

MSD-012
POST GRADUATE DIPLOMA IN SUTAINABILITY
SCIENCE

Ecosystem and Natural Resources

Mark Per Question-2 Total Marks- 100

Time Duration - 180 Minutes

1. Which of the following is not example of Supporting Services of Ecosystem?

- A) Primary production
- B) Nutrient Cycling
- C) Production of atmospheric oxygen
- D) Pest Regulation

2. IUCN stands for:

- A) International United Council for Nature
- B) International Union for Conservation of Nature and Natural Resources
- C) Indian Union for Conservation of Natural Resources
- D) None of above

3. Cryopreservation means:

- A) Preservation in natural condition
- B) Preservation in alcohol
- C) Preservation in humid condition
- D) Preservation in very low temperature

4. Which of the following is the example of on-site effect of land degradation of an agricultural plot?

- A) Siltation of river beds and dams
- B) Reduction in agricultural yield
- C) Eutrophication of lakes and ponds
- D) Pollution in river water

5. Contribution of soil biodiversity in the total biodiversity is about:

- A) 7%
- B) 23%
- C) 41%
- D) 53%

6. Which of the following is not the phase of hydrologic cycle?

- A) Evaporation & transpiration
- B) Precipitation
- C) Runoff
- D) Eutrophication

7. Which of the following is not a good approach to resolve trans boundary water conflicts?

- A) Dividing water between the nations in equal amount
- B) Benefit sharing between the nations
- C) Focusing on various values derived from water use in multiple spheres
- D) Equitable access and partnership to conserve shared water

8. Which of the following is related to capacity of an ecosystem to tolerate stress?

- A) Supportive capacity
- B) Assimilative capacity
- C) Sustainable yield
- D) Carrying capacity

9. Which of the following gases has the highest proportion in natural gas?

- A) Methane
- B) Ethane
- C) Propane
- D) Butane

10. Which of the following is the most common strategy for electricity storage?

- A) Electrochemical energy storage
- B) Compressed air energy storage
- C) Pumped hydroelectric storage

D) Superconducting magnetic energy storage

11. Dissipative use of mineral means:

- A) Where recycling is easily done with little use of energy
- B) Where totality of material is lost and recovery is impossible
- C) Where minerals are used in multiple ways
- D) Where mineral can be recycled about 50% of the original amount

12. Which of the following was not a reason of significant growth in grain production during years 1960 to 2000?

- A) Intensive nitrogen mineralization
- B) Use of high agrobiodiversity
- C) Effective use of herbicides for weed control
- D) Use of high yielding varieties

13. Which of the following Ecological Pyramids is always upright?

- A) Pyramid of Energy
- B) Pyramid of Biomass
- C) Pyramid of Number
- D) None of the above

14. Which group of organisms represent the highest diversity among known number of species?

- A) Bacteria
- B) Virus
- C) Insects
- D) Plants

15. Which of the following is not the major effect of loss of biodiversity?

- A) Threats to our food supplies
- B) Threats to ecosystem services
- C) Threats to supply of minerals
- D) Threats to opportunities for recreations and tourism

16. Different varieties of rice represent:

- A) Genetic diversity
- B) Species diversity
- C) Ecosystem diversity
- D) Cultural diversity

17. Red List published by IUCN pertains to:

- A) Threatened Species
- B) Endemic species
- C) Animals with red blood
- D) Invasive species

18. In which international summit, Convention on Biological Diversity was signed?

- A) Stockholm Conference
- B) Earth Summit
- C) Brundtland Commission
- D) Ramsar Convention

19. Land is often classified in terms of:

- A) Land capacity and fertility
- B) Stability and resilience
- C) Land capability and suitability
- D) Land productivity and tolerance

20. In which type of agriculture; application of fertilizers is done as per specific needs of that part of plot?

- A) Precision agriculture
- B) Organic agriculture
- C) Slash and burn agriculture
- D) Subsistence agriculture

21. The process of evaporation of water through microscopic pores in leaves is called:

- A) Leaf drip
- B) Interception

- C) Infiltration
- D) Transpiration

22. World Water Day is celebrated on:

- A) 22 March
- B) 22 April
- C) 5 June
- D) 16 September

23. Which of the following is not true out of the following facts?

- A) Preservation refer to no use while conservation refer to minimum use of resources
- B) Restoration seeks to return a degraded resource to its original state
- C) Restoration is more cost effective than conservation or preservation
- D) Restoration is most effective at landscape level than at part of it

24. Which of the following is considered the best quality of coal?

- A) Lignite coal
- B) Anthracite coal
- C) Bituminous coal
- D) Peat

25. Which of the following is not an abundant element of the earth crust?

- A) Calcium
- B) Silicon
- C) Copper
- D) Iron

26. Dematerialization means:

- A) To make product of small size in order to save material and energy
- B) To use commonly available mineral in production of something
- C) To simplify production process to save material
- D) To break products for recycling

27. Which of the following is not a major reason that leads to agrobiodiversity erosion?

- A) Natural selection
- B) Use of high yielding varieties
- C) Pressure for ecological uniformity
- D) Use of exotic varieties

