

QAD Series

Ecology, Anatomy

- Ecology is study of organisms and**
a) sunlight b) habitat c) cell d) community
- Green plants form.....trophic level.**
a) 1st b) 2nd c) 3rd d) all
- In a food chain, herbivores are:**
a) Primary consumers b) Primary producers
c) Secondary consumers d) Decomposers
- Edaphic factor is due to:**
a) Man b) Temperature c) Soil d) Light
- A food chain starts with:**
a) N2 fixation b) Decay c) Photosynthesis d) Respiration
- The concept of ecological pyramid was introduced by**
a) David Elton b) Charles Elton c) Haeckel d) Reiter
- Pyramid of number is inverted in:**
a) pond Ecosystem b) grassland ecosystem
c) ocean Ecosystem d) tree ecosystem
- The term Ecology was proposed by:**
a) Reiter b) Haeckel c) Tansley d) Odum
- Submerged water plant is:**
a) Hydrilla b) Pistia c) Lotus d) Nelumbo
- A plant living only a few months in a year is said to be:**
a) Biennial b) Perennial c) Ephemeral d) Annual
- Sunken stomata are present in:**
a) Xerophytes b) Hydrophytes
c) Mesophytes d) Epiphytes
- Oak or Quercus belong to**
a) tropical b) temperate c) subalpine d) subtropical
- What percentage of radiant energy is stored by producer?**
a) 1% b) 10% c) 5% d) 50%
- Pyramid of biomass is inverted in**
a) tree ecosystem b) parasitic ecosystem
c) both d) pond ecosystem
- Main air pollutant is:**
a) CO b) CO₂ c) N₂ d) Sulphur
- Acid rain contains:**
a) SO₂, NO₂ b) NO₃ c) O₃ d) CO
- Ozone layer abundantly found in which layer of atmosphere:**
a) Troposphere b) Stratosphere c) Mesosphere d) Thermosphere
- When huge amount of sewage is dumped into river BOD will:**
a) Remain unchanged b) increase
c) slightly decrease d) decrease
- Spraying of DDT on crops produces pollution of:**
a) air only b) air and soil only
c) air, soil and water d) air and water only
- Soil conservation is the process where:**
a) sterile soil is converted into fertile soil b) soil is aerated
c) soil erosion is allowed d) soil is protected against loss
- Both species are benefitted but relation is not obligatory that is**
a) symbiosis b) proto cooperation c) commensalism d) antibiosis
- Which is best for plant growth?**
a) Loamy soil b) sandy soil c) Gravel d) Clayey soil
- Plants which prefer extreme sunlight are called:**
a) Heliophytes b) Halophytes c) sciophytes d) Xerophytes
- The association of roots of higher plants with fungi is:**
a) symbiosis b) mutualism c) parasitism d) hyperparasitism
- The succession which starts in sand is:**
a) Lithosere b) Halosere c) Hydrosere d) Psammosere
- The ecosystem which is most stable?**
a) forest b) Desert c) mountain d) Ocean
- Viviparous germination is found in:**
a) Hydrophytes b) Xerophytes c) Halophytes d) Mesophytes
- Efficiency of any ecosystem is best depicted by pyramid of:**
a) Energy b) number c) Biomass d) volume
- The study of fresh water ecology is:**
a) Hydrology b) Ecology c) Limnology d) geology
- The place where freshwater joins the salt water is called:**
a) Island b) Lagoon c) Beach d) Estuary
- Successful establishment of species is**
a) nudation b) ecesis c) aggregation d) colonization
- 10% energy transfer law in food chain was first given by:**
a) Tansley b) Lindeman c) Elton d) Haeckel
- One of the following is sedimentary cycle:**
a) carbon b) hydrogen c) nitrogen d) phosphorus
- One of the following is linked with greenhouse effect?**
a) CFC b) Freon and CH₄ c) CO₂ d) all
- One way cycle is:**
a) CO₂ cycle b) H₂O cycle c) energy cycle d) O₂ cycle
- Mineral cycle is**
a) one way cycle b) two way cycle
c) multi-directional cycle d) O₂ cycle
- Sedimentary cycle is**
a) CO₂ b) O₂ c) H₂O d) Ca
- The limiting factor in nitrification of soil is:**
a) P^H b) Temperature c) light d) Air
- Nitrogen fixation and denitrification both are**
a) aerobic b) anaerobic
c) either aerobic or anaerobic d) usually anaerobic
- In Nepal, area covered by protected area is:**
a) 28% b) 19% c) 10% d) 50%
- Non-conventional source of energy is:**
a) wood b) biogas c) coal d) petroleum
- Main reason of animal extinction is:**
a) felling of trees b) habitat destruction
c) predation d) pollution
- The acid rain destroys vegetation because it contains:**
a) nitrates b) H₂SO₄ c) O₃ d) CO
- Supersonics jet cause thinning of:**
a) O₃ layer b) SO₂ layer c) O₂ layer d) CO₂
- The magnitude of noise pollution required to cause permanent hearing loss is:**
a) 120 dB b) 60 dB c) 80 dB d) 40 dB
- The pollutant that directly affects the nervous system is:**
a) organophosphate b) DDT c) aldrin d) methyl
- Eutrophication results in the reduction of:**
a) mineral salts b) dissolved hydrogen
c) dissolved oxygen d) none
- Environment day is**
a) Sep 16 b) April 21 c) July 5 d) June 5
- Loss of forests and increasing pollution are all due to:**
a) green house effect b) global warming
c) ozone depletion d) population explosion
- Primary habitat of Musk deer is:**
a) Rara National Park b) Langtang National Park
c) Shey-phoksundo NP d) Chitwan National Park
- The national park specially associated with Rhinoceros is**
a) Chitwan NP b) Langtang NP
c) Sagarmatha NP d) Rara NP
- The protected area with red panda is**
a) Chitwan NP b) Langtang NP
c) Sagarmatha NP d) Rara NP
- The number of snow leopard is more in**
a) Chitwan NP b) Langtang NP
c) Sagarmatha NP d) Shey Phoksundo NP
- The largest and smallest national parks of Nepal are**
a) Chitwan and Rara b) Shey Phoksundo and Shivpuri
c) Rara and Shey Phoksundo d) Shey Phoksundo and Rara
- Wild protected reptile of Nepal is**
a) Golden monitor b) Rock python
c) Gharial crocodile d) Pigmy hog

