

Roll No.

Question Booklet Number

O. M. R. Serial No.

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M. Sc. (Fourth Semester)
(NEP) EXAMINATION, 2025-26

BOTANY

(Conservation And Restoration Ecology)

Paper Code							
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Questions Booklet
Series

A

Time : 1:30 Hours]

[Maximum Marks : 75

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, तो उसे तुरन्त बदल लें।

(Remaining instructions on the last page)

(शेष निर्देश अन्तिम पृष्ठ पर)

(Only for Rough Work)

1. Conservation ecology mainly deals with :
 - (A) Industrial development
 - (B) Protection and management of biodiversity
 - (C) Urban expansion
 - (D) Mining resources
2. Biodiversity conservation primarily aims to :
 - (A) Increase monoculture farming
 - (B) Maintain genetic, species and ecosystem diversity
 - (C) Promote deforestation
 - (D) Reduce ecosystem complexity
3. The term biodiversity includes :
 - (A) Only plant diversity
 - (B) Only animal diversity
 - (C) Genetic, species and ecosystem diversity
 - (D) Only microbial diversity
4. Conservation ethics mainly emphasize :
 - (A) Unlimited resource exploitation
 - (B) Responsible use and protection of nature
 - (C) Complete human control over ecosystems
 - (D) Industrial growth
5. The concept that humans have moral responsibility to protect nature is known as :
 - (A) Environmental ethics
 - (B) Industrial ethics
 - (C) Economic ethics
 - (D) Agricultural ethics
6. Which level of biodiversity refers to variation within a species ?
 - (A) Ecosystem diversity
 - (B) Species diversity
 - (C) Genetic diversity
 - (D) Landscape diversity
7. Conservation biology emerged as a scientific discipline mainly in the :
 - (A) 18th century
 - (B) 19th century
 - (C) 20th century
 - (D) 17th century
8. The ethical view that nature has intrinsic value independent of human use is called :
 - (A) Anthropocentrism
 - (B) Biocentrism
 - (C) Industrialism
 - (D) Utilitarianism

9. Which approach considers humans as the central focus of conservation value ?
- (A) Biocentric approach
 - (B) Ecocentric approach
 - (C) Anthropocentric approach
 - (D) Ecosystem approach
10. Conservation ecology integrates principles mainly from :
- (A) Ecology and genetics
 - (B) Economics only
 - (C) Chemistry only
 - (D) Engineering
11. The precautionary principle in conservation suggests that :
- (A) Development should proceed without concern
 - (B) Lack of full scientific certainty should not delay environmental protection
 - (C) Conservation actions should be avoided
 - (D) Natural resources should be exploited immediately
12. One of the basic postulates of conservation biology is that :
- (A) Evolutionary processes must be maintained
 - (B) Biodiversity has no value
 - (C) Species extinction is desirable
 - (D) Ecosystems should remain static
13. Which ethical principle emphasizes sustainable use of resources ?
- (A) Stewardship principle
 - (B) Exploitation principle
 - (C) Industrial principle
 - (D) Extraction principle
14. Conservation ecology is important because it :
- (A) Prevents ecosystem degradation and species extinction
 - (B) Promotes pollution
 - (C) Reduces biodiversity intentionally
 - (D) Eliminates natural habitats
15. Population dynamics refers to the study of :
- (A) Changes in population size and structure over time
 - (B) Industrial population growth
 - (C) Only plant distribution
 - (D) Only animal behavior
16. The number of individuals of a species per unit area is called :
- (A) Population density
 - (B) Population niche
 - (C) Population niche width
 - (D) Habitat diversity

