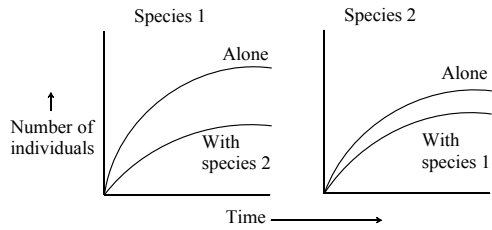


Topic :- Organisms & Populations

- Zero growth of population is indicated by
 - Less number of child birth
 - Less number of reproductive females
 - Reproductive individual are equal to pre-reproductive individuals
 - Less number of male then females
- Why mammals of the colder region generally have shorter ears and limbs?
 - To minimize their surface volume ratio
 - To minimize heat loss
 - To maximize their surface volume ratio
 - To maximize heat lossChoose the correct combination from the given option
 - I and II
 - II and III
 - III and IV
 - I and IV
- The productivity and distribution of plants mainly depends on
 - Soil
 - Temperature
 - Water
 - Light
- Which one is the edaphic factor in biosphere?
 - Light
 - Temperature
 - Water
 - Soil
- The most important factor which determined the increase in human population in India during the 20th century.
 - Natality
 - Mortality
 - Immigration
 - Emigration
- Population density of terrestrial organisms is measured in terms of individuals per
 - m^3
 - m^4
 - m
 - m^2
- In laboratory experiments, two species of the protest *Paramecium* were grown alone and in the presence of the other species. The following graphs show growth of species 1 (left) and species 2 (right), both alone and when in mixed culture



Interpretation of these graphs shows that

- Competitive exclusion occurred in these experiments
 - Both species are affected by interspecific competition but species 1 is affected less
 - Both species are affected by interspecific competition but species 2 is affected less
 - Both species are affected equally by interspecific competition
8. I. Population evolve to maximise their reproductive fitness, also called Darwinian reproductive fitness (higher r value), in the habitat in which they live
 II. The population growth rate r is inversely related to generation time
 III. The housefly, which has a short life span and produces a large number of eggs, could be considered as a 'K' selected species
 IV. Under a particular set of selection pressures, organisms evolve towards the most efficient reproductive strategies
 V. Life history traits of organisms have evolved in relation to the constraints imposed by biotic and abiotic factors in their habitat
 Select the combination of correct statements
 a) I, II and III b) I, III and IV c) III, IV and V d) All except III
9. Two opposite forces operate in the growth and development of every population, one of them relates to the ability to reproduce at a given rate. The force opposing is called
 a) Biotic potential b) Environmental resistance
 c) Morbidity d) Fecundity
10. When the value of ' r ' is significantly low as compared to other. It is better known by
 a) Competition exclusion b) Resource partition
 c) Interference competition d) Competition release
11. Which one is the example of sexual parasite?
 a) An male agler fish (*Photocorynus*) b) Male *Bonellia*
 c) Male *Schistosoma* d) All of the above
12. An overwhelming majority ...A... of animals and nearly all plants cannot maintain a constant internal environment. Their body temperature ...B... with the ambient temperature. In aquatic animals, the osmotic concentration of the body fluids ...C... with that of the ambient water osmotic concentration. These animals and plants are simply conformers
 Choose the correct option for A , B and C
 a) A-98%, B-Changes, C-Constant b) A-97%, B-Constant, C-Changes

- c) A-96%, B-Changes, C-Constant
- d) A-99%, B-Changes, C-Changes
13. Good soil is that which
- a) Holds whole of the water that enters into it
- b) Allows percolating the water slowly from it
- c) Allows water to pass very quickly from it
- d) Allows limited amount of water to retain into it
14. Living in same habitat, organisms of same species of form
- a) Biosphere
- b) Community
- c) Population
- d) Niche
15. Which of the following factors increase, the size of a population?
- a) Natality and immigration
- b) Natality and mortality
- c) Mortality and immigration
- d) Natality and emigration
16. Population size is more technically called
- a) Population density
- b) Demography
- c) Population growth
- d) Population dynamics
17. If natality is represented by $-B$
 If mortality is represented by $-D$
 If immigration is represented by $-I$
 If emigration is represented by $-E$
 If population density is represented by $-N$
 Then population density at time $t+1$ is represented by
- a) $N_{t+1} = N_t - [(B + I)] - [(D + E)]$
- b) $N_{t+1} = N_t + [(B + I)] - [(D + E)]$
- c) $N_{t+1} = N_t + [(B + I)] + [(D + E)]$
- d) $N_{t+1} = N_t - [(B + I)] + [(D + E)]$
18. How seals can survive in polar climate where the temperature prevails below 0°C ?
- a) They have long hairs on their body surface
- b) They have thick layer of fat below their skin
- c) Both (a) and (b)
- d) They have genetic regulation for avoiding cold climate
19. Identify the basic levels of ecology
- I. Organisms II. Populations
- III. Communities IV. Biomes
- V. Human VI. Vertebrates
- Choose the correct option
- a) I, II and III
- b) II, III and IV
- c) I, II, III and IV
- d) I, II, III and V
20. What is true about the isolated small tribal populations?
- a) There is a decline in population as boys marry girls only from their own tribe
- b) Hereditary diseases like colour blindness do not spread in the isolated population

- c) Wrestlers who develop strong body muscle in their life time pass this this character on to their progeny
- d) There is no change in population size as they have a large gene pool

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