल 1, 5 और 7
- (c) केवल 2, 5, 6 और 7
- (d) केवल 1, 3, 5 और 6

68. 'समुद्री शैवाल (Seaweeds)' के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

- 1. यह एक पोषक तत्त्वों से भरपूर समुद्री पौधा है जो महासागरों और समुद्रों में उगता है।
- 2. समुद्री शैवाल की खेती के लिए भूमि, ताजे जल, उर्वरक या कोटनाशकों की आवश्यकता नहीं होती।
- 3. समुद्री शैवाल का उपयोग उद्योगों में गाढ़ा करने (Thickening) और जेल बनाने वाले एजेंट बनाने में किया जाता है।

उपर्युक्त कथनों में से कितने सही हैं?

- (a) केवल एक
- (b) केवल दो
- (c) सभी तीन
- (d) कोई नहीं

63. Consider the following pairs:

	Ramsar Site	State/UT
1.	Gokul Jalashaya	Bihar
2.	Kichan	Assam
3.	Menar	Jammu and Kashmir

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

64. Which of the following species are considered *Invasive Alien Species* in India?

- 1. Suckermouth catfish
- 2. Congress grass
- 3. African catfish
- 4. Lantana camara

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 3 only
- (d) 1, 2, 3 and 4

65. With respect to Environmental Impact Assessment (EIA), consider the following statements :

- 1. EIA is mandatory for large projects under the Environment (Protection) Act, 1986.
- 2. Category ‘B2’ projects don’t require an Environment Impact Assessment report.

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

66. In the context of Project Cheetah, consider the following statements:

- 1 Cheetah is the only large carnivore species that went extinct in independent India.

- 2 Asiatic Cheetahs have been reintroduced in Kuno National Park.
- 3 Project Cheetah is being implemented by the National Tiger Conservation Authority.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

67. Which of the following areas can be classified as sites of *primary ecological succession*?

- 1. Burned forest
- 2. Uplifted marine deposits
- 3. Flooded lands
- 4. Abandoned farmlands
- 5. Sand dunes
- 6. Newly cooled lava
- 7. Bare rocks

Select the correct answer using the codes given below:

- (a) 1, 3 and 4 only
- (b) 1, 5 and 7 only
- (c) 2, 5, 6 and 7 only
- (d) 1, 3, 5 and 6 only

68. Consider the following statements regarding seaweeds:

- 1. They are nutrient-rich marine plants that grow in oceans and seas.
- 2. Seaweed cultivation requires no land, freshwater, or fertilizers.
- 3. Seaweeds are used in various industries for producing thickening and gelling agents.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

69. भारतीय गैंडे (Indian Rhinos) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. भारतीय गैंडे दो-सींग बाले होते हैं और उनकी त्वचा मोटी, कवच जैसी होती है।
2. वे बाढ़ के मैदानों, दलदलों और नदी के किनारे के जंगलों में पनपते हैं।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

70. जैव-विविधता और पारिस्थितिकी तंत्र सेवाओं पर अंतर-सरकारी विज्ञान-नीति मंच (IPBES) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. यह जैव-विविधता और पारिस्थितिकी तंत्र सेवाओं के लिए विज्ञान-नीति संबंध को मजबूत करने हेतु एक संयुक्त राष्ट्र निकाय है।
2. इसका सचिवालय संयुक्त राष्ट्र पर्यावरण कार्यक्रम (UNEP) द्वारा आयोजित किया जाता है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

71. वन (संरक्षण) संशोधन अधिनियम, 2023 [Forest (Conservation) Amendment Act, 2023] के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. यह अधिनियम अंतर्राष्ट्रीय सीमा से 100 किमी के भीतर राष्ट्रीय सुरक्षा से संबंधित रणनीतिक परियोजनाओं को केंद्रीय सरकार की पूर्व अनुमति से मुक्त करता है।
2. इस अधिनियम के प्रावधानों के अंतर्गत वन भूमि के वन संवर्धन गतिविधियों के लिए उपयोग पर प्रतिबंध लागू नहीं होंगे।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

72. वन अधिकार अधिनियम, 2006 के अनुसार, निम्नलिखित में से कौन-सी मर्दे लघु वनोपज (MFP) में शामिल हैं?

1. बाँस
2. लकड़ी
3. बोत
4. शहद
5. औषधीय जड़ी-बूटियाँ

नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:

- (a) केवल 1, 3 और 4
- (b) केवल 2, 3 और 5
- (c) केवल 1, 2 और 5
- (d) केवल 1, 3, 4 और 5

73. निम्नलिखित में से कौन-सा पारिस्थितिकी में संगठन के पदानुक्रम के सही क्रम को निम्न से उच्चतर स्तर तक दर्शाता है?

- (a) समुदाय → जनसंख्या → पारितंत्र → बायोम → जीवमंडल
- (b) जनसंख्या → समुदाय → पारितंत्र → जीवमंडल → बायोम
- (c) जनसंख्या → समुदाय → पारितंत्र → बायोम → जीवमंडल
- (d) समुदाय → जनसंख्या → पारितंत्र → जीवमंडल → बायोम

74. जैव-सुरक्षा समाशोधन गृह/बायोसेफ्टी क्लियरिंग-हाउस (BCH) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. यह नागोया प्रोटोकॉल के तहत जीवित संशोधित जीवों संबंधी सूचना के आदान-प्रदान को सुगम बनाने के लिए स्थापित एक तंत्र है।
2. BCH में पंजीकृत जानकारी केवल प्रोटोकॉल के पक्षकारों को ही निर्बाध रूप से उपलब्ध है।

उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

75. भारत ने हाल ही में “प्रोजेक्ट स्लॉथ बियर” (Project Sloth Bear) की शुरुआत की है। इस संदर्भ में, स्लॉथ बियर (भालू) से संबंधित निम्नलिखित कथनों पर विचार कीजिए:

69. With reference to Indian rhinos, consider the following statements:

1. Indian rhinos are double-horned and have thick, armour-like skin.
2. They thrive in floodplain grasslands, swamps, and riverine forests.

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

70. With reference to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), consider the following statements:

1. It is a United Nations body to strengthen the science-policy interface for biodiversity and ecosystem services.
2. The United Nations Environment Programme (UNEP) hosts its secretariat.

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

71. With reference to the Forest (Conservation) Amendment Act, 2023, consider the following statements:

1. It exempts strategic projects related to national security within 100 km of the International Border from prior Central Government approval.
2. The restrictions on the use of forest land for silvicultural activities shall not apply under the provisions of this Act.

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

72. Which of the following are included under *Minor Forest Produce (MFP)* as per the Forest Rights Act, 2006?

1. Bamboo
2. Timber
3. Cane
4. Honey
5. Medicinal herbs

Select the correct answer using the codes given below:

- (a) 1, 3 and 4 only
- (b) 2, 3 and 5 only
- (c) 1, 2 and 5 only
- (d) 1, 3, 4 and 5 only

73. Which one of the following represents the correct order of hierarchy of organisation in ecology, from lower to higher levels?

- (a) Community → Population → Ecosystem → Biome → Biosphere
- (b) Population → Community → Ecosystem → Biosphere → Biome
- (c) Population → Community → Ecosystem → Biome → Biosphere
- (d) Community → Population → Ecosystem → Biosphere → Biome

74. Consider the following statements with reference to the Biosafety Clearing-House (BCH):

1. It is a mechanism established under the Nagoya Protocol to facilitate the exchange of information on Living Modified Organisms.
2. The information registered in the BCH is freely available only to the Parties of the Protocol.

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

75. India has recently launched Project Sloth Bear. In this context, consider the following statements regarding the Sloth Bear:

1. यह एक दुर्लभ भालू प्रजाति है जो मनुष्यों के साथ शांतिपूर्ण सहअस्तित्व के लिए जानी जाती है।
2. इसकी वैशिक आबादी का लगभग 90 प्रतिशत हिस्सा भारत में पाया जाता है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

76. निम्नलिखित कथनों पर विचार कीजिए:

कथन I:

उष्णकटिबंधीय क्षेत्रों में समशीतोष्ण क्षेत्रों की तुलना में अधिक जैव-विविधता पाई जाती है।

कथन II:

उष्णकटिबंधीय क्षेत्र लाखों वर्षों से अपेक्षाकृत अव्यवधानित (अविचलित) रहे हैं, जिससे प्रजातियों के विविधीकरण के लिए अधिक समय मिला है।

कथन III:

उष्णकटिबंधीय क्षेत्रों को पूरे वर्ष अधिक सौर ऊर्जा प्राप्त होती है, जिससे अधिक उत्पादकता होती है।

उपर्युक्त कथनों के संदर्भ में निम्नलिखित में से कौन-सा एक सही है?

- (a) कथन II और कथन III दोनों सही हैं तथा दोनों, कथन I की व्याख्या करते हैं।
- (b) कथन II और कथन III दोनों सही हैं, किंतु उनमें से केवल एक, कथन I की व्याख्या करता है।
- (c) कथन II और कथन III में से केवल एक सही है और वह कथन I की व्याख्या करता है।
- (d) कथन II और कथन III में से केवल एक सही है, किंतु वह कथन I की व्याख्या नहीं करता।

77. 'लिविंग प्लैनेट रिपोर्ट' निम्नलिखित में से किस संगठन का प्रमुख प्रकाशन है?

- (a) संयुक्त राष्ट्र पर्यावरण कार्यक्रम (UNEP)
- (b) वर्ल्ड वाइड फँड फ़ॉर नेचर (WWF)
- (c) जलवायु परिवर्तन पर अंतर-सरकारी पैनल (IPCC)
- (d) वर्ल्ड रिसोर्सेज इंस्टीच्यूट (WRI)

78. वन अधिकार अधिनियम, 2006 के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

1. यह वन-आश्रित अनुसूचित जनजातियों और अन्य पारंपरिक वनवासियों के व्यक्तिगत और सामुदायिक अधिकारों दोनों को मान्यता देता है।
2. यह ग्राम सभा को जैव-विविधता के संरक्षण और सामुदायिक वन संसाधनों के सतत् उपयोग के लिए प्रबंधन का अधिकार देता है।
3. इसमें एक सनसेट क्लॉज़ (समाप्ति प्रावधान) है, जो अनुसूचित जनजातियों और अन्य वनवासियों को कानून के तहत अधिकारों की मान्यता और हस्तांतरण के लिए अंतिम तारीख प्रदान करता है।

उपर्युक्त में से कौन-से कथन सही हैं?

- (a) केवल 1 और 2
- (b) केवल 2 और 3
- (c) केवल 1 और 3
- (d) 1, 2 और 3

79. हाल ही में PRATUSH मिशन अपनी "कॉस्मिक डॉन" (Cosmic Dawn) का अध्ययन करने के उद्देश्य के लिए समाचारों में था। "कॉस्मिक डॉन" शब्द किसको संदर्भित करता है?

- (a) बिंग बैंग के बाद पहली आकाशगंगाओं के निर्माण का काल
- (b) वह क्षण जब सूर्य की रोशनी पहली बार पृथ्वी की सतह तक पहुँची
- (c) एक युवा तारा प्रणाली में ग्रह निर्माण का प्रारंभिक चरण
- (d) बिंग बैंग के तुरंत बाद ब्रह्मांड के तीव्र प्रसार का चरण

80. संयुक्त राष्ट्र वन मंच (UNFF) के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

1. यह संयुक्त राष्ट्र आर्थिक और सामाजिक परिषद् (ECOSOC) का एक कार्यकारी आयोग है।
2. यह सदस्य देशों के मध्य वन संरक्षण के संबंध में कानूनी रूप से बाध्यकारी समझौते बनाने के लिए जवाबदेह है।

उपर्युक्त में से कौन-सा/से कथन सही है/हैं?

- (a) केवल 1
- (b) केवल 2
- (c) 1 और 2 दोनों
- (d) न तो 1, न ही 2

- 1 It is a rare bear species known for its peaceful coexistence with humans.
- 2 India accounts for nearly 90 percent of its global population.

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

76. Consider the following statements:

Statement I:

Tropical regions have greater biological diversity than temperate regions.

Statement II:

Tropical regions have remained relatively undisturbed for millions of years, providing more time for species diversification.

Statement III:

Tropical regions receive more solar energy throughout the year, leading to higher productivity.

Which one of the following is correct in respect of the above statements ?

- (a) Both Statement-II and Statement-III are correct and both of them explain Statement-I
 - (b) Both Statement-II and Statement-III are correct, but only one of them explains Statement-I
 - (c) Only one of the Statements II and III is correct and that explains Statement-I
 - (d) Only one of the Statements II and III is correct, but that does not explain Statement-I
- 77.** The *Living Planet Report* is a flagship publication of which one of the following organisations?
- (a) United Nations Environment Programme (UNEP)
 - (b) World Wide Fund for Nature (WWF)
 - (c) Intergovernmental Panel on Climate Change (IPCC)
 - (d) World Resources Institute (WRI)

78. With reference to the Forest Rights Act, 2006, consider the following statements:
 1. It recognizes both individual and community rights of forest-dwelling Scheduled Tribes and other traditional forest dwellers.
 2. It empowers the Gram Sabha to conserve biodiversity and manage community forest resources for sustainable use.
 3. It has a sunset clause that provides an end date for the recognition and vesting of rights under the law to Scheduled Tribes and other forest dwellers.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

79. Recently, the PRATUSH mission was in the news for its objective to study the “cosmic dawn.” What does the term “cosmic dawn” refer to?

- (a) The period marking the formation of the first galaxies after the Big Bang
- (b) The moment when the Sun’s light first reached the Earth’s surface
- (c) The earliest stage of planet formation in a young stellar system
- (d) The phase of rapid expansion of the Universe immediately after the Big Bang

80. Consider the following statements regarding the United Nations Forum on Forests (UNFF):

- 1. It is a functional commission of the UN Economic and Social Council (ECOSOC).
- 2. It is responsible for creating legally binding agreements among member countries regarding forest conservation.

Which of the above statements is/are correct?