Plant Anatomy

- The term 'Meristem' was given by**
a) Nageli b) Hanstein c) Grew d) Malgiphi
- Intercalary meristem is responsible for increase in**
a) length b) breadth c) diameter d) mass
- Histogen concept for shoot apex organization was given by:**
a) Nageli b) Hanstein c) Schmidt d) Grew
- A simple mechanical tissue devoid of lignin is:**
a) Parenchyma b) Collenchyma
c) Sclerenchyma d) Chlorenchyma

5. **The chief function of collenchyma is**
a) storage b) mechanical c) assimilation d) None
6. **In angiosperms, lateral roots arise from:**
a) Epiblema b) Endodermis c) Pericycle d) epidermis
7. **Grafting is not possible in monocots, because of**
a) Lack Cambium b) Scattered vascular bundles
c) Parallel veins d) Herbaceous
8. **A monocot stem without secondary growth is**
a) *Lilium* b) *Cocos* c) *Asparagus* d) *Yucca*
9. **Most of our trees grow faster in**
a) Autumn b) Winter c) Summer d) Spring
10. **Maximum growth in root occurs**
a) at its tip b) towards light
c) behind the apex d) towards darkness
11. **Sieve tubes are the part of**
a) protoxylem b) metaxylem
c) vascular Cambium d) bast
12. **When Xylem has phloem on two sides, the vascular bundle is known as**
a) endarch b) exarch c) bicollateral d) collateral
13. **Bast fibres in woody stem belong to**
a) Cork b) Phloem c) Cortex d) Xylem
14. **In submerged hydrophytes stomata are found on**
a) upper surface of leaf b) lower surface of leaf
c) both surface of leaf d) nowhere on the leaf
15. **Growth rings are formed due to activity of**
a) intrastelar Cambium b) intercalary Cambium
c) extrastelar Cambium d) primary Cambium
16. **The process by which the plant becomes woody is called**
a) calcification b) lignification
c) impregnation d) fossilization
17. **Lateral meristem is responsible for growth in**
a) length b) parenchyma
c) thickness d) Cortex
18. **Cork cells have a major component of**
a) Lignin b) Suberin c) Pectin d) Cellulose
19. **Timber is**
a) secondary phloem b) phellem
c) secondary Cortex d) secondary xylem
20. **In *Cucurbita*, which types of vascular bundle is**
a) collateral b) bicollateral c) radial d) concentric
21. **Endodermis is a part of**
a) epidermis b) cortex
c) vascular cylinder d) pith
22. **A component of xylem is**
a) sieve tube b) medullary ray c) sclereid d) tracheid
23. **Cotton is extracted from**
a) epidermal tissue system b) vascular tissue system
c) meristem tissue system d) ground tissue system
24. **The type of vascular bundles in the stem of *Dracaena* is**
a) radial b) bicollateral
c) amphicribal d) amphivasal
25. **Numerous Vascular bundles are scattered in ground tissue of**
a) monocot stem b) dicot stem
c) monocot root d) dicot root
26. **Diffuse porous woods are characteristic of plant growing in**
a) Tropics b) Alpine region
c) Temperature climate d) Cold winter regions
27. **Cork cambium is also called**
a) Phellem b) Bast c) Phellogen d) Wood
28. **Which of the following contains xylem vessel?**
a) Bryophyta b) Pteridophyta
c) Gymnosperm d) Angiosperm
29. **Thick cuticle, sunken stomata are found in leaves of**
a) Hydrophytes b) Xerophytes
c) Mesophytes d) Epiphytes
30. **An elongated cells with tapering ends is**
a) Collenchyma b) Vessel c) Sclerenchyma d) Tracheids
31. **External protective tissues are**
