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Choice Based Credit System (CBCS)

B.Sc. Part I: Subject: Botany

SEMESTER –II

Botany Paper III: DSC- 13 B: PLANT ECOLOGY

Q.1 MCQ

- 1) ----- are the plants growing best in shade or diffused light.
 - i) Heliophytes
 - ii) Sciophytes
 - iii) Short Day Plants
 - iv) Long Day Plants
- 2) Size of ----- soil particles is between 0.02 to 0.002 mm.
 - i) Gravel
 - ii) Sand
 - iii) Silt
 - iv) Clay
- 3) Rhythmic activity of an organism in a community is considered as -----.
 - i) Physiognomy
 - ii) Phenology
 - iii) Sociability
 - iv) Vitality and Vigour
- 4) ----- is the last stage of plant succession.
 - i) ecosystem
 - ii) ecotone
 - iii) climax community
 - iv) sere
- 5) The shape of a frequency histogram is always ----- shaped.
 - i) τ
 - ii) ζ
 - iii) γ
 - iv) Γ
- 6) Human beings are -----.
 - i) herbivores
 - ii) carnivores
 - iii) omnivores
 - iv) decomposers
- 7) Pyramid of number and biomass are -----.
 - i) always upright
 - ii) always inverted
 - iii) either upright or inverted
 - iv) None of these

- 8) -----food chain goes from large organisms to smaller ones without killing of predators.
- i) Grazing
 - ii) Parasitic
 - iii) Detritus
 - iv) Both parasitic and detritus
- 9) ----- % nitrogen is present in the atmosphere.
- i) 25
 - ii) 50
 - iii) 78
 - iv) 87
- 10) Sunder ban forms largest mangrove forest system in-----.
- i) Indus Plains
 - ii) Andaman Region
 - iii) Malbar Region
 - iv) Gangetic Plains
- 11) ----- water is the major source for the growth of plants.
- i) Run off
 - ii) Gravitational
 - iii) Hygroscopic
 - iv) Capillary
- 12) The plants growing in alpine forests require very low temperature for their growth are called as-----.
- i) Microtherms
 - ii) Megatherms
 - iii) Mesotherms
 - iv) Hekisotherms
- 13) Epiphytic orchids show ----- tissues are capable of absorbing water from humid atmosphere.
- i) Epidermis
 - ii) Cortex
 - iii) Velamen
 - iv) Vascular
- 14) ----- is an intermediate zone created between two close adjoining communities.
- i) Niche
 - ii) Ecotone
 - iii) Climax community
 - iv) Sere
- 15) ----- classified plant communities into five groups based on their life forms.
- i) Haeckel (1869)
 - ii) Elton (1927)
 - iii) Odum (1971)
 - iv) Raunkiaer (1934)
- 16) ----- are the primary producers of the ecosystem.
- i) Herbivores
 - ii) Carnivores
 - iii) Producers
 - iv) Decomposers

- 17) Pyramid of energy is -----.
- i) always upright
 - ii) always inverted
 - iii) either upright or inverted
 - iv) None of these
- 18) -----food chain is the most common type found in most of the ecosystems.
- i) Grazing
 - ii) Parasitic
 - iii) Detritus
 - iv) Both parasitic and detritus
- 19) ----- is not present in the atmosphere.
- i) Phosphorus
 - ii) Nitrogen
 - iii) Oxygen
 - iv) Water
- 20) Mangrove forest system is present along the west coast of -----.
- i) Indus Plains
 - ii) Western Himalayas
 - iii) Malbar Region
 - iv) Eastern Himalayas
- 21) ----- is the sequence of colour in the visible spectrum.
- i) VBIYGOR
 - ii) VIBGYOR
 - iii) ROYGBIV
 - iv) VIBGYRO
- 22) ----- is the process where the animals buried themselves to escape from cold as well as hot temperature.
- i) Hibernation
 - ii) Funeral
 - iii) Diurnal Migration
 - iv) None of these
- 23) -----shows air chambers in the cortex of stem.
- i) Hydrophytes
 - ii) Xerophytes
 - iii) Mesophytes
 - iv) Epiphytes
- 24) Typha is ----- plant.
- i) submerged
 - ii) amphibious
 - iii) Floating
 - iv) Sedge –Meadow stage
- 25) ----- are the pioneers in hydrosere.
- i) Phytoplanktons
 - ii) Submerged Plants
 - iii) Floating Plants
 - iv) Amphibious Plants

- 26) The amount of ----- components present in an ecosystem is called as standing stage.
- i) Biotic
 - ii) Abiotic
 - iii) Both biotic and abiotic
 - iv) None of these
- 27) Detritus food chain mainly depends on the -----
- i) solar energy
 - ii) living producers
 - iii) living consumers
 - iv) dead and decaying organic matter
- 28) Several food chains linked together and intersecting each other to form a network of -----.
- i) food web
 - ii) food chain
 - iii) food chain and food web
 - iv) None of these
- 29) ----- is an essential constituent of amino acids, proteins, enzymes, chlorophylls, nucleic acids and vitamins.
- i) Phosphorus
 - ii) Nitrogen
 - iii) Zinc
 - iv) Molybdenum
- 30) Chatterji and Mani divided India into ----- phytogeographical regions
- i) 7
 - ii) 8
 - iii) 9
 - iv) 10
- 31) The term ecology was coined by -----.
- i) Haeckel
 - ii) Darwin
 - iii) Odum
 - iv) Arnon
- 32) Soil Water available to plants is -----.
- i) Hygroscopic Water
 - ii) Capillary Water
 - iii) Gravitational Water
 - iv) Floating Water
- 33) Competition is most server between -----.
- i) Closely related species growing in the same habitat
 - ii) Closely related species growing in the same niche.
 - iii) Distantly related species growing indifferent niche.
 - iv) Distantly related species