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

81. निम्नलिखित में से कौन-सा विकल्प ‘बायोप्रॉस्पेक्टिंग’ शब्द का सर्वोत्तम वर्णन करता है?
- संकटग्रस्त प्रजातियों का इन-सीटू और एक्स-सीटू उपायों के माध्यम से संरक्षण।
 - औद्योगिक उपयोग के लिए जेनेटिकली मॉडिफ़ाइड फ़्लसलों की बड़े पैमाने पर खेती।
 - वाणिज्यिक रूप से मूल्यवान आनुवंशिक और जैव रासायनिक गुणों के लिए जैविक संसाधनों का अन्वेषण।
 - प्राकृतिक पारिस्थितिक तंत्र को पुनर्स्थापित करने के लिए आक्रामक प्रजातियों को हटाने की प्रक्रिया।

82. खारे पानी के मगरमच्छों के संबंध में निम्नलिखित कथनों पर विचार कीजिए:

- ये दुनिया के सबसे बड़े सरीसृप हैं।
- ये भारत के स्थानिक हैं।
- ये अंडमान और निकोबार द्वीप समूह के तटीय क्षेत्रों में प्राकृतिक रूप से पाए जाते हैं।

उपर्युक्त कथनों में से कौन-से सही हैं?

- केवल 1 और 2
- केवल 2 और 3
- केवल 1 और 3
- 1, 2 और 3

83. निम्नलिखित युगमों पर विचार कीजिए:

	राष्ट्रीय उद्यान	राज्य
1.	इंद्रावती राष्ट्रीय उद्यान	छत्तीसगढ़
2.	पिन घाटी राष्ट्रीय उद्यान	हिमाचल प्रदेश
3.	संजय गाँधी राष्ट्रीय उद्यान	महाराष्ट्र

उपर्युक्त में से कितने युगम सही सुमेलित हैं?

- केवल एक
- केवल दो
- सभी तीन
- कोई नहीं

84. दुगोंग संरक्षण रिजर्व, जिसे हाल ही में 2025 के बल्ड कंजर्वेशन कांग्रेस में IUCN द्वारा अनुमोदित किया गया, भारत के निम्नलिखित किनारे में से किस पर स्थित है?
- मालाबार तट
 - कांकण तट
 - कोरोमंडल तट
 - काठियावाड़ तट

85. निम्नलिखित में से कौन-सा कथन “पारिस्थितिक पदचिह्न (Ecological Footprint)” शब्द का सर्वोत्तम वर्णन करता है?
- किसी क्षेत्र में अधिकतम प्रजातियों को समर्थन देने की पारिस्थितिकी तंत्र की क्षमता।
 - किसी जनसंख्या की आवश्यकताओं को पूर्ण करने के लिए आवश्यक जैविक रूप से उत्पादक भूमि और जल की मात्रा।
 - पारिस्थितिक तंत्र की, उन सतहों से लोगों की माँग के अनुसार पुनर्जीवित करने की क्षमता
 - मानव गतिविधियों को बनाए रखने के लिए आवश्यक कुल ऊर्जा की मात्रा।

86. जैव संचयन और जैव आवर्धन के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:

- जैव संचयन किसी जीव के भीतर प्रदूषक की सांद्रता में वृद्धि है, जबकि जैव आवर्धन पोषी स्तरों में इसकी वृद्धि है।
- जैव-संचयन मुख्यतः जैवनिमीकरणीय प्रदूषकों में होता है, जबकि जैव-आवर्धन सामान्यतः गैर-जैवनिमीकरणीय प्रदूषकों में होता है।
- पारा और डीडीटी को जलीय खाद्य शृंखलाओं में जैव आवर्धन करने के लिए जाना जाता है।

उपर्युक्त कथनों में से कौन-से सही हैं?

- केवल 1 और 2
- केवल 2 और 3
- केवल 1 और 3
- 1, 2 और 3

87. शहतूश, ऊन का एक उत्तम प्रकार, निम्नलिखित में से किस जानवर से प्राप्त किया जाता है?

- चांगथांगी बकरी
- अंगोरा खरगोश
- तिब्बती मृग
- कश्मीरी बकरी

88. भारत वन स्थिति रिपोर्ट (ISFR), 2023 के संबंध में, निम्नलिखित कथनों पर विचार कीजिए:

- यह भारतीय वन सर्वेक्षण (FSI) द्वारा एक द्विवार्षिक प्रकाशन है।
- मध्य प्रदेश में देश का सबसे बड़ा वन एवं वृक्ष आवरण है।
- कुल भौगोलिक क्षेत्र की दृष्टि से सिक्किम में वन आवरण का अनुपात सबसे अधिक है।

- 81.** Which of the following best describes the term ‘bioprospecting’?
- The conservation of endangered species through in-situ and ex-situ measures.
 - The large-scale cultivation of genetically modified crops for industrial use.
 - The exploration of biological resources for commercially valuable genetic and biochemical properties.
 - The process of removing invasive species to restore natural ecosystems.
- 82.** Consider the following statements regarding the Salt Water Crocodiles:
- They are the largest reptiles in the world.
 - They are endemic to India.
 - They are naturally found in coastal areas of the Andaman and Nicobar Islands.
- Which of the statements given above are correct?
- 1 and 2 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
- 83.** Consider the following pairs:
- | | National Park | State |
|----|-----------------------------|------------------|
| 1. | Indravati National Park | Chhattisgarh |
| 2. | Pin Valley National Park | Himachal Pradesh |
| 3. | Sanjay Gandhi National Park | Maharashtra |
- How many of the above pairs are correctly matched?
- Only one
 - Only two
 - All three
 - None
- 84.** The Dugong Conservation Reserve, recently endorsed by IUCN at the World Conservation Congress 2025, is located along which one of the following coasts of India?
- Malabar Coast
 - Konkan Coast
 - Coromandel Coast
 - Kathiawar Coast
- 85.** Which of the following statements best describes the term “ecological footprint”?
- Ecosystem’s ability to support maximum number of species in an area
 - Amount of biologically productive land and water required to support the demands of a population
 - Capacity of ecosystems to regenerate what people demand from those surfaces
 - Total amount of energy required to sustain human activities
- 86.** Consider the following statements regarding bioaccumulation and biomagnification:
- Bioaccumulation is the increase in concentration of a pollutant within an organism, whereas biomagnification is its increase across trophic levels.
 - Bioaccumulation primarily occurs in biodegradable pollutants, whereas biomagnification generally occurs in non-biodegradable pollutants.
 - Mercury and DDT are known to undergo biomagnification in aquatic food chains.
- Which of the statements given above are correct?
- 1 and 2 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
- 87.** Shahtoosh, a fine type of wool, is obtained from which one of the following animals?
- Changthangi goat
 - Angora rabbit
 - Tibetan Antelope
 - Cashmere goat
- 88.** Consider the following statements regarding the *India State of Forest Report (ISFR) 2023*:
- It is a biennial publication released by the Forest Survey of India (FSI).
 - Madhya Pradesh has the largest total forest and tree cover in the country.
 - Sikkim has the highest proportion of forest cover in terms of total geographical area.



- उपर्युक्त में से कौन-से कथन सही हैं?
- केवल 1 और 2
 - केवल 2 और 3
 - केवल 1 और 3
 - 1, 2 और 3
- 89.** मेलेनिस्टिक बाघों के संबंध में, निम्नलिखित कथनों में से कौन-से सही हैं?
- ये कोई अलग उप-प्रजाति नहीं हैं, बल्कि रॉयल बंगल टाइगर का एक पृथक् रंग का संस्करण है।
 - बाघों में मेलेनिज्म एक आनुवंशिक उत्परिवर्तन के कारण होता है, जो रंजकता (Pigmentation) को प्रभावित करता है।
 - वन में, ये केवल काजीरंगा राष्ट्रीय उद्यान में पाए जाते हैं।
- नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:
- केवल 1 और 2
 - केवल 2 और 3
 - केवल 1 और 3
 - 1, 2 और 3
- 90.** ग्लोबल मेथेन ट्रैकर, जो विश्व भर में मीथेन उत्पर्जन की निगरानी और जागरूकता बढ़ाने के लिए एक उपकरण है, किस संगठन द्वारा जारी किया गया है?
- संयुक्त राष्ट्र पर्यावरण कार्यक्रम (UNEP)
 - जलवायु परिवर्तन पर अंतर-सरकारी पैनल (IPCC)
 - विश्व मौसम विज्ञान संगठन (WMO)
 - अंतर्राष्ट्रीय ऊर्जा एजेंसी (IEA)
- 91.** लाइकेन के संबंध में, निम्नलिखित कथनों पर विचार कीजिए:
- ये कवक और जीवाणु के बीच सहजीवी संबंध दर्शाते हैं।
 - ये नग्न चट्टानों पर बसने में सक्षम हैं और जैविक अपक्षयण के माध्यम से मृदा-निर्माण में योगदान देते हैं।
 - लाइकेन उच्च वायु प्रदूषण वाले क्षेत्रों में प्रचुर मात्रा में उगते हैं।
- उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?
- केवल 1 और 2
 - केवल 2
 - केवल 2 और 3
 - 1, 2 और 3

- 92.** निम्नलिखित कथनों पर विचार कीजिए:
- कथन-I:**
- स्थलीय पारिस्थितिक तंत्रों की तुलना में महासागरों में उच्चतर उत्पादकता होती है।
- कथन-II:**
- महासागर, पृथ्वी की सतह के स्थलीय भाग की तुलना में बड़े भाग पर फैले हुए हैं।
- उपर्युक्त कथनों के संदर्भ में, निम्नलिखित में से कौन-सा एक सही है?
- कथन-I और कथन-II दोनों सही हैं तथा कथन-II, कथन-I की सही व्याख्या करता है।
 - कथन-I और कथन-II दोनों सही हैं, किंतु कथन-II, कथन-I की सही व्याख्या नहीं करता है।
 - कथन-I सही है, किंतु कथन-II गलत है।
 - कथन-I गलत है, किंतु कथन-II सही है।
- 93.** निम्नलिखित वैश्विक पर्यावरण संगठनों पर विचार कीजिए:
- बर्डलाइफ इंटरनेशनल
 - कंजर्वेशन इंटरनेशनल
 - अंतर्राष्ट्रीय प्रकृति संरक्षण संघ
 - संयुक्त राष्ट्र पर्यावरण कार्यक्रम विश्व संरक्षण निगरानी केंद्र
 - विश्व बन्यजीवन कोष
- उपर्युक्त संगठनों में से कितने IBAT (एकीकृत जैव-विविधता मूल्यांकन उपकरण) गठबंधन का हिस्सा हैं?
- केवल दो
 - केवल तीन
 - केवल चार
 - सभी पाँच
- 94.** कभी-कभी सुर्खियों में देखी जाने वाली “ग्रे राइनो” घटना निम्नलिखित में से किसके वर्णन के लिए प्रयुक्त होती है?
- संरक्षित क्षेत्रों में भारतीय गैंडों की आबादी में हालिया वृद्धि
 - सीमा-पार बन्यजीव गलियारों के लिए संरक्षण निधियन क्रियाविधि

- Which of the statements given above are correct?
- 1 and 2 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
- 89.** Which of the following statements are correct regarding the melanistic tigers?
- They are not a separate subspecies but a colour variant of the Royal Bengal Tiger.
 - Melanism in tigers results from a genetic mutation affecting pigmentation.
 - In the wild, they are found only in Kaziranga National Park.
- Select the correct answer using the codes given below:
- 1 and 2 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
- 90.** The *Global Methane Tracker*, a tool for monitoring and raising awareness about methane emissions worldwide, is released by which one of the following organisations?
- United Nations Environment Programme (UNEP)
 - Intergovernmental Panel on Climate Change (IPCC)
 - World Meteorological Organization (WMO)
 - International Energy Agency (IEA)
- 91.** Consider the following statements regarding lichens:
- They represent a symbiotic association between a fungus and bacterium.
 - They are capable of colonising bare rocks and contribute to soil formation through biological weathering.
 - Lichens grow abundantly in areas with high levels of air pollution.
- Which of the statements given above is/are correct?
- 1 and 2 only
 - 2 only
 - 2 and 3 only
 - 1, 2 and 3
- 92.** Consider the following statements:
- Statement I:*
- Oceans have higher productivity than terrestrial ecosystems.
- Statement II:*
- Oceans cover a larger portion of the Earth's surface than land.
- Which of the following is correct with respect to the above statements?
- Both Statement I and Statement II are correct, and Statement II is the correct explanation for Statement I.
 - Both Statement I and Statement II are correct, but Statement II is not the correct explanation for Statement I.
 - Statement I is correct, but Statement II is incorrect.
 - Statement I is incorrect, but Statement II is correct.
- 93.** Consider the following Global environmental organisations:
- Birdlife International
 - Conservation International
 - International Union of Conservation for Nature
 - United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC)
 - World Wildlife Fund
- How many of the above organisations are part of the IBAT (Integrated Biodiversity Assessment Tool) Alliance?
- Only two
 - Only three
 - Only four
 - All five
- 94.** The term “Grey Rhino” event, sometimes seen in the news, is used to describe:
- Recent surge in the population of the Indian rhinoceros in protected areas
 - A conservation funding mechanism for transboundary wildlife corridors.

