

**D****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. :

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 amount of living material in different trophic levels known as-
 - (A) Standing crop
 - (B) Standing moment
 - (C) Standing rate
 - (D) Standing state

- 2 Which of the following is not a type of ecological pyramid ?
 - (A) Pyramid of energy
 - (B) Pyramid of biomass
 - (C) Pyramid of organisms
 - (D) Pyramid of number

- 3 The study of individuals of same species with processes like aggregation, interdependences between individuals is known as-
 - (A) Population ecology
 - (B) Biome ecology
 - (C) Biosphere ecology
 - (D) Community ecology

- 4 The vital processes depends upon the interaction between the organisms-
 - (A) Reproduction
 - (B) Nutrition
 - (C) All of these
 - (D) Growth

- 5 The bird which posses parasitism for shelter-
 - (A) Humming bird
 - (B) Cuckoo
 - (C) House sparrow
 - (D) Crow

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

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

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

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

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

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