17. Which factor directly increases population size ?
- (A) Mortality
 - (B) Emigration
 - (C) Immigration
 - (D) Predation
18. Genetic variation in populations is important because it :
- (A) Reduces adaptability
 - (B) Increases survival and evolutionary potential
 - (C) Causes extinction
 - (D) Stops natural selection
19. Loss of genetic diversity in small populations is mainly due to :
- (A) Genetic drift
 - (B) Mutation
 - (C) Natural selection
 - (D) Migration
20. In conservation biology, the minimum viable population (MVP) refers to :
- (A) Smallest population able to survive long term
 - (B) Largest population in ecosystem
 - (C) Population with highest genetic diversity
 - (D) Population without predators
21. Population viability analysis (PVA) is used to :
- (A) Predict extinction risk of species
 - (B) Increase agricultural production
 - (C) Control climate change
 - (D) Measure soil fertility
22. Which of the following causes reduction in genetic variation ?
- (A) Mutation
 - (B) Gene flow
 - (C) Inbreeding
 - (D) Migration
23. Inbreeding depression results in :
- (A) Increased survival
 - (B) Reduced fitness and reproduction
 - (C) Increased biodiversity
 - (D) Faster evolution
24. Carrying capacity of an ecosystem refers to :
- (A) Maximum population size an environment can sustain
 - (B) Minimum population size
 - (C) Total number of ecosystems
 - (D) Rate of migration
25. Density-dependent factors affecting populations include :
- (A) Earthquakes
 - (B) Floods
 - (C) Competition for resources
 - (D) Volcanic eruptions

26. Habitat-specific demography studies :
- (A) Population characteristics in particular habitats
 - (B) Industrial population growth
 - (C) Global biodiversity only
 - (D) Climatic variation only
27. Which method is commonly used to estimate wildlife population size ?
- (A) Mark-recapture method
 - (B) Industrial census
 - (C) Soil testing
 - (D) Remote mining
28. Fragmentation of habitat can lead to :
- (A) Increased gene flow
 - (B) Isolation of populations and genetic loss
 - (C) Unlimited population growth
 - (D) Decrease in extinction risk
29. Species conservation focuses mainly on :
- (A) Increasing industrial development
 - (B) Preventing extinction of species.
 - (C) Promoting deforestation
 - (D) Reducing biodiversity
30. A species that is at high risk of extinction in the near future is called :
- (A) Endemic species
 - (B) Endangered species
 - (C) Dominant species
 - (D) Keystone species
31. Endemic species are those that :
- (A) Occur only in a particular geographic region
 - (B) Occur everywhere on Earth
 - (C) Migrate frequently
 - (D) Live only in oceans
32. Habitat conservation aims to :
- (A) Protect the natural environment where species live
 - (B) Destroy ecosystems
 - (C) Promote urban expansion
 - (D) Increase pollution
33. A protected area is defined as :
- (A) Land used for industrial production
 - (B) Area managed for conservation of biodiversity
 - (C) Land used only for agriculture
 - (D) Area used for mining
34. National parks are established mainly for :
- (A) Wildlife conservation and ecosystem protection
 - (B) Industrial development
 - (C) Urban settlement
 - (D) Mining activities

35. Wildlife sanctuaries differ from national parks because :
- (A) They allow limited human activities
 - (B) They allow heavy industrial activities
 - (C) They permit urban construction
 - (D) They eliminate all wildlife
36. The theory of reserve design is concerned with :
- (A) Planning protected areas for biodiversity conservation
 - (B) Designing industrial cities
 - (C) Agricultural land planning
 - (D) Urban infrastructure
37. The SLOSS debate in conservation biology refers to :
- (A) Single Large or Several Small reserves
 - (B) Soil loss in forests
 - (C) Species loss due to climate change
 - (D) Small land size optimization
38. A keystone species is one that :
- (A) Has very little effect on ecosystem
 - (B) Plays a crucial role in maintaining ecosystem structure
 - (C) Exists in very small numbers
 - (D) Has no ecological function
39. Habitat fragmentation generally leads to :
- (A) Increased biodiversity
 - (B) Reduced habitat connectivity
 - (C) Unlimited species growth
 - (D) Increased gene flow
40. Corridors between protected areas help in :
- (A) Preventing migration
 - (B) Reducing biodiversity
 - (C) Increasing habitat destruction
 - (D) Facilitating movement of organisms
41. Ex-situ conservation involves :
- (A) Protecting species in their natural habitat
 - (B) Conserving species outside natural habitats
 - (C) Industrial farming
 - (D) Habitat destruction
42. Botanical gardens and seed banks are examples of :
- (A) In-situ conservation
 - (B) Ex-situ conservation
 - (C) Habitat degradation
 - (D) Industrial conservation