- (c) वैशिक पर्यावरण सुविधा के तहत शुरू की गई गेंडा संरक्षण की एक पहल
 (d) एक अत्यधिक संभावित लेकिन उपेक्षित ख़तरा, जिसके संभवतः गंभीर परिणाम हो सकते हैं।
- 95.** पारितंत्र में खाद्य शृंखलाओं के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
- चारण खाद्य शृंखला में पहला पोषी स्तर स्वपोषियों द्वारा निर्मित होता है, जबकि अपरद खाद्य शृंखला में यह मृत कार्बनिक पदार्थों द्वारा निर्मित होता है।
 - स्थलीय पारितंत्र में चारण खाद्य शृंखला के माध्यम से ऊर्जा प्रवाह सामान्यतः अपरद खाद्य शृंखला की तुलना में अधिक होता है।
- उपर्युक्त कथनों में से कौन-सा/से सही है/हैं?
- केवल 1
 - केवल 2
 - 1 और 2 दोनों
 - न तो 1, न ही 2
- 96.** प्रायः चरते हुए मवेशियों के पीछे या उनके आस-पास मवेशी बगुलों (कैटल इंग्रेट्स) को कीड़े पकड़ते हुए देखा जाता है। जब मवेशी चलते हैं, तो उनके खुर से मिट्टी के दबने के कारण कीड़े व अन्य छोटे जीव बाहर निकलते हैं, जो इन बगुलों का आहार होते हैं। इस प्रकार की प्रजातियों की परस्पर क्रिया को सर्वश्रेष्ठ रूप से किस रूप में वर्णित किया जा सकता है?
- परजीविता
 - सहभोजिता
 - सहोपकारिता
 - अंतर-जातीय परजीविता
- 97.** हरी खाद के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
- इसमें खाद के रूप में अपघटित पौधों और खाद्य अपशिष्ट का उपयोग किया जाता है।
 - यह पोषक तत्वों को निचली परतों तक निक्षालित होने से रोकता है।
 - सनई और ढैंचा दो सामान्य हरी खाद वाली फ़सलें हैं।
- नीचे दिए गए कूट का प्रयोग कर सही उत्तर चुनिए:
- केवल 1 और 2
 - केवल 2 और 3
 - केवल 1 और 3
 - 1, 2 और 3
- 98.** भारत में बन्यजीव प्रजातियों के संबंध में, निम्नलिखित युगमों पर विचार कीजिए:
- | प्रजातियाँ | बन्यजीवों की सर्वाधिक जनसंख्या वाला राज्य/संघ राज्यक्षेत्र |
|---------------|--|
| 1. शेर | गुजरात |
| 2. हिम तेंदुआ | हिमाचल प्रदेश |
| 3. बाघ | मध्य प्रदेश |
- उपर्युक्त में से कौन-से युगम सही सुमेलित हैं?
- केवल 1 और 2
 - केवल 1 और 3
 - केवल 2 और 3
 - 1, 2 और 3
- 99.** यदि वर्ष 2026 में “अर्थ ओवरशूट डे”, वर्ष 2025 की अपेक्षा जल्दी आता है, तो यह निम्नलिखित संकेत देगा:
- वैशिक संसाधन दक्षता और स्थिरता में सुधार।
 - मानवता के समग्र परिस्थितिक पदचिह्न में गिरावट।
 - असंवहनीय उपभोग के कारण प्राकृतिक संसाधनों का तेजी से हासा।
 - जलवायु परिवर्तन के कारण वैशिक जैव-विविधता में गिरावट।
- 100.** हरित ऋण कार्यक्रम (GCP) के संदर्भ में, निम्नलिखित कथनों पर विचार कीजिए:
- हरित ऋण कार्यक्रम के नियमों को बन (संरक्षण) अधिनियम, 1980 के अंतर्गत अधिसूचित किया गया है।
 - वृक्षारोपण गतिविधियों के लिए व्यक्ति और कंपनियाँ दोनों ही इस कार्यक्रम के अंतर्गत हरित ऋण अर्जित करने के पात्र हैं।
 - भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद् को GCP के प्रभावी कार्यान्वयन के लिए प्रशासक नामित किया गया है।
- उपर्युक्त में से कौन-सा/से कथन सही है/हैं?
- केवल 1
 - केवल 2
 - केवल 2 और 3
 - 1, 2 और 3



- (c) An initiative for rhino conservation launched under the Global Environment Facility
 (d) A highly probable but neglected threat with potentially severe consequences
- 95.** With reference to the food chains in ecosystem, consider the following statements:

- 1 The first trophic level in a grazing food chain is formed by the autotrophs, whereas it is formed by dead organic matter in a detritus food chain.
- 2 Energy flow through the grazing food chain is usually greater than through the detritus food chain in a terrestrial ecosystem.

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
- 96.** It is generally observed that cattle egrets are often seen feeding near grazing cattle, as they pick up insects and other small animals disturbed by the movement of the cattle. This type of species interaction can be best described as a form of:
- (a) Parasitism
 - (b) Commensalism
 - (c) Mutualism
 - (d) Amensalism

- 97.** Consider the following statements regarding the Green manuring:
1. It involves the usage of decomposed plants and food waste as manure.
 2. It prevents leaching of nutrients to lower layers.
 3. Sunnhemp and Dhaincha are two common green manure crops.

Select the correct answer using the code given below:

- (a) 1 and 2 only
 (b) 2 and 3 only
 (c) 1 and 3 only
 (d) 1, 2 and 3

- 98.** Consider the following pairs regarding the wildlife species in India:

	<i>Species</i>	<i>State/UT having highest population in wild</i>
1.	Lion	Gujarat
2.	Snow Leopard	Himachal Pradesh
3.	Tiger	Madhya Pradesh

Which of the pairs given above are correctly matched?

- (a) 1 and 2 only
 (b) 1 and 3 only
 (c) 2 and 3 only
 (d) 1, 2 and 3

- 99.** If the “Earth Overshoot Day” in 2026 occurs earlier than in 2025, it would indicate:

- (a) An improvement in global resource efficiency and sustainability.
- (b) A decline in the overall ecological footprint of humanity.
- (c) Faster depletion of natural resources due to unsustainable consumption.
- (d) Decline in global biodiversity due to climate change

- 100.** With reference to the Green Credits Programme (GCP), consider the following statements :

1. The rules of the Green Credit Programme have been notified under the Forest (Conservation) Act, 1980.
2. Both individuals and companies are eligible to earn green credits under the programme for undertaking tree plantation activities.
3. The Indian Council of Forestry Research and Education has been designated as the administrator for the effective implementation of the GCP.

Which of the statements given above is/are correct ?

- (a) 1 only
 (b) 2 only
 (c) 2 and 3 only
 (d) 1, 2 and 3



Space for Rough Work





GENERAL STUDIES

CSE Prelims Test Series (PTS): 2026

26th October, 2025 | Test-12 [Sectional Test]

Answer Key

1. (a)	21. (a)	41. (a)	61. (b)	81. (c)
2. (c)	22. (c)	42. (a)	62. (a)	82. (c)
3. (d)	23. (c)	43. (a)	63. (a)	83. (c)
4. (d)	24. (c)	44. (c)	64. (d)	84. (c)
5. (d)	25. (b)	45. (c)	65. (c)	85. (b)
6. (a)	26. (b)	46. (d)	66. (c)	86. (c)
7. (c)	27. (c)	47. (c)	67. (c)	87. (c)
8. (a)	28. (d)	48. (a)	68. (c)	88. (a)
9. (c)	29. (c)	49. (b)	69. (b)	89. (a)
10. (a)	30. (c)	50. (b)	70. (b)	90. (d)
11. (c)	31. (a)	51. (b)	71. (c)	91. (b)
12. (b)	32. (a)	52. (a)	72. (d)	92. (d)
13. (b)	33. (a)	53. (b)	73. (c)	93. (c)
14. (c)	34. (b)	54. (b)	74. (d)	94. (d)
15. (a)	35. (d)	55. (c)	75. (b)	95. (a)
16. (b)	36. (d)	56. (d)	76. (a)	96. (b)
17. (c)	37. (a)	57. (c)	77. (b)	97. (b)
18. (b)	38. (b)	58. (d)	78. (a)	98. (b)
19. (c)	39. (c)	59. (b)	79. (a)	99. (c)
20. (b)	40. (d)	60. (a)	80. (a)	100. (c)

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General Studies

Test-12

Sectional Test:

Environment and Ecology & Current Affairs
(January 2025 - Till Date)

1. (a)

Statement I is correct: Joel Allen in 1877 posited a biological rule called Allen's rule. It states that animals adapted to cold climates tend to have shorter extremities (ears, tails, snout, and limbs etc) to minimize heat loss, whereas those in warm climates have longer extremities to promote heat dissipation.

Allen's Rule applies mainly to endothermic (warm-blooded) animals such as mammals and birds.

Statement II is correct and is the correct explanation for Statement I: Shorter limbs reduce the surface area exposed to the external environment, thereby minimizing heat loss. In cold climates, conserving body heat is crucial for survival, and a smaller surface area relative to body volume helps in retaining warmth.

Additional information:

- **Bergmann's Rule:** It states that animals in colder regions tend to have larger body sizes to conserve heat. Large-bodied animals have a **smaller surface area-to-volume ratio**. This means they lose **less heat** to the environment. On the other hand, animals in warmer regions tend to have smaller body to dissipate heat more effectively.
- **Gloger's rule:** Animals living in warm and humid climates tend to have darker pigmentation (skin, fur, or feathers), while those in cold and dry climates tend to be lighter in color." Dark coloration of animals in warm and humid climates (more melanin) provides **protection against skin infections, UV radiation, and camouflage** in shaded forests.

2. (c)

Option (c) is the correct answer: The given diagram shows an **inverted pyramid**, where producers form the smallest layer at the bottom, and higher trophic levels (primary and secondary

consumers) occupy larger portions above. This pattern is typically observed in **aquatic or marine ecosystems**, where **phytoplankton (producers)** have very low biomass at any given time compared to **zooplankton (primary consumers)** and small fishes (secondary consumers). Hence, the diagram represents **Pyramid of biomass in a sea (aquatic ecosystem)**.

Additional information:

- In terrestrial ecosystems (like forests and grasslands), pyramids of biomass and numbers are upright, as producers (plants) have more biomass than herbivores or carnivores.
- **The pyramid of energy is always upright in all ecosystems**, since energy transfer follows the **Second Law of Thermodynamics** — with **loss of energy as heat at each trophic level**.

3. (d)

Statement 1 is not correct: The **UN High Seas Treaty (Biodiversity Beyond National Jurisdiction – BBNJ)** deals with the protection of biodiversity **beyond 200 nautical miles** from a country's coastline — that is, **in areas beyond national jurisdiction (ABNJ)**, commonly referred to as the *high seas*. Waters extending up to 200 nautical miles fall under the **Exclusive Economic Zone (EEZ)** of a coastal state.

Statement 2 is not correct: The Treaty does **not propose an outright prohibition of fishing** in international waters. Instead, it aims to **regulate and sustainably manage human activities**, including fishing.

Statement 3 is not correct: The Treaty does **not grant countries exclusive monetary rights** over marine genetic resources (MGRs) found in the high seas. Instead, it establishes a **benefit-sharing mechanism** ensuring that any economic benefits from the use of such resources are **shared fairly and equitably among all nations**.

Additional information: More about UN High Seas Treaty:

- It is an international treaty under the United Nations Convention on the Law of the Sea (UNCLOS).
- It is an international legally binding treaty.
- It has four objectives:
 - ◆ Demarcation of marine protected areas (MPAs), rather like there are protected forests or wildlife areas;
 - ◆ Sustainable use of marine genetic resources and equitable sharing of benefits arising from them;
 - ◆ Initiation of the practice of environmental impact assessments for all major activities in the oceans; and
 - ◆ Capacity building and technology transfer.

Note: The high seas comprise 64 percent of the ocean surface and about 43 percent of the Earth.

4. (d)

Option (a) is not correct: Gharial has a strong attenuated snout and rows of uniform sharp teeth supported by a relatively long, well muscled neck. Gharial has a bulbous knob at the end of their snout. Whereas, Mugger has a broad snout and rough skin.

Option (b) is not correct: Gharial generally prefers deep fast flowing rivers while the Mugger prefers slow moving, shallow water bodies.

- The mugger crocodile is found in lakes, rivers, and marshes. The mugger crocodile is adapted well to reservoirs, irrigation canals, man-made ponds, and even in coastal saltwater lagoons. Adult gharial have occasionally been observed in still water branches (jheel) of rivers.

Option (c) is not correct: Both Gharial and Mugger are freshwater crocodiles. The Gharials occur in three tributaries of the Ganga River, the Chambal and the Girwa Rivers in India and the Rapti-Narayani River in Nepal.

Hence, the correct answer is Option (d) None of the above.

5. (d)

Statement 1 is not correct: Kelp forests are formed by large brown algae — not trees. While they

can grow to be very tall and form vast underwater structures resembling a forest, they are not vascular plants like trees. Kelp forests are among the **most productive and dynamic ecosystems** on Earth.

Statement 2 is not correct: Kelp forests are **not found in tropical waters** where coral reefs dominate. They occur in **cold, nutrient-rich coastal regions**, especially along **temperate and subpolar coastlines**. Tropical waters are generally too warm and nutrient-poor for kelp to form dense forests. Coral reefs, on the other hand, are characteristic of warm, tropical, shallow waters.

6. (a)

1 is not correct: While Biosphere Reserves are important conservation areas, they are **not directly mentioned under the Wildlife Protection Act, 1972**. The designation as a Biosphere Reserve is vested with the International Co-ordinating Council of the UNESCO MAB Programme, at the request of the Member State concerned.

2 and 4 are correct: Protected areas recognise under the Wildlife (Protection) Act, 1972 are: (1) **National Park**, (2) **Wildlife sanctuary**, (3) **a conservation reserve or a community reserve**.

3 is not correct: Elephant Reserves: These are specific areas identified for the conservation of elephants. However, they are **not officially recognized as protected areas under the Wildlife Protection Act, 1972**. Instead, they are part of an initiative under the Elephant Conservation Programme, and their protection is governed by different laws and guidelines.

7. (c)

About biogeochemical cycles: The movement of nutrient elements through the various components of an ecosystem is called **nutrient cycling** also known as **biogeochemical cycles**. Nutrient cycles are of two types-gaseous and sedimentary.

3 and 4 are correct: The reservoir for the sedimentary cycle is located in **Earth's crust**. **Sulphur** and **phosphorus** cycles are examples of **sedimentary cycles**.

1 and 2 are not correct: The reservoir for the gaseous cycle is in the atmosphere. **Nitrogen** and **Carbon** cycles are examples of **gaseous cycles**.

8. (a)

Option (a) is the correct answer: The **Competitive Exclusion Principle**, also known as **Gause's Principle**, states that **two species competing for exactly the same resources cannot stably coexist in the same habitat**. Eventually, one species will have even a slight advantage and will **outcompete and eliminate the other**. When two species have identical ecological niches (same habitat and same resource use), intense competition arises. Over time, the species with better adaptability, efficiency, or reproductive advantage will **survive**, while the other will **be excluded or become locally extinct**.

9. (c)

Reserved Forests and Protected forests are notified under the provisions of **Indian Forest Act, 1927**.

Statement 1 is correct: Reserved Forests are areas notified under the provisions of Indian Forest Act that **have full degree of protection**. In Reserved Forests **all activities are prohibited unless permitted**.

Statement 2 is correct: Protected Forests are areas notified under the provisions of Indian Forest Act that **have limited degree of protection**. In Protected Forests **all activities are permitted unless prohibited**.

10. (a)

Pair 1 is not correctly matched: In **competition**, both species suffer reduced fitness due to shared limiting resources → (- / -).

- **Example:** Plants competing for light and nutrients

Pair 2 is correctly matched: In **commensalism**, one species benefits while the other is unaffected → (+ / 0).

- **Example:** Barnacles on whales.

Pair 3 is not correctly matched: In **parasitism**, the parasite benefits and the host is harmed → (+ / -).

- **Example:** Tick on a dog; *Cuscuta* on a host plant.

Pair 4 is not correctly matched: In **amensalism**, one species is harmed while the other is unaffected → (- / 0).

- **Example:** *Penicillium* inhibiting nearby bacteria

Additional information:

Species A	Species B	Name of Interaction
+	+	Mutualism
+	-	Competition
+	-	Predation
+	-	Parasitism
+	0	Commensalism
-	0	Amensalism

11. (c)

Option (c) is the correct answer : The Awaza Programme of Action (APoA) for Landlocked Developing Countries (LLDCs) for the Decade 2024–2034 was adopted by the United Nations General Assembly on 24 December 2024 under resolution A/RES/79/233. The APoA represents a renewed and strengthened global commitment to support the development aspirations of the 32 LLDCs located in Africa, Asia, Europe, and South America.

This APoA draws on lessons learned from the Vienna Programme of Action (2014–2024) and seeks to ensure that progress accelerates, especially in such areas as trade facilitation, structural transformation, transport connectivity, technology, climate resilience, and the mobilization of international support. The aim is to align national-level actions, regional integration efforts, and global policy frameworks to place LLDCs on a more dynamic and inclusive path to sustainable development, while safeguarding them against future shocks and disasters.

12. (b)

Statement 1 is not correct: Cyanobacteria, despite being called *blue-green algae*, are **not true algae**. They are **prokaryotic bacteria** belonging to the **kingdom Monera**. The term “algae” is used only because they are photosynthetic and aquatic.

Statement 2 is correct: Cyanobacteria are photosynthetic autotrophs that contain chlorophyll and perform oxygenic photosynthesis, releasing oxygen as a by-product — similar to green plants.

Statement 3 is correct: Some cyanobacteria possess specialized cells, which can fix atmospheric nitrogen under anaerobic conditions.

Additional information:

- Cyanobacteria are among the **oldest life forms on Earth**, credited with oxygenating the early atmosphere about **2.5 billion years ago**.
- They can also contribute to soil fertility and act as efficient biofertilizers/

13. (b)

Option (a) is correct: Project Tiger was launched in 1973 for holistic conservation of tiger and its ecosystem. It is a Centrally Sponsored Scheme of the Environment, Forests and Climate Change. It provides funding support to tiger range States, for in-situ conservation of tigers in designated tiger reserves

Option (b) is not correct: National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change. It was constituted under enabling provisions of the **Wildlife (Protection) Act, 1972**, as amended in 2006, for strengthening tiger conservation.

- The authority consists of the Minister in charge of the Ministry of Environment and Forests (as Chairperson), the Minister of State in the Ministry of Environment and Forests (as Vice-Chairperson), three members of Parliament, Secretary, Ministry of Environment and Forests and other members.

Option (c) is correct: India currently harbors almost 75% of the world's wild tiger population.

Option (d) is correct: The tiger reserves are constituted on a core/buffer strategy. The core areas have the legal status of a national park or a sanctuary. The buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple use area.

Additional information:

- **State having max Tiger population:** The largest tiger population is found in Madhya Pradesh (785), followed by Karnataka (563) and Uttarakhand (560).
- **Tiger reserve having max Tiger population:** The highest tiger population within the tiger reserve is found in Corbett tiger reserve (260), followed by Bandipur (150), and Nagarhole (141).
- **Tiger reserve having max Tiger density:** Tiger density is maximum in Bandipur Tiger Reserve in Karnataka, followed closely by Corbett Tiger Reserve and Kaziranga Tiger Reserve in Assam.
- **Tiger reserve with largest area under "Critical Tiger Habitat":** Nagarjunsagar-Srisailam Tiger Reserve in Andhra Pradesh.
- Recently, Sundarbans Tiger Reserve in West Bengal became India's second-largest tiger reserve after the National Board for Wildlife approved an expansion. This expansion now places it just behind Andhra Pradesh's Nagarjunasagar-Srisailam Tiger Reserve.

14. (c)

About Ex-situ conservation: Ex situ conservation is the relocation of endangered or rare species from their natural habitats to protected areas equipped for their protection and preservation. **Zoological parks, botanical gardens, wildlife safari parks, cryopreservation techniques, Gene banks and seed banks are examples of ex-situ conservation.** (Hence 2, 3, 4 and 5 are correct).

About In-situ conservation: The process of protecting an endangered plant or animal species in its natural habitat is commonly known as in situ conservation. **Examples of In-situ conservation:** Biosphere reserves, national parks, wildlife sanctuaries and sacred groves. (Hence 1 and 6 are not correct).

Additional information:

- **Sacred groves:** These are patches of forest traditionally protected by local communities for religious or cultural reasons.

- **Botanical gardens:** These maintain living collections of plant species under human care, often for research, education, and conservation.
- **Zoological park:** These maintain captive populations of animals in controlled environments for breeding, education, and conservation.
- **Seed bank:** These conserve plant genetic material in the form of seeds stored at low temperatures for long-term preservation.
- **Gene bank:** These store genetic material such as seeds, tissues, DNA, or sperm/ova of species for future use in restoration or breeding programs.

15. (a)

Pair 1 is correctly matched: In 1991, a separate chapter was added (by way of amendment) to the **Wildlife (Protection) Act, 1972** for establishment of the **Central Zoo Authority** (CZA) in India. The CZA is a statutory body under the MoEF&CC. The main objective of CZA is to complement and strengthen the national effort in the conservation of the rich biodiversity of the country, particularly the fauna, as per the National Zoo Policy, 1998.

Pair 2 is not correctly matched: **Wildlife Crime Control Bureau** is a statutory multi-disciplinary body established by the Government of India under the **Wild Life (Protection) Act, 1972** to combat organized wildlife crime in the country.

Pair 3 is not correctly matched: **National Board for Wild Life** is constituted under section 5A of the **Wild Life (Protection) Act, 1972**. It Shall be the duty of the National Board to promote the conservation and development of wild life and forests by such measures as it thinks fit.

16. (b)

Statement 1 is correct : A cloudburst is an extreme weather event. In simple words, it refers to intense rainfall occurring over a short duration within a small area. It is called an extreme weather event because the frequency of cloudbursts has increased due to global warming across the world. The India Meteorological Department (IMD) defines it as unexpected precipitation exceeding 100mm

(or 10 cm) per hour over a geographical region of approximately 20 to 30 square km. Significant amounts of rainfall such as this can result in floods.

Statement 2 is correct : In the hill states like Himachal Pradesh, three main factors contribute to cloudbursts: first, the wind pattern; second, the height of the mountains; and third, the level of moisture and humidity in the air. In the mountains, low-pressure areas form at the top, attracting clouds with significant force. Warm air creates thunderstorms. When air coming from the opposite direction collides with the mountain, it can result in a heavy downpour. This is why the height of the mountain matters in this scenario. The air cannot penetrate the mountain.

Statement 3 is not correct : The formation of clouds and even cloudbursts occur suddenly. Doppler radars (used to determine the velocity of an object) can predict heavy rainfall events up to two hours in advance, but they cannot detect the velocity if a mountain obstructs the signal. Also, cloudbursts are not confined to one place. **The conditions that trigger cloudbursts can develop quickly in one location and then move to another, making it difficult for early prediction.**

17. (c)

Option (c) is the correct answer: Mig La Pass is located in the Ladakh region. Border Roads Organisation (BRO) has recently scripted history by setting a new world record, as **Project Himank** constructed the **world's highest motorable road at Mig La Pass**, located at 19,400 feet above sea level in eastern Ladakh near the Line of Actual Control (LAC). With this achievement, the BRO has surpassed its own previous record set at Umling La in 2021, which stood at 19,024 feet.

18. (b)

Statement 1 is not correct: The Fiscal Health Index (FHI) is an initiative by NITI Aayog that aims to evolve an understanding of the fiscal health of states in India.

- The report objectively evaluates each state's fiscal health through a composite index,

facilitating comparisons and benchmarking against best practices.

- The FHI analysis covers eighteen major states that drive the Indian economy in terms of their contribution to India's GDP, demography, total public expenditure, revenues, and overall fiscal stability.
- The composite Fiscal Health Index has been developed using data from the Comptroller and Auditor General of India (CAG), covering the Financial Year 2022-23.

Statement 2 is correct: Odisha leads the Index, followed by Chhattisgarh, Goa, Jharkhand and Gujarat.

19. (c)

Statement 1 is correct: Protection of Women from Domestic Violence Act, 2005 is aimed at providing protection to wife or female live-in-partner from violence at the hands of the husband or male live-in partner or his relatives. The Law extends protection to women who are sisters including adopted sisters and mothers.

Statement 2 is not correct: Domestic violence under the Act includes actual abuse or threat of abuse, whether physical, sexual, verbal, emotional or economic. Harassment by way of unlawful dowry demands to the women victim or her relatives would also be covered under the definition of Domestic Violence.

Statement 3 is correct: For effective implementation, the Rules provide for Appointment of Protection Officers in each district as per section 8 of the Act and provide them with necessary infrastructure to enable them to start functioning

20. (b)

Option (b) is correct: State of Social Justice is a flagship report published by International Labour Organization (ILO). State of Social Justice 2025 report positions social justice not as a luxury but as a foundational pillar for peace, stability, cohesion, and sustainable development, grounded in the universal recognition of human and labour rights as essential to dignity and fairness.

21. (a)

Option (a) is the correct answer: Cartagena Protocol on Biosafety is an international agreement which aims to ensure safe handling, transport and use of living modified organisms (LMOs). It establishes an advance informed agreement procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import of such organisms into their territory.

Cartagena protocol is a supplementary agreement to the Convention on Biological Diversity (CBD), adopted in 2000 and came into force in 2003.

Additional information:

- The Nagoya Protocol (2010) — also under the CBD — deals with **access to genetic resources and fair benefit-sharing**, not biosafety.
- CITES (1973) regulates **trade in endangered species**, and the Bonn Convention (CMS, 1979) focuses on **migratory species**.

22. (c)

Statement 1 is correct : CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species. States that have agreed to be bound by the Convention ('joined' CITES) are known as Parties. Although CITES is legally binding on the Parties – in other words, they have to implement the Convention – it does not take the place of national laws.

Statement 2 is not correct : The species covered by CITES are listed in three Appendices, according to the degree of protection they need.

Statement 3 is not correct : Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.

- Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.

- Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade.

Statement 4 is correct : India is one of the earliest ones to join the Convention in July 1976. In line with the requirements of the Convention, the Wild Life Protection Act 1972 has been amended recently, providing for its implementation in the country as a part of the domestic law.

23. (c)

About International Whaling Commission: It was established in the year 1946 as the global body for management of whaling and conservation of whales. It is an inter-governmental organisation with a current membership of 88 governments from all over the world. The legal convention of the IWC is the International Convention for the Regulation of Whaling. India joined IWC in 1981.

Statement 1 is correct: To conserve and manage the world's whale and cetacean population, the commission introduced a moratorium on commercial whaling in 1986.

Statement 2 is correct: The commission regulates Aboriginal Subsistence Whaling conducted by indigenous communities. It recognises nutritional and cultural needs of the communities.

24. (c)

Option (c) is the correct answer: Indicator species are those whose presence, absence, or population abundance reflects specific environmental conditions, such as pollution levels, ecosystem health, or climate change. They act as biological barometers of ecosystem quality or habitat integrity.

- Example:** Lichens indicate air quality, as they are highly sensitive to atmospheric pollutants like sulfur dioxide.

Additional information:

- Keystone species** have a disproportionately large impact on ecosystem structure and function (e.g., tiger, sea otter).
- Flagship species** are charismatic species used for raising conservation awareness (e.g., elephant, panda).

- Foundation species** are those that create or maintain habitats that support other organisms (e.g., coral, mangrove trees).

25. (b)

Option (b) is the correct answer: Gandhi Sagar Wildlife Sanctuary, located in Madhya Pradesh along the Chambal River, has been in the news because it is being developed as India's second habitat for cheetahs, after Kuno National Park.

According to an **action plan** devised by the National Tiger Conservation Authority (NTCA), the **MP wildlife department** and **Wildlife Institute of India (WII)**, **6-8 cheetahs will be released into** an enclosure of the **Gandhi Sagar Wildlife Sanctuary, in Madhya Pradesh**.

The sanctuary has a **mix of grasslands, dry deciduous forests, and riverine evergreen patches**. It also supports an **adequate prey base** that includes species such as chital, wild pig, peafowl, hare etc. Hence, it **offers an ideal habitat for the cheetahs** to thrive.

26. (b)

Decomposition is the process by which **dead organic matter is broken down** into simpler inorganic substances, releasing nutrients back into the ecosystem.

Option (b) is the correct answer: The correct order of important steps in the process of decomposition is fragmentation, leaching, catabolism, humification and mineralisation.

- Fragmentation:** Detritivores (e.g., earthworm) break down detritus into smaller particles. This process is called fragmentation.
- Leaching:** By the process of leaching, water soluble inorganic nutrients go down into the soil horizon and get precipitated as unavailable salts.
- Catabolism:** Bacterial and fungal enzymes degrade detritus into simpler inorganic substances. This process is called as catabolism
- Humification:** Some organic matter is converted into **dark, amorphous, and resistant substances** called **humus**. **Humus** improves soil fertility and structure but decomposes very slowly.