a) cortex and epidermis b) cork and pericycle
c) cortex and pericycle d) cork and epidermis
32. **Polyarch, exarch Vascular bundles are the characteristics of**
a) Dicot stem b) Dicot root
c) Monocot stem d) Monocot root
33. **Lenticels are found in**
a) monocot stem b) dicot stem c) monocot leaf d) dicot root
34. **A Vascular tissue in which annual rings, vessels and fibres are present should be a**
a) Protoxylem b) Metaxylem
c) Primary xylem d) Secondary xylem
35. **In dicot root, major portion of vascular cambium is derived from**
a) Pericycle b) Cortex c) Hypodermis d) Epiblema
36. **Cork Cambium is an example of**
a) Apical meristem b) Intercalary meristem
c) Primary meristem d) Lateral meristem
37. **Bulliform cells are found in the leaves of**
a) sunflower b) wheat c) *Tinospora* d) potato
38. **Sieve tubes are blocked by**
a) tyloses b) callose c) callase d) callus
39. **Undifferentiated ground tissue is met within**
a) maize stem b) *Cucurbita* stem
c) sunflower stem d) *Pisum* stem
40. **Which of the following is not the primary meristem?**
a) Apical b) Lateral c) Intercalary d) Promeristem
41. **Cork Cambium in stem is formed by**
a) Epidermis b) Hypodermis or Cortex
c) Pericycle d) Endodermis
42. **Companion cells are associated with**
a) Sieve tubes b) Xylem c) Collenchyma d) Cambium
43. **Lignification is associated with**
a) Xylem b) Phloem c) Parenchyma d) Chlorenchyma
44. **Air spaces are present in**
a) Hydrophytes b) Xerophytes
c) Mesophytes d) All of these
45. **Outer covering of epiphytic root is**
a) Osmophore b) Rhizophore
c) Velamen d) Pneumatophore
46. **Casparian strips are characteristics feature of**
a) Epidermis b) Epiblema c) Exodermis d) Endodermis
47. **Isobilateral leaves are**
a) hydrotomatic b) epistomatic
c) amphistomatic d) anisostomatic
48. **Oil glands in *Eucalyptus* are**
a) Lysigenous b) Schizogenous c) Endogenous d) water cavity
49. **Bundle sheath is present around vascular bundles in**
a) monocot stem b) dicot stem
c) stem d) roots

Application of Biology

1. **Which of the following is not biofertilizer?**
a) Lichen b) *Azolla-Anabaena* both
c) Legume - rhizobium d) Mycorrhiza
2. **VAM are important for**
a) Nitrogen assimilation b) Phosphate absorption
c) Moisture absorption d) Potassium absorption
3. **Heterosis is**
a) hybrid vigor b) hybrid mixing
c) hybrid incompatibility d) none
4. **Pathogen free plants can be produced by**
a) root tip culture b) meristem tip culture
c) shoot tip culture d) anther tip culture
5. **Removal of anther from bud in**
a) bagging b) emasculation
c) selection d) selfing
6. **The best bio-fertilizer in paddy field is**
a) *Azolla* b) *Rhizobium* c) *Nostoc* d) *Aulosira*
7. **Antibiotics are mainly obtained by**
a) fungi b) Actinomycetes
c) both (a) & (b) d) bacteria
8. **Term antibiotics is given by**
a) Wakesman b) Jenner c) Fleming d) Robert
9. **Recent hepatitis B vaccine is**
a) first generation vaccine b) second generation vaccine
c) 3rd generation vaccines d) synthetic vaccines
10. **Pure lines are obtained by**
a) self-pollination b) vegetative propagation
c) cross pollination d) polyploid breeding
11. **Auxenic culture is**
a) culture with contamination b) culture without contamination
c) gene culture d) anther culture