

**A****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 Any External force, substance or condition that affects organism in any way is also known as-
 - (A) Factor
 - (B) Ecological factor
 - (C) Environmental factor
 - (D) All of these

- 2 Those which are regarded as poikilotherms or ectotherms (cold-blooded)-
 - (A) Fishes and mammals
 - (B) Birds and Amphibians
 - (C) Reptiles, Fishes and Amphibians
 - (D) Mammals only

- 3 The amount of inorganic substances present at any time in an ecosystem-
 - (A) Standing Rate
 - (B) Standing quality
 - (C) Standing state
 - (C) Standing quality and Standing state both

- 4 The organisms which chiefly ingest other organic matter is known as-
 - (A) Consumer
 - (B) Microconsumer
 - (C) Macroconsumer
 - (D) Decomposer

- 5 In pond ecosystem, Turbidity index of water at different depths is measured by -
 - (A) Misra Disc
 - (B) Sechhi Disc
 - (C) Odum Disc
 - (D) Smith Disc

- 6 The pyramid showing the rate of productivity at successive trophic levels-
 - (A) Pyramid of Number
 - (B) Pyramid of Energy
 - (C) Pyramid of Biomass
 - (D) Pyramid of Organisms

- 7 Energy flow & mineral cycle occurs in an ecosystem respectively in –
 - (A) Unidirectional & cyclic manner
 - (B) Cyclic & unidirectional manner
 - (C) Unidirectional & bidirectional manner
 - (D) Multidirectional & cyclic manner

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

- 15 The model representing geometrically the proportions of different age groups in the population of any organism is called-
- (A) Age level
 - (B) Age pyramid
 - (C) Age model
 - (D) Age triangles
- 16 Temperature also affect the absolute size of an animal and the relative proportions of various body parts-
- (A) Jordon's rule
 - (B) Rensch's rule
 - (C) Bergman's rule
 - (D) Allen's rule
- 17 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), (iii), (iv), (ii), (v)
 - (B) (i), (ii), (iii), (iv), (v)
 - (C) (i), (iv), (ii), (v), (iii)
 - (D) (i), (v), (ii), (iv), (iii)
- 18 The amount of sunlight reaching the earth's atmosphere which is used by green plants for photosynthesis-
- (A) 5-10%
 - (B) 15-20%
 - (C) 60-70%
 - (D) 1-5%
- 19 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) Terrestrial Ecosystem Model
 - (B) Biotic Model
 - (C) Aquatic ecosystem Model
 - (D) Habitat ecosystem Model
- 20 Escherchia coli found in human colon is an example of-
- (A) Mutualism
 - (B) Commensalism
 - (C) Predation
 - (D) Parasitism

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

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

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

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