- Mineralisation:** The humus is further degraded by some microbes and release of inorganic nutrients occur by the process known as mineralisation. **Inorganic nutrients** such as **ammonia, nitrates, phosphates, and sulfates** are released from organic matter, making them available for plant uptake.

27. (c)

Option (c) is correct : Gambusia affinis and Lepidopygopsis typus are fishes.

Gambusia affinis (Mosquito fish): Gambusia affinis (G affinis) is native to the waters of the southeastern United States and a single full grown fish eats about 100 to 300 mosquito larvae per day. Gambusia have been a part of mosquito-control strategies for over a century in various parts of the world, including India. G affinis has a sister species, Gambusia holbrooki (G holbrooki), also known as the eastern mosquito fish.

- However, they are highly invasive. Multiple countries, including India have listed Gambusia as invasive species. Still, the fish continues to be a prominent part of the country's malaria control programmes and the fish continue to be released into freshwater bodies across the country, like Andhra Pradesh, Chandigarh and Uttar Pradesh.

Lepidopygopsis typus: Recently, Scientists have decoded for the first time the mitochondrial genome of **Lepidopygopsis typus**, a **unique freshwater fish** species of the Western Ghats, known to occur only inside Kerala's Periyar Tiger Reserve.

- Known locally as '**Brahmanakenda**', Lepidopygopsis typus is an example of a monotypic species (a genus having only a single species), signifying its evolutionary importance.

28. (d)

The nine criteria for identifying Wetlands of International Importance are as follows:

Group A of the Criteria: Sites containing representative, rare or unique wetland types:

- Criterion 1:** A wetland should be considered internationally important if it contains a representative, rare, or unique example of a

natural or near-natural wetland type found within the appropriate biogeographic region.

Group B of the Criteria: Sites of international importance for conserving biological diversity

- Criterion 2:** A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities. (**Hence, 1 is correct**)
- Criterion 3:** A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region
- Criterion 4:** A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions

Specific criteria based on waterbirds:

- Criterion 5:** A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds (**Hence, 2 is correct**)
- Criterion 6:** A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird. (**Hence, 3 is correct**)

Specific criteria based on fish:

- Criterion 7:** A wetland should be considered internationally important if it supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.
- Criterion 8:** A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend

Specific criteria based on other taxa:

- Criterion 9:** A wetland should be considered internationally important if it regularly supports

1% of the individuals in a population of one species or subspecies of wetland-dependent nonavian animal species

29. (c)

Context: Mary E. Brunkow, Fred Ramsdell and Shimon Sakaguchi are awarded the Nobel Prize in Physiology or Medicine 2025 for their groundbreaking discoveries concerning peripheral immune tolerance

Statement 1 is correct: Peripheral immune tolerance refers to the mechanisms by which the immune system prevents attacking the body's own tissues. It acts as a second line of control after central tolerance and ensures that self-reactive immune cells do not cause autoimmune damage.

Statement 2 is correct: Regulatory T cells (Tregs) play a key role in maintaining self-tolerance and preventing autoimmune responses by suppressing the activity of other T cells that could mistakenly attack the body's own tissues.

30. (c)

Option (c) is correct: The Rhisotope Project was launched by South African scientists. It involves injecting a small, safe dose of radioactive material into the horns of live rhinoceroses to deter poaching and make horns detectable at border posts. South Africa, having the largest population of rhinoceroses, is a hotspot for poaching.

31. (a)

About Eutrophication: Eutrophication is characterised by excessive plant and algal growth due to the increased availability of one or more limiting growth factors needed for photosynthesis (Schindler 2006), such as sunlight, carbon dioxide, and nutrient fertilisers.

Both Statement I and Statement II are correct and Statement II provides the correct explanation for Statement I: Eutrophication sets off a chain reaction in the ecosystem, starting with an overabundance of algae and plants. The excess algae and plant matter eventually decompose, producing large amounts of carbon dioxide. This lowers the pH of seawater, a process known as ocean acidification.

32. (a)

Option (a) is correct: Shark is considered a true fish according to biological classification. It belongs to the class Chondrichthyes, which includes fishes having cartilaginous skeletons. Like true fishes, Sharks breathe through gills, lay eggs or give birth to young in water, and are cold-blooded (poikilothermic).

Option (b) is not correct: Despite their name, jellyfish are not fish, but a type of invertebrate called a cnidarian. They're jelly-like marine animals which have radial symmetry and sting their prey using cells on their tentacles called 'cnidocytes', which release powerful venom from microscopic barbed stingers whenever they're touched by a foreign object! Their name comes from the ancient Greek word 'cnide' meaning "nettle".

Option (c) is not correct: Whales are mammals, not fish. They breathe air, give birth to live young, and produce milk.

Option (d) is not correct: Dolphins are mammals, closely related to whales. They share the same mammalian characteristics.

33. (a)

About the UN Convention to Combat Desertification (UNCCD): The UNCCD is a multilateral commitment to mitigate the impact of land degradation, and protect our land so as to provide food, water, shelter and economic opportunity to all people. The other two Rio Conventions are:

- United Nations Framework Convention on Climate Change (UNFCCC)
- Convention on Biological Diversity (CBD)

Statement 1 is correct: United Nations Convention to Combat Desertification (UNCCD) is one of the three Rio Conventions that emerged from the 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro.

Statement 2 is correct: The UNCCD is the only legally binding framework set up to address desertification and the effects of drought.

Statement 3 is not correct: "Great Green Wall Initiative" is an African Union-led initiative,

launched in 2007, and aimed at combating desertification across the Sahel region of Africa. However, the UNCCD supports and partners in its implementation.

Additional information:

- The UNCCD Secretariat is based in Bonn, Germany.
- UNCCD promotes the global target of achieving Land Degradation Neutrality (LDN) by 2030, aligned with SDG 15.3.
- International Drought Resilience Alliance (IDRA) secretariat is hosted by the UNCCD.
- **Peace Forest Initiative (PFI)** is a flagship programme of UNCCD that demonstrates crucial linkages between land, peace and security

34. (b)

Option (b) is correct: **Greenwashing** is the process of **conveying a false impression or misleading information about how a company's products are environmentally sound**. Greenwashing involves making an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly or have a greater positive environmental impact than they actually do.

Additional information:

- **Greenhushing:** It occurs when firms under report or strategically withhold information about their environmental goals and achievements. Greenhushing firms don't advertise their green credentials or deliberately remain silent about their future commitments to environmental sustainability. It is done as companies fear pushback from stakeholders who would find its sustainability efforts lacking or from investors who believe ESG undermines returns.

35. (d)

Option (d) is the correct answer: Salkhan Fossils park was recently included in the tentative list of Unesco World Heritage. Salkhan Fossil Park,

officially known as Sonbhadra Fossils Park, located in the Sonbhadra District of Uttar Pradesh, India, is a remarkable geological site, nestled amidst the verdant embrace of the Kaimoor Wildlife Sanctuary.

The site's fossil assemblage, scattered across various formations, primarily features an exceptional collection of stromatolites, i.e. formations created by communities of cyanobacteria or blue-green algae, which are vital indicators of ancient environmental conditions and microbial life.

Salkhan's fossils are meticulously preserved offering invaluable insights into the earliest forms of life that populated our planet, during the Proterozoic Eon - a critical time in geological history, essential for understanding the evolution of life forms on Earth.

36. (d)

Statement 1 is correct : Biodiversity Heritage Site is a unique conservation approach recognised under the Section 37 of the Biological Diversity Act, 2002.

Statement 2 is correct : As per Section 37 (1) of the Biological Diversity Act, 2002 the State Government may, from time to time in consultation with the local bodies, notify in the Official Gazette, of areas of biodiversity importance as Biodiversity Heritage Sites.

Statement 3 is not correct : The creation of BHS may not put any restriction on the prevailing practices and usages of the local communities, other than those voluntarily decided by them. The purpose is to enhance the quality of life of the local communities through this conservation measure.

Additional information: Biodiversity Heritage Sites have rich biodiversity with wild as well as domesticated species; high endemism; rare and threatened species, keystone species, species of evolutionary significance, wild ancestors of domesticated/ cultivated species; fossil beds; cultural, ethical or aesthetic values for maintaining cultural diversity, with or without long human association with them.

37. (a)

1 and 2 are correct: Warm-blooded animals (also known as endotherms) are animals that can maintain a constant internal body temperature, regardless of changes in the external environment. This allows them to survive in a wide range of habitats. All mammals and birds are capable of regulating their internal temperature and are classified as warm-blooded animals.

3 and 4 are not correct: Cold-blooded animals, also known as ectotherms, are creatures that cannot regulate their own body temperature and rely on external sources like the sun for heat. Insects, worms, fish, amphibians, and reptiles fall into this category—all creatures except mammals and birds.

- The term cold-blooded is a little misleading because they can have very warm body temperatures in the tropics. Cold-blooded actually means the animal's body temperature is basically the same as its surroundings.

38. (b)

Statement 1 is not correct: Nitrogen is an essential component of protein and required by all living organisms including human beings. Our atmosphere contains nearly 79% of nitrogen but it can not be used directly by the majority of living organisms.

Statement 2 is correct: Nitrogen gas in the atmosphere is converted into compounds that plants can use through natural processes such as lightning, the burning of fossil fuels, and volcanic eruptions.

Statement 3 is correct: In industrial nitrogen fixation, nitrogen gas is converted into ammonia by combining it with hydrogen gas at high temperatures and pressures.

39. (c)

Option (c) is the correct answer: PM-SETU (Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs) is a centrally sponsored scheme. It envisages **the upgradation of 1,000 Government ITIs across the country in a hub-and-spoke model** comprising 200 hub ITIs and 800 spoke ITIs.

Each hub will be connected to four spokes on average, creating clusters equipped with advanced infrastructure, modern trades, digital learning systems and incubation facilities. **Anchor Industry Partners will manage these clusters, ensuring outcome-based skilling aligned with market demand.** Hubs will also house innovation centres, training-of-trainers facilities, production units and placement services, while spokes will focus on expanding access. **Collectively, PM-SETU will redefine India's ITI ecosystem, making it government-owned but industry-managed, with global co-financing support from the World Bank and Asian Development Bank.** In the first phase of the scheme implementation there will be special focus on ITIs in Patna and Darbhanga.

40. (d)

Context: Prime Minister Narendra Modi marked World Environment Day by planting a Sindoor sapling.

Statement 1 is not correct: The Sindoor plant (*Bixa orellana*) produces a reddish-orange natural dye called annatto, which is extracted mainly from the seeds (not the leaves). The colour closely resembles traditional vermillion (sindoor) used in India. This dye is widely used as a natural food colourant, cosmetic ingredient, and in traditional rituals.

Statement 2 is not correct: *Bixa orellana* is not native to India. It is native to tropical regions of Central and South America.

41. (a)

Statement 1 is correct: Primary productivity is the rate of capture of solar energy or biomass production of the producers. **Primary productivity depends on the plant species inhabiting a particular area. It also depends on a variety of environmental factors, availability of nutrients and photosynthetic capacity of plants.**

- Primary productivity is divided into two types: gross primary productivity (GPP) and net primary productivity (NPP). Rate of capture of solar energy or total production of organic matter is called as GPP. NPP is the remaining

- biomass or the energy left after utilisation of producers.
- The annual net primary productivity of the whole biosphere is approximately 170 billion tons (dry weight) of organic matter.
- Statement 2 is correct:** Secondary productivity is defined as the **rate of formation of new organic matter by consumers**. It is the **rate of assimilation of food energy by the consumers**.
- Statement 3 is not correct:** In most ecosystems, **primary productivity is higher** than secondary productivity, because only a **fraction of the energy** captured by producers is transferred to consumers. Energy is lost at each trophic level due to metabolic activities and heat loss.
- 42. (a)**

Statement 1 is correct: More than 70 per cent of all the species recorded are animals, while plants (including algae, fungi, bryophytes, gymnosperms and angiosperms) comprise no more than 22 per cent of the total.

Statement 2 is not correct: Among animals, insects are the most species-rich taxonomic group, making up more than 70 per cent of the total. That means, out of every 10 animals on this planet, 7 are insects.

43. (a)

Of the Biosphere Reserves listed, only the **Nilgiri Biosphere Reserve** spans across more than two states. It covers parts of **Tamil Nadu, Kerala, and Karnataka**. The others are located within a single state.

About Nilgiri Biosphere Reserve : was the first biosphere reserve in India established in the year 1986. It is located in the Western Ghats and includes 2 of the 10 biogeographical provinces of India. Wide ranges of ecosystems and species diversity are found in this region. Thus, it was a natural choice for the premier biosphere reserve of the country. The Nilgiri Biosphere Reserve was established mainly to fulfill the following objectives:

- To conserve in-situ genetic diversity of species
- To restore degraded ecosystems to their natural conditions
- To provide baseline data for ecological and environmental research and education
- To function as an alternate model for sustainable development

44. (c)

Digital Sequence Information is a digital version of the DNA of plants, animals and microbes (such as bacteria). Scientists identify genes to help create or improve medicines, skincare products, foods and nutritional supplements, feed for animals, bioplastics, and textiles, among other products. The Conference of the Parties (COP) to the Convention on Biological Diversity first addressed the issue of digital sequence information (DSI) on genetic resources at their meeting held in December 2016. **In December 2022**, at its fifteenth meeting, the **COP decided to establish a multilateral mechanism for benefit-sharing from the use of DSI on genetic resources**.

45. (c)

About International Tropical Timber Organization (ITTO): It is an international organization established as an intergovernmental organization aimed to promote the sustainable management and conservation of tropical forests. It was established for implementing the International Tropical Timber Agreement, 1983, which was launched by the United Nations Conference on Trade and Development.

Statement 1 is correct: ITTO has mainly two objectives. One is **to promote the expansion and diversification of international trade in tropical timber** from sustainably managed and legally harvested forests.

- The other objective is **to promote the sustainable management of tropical timber-producing forests**.

Statement 2 is correct: The current membership under the ITTA is 76 countries including the European Union. They together account for approximately 80 percent of the world's

tropical forests and more than 90 percent of the international trade of tropical timber and tropical timber products.

Statement 3 is correct: India is a timber producing member in the organization.

46. (d)

Statement 1 is correct: An ecotone is a transition zone between two ecosystems or communities, such as between a forest and a grassland. It often contains unique species (edge species) that are not found in either adjoining ecosystem, due to the mixed environmental conditions.

Statement 2 is correct: The population density of some species in an ecotone is often higher than in the adjoining ecosystems — a phenomenon known as the “edge effect.”

Statement 3 is correct: Mangroves represent a natural ecotone between marine and terrestrial ecosystems. They contain species adapted to both saline aquatic and terrestrial conditions.

Additional information:

- Ecotones can arise naturally, such as a lakeshore, or can be human-created, such as a cleared agricultural field from a forest.
- **Ecocline:** An ecocline is another type of landscape boundary. It is a zone of gradual but continuous change from one ecosystem to another when there is no sharp boundary between the two in terms of species composition.

47. (c)

Statement 1 is correct: The National Board for Wildlife (NBWL) is a statutory board constituted under the Wild Life (Protection) Act, 1972. It is a 47-member committee, headed by the Prime Minister of India. The minister of environment, forest and climate change acts as vice chairperson.

Statement 2 is correct: No alteration in the boundaries of a tiger reserve can be made except on a recommendation of the Tiger Conservation Authority and the approval of the National Board for Wild Life.

Additional information:

- **Notifying a Tiger reserve:** Tiger Reserves are notified by State Governments as per provisions

of Section 38V of the Wildlife (Protection) Act, 1972 on advice of the National Tiger Conservation Authority.

- **De-notifying a Tiger reserve:** No State Government shall de-notify a tiger reserve, except in public interest with the approval of the Tiger Conservation Authority and the National Board for Wild Life.

48. (a)

Statement 1 is correct: Mangrove forests are typically found in tropical and subtropical intertidal regions. They thrive in saline, waterlogged, and muddy soils.

Statement 2 is correct: The seeds of mangrove plants germinate while still attached to the parent tree (a phenomenon known as vivipary). The germinated seed (propagule) later drops into the water, floats, and establishes itself in the mud when conditions are suitable.

Statement 3 is not correct: West Bengal holds the largest share of the country's mangrove forests, accounting for 42.45% of the total cover, followed by Gujarat (23.32%) and the Andaman & Nicobar Islands (12.19%).

49. (b)

Context: 2025 Nobel prize in physics was awarded for the discovery of macroscopic quantum mechanical tunnelling and energy quantisation in an electric circuit.

Option (b) is the correct answer: Quantum tunnelling is a process whereby a particle passes directly through a potential energy barrier, even if it lacks the energy to overcome it classically. The term “macroscopic quantum tunnelling,” as referenced in the context of the 2025 Nobel Prize in Physics, refers to the phenomenon where large-scale systems (composed of many particles, and observable with the naked eye) pass through an energy barrier that would be impossible for them to cross according to classical physics.

While quantum tunneling is typically only observed for small, microscopic particles (like electrons), the Nobel-winning experiments from 2025 demonstrated that a system containing billions of

particles (such as superconducting electrons in a Josephson junction circuit) could also collectively tunnel through such a barrier.

50. (b)

Option (b) is correct: The *desert soilification technology* developed by researchers at the **Central University of Rajasthan (CUoR)** uses an **indigenous bioformulation** to convert **desert sand into soil-like material** suitable for crop cultivation. The bioformulation enhances **water retention, improves soil structure** by promoting **cross-linking of sand particles**, and **stimulates beneficial microbial activity**, which together enable sustainable plant growth even under arid conditions.

Using this technology, wheat was successfully grown in Banseli village near Pushkar, Ajmer district, with significantly reduced irrigation requirement — only three to four water cycles instead of the usual five to six.

51. (b)

1 and 2 are correct: Conservation International was a pioneer in defining and promoting the concept of hotspots. As per Conservation International, a region must meet two strict criteria to qualify as a biodiversity hotspot:

- It must have **at least 1,500 vascular plants as endemics** — which is to say, it must have a high percentage of plant life found nowhere else on the planet. A hotspot, in other words, is irreplaceable.
- **It must have 30% or less of its original natural vegetation.** In other words, it must be threatened.

3 is not correct: “It shall support at least 1% of the individuals in the population of a particular waterbird species or subspecies.” — This criterion relates to **Ramsar Wetland Sites**, not biodiversity hotspots. Under Ramsar Convention (Criterion 6), a wetland qualifies as internationally important if it regularly supports 1% of the individuals in a population of a waterbird species or subspecies.

52. (a)

Statement 1 is correct: The **Blue Nationally Determined Contributions (NDC) Challenge**

was **jointly launched by Brazil and France in June 2025**, during the **UN Ocean Conference (UNOC)** held in Nice, France. The initiative urges all countries to integrate ocean-based climate action into their nationally determined contributions (NDCs) under the Paris Agreement, ahead of COP30, which Brazil will host in November 2025.

Statement 2 is not correct: The **Blue NDC Challenge** does **not aim to create a fund for deep-sea mining or ocean resource extraction**. Instead, its **primary objective** is to **place the ocean at the heart of global climate plans**, promoting **marine conservation, coastal resilience, and ocean-based solutions** for reducing greenhouse gas emissions and adapting to climate change.

53. (b)

Option (b) is correct and Options (a) & (c) are not correct: Biosphere Reserves involve local communities and all interested stakeholders in planning and management. They integrate three functions:

- **Conservation** of biodiversity and cultural diversity.
- **Economic development** that is socio-culturally and environmentally sustainable.
- **Logistic support** underpinning development through research, monitoring, education and training.

These three functions are pursued through the Biosphere Reserves' **three main zones**:

- **Core areas:** They comprise a **strictly protected zone** that contributes to the conservation of landscapes, ecosystems, species and genetic variation
- **Buffer zones:** They surround or adjoin the core area(s), and are **used for activities compatible with sound ecological practices** that can reinforce scientific research, monitoring, training and education.
- **Transition area:** The transition area is where **communities foster socio-culturally and ecologically sustainable economic and human activities**.

Option (d) is not correct: Biosphere reserves are nominated by national governments and **remain**

under the sovereign jurisdiction of the states where they are located.

54. (b)

Statement 1 is not correct: Species richness is the measure of the total number of different species present in a community or area. It is a count of the species, not the number of individuals within those species.

Statement 2 is correct: Species evenness refers to the relative abundance of individuals among the species present in a community. It indicates how evenly individuals are distributed among those species. High evenness means that all species in the area have a similar number of individuals (e.g., 10 deer, 10 rabbits, 10 squirrels etc.).

55. (c)

Statement 1 is correct: Accelerating Innovative Monitoring for Nature Restoration (AIM4NatuRe), is an FAO-led USD 9 million initiative funded by the United Kingdom to enhance countries' capacity to monitor and report ecosystem restoration progress.

- AIM4NatuRe is part of FAO's AIM4Forests Programme, expanding the scope beyond forests to provide a holistic approach to nature restoration monitoring.

Statement 2 is correct: AIM4NatuRe will leverage cutting-edge technology, standardized data frameworks, and capacity development to support global efforts to restore at least 30 percent of degraded ecosystems by 2030, as outlined in Target 2 of the Global Biodiversity Framework (GBF).

56. (d)

Statement 1 is NOT correct: Hibernation or wintersleep is characterised by the animal slowing down its activities and resting underground. The ectotherms avoid excessive cold or excessive heat by hiding underground – **hibernation**(winter sleep) and **aestivation** (summer sleep). Hibernation is indeed a state of inactivity to avoid cold. However, **aestivation is also a state of inactivity, but to avoid excessive heat or dryness during summer.**

Statement 2 is NOT correct: The rate of metabolism slows down during both hibernation and aestivation. Both are periods of decreased metabolic activity.

57. (c)

The given description is of Sarus crane.

About Sarus crane:

- It is the tallest flying bird in the world.
- It has a predominantly grey plumage with a naked red head and upper neck and pale red legs.
- It is a social creature, found mostly in pairs or small groups of three or four.
- Known to mate for life with a single partner, its breeding season coincides with heavy rainfall in monsoon.
- The Sarus crane has three disjunct populations in the Indian sub-continent, south-east Asia and northern Australia.
- In the Indian subcontinent, it is found in northern and central India, Terai Nepal and Pakistan.
- The Sarus crane is known for its ability to live in association with humans, inhabiting open, cultivated, well watered plains, marshlands and jheels.
- It is the State Bird of Uttar Pradesh.

58. (d)

Megadiversity is a term for a country or region with a high level of biodiversity or different species, including a significant percentage of endemic species.

Statement 1 and Statement 2 are correct: This is a criterion for a country to be considered megadiverse — it must have at least 5,000 endemic plant species. Another requirement for classification as a Megadiverse Country is the presence of a marine ecosystem within its territory.

Statement 3 is correct: The 17 megadiverse countries together host about 70% of global biodiversity.

59. (b)

Option (b) is correct: The term “Silver Economy” refers to the economic opportunities and policies

associated with an ageing population — i.e., the **increasing proportion of elderly people** in a country. It focuses on goods, services, healthcare, technology, and social systems that cater to the needs of **senior citizens** while also viewing them as a potential driver of economic growth.

60. (a)

Statement 1 is correct : The IUCN Green Status of Species complements the Red List by providing a tool for assessing the recovery of species' populations and measuring their conservation success. In 2020, Green Status of Species assessments became an optional part of Red List assessments.

Statement 2 is not correct : It is a misconception that a species assessed on a Green "List" is no longer in need of conservation. The Green Status assesses species against three essential facets of recovery. A species is fully recovered if it is present in all parts of its range, even those that are no longer occupied but were occupied prior to major human impacts/disruption; AND It is viable (i.e., not threatened with extinction) in all parts of the range; AND It is performing its ecological functions in all parts of the range.

61. (b)

Option (b) is the correct answer: Recently, the Ministry of Coal launched RECLAIM – a community engagement and development framework. The framework—referred to as the RECLAIM—serves as a structured guide for inclusive community engagement and development throughout the mine closure and post-closure phases. It offers a practical, step-by-step approach to institutionalizing community participation in the transition process. Ultimately, the RECLAIM Framework aspires to facilitate a seamless and resilient transition for mining communities—grounded in trust, ecological restoration, and long-term socio-economic well-being.

62. (a)

Statement 1 is correct: Nekton are **actively swimming aquatic animals** that can **move independently of water currents**. The nektons

are relatively large and powerful as they have to overcome the water currents. They range in size from the swimming insects to the largest animals that have lived on earth namely the blue whale.

Statement 2 is not correct: Zooplankton are **microscopic or very small aquatic animals, not plants**. They **drift with water currents** and include **protozoans, small crustaceans (like copepods), and larvae of larger animals**. The **microscopic plants** that drift with currents are called **phytoplankton**, not zooplankton.

Additional information: Other types of aquatic organisms:

- **Neuston** : These are unattached organisms which live at the air-water interface such as floating plants and several types of animals.
- **Periphyton** : These are organisms which remain attached or clinging to stems and leaves of rooted plants or substances emerging above the bottom mud.
- **Plankton** : This group includes both microscopic plants (phytoplankton) and animals (zooplankton) found in all aquatic ecosystems.
- **Benthos:** The benthos or the benthic organisms are those found living in or on the bottom or benthic region of the water mass.

63. (a)

Pair 1 is correctly matched: Gokul Jalashaya is an oxbow lake located on the southern edge of the Ganga (Ganges) River in the state of Bihar.

Pair 2 is not correctly matched: Menar and Khichan wetlands are in Rajasthan.

Khichan wetland is located in the northern Thar Desert, comprises two water bodies, Ratri nadi (river) and Vijaysagar talab (pond).

- Menar wetland is a freshwater lake formed by three ponds Braham talab, Dhand talab and Kheroda talab and farmland, which floods during monsoon and becomes home to over 110 species of waterbirds of which 67 are migratory.

64. (d)

Option (d) is the correct answer: All four species listed are recognised as *Invasive Alien Species (IAS)*

in India. These are species introduced from outside their natural range that spread rapidly and threaten native biodiversity, ecosystems, and livelihoods.

Suckermouth catfish: Native to South America, this fish has spread in Indian freshwater bodies. Suckermouth catfish is kept as an ornamental fish by hobbyists primarily to keep aquariums and garden ponds clean.

Congress grass (Parthenium hysterophorus): A native of tropical America, it is also known as carrot grass. It is an alien weed which entered India along with wheat imported from the USA in the early 1950s. Since then it has spread alarmingly and invaded about 35 million hectares of land throughout the country including Andaman & Nicobar and Lakshadweep.

African catfish (Clarias gariepinus): It is now **banned in India** due to its predatory nature. It preys on native fish species and disrupts aquatic food chains.

Lantana camara: A shrub native to Central and South America. In India, it was first introduced in the early 18th century as an ornamental plant, and since then, it has invaded almost all the tropical areas across the country.

65. (c)

Environmental Impact Assessment (EIA): It is a process of evaluating the likely environmental impacts of a proposed project or development.

Statement 1 is correct: EIA was made mandatory in India under the Environmental (Protection Act, 1986 for 29 categories of developmental activities involving investments of Rs. 50 crores and above.

Statement 2 is correct: The EIA Notification of 2006 classifies projects into two main categories: Category 'A' and Category 'B' based on their potential environmental impacts. Category 'A' projects require prior environmental clearance from the Central Government on the recommendations of an Expert Appraisal Committee (EAC). Category 'B' projects also require prior environmental clearance from the State/Union territory Environment Impact

Assessment Authority (SEIAA). Category 'B' projects are subdivided into two types: Category B1 and Category B2. **The projects requiring an Environmental Impact Assessment report fall within Category 'B1'. Remaining projects fall within Category 'B2' and don't require an Environment Impact Assessment report.**

66. (c)

Statement 1 is correct: Cheetah is the only large carnivore species that went extinct in Independent India.

