# CHAPTER



# Organisms and **Populations**

# PRACTICE QUESTIONS

#### **Organism and its Enviornment**

- 1. \_\_\_\_\_\_ is revered as the Father of Ecology in India.
  - (a) Verghese Kurein
- (b) Amartya Sen
- (c) Ramdeo Misra (d) Hargobind Khurana
- 2. Ecology is a subject which studies the interactions among organisms and \_\_\_\_\_\_.
  - (a) Amongst the organism and its chemical environment.
  - (b) Between the organism and its physical environment.
  - (c) Amongst the organism and its habitat.
  - (d) Between the organism and its biosphere.
- **3.** Basically, ecology is concerned with how many levels of biological organizations? (a) 3 (b) 4 (c) 5 (d) 7
- 4. The levels of biological organization in ecology are
  - (a) Cell, Organism, Community, Biosphere
  - (b) Organisms, Family, Communities, Biomes
  - (c) Species, Populations, Communities, Biomes
  - (d) Organisms, Populations, Communities, Biomes
- 5. Ecology at the level of an individual organism is
  - (a) Systemic ecology
  - (c) Physiological ecology
- 6. Which important life process is considered at organism level of ecology?
  - (a) Respiration (b) Immunity
  - (d) Homeostasis (c) Reproduction
- 7. How does seasonal variations take place on earth?
  - (a) Rotation on its own axis (b) Rotation around sun
  - (c) Rotation of moon around earth (d) Both (a) and (b)
- 8. The factors responsible for causing annual variation in the intensity and duration of temperature are
  - (a) Rotation of earth in solar system (b) Rotation of earth around sun
  - (c) Tilt in axis of earth (d) Both (b) and (c)
- 9. Precipitation due to annual variation in seasons includes
  - (a) Rain (b) Snow (c) Dew
- (d) Both (a) and (b)

- (b) Somatic ecology

- (d) Physical ecology

10.	Precipitation is an imp (a) Rain forest	ortant factor for the forr	natic (b)	n of major biomes : Tundra	such	as
	(c) Desert		(d)	All the above		
11.	<ul> <li>A: Regional and local</li> <li>B: It causes formation</li> <li>(a) A is true and B is a</li> <li>(c) A is true but B is formation</li> </ul>	variations occur with ea of a wide variety of bio also true alse	ch ha mes. (b) (d)	abitat. A is false but B is A is false and B is	true also	false
12.	<ul><li>Rain-soaked forest occ</li><li>(a) Assam</li><li>(c) Arunachal Pradesh</li></ul>	eurs in which state of Inc	lia? (b) (d)	Meghalaya Nagaland		
13.	Just as sand: desert; (a) Lichen (c) Perma frost	: Polar region	ns (b) (d)	Sand Silt		
14.	<ul><li>Which part of human b</li><li>(a) Mouth</li><li>(c) Intestine</li></ul>	oody is a unique habitat	for h (b) (d)	undreds of species Urinary bladder Spleen	of mi	icrobes?
15.	The key elements whi different habitat are en <i>Temperature, Wind, Wa</i> (a) 5	ch lead to much variation listed below: <i>ter; Light, Soil, Humidit</i> (b) 6	on ir y, U (c)	n the physical and c <i>V rays</i> 4	hem (d)	ical conditions of 3
16.	<ul><li>A habitat of an organis</li><li>(a) Abiotic component</li><li>(c) Symbiotic component</li></ul>	m constitutes ts ınds	 (b) (d)	Biotic components Both (a) and (b)		
17.	The organisms throug and reproduction in its (a) Camouflage (c) Specialized Physic	h natural selection have habitat. blogy	evo (b) (d)	lved to Adaptations Higher reproduction	o opt on rat	imize its survival te
18.	In tropical deserts, the (a) $> 40^{\circ}C$	temperature goes (b) > 60°C	(c)	 > 50°C	(d)	>70°C
19.	Habitats such as therm exceeding	al springs and deep-sea	hyd	rothermal vents hav	e ave	erage temperature
20.	(a) $100^{\circ}C$	(b) 150°C ot grow in temperate cou	(c) Intrie	80°C	(d)	1000°C
21	(a) Banana Mango cannot grow in	(b) Mango	(c)	Oranges	(d)	Peaches
<i>4</i> 1.	<ul><li>(a) Canada</li><li>(c) Africa</li></ul>		(b) (d)	Germany Both (a) and (b)		
22.	are not fou (a) Snakes (c) Elephants	nd in Kerala forests.	(b) (d)	Snow leopards Monkeys		

23. \_\_\_\_\_\_ fish is rarely caught beyond tropical latitudes in ocean. (a) Salmon (b) Shark (c) Tuna (d) Pomphret 24. The temperature of habitat affects kinetics of \_\_\_\_\_ in the body of organisms. (a) Hormones (b) Enzymes (c) Inflammatory mediators (d) Neurotransmitters **25.** The organisms which can tolerate and thrive in a wide range of temperature are called as (a) Stenothermal (b) Homiotherm (c) Eurythermal (d) Poikilotherm **26.** The organisms which thrive in a very narrow range of temperatures are known as \_\_\_\_\_\_. (a) Stenothermal (b) Poikilotherm (c) Homeotherm (d) Eurythermal 27. The level of thermal tolerance of different species determines the extent of \_\_\_\_\_. (a) Survival (b) Geographical distribution (c) Morphology (d) Biodiversity **28.** Life originated on earth first in (b) Land (a) Air (c) Water (d) All the above 29. Special modifications with respect of \_\_\_\_\_ make it possible for an organism to survive in desert. (a) Water (b) High temperature (c) