

**B****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 Net primary productivity also known as-
 - (A) All of these
 - (B) Apparent photosynthesis
 - (C) Net assimilation
 - (D) None of these
- 2 The rate at which radiant energy is stored by photosynthetic & chemosynthetic activity of producers-
 - (A) Secondary productivity
 - (B) Primary productivity
 - (C) Gross primary productivity
 - (D) Net primary productivity
- 3 The order of inverted food chain in parasitic food chain can be-
 - (A) Hyperparasites- tree-parasites-herbivores
 - (B) Herbivores- Parasites- Hyperparasites-tree
 - (C) Parasites- Herbivores-Tree-Hyperparasites
 - (D) Tree- Herbivores- Parasites-Hyperparasites
- 4 In producer- consumer arrangement, each food level is known as-

(A) Decomposer level	(B) Trophic Level
(C) Consumer level	(D) Producer level
- 5 Those organisms which depend on material made by producers-
 - (A) Heterotrophs & consumers
 - (B) Autotrophs
 - (C) Decomposers
 - (D) Consumers
- 6 The total length of the daily light period to which plants are exposed-
 - (A) Photoperiodism
 - (B) Photosynthesis
 - (C) Transpiration
 - (D) Succession
- 7 A stage of dormancy and arrested growth is-

(A) Diapause	(B) Pause
(C) Suspension	(D) Curfew
- 8 Light intensity reaching earth's surface affected by-
 - (A) All of these
 - (B) Atmospheric gases & slope
 - (C) Layers of vegetation & water
 - (D) Suspended particulate matter
- 9 The response of plant to rhythmic diurnal fluctuations in temperature is-
 - (A) Desiccation
 - (B) Flowering
 - (C) Thermoperiodism
 - (D) Dormancy
- 10 The term ecosystem given by-

(A) Vernadsky	(B) S. A. Forbes
(C) Karl Mobius	(D) A. G. Tansley

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

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

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

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

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

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