Statement 2 is correct: The cheetahs reintroduced in Kuno National Park (Madhya Pradesh) under Project Cheetah are African Cheetahs, not the Asiatic cheetah. Asiatic cheetahs now survive only in Iran. The Cheetahs for release into the Kuno National park are sourced from South Africa and Namibia.

Statement 3 is not correct: The Project Cheetah is being implemented by National Tiger Conservation Authority (NTCA), a statutory body under the Ministry of Environment, Forest and Climate Change (MoEF&CC) in collaboration with Madhya Pradesh Forest Department, Wildlife Institute of India (WII).

67. (c)

About primary and secondary succession:

- Primary ecological succession occurs in areas where no living organisms ever existed, say bare rock; or in areas that somehow, lost all the living organisms that existed there.
- In contrast, secondary succession occurs in areas where natural biotic communities have been destroyed such as in abandoned farm lands, burned or cut forests, lands that have been flooded. Since some soil or sediment is present, secondary succession is faster than primary succession.

2, 5, 6 and 7 are correct: Primary Succession occurs in the areas like newly cooled lava, Uplifted marine deposits, Newly created reservoirs, Bare rocks, Dunes.

1, 3, and 4 are not correct: Secondary Succession occurs in the areas like Abandoned farm lands, Burned forests, Flooded lands.

68. (c)

Statement 1 is correct : Seaweed is a nutrient-rich marine plant, packed with vitamins, minerals and amino acids. It contains 54 trace elements and essential nutrients that help fight diseases like cancer, diabetes, arthritis, heart problems and high blood pressure. Seaweed is a sea plant that grows in the ocean and seas.

Statement 2 is correct : Seaweed cultivation requires no land, freshwater, fertilizers or pesticides, making it sustainable. The \$5.6 billion seaweed industry is booming, with India's production increasing steadily.

Statement 3 is correct : Seaweed isn't just for eating, it's also used in industries for making thickening and gelling agents :

1. Alginate: Extracted from brown seaweeds (harvested from the wild). It's used as a thickener in foods, cosmetics, and even medical products.
2. Agar: Comes from red seaweeds. It's been cultivated since the 1960s and is used in desserts, jams, and laboratory cultures.
3. Carrageenan: Extracted from certain red seaweeds like Irish Moss. It's used in dairy products, ice creams, and toothpaste.

69. (b)

Statement 1 is not correct : The Indian rhino is the largest of the three Asian species, and shares its single horn characteristic with the Javan rhino. The Sumatran rhino, in contrast, has two horns, a trait linking Asian and African rhinos. Indian rhinos are known for their single horn and thick, armor-like skin. Adults can weigh up to 2,800 kg and live for 45–50 years, feeding primarily on grass, leaves, fruits, and aquatic plants.

Statement 2 is correct : Rhinos thrive in floodplain grasslands, swamps, and riverine forests, particularly in the Terai region of India and Nepal.

70. (b)

About IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

(IPBES) is an independent intergovernmental body which provides policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems and the benefits they provide to people. IPBES was established in 2012, as an independent body inspired by the Intergovernmental Panel on Climate Change (IPCC) and the Millennium Ecosystem Assessment and its first work programme covers the period from 2014 to 2018.

Statement 1 is not correct, but Statement 2 is correct: IPBES is not a United Nations body. However, at the request of the IPBES Plenary and with the authorization of the UNEP Governing Council in 2013, the United Nations Environment Programme (UNEP) provides secretariat services to IPBES.

Additional information: "Nexus Assessment" is the flagship report by IPBES. The report reveals the deep interconnections between biodiversity, water, food, health and climate – demonstrating that tackling these challenges together is our only path to sustainability.

71. (c)

Forest (Conservation) Amendment Act, 2023 amends the Forest (Conservation) Act, 1980 to make it applicable to certain types of land. These include land notified as a forest under the Indian Forest Act, 1927 or in government records after the 1980 Act came into effect. The Act will not be applicable for land converted to non-forest use before December 12, 1996.

Statement 1 is correct: The Forest (Conservation) Amendment Act, 2023 provides exemption for certain activities from the requirement of **prior Central Government approval** under the Forest (Conservation) Act, 1980. The exempted projects include strategic projects concerning national security located within 100 km of distance from the International Borders, Line of Actual Control, Line of Control, 0.10 ha of forest land proposed to be provided connectivity to habitation and establishments located on the side of roads and railways, up to 10 ha of land proposed for security

related infrastructure and up to 5 ha of forest land in Left Wing Extremism Affected Districts for public utility projects.

Statement 2 is correct : Under the act, restrictions on use of forest land will not apply for silviculture activities, establishment of check-posts and infrastructure for the front line forest staff, establishment and maintenance of fire lines, wireless communications, construction of fencing, boundary marks or pillars, bridges and culverts, check dams, waterholes, trenches and pipelines, establishment of zoo and safaris referred to in the Wild Life (Protection) Act, 1972, owned by the Government or any authority, in forest areas other than protected areas and eco-tourism facilities.

72. (d)

About Minor forest produce: Indian Forest Act 1927 defines only “forest-produce” and this term connotes to those products whether found in, or brought from a forest. Minor Forest Produce (MFP) is a subset of forest produce and got a definition only in 2007 when the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, was enacted. This Act is popularly known as the Forests Rights Act (FRA), 2006.

1, 3, 4 and 5 are correct: Section 2(i) of the said Act defines a Minor Forest Produce (MFP) as **all non-timber forest produce of plant origin** and **includes bamboo, cane, brushwood, stumps, canes, Tusser, cocoon, honey, waxes, Lac, tendu/kendu leaves, medicinal plants and herbs**, roots, tuber and the like.

Note: The definition of “minor forest produce” includes bamboo and cane, thereby changing the categorization of bamboo and cane as “trees” under the Indian Forest Act 1927.

73. (c)

Correct order of ecological hierarchy (from lower to higher levels): Population → Community → Ecosystem → Biome → Biosphere

- Population:** A group of individuals of the **same species** living in a particular area at a given time.

- Community:** All the **populations of different species** living and interacting in a particular area.
- Ecosystem:** A functional unit comprising **biotic (living)** and **abiotic (non-living)** components interacting together through energy flow and nutrient cycling.
- Biome:** A large regional ecosystem characterized by **distinct vegetation, climate, and animal life**.
- Biosphere:** The highest level of organization that includes **all ecosystems and life on Earth**, interacting with the atmosphere, hydrosphere, and lithosphere.

74. (d)

Statement 1 is not correct: The Biosafety Clearing-House (BCH) is an information exchange mechanism established by the Cartagena Protocol on Biosafety to assist Parties to implement its provisions and to facilitate sharing of information on, and experience with, living modified organisms (LMOs).

Statement 2 is not correct: The information registered in the BCH is **freely available for public search and retrieval without an account** to the Parties of the Protocol.

75. (b)

Statement 1 is not correct: The Sloth Bears are forest-dwelling bears (family Ursidae) that inhabit tropical or subtropical regions of India and Sri Lanka. Named for its slow-moving habits, the sloth bear has poor senses of sight and hearing but a good sense of smell. They are *not* known for “peaceful coexistence with humans”. In fact, they are considered the world’s deadliest bear.

Statement 2 is correct: Classified as ‘Vulnerable’ on the IUCN Red List, sloth bears are endemic to the Indian sub-continent and 90% of the species population is found in India

76. (a)

Statement I is correct: In general, species diversity decreases as we move away from the equator towards the poles. With very few exceptions, tropics (latitudinal range of 23.5° N to 23.5° S)

harbour more species than temperate or polar areas.

Statement II is correct and correctly explains Statement I: Speciation is generally a function of time, unlike temperate regions subjected to frequent glaciations in the past, tropical latitudes have remained relatively undisturbed for millions of years and thus, had a long evolutionary time for species diversification,

Statement III is correct and correctly explains Statement I: There is more solar energy available in the tropics, which contributes to higher productivity; this in turn might contribute indirectly to greater diversity.

Additional information: Another reason for higher biological diversity in tropics is that the tropical environments, unlike temperate ones, are less seasonal, relatively more constant and predictable. Such constant environments promote niche specialisation and lead to a greater species diversity

77. (b)

Option (b) is the correct answer: The Living Planet Report is the flagship publication of the World Wide Fund for Nature (WWF). It is released biennially (every two years) in collaboration with the Zoological Society of London (ZSL) and other partners. The report tracks the state of global biodiversity and ecosystem health using indicators such as the Living Planet Index (LPI), which measures trends in vertebrate species populations worldwide.

78. (a)

Statement 1 is correct:

- The Forest Rights Act (FRA), 2006 recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs.
- The Act encompasses Rights of Self-cultivation and Habitation which are usually regarded as Individual rights;

- And Community Rights as Grazing, Fishing and access to Water bodies in forests, Habitat Rights for PVTGs, Traditional Seasonal Resource access of Nomadic and Pastoral community, access to biodiversity, community right to intellectual property and traditional knowledge, recognition of traditional customary rights and right to protect, regenerate or conserve or manage any community forest resource for sustainable use.

- It also provides rights to allocation of forest land for developmental purposes to fulfil basic infrastructural needs of the community.

Statement 2 is correct: The Act further enjoins upon the Gram Sabha and rights holders the responsibility of conservation and protection of bio-diversity, wildlife, forests, adjoining catchment areas, water sources and other ecologically sensitive areas as well as to stop any destructive practices affecting these resources or cultural and natural heritage of the tribals. The Gram Sabha is also a highly empowered body under the Act, enabling the tribal population to have a decisive say in the determination of local policies and schemes impacting them.

Statement 3 is not correct: The FRA does not contain a sunset clause. There is no fixed end date for the recognition or vesting of rights. In fact, a recent United Nations report released on the progress of the Forest Rights Act in India has suggested that there may be a need to build consensus for a “sunset clause” that provides an “end date” for the recognition and vesting of rights under the law to Scheduled Tribes and other forest-dwellers.

79. (a)

About PRATUSH Mission: First of its kind proposed space payload, PRATUSH (Probing ReionizATion of the Universe using Signal from Hydrogen) by a team from Raman Research Institute (RRI), an autonomous institute funded by the Department of Science and Technology (DST), Government of India is designed to unlock this mystery. It is a future radiometer in lunar orbit that will answer questions about the first stars formed

in our universe. It will help in the study of cosmic dawn.

Option (a) is the correct answer: Cosmic Dawn is an important era in the history of the Universe. It is the time, roughly 100 million to 1 billion years after the Big Bang, when the first luminous sources—the first stars (Population III stars) and early galaxies—began to form. Before this time, the Universe was filled with a neutral, dark fog of hydrogen and helium gas, a period often called the Dark Ages. The light and high-energy radiation from these first stars and galaxies dramatically altered the Universe by reionizing the neutral hydrogen gas, effectively lifting the cosmic “fog” and allowing light to travel freely.

80. (a)

Statement 1 is correct: The United Nations Forum on Forests (UNFF) is a functional commission within the UN Economic and Social Council (ECOSOC) with universal membership.. It was established to promote the management, conservation, and sustainable development of all types of forests.

Statement 2 is NOT correct: While the UNFF promotes sustainable forest management and international cooperation, it primarily focuses on facilitating dialogue, policy development, and voluntary commitments. It does not create legally binding agreements.

About The UN Economic and Social Council (ECOSOC): The UN Charter established ECOSOC in 1945 as one of the six main organs of the United Nations.

- It is at the heart of the United Nations system to advance the three dimensions of sustainable development – economic, social and environmental
- It is the central platform for fostering debate and innovative thinking, forging consensus on ways forward, and coordinating efforts to achieve internationally agreed goals.

United Nations Strategic Plan for Forests 2017–2030:

- The agreement on the first-ever UN Strategic Plan for Forests was forged at a special session

of the UN Forum on Forests held in January 2017

- It features a set of six Global Forest Goals and 26 associated targets to be reached by 2030, which are voluntary and universal.
- It includes a target to increase forest area by 3% worldwide by 2030, signifying an increase of 120 million hectares, an area over twice the size of France

81. (c)

Option (c) is the correct answer: Bioprospecting is the exploration of plant and animal species for the utilization of their genetic resources in pharmaceutical and biochemical industries, and in the production of a wide array of commercially viable products.

Bioprospecting is based on a sustainable approach bringing economic and social benefits to often poor communities who otherwise would resort to unsustainable use of land, consumption of environmental resources or other negative coping mechanisms such as economic migration.

Additional information:

- **Biopiracy:** it focuses on the use of biological resources and/or knowledge of indigenous tribes or communities **without allowing them to share the revenues generated out of economic exploitation or other non-monetary incentives associated with the resource/knowledge.**
- While bioprospecting implies that the samples are acquired through proper legal and ethical frameworks (including equitable benefit sharing and Prior Informed Consents, PICs), the term biopiracy is used when an indigenous knowledge is patented for lucrative purposes with neither the knowledge of indigenous community, nor their consent.

82. (c)

Statement 1 is correct: Estuarine or salt water crocodiles are the largest and heaviest of living reptiles, growing up to 7 metres (about 23 feet) long and weighing up to 1,200 kg.

Statement 2 is NOT correct: Saltwater crocodiles are found in a wide range of coastal areas and rivers

across Southeast Asia, Australia, and parts of the Pacific Islands, not just India.

Statement 3 is correct: Apart from the eastern coast of India, the saltwater crocodile is extremely rare on the Indian subcontinent. The saltwater crocodile is also found in Bangladesh. A large population is present within the Bhitarkanika Wildlife Sanctuary of Odisha while smaller populations occur throughout the Sundarbans. Populations are also present within the mangrove forests and other coastal areas of the Andaman and Nicobar Islands in India

83. (c)

Pair 1 is correctly matched: Indravati National Park is a national park located in Bijapur district of Chhattisgarh state of India. It derives its name from the nearby Indravati River, which forms the northern boundary of the reserve with the Indian state of Maharashtra. It is home to one of the last populations of rare wild buffalo. It was declared as a tiger reserve in 1983 under the Project Tiger of India.

