

**B****DF-3046****Second Year (Envi. Sci.) (Sem. III) Examination****March / April – 2016****Population Ecology**

Time : 2 Hours]

[Total Marks : 50

સૂચના / Instructions :

(1)

|   |                      |
|---|----------------------|
| નીચે દર્શાવેલ નિશાનીયાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.<br>Fillup strictly the details of signs on your answer book. | Seat No. :           |
| Name of the Examination :   | <input type="text"/> |
| <b>SECOND YEAR (ENVI. SCI.) (SEM. III)</b>  | <input type="text"/> |
| Name of the Subject :   | <input type="text"/> |
| <b>POPULATION ECOLOGY</b>   | <input type="text"/> |
| Subject Code No. : <input type="text"/> 3 <input type="text"/> 0 <input type="text"/> 4 <input type="text"/> 6      | <input type="text"/> |
| Section No. (1, 2,.....): <b>Nil</b>  |                      |
|   | Student's Signature  |

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

***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 are given back side of provided O.M.R. Sheet.***

- 1 The first group of organisms establishing the succession is called as  
 (A) association. (B) society  
 (C) pioneer (D) species
- 2 The succession in which self modification causing replacement of new communities is  
 (A) allogenic (B) primary  
 (C) secondary (D) autogenic
- 3 Which type of ecological succession allows replacement of communities by external condition?  
 (A) allogenic (B) primary  
 (C) secondary (D) autogenic
- 4 Which are the factors affecting to the nudation?  
 (A) All of these  
 (B) air, water & soil  
 (C) topographic, climatic & biotic  
 (D) autogenic, allogenic, heterogenic
- 5 The successful establishment of species in a bare area completed by:  
 (A) All of these (B) migration  
 (C) ecesis (D) aggregation
- 6 The sequence of communities that replaces one another in given are is called  
 (A) seral communities  
 (B) migrative communities  
 (C) climax communities  
 (D) competitive communities
- 7 The amphibious stage is also known as  
 (A) reed swamp stage  
 (B) phytoplankton  
 (C) rooted submerged  
 (D) rooted floating
- 8 Microsere succession is a part of which succession process?  
 (A) allogenic  
 (B) heterotrophic  
 (C) autotrophic  
 (D) autogenic
- 9 The undesirable outcome of research by statistical study is known as  
 (A) confounding  
 (B) inferences  
 (C) acceptance  
 (D) psudoreplication
- 10 Who state the words "to do science is to search for patterns, not simply to accumulate facts"?  
 (A) Darwin (B) Snee  
 (C) Macarther (D) Odom

- 11 Conclusion based on mathematical summaries of the data is known as
- (A) statistical inferences
  - (B) random variables
  - (C) acceptance of theory
  - (D) normality
- 12 Which conclusion is known as inductive conclusion of research?
- (A) statistical as well experimental both
  - (B) Generalized conclusion
  - (C) reasoning conclusion from specific
  - (D) expected conclusion
- 13 Who did give the concept of "statistical thinking" for ecologist?
- (A) Darwin
  - (B) Snee
  - (C) Arther S. E.
  - (D) Odom
- 14 How sample is defined in statistics?
- (A) All of these
  - (B) measurable unit
  - (C) scientific gather data
  - (D) a representative-small number of individual
- 15 The errors observed during deriving hypothesis
- (A) all types are consider
  - (B) type 1, 2, 3
  - (C) type a, b, c
  - (D) type big, medium, small

- 16 A hypothesis that a sample of individuals drawn from a population in nature will come from a population with known characteristic or parameter is known as
- (A) Research hypothesis
  - (B) Full hypothesis
  - (C) One hypothesis
  - (D) Null hypothesis
- 17 During which stage, xerophytic mosses develop?
- (A) Shrub
  - (B) Crustose
  - (C) Foliose
  - (D) Moss
- 18 Biological spectrum represents as
- (A) percentage of total community in population
  - (B) percentage of total population of community
  - (C) percentage of total species in the community
  - (D) percentage of total species of population
- 19 Which scientist gave theory of maturity in succession?
- (A) Margalef
  - (B) P. K. Khanna
  - (C) P. D. Sharma
  - (D) Odum
- 20 How many theories are there for studying climax concept in succession?
- (A) 5
  - (B) 2
  - (C) 3
  - (D) 4

- 21 Specific density is per unit of \_\_\_\_\_  
(A) Life table  
(B) Total space  
(C) Habitat  
(D) Total number
- 22 Decreasing the population density depends on  
(A) natality and immigration  
(B) mortality and emigration  
(C) size and movement  
(D) habitat and ecological aspects
- 23 Growth rates interplay with factors  
(A) size, movement, age, immigration  
(B) natality, immigration, mortality, emigration  
(C) ecosystem, habitat, population, space  
(D) ecosystem, natality, life space, mortality
- 24 Moderate proportion of young to old is represented in age structure  
(A) Bell shaped  
(B) Broad based  
(C) Top of pyramid  
(D) Un-shaped
- 25 Log percentage of young individuals presented in age structure  
(A) Bell shaped  
(B) Broad based  
(C) Top of pyramid  
(D) Un-shaped
- 26 Value of  $\lambda$  refers to \_\_\_\_\_ in population dynamic studies  
(A) rate of mortality and natality  
(B) carrying capacity  
(C) intrinsic rate of natural increase  
(D) rate of growth
- 27 Logistic equation describes  
(A) population detail with all limits  
(B) population growth with an upper limit  
(C) population growth with a lower limit  
(D) population description with range

- 28 Plant population structure follows the levels  
 (A) models and modular  
 (B) off springs and winter  
 (C) seed and stem  
 (D) gamete and ramet
- 29 Function of seed bank  
 (A) storage of seeds in dormant state  
 (B) bank which store seeds sequence  
 (C) storage of seeds in germination stage  
 (D) bank which stores seed documents
- 30 Polycarpic refers as  
 (A) never happened  
 (B) polymerase reaction  
 (C) repeated several time  
 (D) multiple seeds at a time
- 31 Density independent factor that affects population  
 (A) None of these  
 (B) competition & predation  
 (C) floods & fires  
 (D) Both of these
- 32 Voda's  $-3/2$  law is used to calculate  
 (A) Mortality rate  
 (B) Population ecosystem  
 (C) Population dynamics  
 (D) Growth pattern
- 33 Relationship between plant density & its biomass  
 (A) key factor structure  
 (B) intraspecific complex  
 (C) self thinning curve  
 (D) density curve map
- 34 Local diversity of species diversity refer as  
 (A) All of these  
 (B) no. of communities in locally  
 (C) whole population in part of continents  
 (D) nations different communities exist at different latitude

- 35 Stratification strata depends on  
(A) atmosphere & spectra  
(B) heat & waves  
(C) light & relative humidity  
(D) rains & flood
- 36 The zone of a lake lying below the compensation depth known as  
(A) limnetic zone  
(B) profundal zone  
(C) benthetic zone  
(D) littoral zone
- 37 Living in open water zone, a depth where effective light may penetrate  
(A) profundal zone  
(B) limnetic zone  
(C) benthetic zone  
(D) littoral zone
- 38 Orderly changed colonization lead to develop vegetation is \_\_\_\_\_.  
(A) ecesis  
(B) climax community  
(C) competition  
(D) succession
- 39 Stabilized habitat and community is also refer as  
(A) ecesis  
(B) climax community  
(C) competition  
(D) succession
- 40 Frequency can be recorded by physiological sampling techniques  
(A) rare, very rare and common  
(B) density, basal & cover area  
(C) abundance, dominance and density  
(D) quadrature, transect and point

- 41 Qualitative characters measures by  
 (A) quadrat, transect and point  
 (B) density, basal & cover area  
 (C) abundance, dominance and density  
 (D) physiognomy, phenology, stratification
- 42 Plant's data from different species arranged in different vertical layers come under characteristics  
 (A) abundance (B) physiognomy  
 (C) phenology (D) stratification
- 43 Proximity of individuals in populations known as  
 (A) abundance, (B) sociability  
 (C) phenology (D) stratification
- 44 Synthetic characteristics are determined by  
 (A) quadrat, transect and point  
 (B) density, basal & cover area  
 (C) presence, constancy, dominance and fidelity  
 (D) physiognomy, phenology, stratification
- 45 Which are the categories methods to study community?  
 (A) quadrat, transect and point  
 (B) density, basal and cover area  
 (C) abundance, dominance and density  
 (D) floristic, physiognomic and phytosociological
- 46 Which are the parts of Raunkiaer's method?  
 (A) frequency and abundance  
 (B) life-forms and biological spectrum  
 (C) association index and diversity index  
 (D) fidelity and density
- 47 Which are the sampling units of phytosociological methods of community?  
 (A) density, line and quadrat  
 (B) area, line and point  
 (C) quadrat, transect and point  
 (D) density, basal and cover area
- 48 Environment is always changing over a period of time due to  
 (A) trends, ecesis and autogenic factors  
 (B) variations in climatic, physiographic factor, species activity  
 (C) soil composition, soil aec & cec ratio  
 (D) soil texture and porosity
- 49 The occurrence of relatively definite sequence of communities over a period of time in the same area is known as  
 (A) association (B) society  
 (C) succession (D) species
- 50 Which of the following are considered as causes of succession?  
 (A) endo,ecto and super causes  
 (B) primary, secondary and final causes  
 (C) first, second and third causes  
 (D) initiating, ecesis and stabilizing causes