43. Conservation strategy refers to :
- (A) Planned actions to protect biodiversity
 - (B) Increasing industrial expansion
 - (C) Promoting deforestation
 - (D) Increasing pollution
44. The main aim of conservation management is to :
- (A) Exploit natural resources rapidly
 - (B) Maintain biodiversity and ecosystem functions
 - (C) Destroy habitats
 - (D) Promote urban growth
45. Conservation planning generally begins with :
- (A) Habitat destruction
 - (B) Goal identification and assessment
 - (C) Industrial investment
 - (D) Mining development
46. Site management plans are prepared mainly to :
- (A) Control population growth
 - (B) Manage and protect specific conservation areas
 - (C) Promote urbanization
 - (D) Increase agricultural land
47. Sustainable development refers to development that :
- (A) Uses unlimited natural resources
 - (B) Meets present needs without harming future generations
 - (C) Focuses only on economic growth
 - (D) Eliminates natural ecosystems
48. The concept of sustainable development became widely known after the :
- (A) Kyoto Protocol
 - (B) Brundtland Report
 - (C) Paris Agreement
 - (D) Montreal Protocol
49. Community participation in conservation is important because :
- (A) Local people depend on natural resources
 - (B) It increases deforestation
 - (C) It promotes mining
 - (D) It decreases biodiversity
50. Conservation planning requires integration of :
- (A) Ecological, economic and social factors
 - (B) Only economic factors
 - (C) Only industrial factors
 - (D) Only agricultural factors

51. The ecosystem approach in conservation emphasizes :
- (A) Managing ecosystems as integrated systems
 - (B) Destroying ecosystems
 - (C) Ignoring biodiversity
 - (D) Increasing industrial production
52. Environmental impact assessment (EIA) is used to :
- (A) Predict environmental consequences of projects
 - (B) Increase industrial waste
 - (C) Destroy habitats
 - (D) Reduce biodiversity
53. A management plan in conservation usually includes :
- (A) Objectives, strategies and monitoring
 - (B) Only objectives
 - (C) Only funding details
 - (D) Only species list
54. Adaptive management involves :
- (A) Fixed conservation plans
 - (B) Flexible strategies based on monitoring results
 - (C) Ignoring environmental changes
 - (D) Preventing scientific research
55. Sustainable resource use means :
- (A) Unlimited exploitation
 - (B) Using resources without degrading ecosystems
 - (C) Destroying habitats
 - (D) Stopping all human activities
56. Long-term monitoring in conservation helps to :
- (A) Evaluate success of management strategies
 - (B) Promote deforestation
 - (C) Increase industrial growth
 - (D) Reduce biodiversity
57. Ecological disturbance is defined as :
- (A) Stable ecosystem condition
 - (B) Event that disrupts ecosystem structure or function
 - (C) Absence of species
 - (D) Lack of nutrients
58. Which of the following is a natural disturbance ?
- (A) Mining
 - (B) Urbanization
 - (C) Forest fire
 - (D) Industrial waste

59. Human-induced disturbances include :
- (A) Floods
 - (B) Earthquakes
 - (C) Deforestation
 - (D) Volcanic eruptions
60. Ecosystem stability refers to the ability of an ecosystem to :
- (A) Remain unchanged forever
 - (B) Resist or recover from disturbances
 - (C) Eliminate biodiversity
 - (D) Stop nutrient cycles
61. Resilience of an ecosystem refers to :
- (A) Resistance to disturbance
 - (B) Ability to recover after disturbance
 - (C) Rate of species extinction
 - (D) Decrease in productivity
62. Resistance in ecology refers to :
- (A) Ability to avoid change during disturbance
 - (B) Ability to destroy ecosystems
 - (C) Ability to increase disturbance
 - (D) Loss of biodiversity
63. Secondary succession occurs when :
- (A) Life colonizes newly formed land
 - (B) Ecosystem recovers after disturbance
 - (C) Species disappear permanently
 - (D) Soil is absent
64. Which disturbance often leads to secondary succession ?
- (A) Glacial retreat
 - (B) Volcanic lava flow
 - (C) Forest fire
 - (D) Formation of new islands
65. Habitat fragmentation results in :
- (A) Continuous habitats
 - (B) Isolation of populations
 - (C) Increased gene flow
 - (D) Unlimited species growth
66. Edge effects occur mainly due to :
- (A) Ocean currents
 - (B) Habitat fragmentation
 - (C) Soil erosion
 - (D) Atmospheric pressure