- 34) Particles of size 0.03 mm belong to the class of -----.
- i) Coarse Sand ii) Silt iii) Fine Sand iv) Slay
- 35) Plants growing in oxygen deficient soils possess -----.
- i) No roots ii) Longer root system
iii) Aerial roots system iv) Shallow root system
- 36) Plants growing in marsh are called -----.
- i) Helophytes ii) Heliophytes
iii) Halophytes iv) Sciophytes
- 37) Hydrilla is a -----.
- i) Free floating Hydrophytes ii) Submerged Hydrophytes
iii) Suspended Hydrophytes iv) Amphibious Hydrophytes
- 38) The Plants growing in marshy habitat are called
- i) Mesophytes ii) Amphibious
iii) Hydrophytes iv) Epiphytes
- 39) Floristic Composition is ----- Character of the community
- i) Ecological ii) Qualitative
iii) Anatomical iv) Quantitative
- 40) 'Niche' according to Grinnel is
- i) Global distribution of Species ii) Regional distribution of Species
iii) Small habitat of Species iv) Micro habitat of Species
- 41) A population of individuals from the same genetic stock but differing in their morphology is called-----.
- i) Ecotype ii) Ecad
iii) Ecotone iv) Life form
- 42) The transition zone between two different types of communities is called -----.
- i) Biome ii) Ecotone
iii) Biological Spectrum iv) Biological clock

- 43) Floristic composition is ----- character of the community.
- i) Qualitative ii) Quantitative
iii) Ecological iv) Simple
- 44) The Process of community changes is known as-----.
- i) Ecological Succession ii) Ecological adaptations
iii) Ecological indicator iv) None of above
- 45) Succession is always -----.
- i) Progressive ii) Regressive
iii) constant iv) None of above
- 46) Energy flow within ecosystem is
- i) Unidirectional ii) Multidirectional
iii) Vertical iv) Bidirectional
- 47) ----- species in north west Himalaya occurs at higher altitudes
- i) Rhododendrons ii) Shorea
iii) Dillenia iv) Eugenia
- 48) There are phytogeographical regions in the Indian sub- Continents.
- i) Five ii) Ten
iii) Four iv) Eight
- 49) The mangrove plants are generally characterized by presence of -----.
- i) Microphylls ii) Pneumatophores and Vivipary
iii) Absence of aerenchyma iv) None
- 50) In a food chain man is -----.
- i) Producer ii) Decomposer
iii) Primary and secondary consumer iv) Parasite

Q.2 BROAD QUESTIONS

- 1) What are Xerophytes? Give the morphological characters and anatomical adaptations of xerophytes with suitable examples.

- 2) What is Plant succession? Describe the various stages of hydrosere with suitable examples.
- 3) What is ecosystem? Describe the biotic components of ecosystem.
- 4) Discuss in detail, "Soil as an edaphic factor"
- 5) What is Plant Community? Describe the quantitative characters of community.
- 6) What is food chain? Describe the different types of food chain.
- 7) Discuss in detail, "Light as an important climatic factor"
- 8) What is Plant Community? Describe the qualitative characters of community.
- 9) What is Plant succession? Describe the various stages of xerosere with suitable examples.
- 10) What is an ecological pyramid? Discuss different types of ecological pyramids.
- 11) What is Life form? Describe Raunkier's Life forms of the plant community.
- 12) Explain nitrogen cycle with its ecological significance.
- 13) What are Hydrophytes? Give the morphological characters and anatomical adaptations of hydrophytes with suitable examples.
- 14) What is Plant Community? Describe the quantitative characters of community.
- 15) What is ecosystem? Describe the abiotic components of ecosystem.

Q.3 SHORT NOTES

- 1) Soil humus.
- 2) Epiphytes.
- 3) Raunkier's Life Forms.
- 4) Process of Succession.
- 5) Food Web.
- 6) Phosphorus Cycle.
- 7) Role of light in plants.
- 8) Parasites.
- 9) Ecological niche.
- 10) Pond Ecosystem.
- 11) Nitrogen Cycle.

- 12) Gangetic Plain.
- 13) Role of temperature in plants.
- 14) Anatomical adaptations in Hydrophytes.
- 15) Ecotone.
- 16) Terrestrial Ecosystem.
- 17) Nitrogen Fixation.
- 18) Malabar Region.
- 19) Edaphic Factor.
- 20) Pond Ecosystem.
- 21) Food Chain.
- 22) Abiotic Factors of the ecosystem.
- 23) Climatic Climax.
- 24) Eastern Himalayas
- 25) Pyramid of Energy