28. Edaphic factor is related to:

- A) Temperature
- B) Water
- C) Soil
- D) Plants

29. Decomposer organism are part of.....food chain

- A) Carnivorous food chain
- B) Grazing food chain
- C) Detritus food chain
- D) Herbivorous food chain

30. Correct sequence of evolution of different life forms on the earth (from older to newer): i) Vertebrate Animals, ii) Invertebrate Animals, iii) Bacteria like organisms, iv) Sexually reproducing multicellular algae & v) Primates, Choose the correct answer from the options:

- A) i, ii, iii, iv, v
- B) iii, iv, ii, i, v
- C) iv, i, iii, ii, v
- D) ii, iv, v, i, iii

31. Which organization publishes Red List of threatened species?

- A) WWF
- B) IUCN
- C) UNEP
- D) UNDP

32. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R Assertion A: Fragmentation of habitat increases risk of extinction of the species. Reason R: Fragmentation of habitat is primarily due to conversion of forests into cropland and urban settlement, In the light of the above statements, choose the most appropriate answer from

- A) Both A and R are correct and R is the correct explanation of A
- B) Both A and R are correct but R is NOT the correct explanation of A
- C) A is correct but R is not correct
- D) A is not correct but R is correct

33. The first National Park of India is

- A) Gir National Park
- B) Corbett National Park
- C) Sundarban National Park
- D) Kaziranga National Park

34. Which is correct description of different types of land uses? i) Culturable waste land represents the land which is not cultivated for more than 15 years ii) Current fallow land is the land which is not cultivated for 1 or less than 1 year iii) Other than current fallow represents the land which is not cultivated for the past 1 to 5 years iv) Net sown area represents land presently occupied by certain crop, Choose the correct answer from the options:

- A) Only i, ii and iii
- B) Only ii, iii and iv
- C) Only i, ii and iv
- D) Only i, iii and iv

35. Which is not a strategy for sustainable management of soil fertility?

- A) Intensive irrigation
- B) Crop rotation
- C) Green manuring
- D) Crop residue management

36. Which of the following are effective methods of reducing water loss and improving soil moisture? i) Using cover crops ii) Mulching iii) Frequent weeding

iv) Plantation of Shelter Belt of trees on the edge of agricultural plots, Choose the correct answer from the options:

- A) i and iii only
- B) i, ii and iv only
- C) i and ii only
- D) ii, iii and iv only

37. Hydropower supplies about.....of world's electricity.

- A) 6%
- B) 20%
- C) 45%
- D) 75%

38. Framework species are associated with:

- A) Recovery of biodiversity in an area
- B) Control of pollution
- C) Supply of energy
- D) Indicator of land degradation

39. Which of the following facts are true about effect of management on agrobiodiversity? i) Crop rotation often has favourable effect on agrobiodiversity ii) Fragmentation of habitat may lead to enhancement of agrobiodiversity iii) Use of herbicides may lead to agrobiodiversity loss iv) Increasing heterogeneity at landscape level may lead to agrobiodiversity loss, Choose the correct answer from the options:

- A) Only i and ii
- B) Only i and iii
- C) Only ii and iii
- D) Only iii and iv

40. Worldwide, only..... species of plants produce about 80% of food supply.

- A) 5
- B) 20
- C) 100
- D) 300

41. Can Ecological Pyramids be upright or inverted? i) Pyramid of Number can be Upright and Inverted both ii) Pyramid of Energy can be Upright and Inverted both iii) Pyramid of Number can be only Upright iv) Pyramid of Energy can be only Upright, Choose the correct answer from the options:

- A) i and iv Only
- B) i and ii Only
- C) iii and iv Only
- D) ii and iii Only

42. Individuals of same species living in a particular place or environment are called as:

- A) Population
- B) Community
- C) Family
- D) Order

43. Convention on Biological Diversity (CBD) was organized in year:

- A) 1987
- B) 1992
- C) 2005
- D) 2010

44. Which is correct description of different National Parks (NP) of India? i) Kaziranga NP is in Assam ii) Kanha NP is in Maharashtra iii) Bandipur NP is in Karnataka iv) Hazaribagh NP is in Jharkhand v) Gir NP is in Rajasthan, Choose the correct answer from the options:

- A) Only i, ii and v
- B) Only i, iv and v
- C) Only ii, iii and iv
- D) Only i, iii and iv

45. Agricultural land occupies about of total geographic area of India.

- A) 40%
- B) 50%
- C) 60%

D) 70%

46. Which parameter of soil is not denoted by soil texture?

- A) Relative proportion of sand
- B) Relative proportion of silt
- C) Relative proportion of organic matter
- D) Relative proportion of clay

47. Which is not a form of precipitation?

- A) Snowfall
- B) Dew
- C) Frost
- D) Runoff

48. Which management strategy focuses on non-use of resources?

- A) Conservation
- B) Preservation
- C) Restoration
- D) Rehabilitation

49. In India Gulf of Kutch, Gulf of Cambay and Sundarban Delta are potential.....sites.

- A) Hydroelectricity
- B) Nuclear power
- C) Tidal power
- D) Wind energy

50. Agrobiodiversity is represented by about:

- A) 150 species of plants
- B) 40,000 species of plants and animals
- C) 75 species of plants and 26 species of animals
- D) 1.8 million species of plant and animals