67. The intermediate disturbance hypothesis states that :
- (A) Biodiversity is highest at moderate disturbance levels
 - (B) Biodiversity is highest at extreme disturbance levels
 - (C) Biodiversity is lowest without disturbance
 - (D) Disturbance has no effect
68. Large-scale disturbances can alter :
- (A) Ecosystem structure and function
 - (B) Only soil color
 - (C) Only temperature
 - (D) Only rainfall
69. Anthropogenic disturbances are caused by :
- (A) Natural processes
 - (B) Human activities
 - (C) Climate cycles
 - (D) Geological forces
70. Recovery of ecosystems after disturbance depends mainly on :
- (A) Species diversity and environmental conditions
 - (B) Industrial development
 - (C) Urban growth
 - (D) Mining activities
71. Ecological restoration aims to :
- (A) Promote urbanization
 - (B) Increase industrial development
 - (C) Recover degraded ecosystems
 - (D) Reduce biodiversity
72. Restoration ecology mainly focuses on :
- (A) Repairing damaged ecosystems
 - (B) Increasing mining activities
 - (C) Industrial expansion
 - (D) Habitat destruction
73. Reforestation refers to :
- (A) Planting trees in deforested areas
 - (B) Removing vegetation
 - (C) Increasing urban settlements
 - (D) Soil erosion
74. Which of the following is an important goal of ecological restoration ?
- (A) Eliminating biodiversity
 - (B) Restoring ecosystem structure and function
 - (C) Increasing pollution
 - (D) Reducing vegetation cover
75. Ecosystem reconstruction involves :
- (A) Industrial development
 - (B) Rebuilding ecosystems using ecological principles
 - (C) Habitat destruction
 - (D) Urban planning

76. Removal of invasive species is necessary in restoration because it :
- (A) Allows native species to recover
 - (B) Reduces soil fertility
 - (C) Promotes habitat degradation
 - (D) Decreases biodiversity
77. Assisted natural regeneration means :
- (A) Allowing natural recovery with minimal human help
 - (B) Complete artificial ecosystem creation
 - (C) Industrial land development
 - (D) Removal of all plants
78. Soil stabilization is important in restoration because it :
- (A) Promotes desertification
 - (B) Increases pollution
 - (C) Reduces vegetation growth
 - (D) Prevents soil erosion
79. A reference ecosystem in restoration ecology is :
- (A) An industrial ecosystem
 - (B) A polluted ecosystem
 - (C) A destroyed ecosystem
 - (D) A model ecosystem used as a target for restoration
80. Which method helps restore degraded land ?
- (A) Revegetation
 - (B) Deforestation
 - (C) Mining
 - (D) Urban expansion
81. Biological restoration techniques include :
- (A) Planting native species
 - (B) Soil mining
 - (C) Industrial waste dumping
 - (D) Habitat destruction
82. Hydrological restoration focuses on restoring :
- (A) Industrial pipelines
 - (B) Water flow and wetlands
 - (C) Road networks
 - (D) Urban drainage systems
83. Restoration success is evaluated mainly through :
- (A) Industrial productivity
 - (B) Monitoring ecological recovery
 - (C) Population growth in cities
 - (D) Mining output