Pair 2 is correctly matched: Pin valley national park is located in the cold desert area of Spiti Sub-Division of Lahaul & Spiti District of Himachal Pradesh. Being a cold desert high altitude, winters are severe and experiences very heavy snow fall in the park area. This park is specially renowned for the protection of endangered Snow-Leopard. Pin Valley is characterized by alpine pasture or dry alpine Scrub Forest. Juniper & Birch trees are on the verge of extinction. Pin Valley National Park is the only National Park in Himachal Pradesh which is situated in the cold desert area.

Pair 3 is correctly matched: Popularly known as “Krishnagiri Upvan” or “Borivali National Park”, the Sanjay Gandhi National Park is in Mumbai, Maharashtra. It is one of the world’s few national parks located within a major metropolitan city. One of the park’s most iconic attractions is the historic Kanheri Caves, a complex of ancient Buddhist rock-cut monuments dating back to the 1st century BCE.

84. (c)

Context: India’s first dugong reserve in Palk Bay gains global recognition at IUCN Congress.

Option (c) is the correct answer: The International Union for Conservation of Nature (IUCN) has formally adopted a motion recognising India’s first Dugong Conservation Reserve in Palk Bay, marking a major international endorsement of the country’s marine conservation efforts. The Palk Bay—where India’s first Dugong Conservation Reserve is located—is located off the southeastern coast of Tamil Nadu. The southeastern coast of India (Tamil Nadu) is part of the Coromandel Coast.

85. (b)

Option (b) is the correct answer: Ecological Footprint is a resource accounting tool used by governments, businesses, educational institutions and NGOs to answer a specific resource question: How much of the biological capacity of the planet is required by a given human activity or population? The Ecological Footprint **measures the amount of biologically productive land and sea area** an individual, a region, all of humanity, or a human activity that compete for biologically productive space.

86. (c)

Statement 1 is correct: Bioaccumulation refers to the **gradual buildup of a chemical substance within the tissues of an organism** over time because the rate of intake exceeds the rate of excretion or metabolism. Whereas, **Biomagnification** (or biological magnification) refers to the **progressive increase in concentration of a pollutant along the food chain**, from lower to higher trophic levels.

Statement 2 is not correct: Bioaccumulation and biomagnification mainly occur with **non-biodegradable, persistent pollutants** (such as **heavy metals and organochlorine pesticides like DDT**). Biodegradable pollutants are broken down by microorganisms and do not accumulate in tissues.

Statement 3 is correct: Mercury and **DDT (dichlorodiphenyltrichloroethane)** are

known examples of substances that undergo **biomagnification**, particularly in **aquatic food chains**.

87. (c)

Option (c) is the correct answer: The **Shahtoosh Shawl** is made from the wool of the **Chiru**, the endangered **Tibetan antelope**. Tibetan antelopes, also known as ‘chiru’, are a small, unique species related to goats and sheep that are found exclusively in the Qinghai-Xizang plateau.

Additional information:

- **Pashmina Shawl:** It is made from wool obtained from the **Changthangi Goat**. Changthangi is a well-recognized breed of goat. The breeding tract of this goat is in the Changthang area of Leh district of Jammu and Kashmir and is adjacent to Tibet. The breed is well adapted to the local cold arid agro-climatic conditions of the region and is reared mainly by a nomad known as ‘Changpa’.
- **Angora wool:** It comes from **angora rabbits** who have extremely soft, thick coats.

88. (a)

Statement 1 is correct: The **ISFR** is brought out by the Forest Survey of India (FSI) on a **biennial basis** since 1987. FSI carries out in-depth assessment of the forest and tree resources of the country based on interpretation of Remote Sensing satellite data and field based National Forest Inventory (NFI), and the results are published in the ISFR. The India State of Forest Report 2023 is 18th such report in the series.

Statement 2 is correct: Area wise top three states having largest forest and tree cover are **Madhya Pradesh** (85,724 sq km) followed by Arunachal Pradesh (67,083 sq km) and Maharashtra (65,383 sq km).

Statement 3 is not correct: In terms of percentage of forest cover with respect to total geographical area, **Lakshadweep** (91.33 percent) has the highest forest cover followed by **Mizoram** (85.34 percent) and Andaman & Nicobar Island (81.62 percent).

Additional information:

- The **Forest and Tree cover of the country** is **8,27,357 sq km** which is **25.17 percent** of the geographical area of the country, consisting of **7,15,343 sq km (21.76%) as forest cover and 1,12,014 sq km (3.41%) as tree cover**.
- As compared to assessment of 2021, there is **an increase of 1445 sq km in the forest and tree cover** of the country which includes 156 sq km increase in the forest cover and 1289 sq km increase in tree cover.
- Top three states showing **maximum increase in forest cover** are **Mizoram** (242 sq km) followed by Gujarat (180 sq km) and Odisha (152 sq km).
- Top four states showing **maximum increase in forest and tree cover** are **Chhattisgarh** (684 sq km) followed by Uttar Pradesh (559 sq km), Odisha (559 sq km) and Rajasthan (394 sq km).
- The present assessment also reveals that **19 states/UTs have above 33 percent of the geographical area under forest cover**. Out of these, eight states/UTs namely Mizoram, Lakshadweep, A & N Island, Arunachal Pradesh, Nagaland, Meghalaya, Tripura, and Manipur have forest cover above 75 percent.
- The **extent of bamboo bearing area** for the country has been estimated as 1,54,670sq km. As compared to the last assessment done in 2021 there is **an increase of 5,227 sq km in bamboo area**.
- In the present assessment total carbon stock in the country’s forest is estimated to be 7,285.5 million tonnes. There is an **increase of 81.5 million tonnes in the carbon stock** of the country as compared to the last assessment.

89. (a)

Statement 1 is correct: **Melanistic tigers** are **not a separate subspecies, but a colour morph (variant) of the Royal Bengal Tiger (*Panthera tigris tigris*)**. Many royal Bengal tigers of Similipal belong to a unique lineage with **higher-than-normal levels of melanin**, which **gives them black and yellow interspersed stripes** on their coats.

Statement 2 is correct: These **tigers** are **not entirely black**, and are therefore more accurately described as being **pseudo-melanistic**. A single mutation in the gene **Transmembrane Aminopeptidase Q (Taqpep)** causes black tigers to develop stripes that seem to have broadened or spread into the yellowish-brown background.

Statement 3 is not correct: In the wild, **melanistic tigers are found only in the Similipal Tiger Reserve in Odisha**.

90. (d)

Option (d) is the correct answer: The **Global Methane Tracker** is released annually by the **International Energy Agency (IEA)**. It provides the latest estimates of methane emissions from the **energy sector**, including oil, gas, coal, and bioenergy industries.

Significance of tracking methane: Methane (CH_4) is a potent greenhouse gas, with a **global warming potential around 28 times greater than CO₂** over a 100-year period.

91. (b)

Statement 1 is not correct: Lichens are a **symbiotic association between a fungus and an alga (or cyanobacterium)**. The **fungus** provides structure and protection, while the **alga or cyanobacterium** performs photosynthesis to produce food.

Statement 2 is correct: Lichens are **pioneer species** that can **colonize bare rocks, tree bark, and other inhospitable surfaces**. They contribute to soil formation by secreting acids that chemically weather rocks, releasing minerals and creating conditions suitable for mosses and higher plants.

Statement 3 is not correct: Lichens are **highly sensitive to air pollution**, especially **sulphur dioxide (SO₂)** and heavy metals. They **do not grow abundantly in polluted areas**; instead, their presence indicates **clean air** and good environmental quality. Hence, they are used as **bioindicators of air pollution**.

92. (d)

Statement I is not correct: The annual net primary productivity of the whole biosphere is approximately 170 billion tons (dry weight) of organic matter. Of this, despite occupying about 70 per cent of the surface, the productivity of the oceans is only 55 billion tons. Rest of course, is on land. Thus, Oceans have **lower productivity** than terrestrial ecosystems.

Statement II is correct: The ocean is a huge body of saltwater that covers about 71 percent of Earth's surface.

93. (c)

Option (c) is the correct answer : IBAT an alliance of four of the world's largest and most influential conservation organisations: Birdlife International, Conservation International, the International Union of Conservation for Nature (IUCN), and the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). The IBAT Alliance licences commercial access to the IBAT platform - the world's most authoritative biodiversity data platform, providing trusted data to assess biodiversity risks and align with global frameworks to support nature-positive goals.

94. (d)

Option (d) is the correct answer: The term "**Grey Rhino**" refers to a **highly probable but neglected threat** that has the potential to cause **severe and widespread consequences** if ignored. Unlike a "**Black Swan**" event (which is rare and unpredictable), a **Grey Rhino** is a **foreseeable and visible risk** — yet often overlooked until it becomes a crisis.

95. (a)

Statement 1 is correct: In a **grazing food chain (GFC)**, the **first trophic level** is formed by **autotrophs (producers)** such as green plants or phytoplankton, which capture solar energy and form the base of the food web. In contrast, in a **detritus food chain (DFC)**, the **first trophic level** consists of **dead organic matter (detritus)** — such as fallen leaves, dead organisms, or waste materials

— which are consumed by **detrivores and decomposers** like earthworms, fungi, and bacteria.

Statement 2 is not correct: In **terrestrial ecosystems, energy flows predominantly through the detritus food chain**, where dead organic matter is broken down by decomposers like fungi and bacteria. This contrasts with **aquatic ecosystems**, where the **grazing food chain plays a larger role**. Therefore, the detritus food chain is more significant in terrestrial energy flow.

96. (b)

Option (b) is correct: **Commensalism** is a type of species interaction in which **one species benefits**, while the **other is neither harmed nor benefited**. In this case, **cattle egrets** benefit by feeding on **insects and small animals** that are **flushed out by the movement of grazing cattle**. The **cattle** remain unaffected by the presence of the egrets — they neither gain nor lose anything.

97. (b)

Statement 1 is not correct: Green manuring is defined as the **practice of ploughing or turning into the soil, undercomposed fresh green plant tissue** for the purpose of improving fertility status, physical and biological condition of the soil. It does not involve the usage of decomposed plants and food waste as manure.

Statement 2 is correct: Various benefits of Green manuring are as follows:

- Huge quantity of organic matter is added to the soil.
- Increases microbial population in the soil.
- Improves physical condition of soil and increases the availability of various macro and micro nutrients.
- No adverse impact on soil and environment, hence environment friendly and help in maintaining the fertility of the soil in the long term.
- **Prevent leaching of nutrients to lower layers.** (Hence, Statement 2 is correct)

- Harbour Nitrogen fixing bacteria, rhizobia in root nodules and fix atmospheric N. (60 to 100 kg N/ha)

Statement 3 is correct: Green manure crops are grown and buried in the crop field either as a pure crop or as an intercrop with the main crop. **Sunhemp, Dhaincha, Cluster bean, Cowpea, Khesari, Berseem, Green Gram**, etc. are the common green manuring crops. Hence, Statement 3 is correct.

Additional information: Characteristic of Green Manuring Crops:

- Capable of establishing and growing quickly.
- Tolerant to adverse climatic conditions such as drought, water logging, high and low temperatures etc and tolerant to pests and diseases.
- Should possess adequate *Rhizobium* nodulation potential and must be effective nitrogen fixer.
- Should be capable of growing very fast and capable of accumulating sufficient fixed N in 4-6 weeks.
- Easy to incorporate and quickly decomposable.

98. (b)

Pair 1 is correctly matched: Asiatic Lion (*Panthera leo persica*) is found only in the wild in Gujarat, specifically in and around the Gir National Park and Wildlife Sanctuary.

Pair 2 is not correctly matched: Ladakh(477), with its rugged mountainous terrain, is one of the primary habitats for **snow leopards** in India followed by **Uttarakhand** (124), **Himachal Pradesh** (51).

Pair 3 is correctly matched: **Madhya Pradesh(526)** is known to have the **highest population of tigers in India**, followed by **Karnataka(524)> Uttarakhand(442)**.

99. (c)

Option (c) is the correct answer: Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what the Earth can regenerate in that year. If Earth Overshoot Day occurs earlier in 2026 than

in 2025, it means humans are consuming natural resources more quickly and depleting Earth's ecological capital faster. In other words, the rate of resource consumption and waste generation (ecological footprint) has increased relative to the planet's ability to renew those resources.

100. (c)

Statement 1 is not correct : The Green Credit Rules have been notified by the Government of India on 12th October 2023 under the Environment Protection Act, 1986, as mechanism to encourage voluntary plantation activity across the country, resulting in award of Green Credits and to build an inventory of degraded land which can be utilised for Afforestation programmes.

Statement 2 is correct : Green Credits (GCs) are a form of environmental rewards that represent the positive environmental actions awarded to entities who participate in environmentally friendly activities like tree plantation etc. Unlike the carbon markets, which are more focused on industry and corporations, green credit programmes can benefit individuals and communities as well. Both individuals and companies can earn carbon credits. To obtain Green Credits, individuals and entities must register their activities through the central government's dedicated app/website

Statement 3 is correct : The Indian Council of Forestry Research and Education, a Society registered under the Societies Registration Act, 1860 (21 of 1860) vide Registration No.596/1990-91, dated the 12th March 1991 and an autonomous body as declared by the then Ministry of Environment and Forests, Government of India vide Resolution No.1-8/89-RT, dated the 22nd

June 1990, shall be responsible for the effective implementation of the Green Credit programme, including its management and operation of the rules.

Additional information:

GCP include the following activities, namely :-

- (i) Tree plantation
- (ii) Water management
- (iii) Sustainable agriculture - to promote natural and regenerative agricultural practices and land restoration to improve productivity, soil health and nutritional value of food produced;
- (iv) Waste management - to promote circularity, sustainable and improved practices for waste management, including collection, segregation, and environmentally sound management;
- (v) Air pollution reduction - to promote measures for reducing air pollution and other pollution abatement Activities;
- (vi) Mangrove conservation
- (vi) Ecomark label development - to encourage manufacturers to obtain ecomark label for their goods and services;
- (vii) Sustainable building and infrastructure - to encourage the construction of sustainable buildings and other infrastructure using environment friendly technologies and materials.

