

**C****DE-2936**

First Year B. Sc. (Sem. I) Examination
March / April - 2016
Environmental Science (ENV-101) Core - I

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
First Year B. Sc. (Sem. I)

Name of the Subject :
Environmental Science (ENV-101) Core - I

Subject Code No. : 2 9 3 6 Section No. (1, 2,.....): NIL

Seat No. :
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Student's Signature

- (2) પ્રશ્ન પત્રમાં કુલ ૫૦ પ્રશ્નો છે, બધાજ ફરજિયાત છે. દરેક પ્રશ્નનો (૧) એક ગુણ છે.
There are 50 questions each question carries one (1) mark and all are compulsory.
- (3) દરેક પ્રશ્નનો કાળજીપૂર્વક અભ્યાસ કરી સાચો વિકલ્પ પસંદ કરો.
Read the question carefully before selecting the correct option.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheet-ની પાછળ છાપેલ છે.
Important instructions to fillup O.M.R. Sheet
is given on back side of the provided O.M.R. Sheet.***

- 1 The specialized roots found in plant parasites are known as-
 (A) Rhizoids (B) Hyphae
 (C) Haustoria (D) Velamen
- 2 The weapon not used by predator-
 (A) Camouflage (B) Webs
 (C) Claws (D) Sharp teeth
- 3 Which of the following is not true regarding thermal stratification ?
 (A) Hypolimnion- bottom cold
 (B) None of these
 (C) Epilimnion- vertical slope of gradual decrease in temperature
 (D) Thermocline- a zone of rapid fall of temperature
- 4 Aestivation i.e. summer sleep is not performed by which one-
 (A) Polar bear (B) amphibians
 (C) Insects (D) lungfishes
- 5 Relative humidity is measured by-
 (A) thermo-hygrometer
 (B) All of these
 (C) Psychrometer
 (D) Paper strip hygrometer
- 6 Due to leaching action of chemicals from A horizon to B horizon; the A-horizon turns to a light ash colour. This process is-
 (A) Gleization (B) Salinization
 (C) Laterization (D) Podsolization
- 7 An age pyramid with almost equal size of prereproductive & reproductive age groups-
 (A) J-shaped curve
 (B) Pyramid with broad base
 (C) Bell shaped polygon
 (D) Urn-shaped figure
- 8 The theoretical maximum production of new individuals under ideal conditions, is also known as-
 (A) Realised natality
 (B) None of these
 (C) Fecundity rate
 (D) Ecological natality
- 9 The interaction occurring between two different species-
 (A) Interpopulation interaction
 (B) Interbiome interaction
 (C) Interspecific interactions
 (D) Intraspecific interactions
- 10 Antagonism do not includes interactions like-
 (A) Antibiosis
 (B) Competition
 (C) Commensalism
 (D) Exploitation

- 11 Net primary productivity also known as-
 (A) None of these
 (B) All of these
 (C) Apparent photosynthesis
 (D) Net assimilation
- 12 The rate at which radiant energy is stored by photosynthetic & chemosynthetic activity of producers-
 (A) Net primary productivity
 (B) Secondary productivity
 (C) Primary productivity
 (D) Gross primary productivity
- 13 The order of inverted food chain in parasitic food chain can be-
 (A) Tree- Herbivores- Parasites-Hyperparasites
 (B) Hyperparasites- tree-parasites-herbivores
 (C) Herbivores- Parasites- Hyperparasites-tree
 (D) Parasites- Herbivores-Tree-Hyperparasites
- 14 In producer- consumer arrangement, each food level is known as-
 (A) Producer level (B) Decomposer level
 (C) Trophic Level (D) Consumer level
- 15 Those organisms which depend on material made by producers-
 (A) Consumers
 (B) Heterotrophs & consumers
 (C) Autotrophs
 (D) Decomposers
- 16 The total length of the daily light period to which plants are exposed-
 (A) Succession
 (B) Photoperiodism
 (C) Photosynthesis
 (D) Transpiration
- 17 A stage of dormancy and arrested growth is-
 (A) Curfew (B) Diapause
 (C) Pause (D) Suspension
- 18 Light intensity reaching earth's surface affected by-
 (A) Suspended particulate matter
 (B) All of these
 (C) Atmospheric gases & slope
 (D) Layers of vegetation & water
- 19 The response of plant to rhythmic diurnal fluctuations in temperature is-
 (A) Dormancy
 (B) Desiccation
 (C) Flowering
 (D) Thermoperiodism
- 20 The term ecosystem given by-
 (A) A. G. Tansley (B) Vernadsky
 (C) S. A. Forbes (D) Karl Mobius

- 21 The amount of living material in different trophic levels known as-
- (A) Standing moment
 - (B) Standing rate
 - (C) Standing state
 - (D) Standing crop
- 22 Which of the following is not a type of ecological pyramid ?
- (A) Pyramid of biomass
 - (B) Pyramid of organisms
 - (C) Pyramid of number
 - (D) Pyramid of energy
- 23 The study of individuals of same species with processes like aggregation, interdependences between individuals is known as-
- (A) Biome ecology
 - (B) Biosphere ecology
 - (C) Community ecology
 - (D) Population ecology
- 24 The vital processes depends upon the interaction between the organisms-
- (A) Nutrition
 - (B) All of these
 - (C) Growth
 - (D) Reproduction
- 25 The bird which posses parasitism for shelter-
- (A) Cuckoo
 - (B) House sparrow
 - (C) Crow
 - (D) Humming bird