84. Long-term restoration projects require :
- (A) Continuous monitoring and management
 - (B) Immediate abandonment
 - (C) Only economic investment
 - (D) No scientific involvement
85. Ecosystem degradation refers to :
- (A) Increase in soil fertility
 - (B) Increase in biodiversity
 - (C) Natural ecosystem growth
 - (D) Decline in ecosystem quality and function
86. Major causes of ecosystem degradation include :
- (A) Deforestation
 - (B) Soil conservation
 - (C) Wildlife protection
 - (D) Habitat restoration
87. Desertification mainly occurs due to :
- (A) Overgrazing and deforestation
 - (B) Increased rainfall
 - (C) Forest conservation
 - (D) Soil protection
88. Land degradation leads to :
- (A) Loss of soil fertility
 - (B) Increase in biodiversity
 - (C) Improved ecosystem productivity
 - (D) Higher rainfall
89. Pollution can cause ecosystem degradation by :
- (A) Improving ecosystem stability
 - (B) Increasing biodiversity
 - (C) Contaminating air, water and soil
 - (D) Increasing nutrient balance
90. Overexploitation of natural resources leads to :
- (A) Resource depletion
 - (B) Increased biodiversity
 - (C) Ecosystem stability
 - (D) Increased soil fertility
91. Habitat restoration aims to :
- (A) Promote mining
 - (B) Increase urban construction
 - (C) Recover natural habitats
 - (D) Destroy vegetation
92. Afforestation is the process of :
- (A) Planting trees in barren land
 - (B) Removing forests
 - (C) Increasing industrial land
 - (D) Soil erosion

93. Wetland restoration helps in :
- (A) Improving water quality and biodiversity
 - (B) Increasing pollution
 - (C) Destroying aquatic life
 - (D) Eliminating vegetation
94. Sustainable land management aims to :
- (A) Promote soil erosion
 - (B) Prevent land degradation
 - (C) Increase pollution
 - (D) Reduce biodiversity
95. Rehabilitation of degraded land involves :
- (A) Mining activities
 - (B) Increasing urban expansion
 - (C) Removing vegetation
 - (D) Improving land productivity and ecological function
96. Which of the following helps control desertification ?
- (A) Soil conservation and vegetation cover
 - (B) Deforestation
 - (C) Overgrazing
 - (D) Industrial waste dumping
97. Restoration of degraded forests may involve :
- (A) Urban expansion
 - (B) Clearing vegetation
 - (C) Mining activities
 - (D) Planting native species
98. Ecosystem services provided by restored ecosystems include :
- (A) Water purification and soil conservation
 - (B) Increased pollution
 - (C) Habitat destruction
 - (D) Reduced biodiversity
99. Climate change can accelerate ecosystem degradation by :
- (A) Altering temperature and rainfall patterns
 - (B) Increasing biodiversity
 - (C) Stabilizing ecosystems
 - (D) Preventing disturbances
100. Successful ecosystem restoration requires :
- (A) Habitat destruction
 - (B) Industrial expansion
 - (C) Scientific planning and community participation
 - (D) Overexploitation of resources

(Only for Rough Work)

4. Four alternative answers are mentioned for each question as—A, B, C & D in the booklet. The candidate has to choose the correct answer and mark the same in the OMR Answer-Sheet as per the direction :

Example :

Question :

Q. 1 (A) ● (C) (D)

Q. 2 (A) (B) ● (D)

Q. 3 (A) ● (C) (D)

Illegible answers with cutting and over-writing or half filled circle will be cancelled.

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.
7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
8. After the completion of the examination candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.
9. There will be no negative marking.
10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
11. To bring and use of log-book, calculator, pager and cellular phone in examination hall is prohibited.
12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. : On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर—A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छँटना है। उत्तर को OMR आन्सर-शीट में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ● (C) (D)

प्रश्न 2 (A) (B) ● (D)

प्रश्न 3 (A) ● (C) (D)

अपठनीय उत्तर या ऐसे उत्तर जिन्हें काटा या बदला गया है, या गोले में आधा भरकर दिया गया, उन्हें निरस्त कर दिया जाएगा।

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
7. ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।
9. निगेटिव मार्किंग नहीं है।
10. कोई भी रफ कार्य, प्रश्न-पुस्तिका के अन्त में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैलकुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण : प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्न-पुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्न-पुस्तिका प्राप्त कर लें।