- 26 Nepenthes, Utricularia, Drosera are examples of-
- (A) Insectivorous plants
 - (B) Saprophytic plants
 - (C) Epiphytes
 - (D) Plant Parasites
- 27 Intraspecific interactions occurs between-
- (A) Between population & community
 - (B) Between community & ecosystem
 - (C) Two different species
 - (D) Within one species
- 28 The network of many interconnected food chains is-
- (A) Food broadband
 - (B) Trophic level
 - (C) Food web
 - (D) Food network
- 29 Which of the following is not a type of ecological pyramid ?
- (A) Pyramid of biomass
 - (B) Pyramid of organisms
 - (C) Pyramid of number
 - (D) Pyramid of energy
- 30 The amount of inorganic substances present at any time in an ecosystem-
- (A) Standing state
 - (B) Standing quality and Standing state both
 - (C) Standing Rate
 - (D) Standing quality

- 31 Any External force, substance or condition that affects organism in any way is also known as-
- (A) Environmental factor
 - (B) All of these
 - (C) Factor
 - (D) Ecological factor
- 32 Those which are regarded as poikilotherms or ectotherms (cold-blooded)-
- (A) Reptiles, Fishes and Amphibians
 - (B) Mammals only
 - (C) Fishes and mammals
 - (D) Birds and Amphibians
- 33 The amount of inorganic substances present at any time in an ecosystem-
- (A) Standing state
 - (A) Standing quality and Standing state both
 - (C) Standing Rate
 - (D) Standing quality
- 34 The organisms which chiefly ingest other organic matter is known as-
- (A) Macroconsumer
 - (B) Decomposer
 - (C) Consumer
 - (D) Microconsumer
- 35 In pond ecosystem, Turbidity index of water at different depths is measured by -
- (A) Odum Disc
 - (B) Smith Disc
 - (C) Misra Disc
 - (D) Sechhi Disc
- 36 The pyramid showing the rate of productivity at successive trophic levels-
- (A) Pyramid of Biomass
 - (B) Pyramid of Organisms
 - (C) Pyramid of Number
 - (D) Pyramid of Energy
- 37 Energy flow & mineral cycle occurs in an ecosystem respectively in –
- (A) Unidirectional & bidirectional manner
 - (B) Multidirectional & cyclic manner
 - (C) Unidirectional & cyclic manner
 - (D) Cyclic & unidirectional manner

- 38 In any food chain, second and third trophic level is occupied respectively by-
- (A) Producers and herbivores
 - (B) Producers and carnivores
 - (C) Omnivores and Carnivores
 - (D) Herbivores and carnivores
- 39 The population of individuals of only one species is known as-
- (A) Monospecific population
 - (B) Disperse population
 - (C) Mixed population
 - (D) Polyspecific population
- 40 The tissues are dehydrated and injured due to rapid transpiration & slow absorption in-
- (A) Freezing injury
 - (B) None of these
 - (C) Desiccation
 - (D) Chilling injury
- 41 The population of individuals of more than one species is known as-
- (A) Monospecific population
 - (B) Both Mixed population and Polyspecific population
 - (C) Mixed population
 - (D) Polyspecific population
- 42 The ecologist who classified all types of symbiotic relationships into positive and negative interactions-
- (A) Haskell
 - (B) McDougall
 - (C) E.P. Odum
 - (D) Clarke
- 43 Lichen is an example of mutualism of which two species-
- (A) Algae and Hydra
 - (B) Fungus and plant roots
 - (C) Algae and Fungus
 - (D) Fungus and protozoa
- 44 The subject of population ecology concerns with-
- (A) Regulation
 - (B) All of these
 - (C) Population characteristics
 - (D) Dynamics

- 45 The model representing geometrically the proportions of different age groups in the population of any organism is called-
- (A) Age model
 - (B) Age triangles
 - (C) Age level
 - (D) Age pyramid
- 46 Temperature also affect the absolute size of an animal and the relative proportions of various body parts-
- (A) Bergman's rule
 - (B) Allen's rule
 - (C) Jordon's rule
 - (D) Rensch's rule
- 47 While moving from equator to poles arrange the earth's vegetation-
- (i) Tropical forest
 - (ii) Deciduous forest
 - (iii) Tundra
 - (iv) Coniferous
 - (v) Grassland or desert
- (A) (i), (iv), (ii), (v), (iii)
 - (B) (i), (v), (ii), (iv), (iii)
 - (C) (i), (iii), (iv), (ii), (v)
 - (D) (i), (ii), (iii), (iv), (v)
- 48 The amount of sunlight reaching the earth's atmosphere which is used by green plants for photosynthesis-
- (A) 60-70%
 - (B) 1-5%
 - (C) 5-10%
 - (D) 15-20%
- 49 The schematic representation of predictions of the future state of ecosystems and the fluxes of carbon dioxide between the atmosphere, the land & biosphere is known as-
- (A) Aquatic ecosystem Model
 - (B) Habitat ecosystem Model
 - (C) Terrestrial Ecosystem Model
 - (D) Biotic Model
- 50 Escherchia coli found in human colon is an example of-
- (A) Predation
 - (B) Parasitism
 - (C) Mutualism
 - (D) Commensalism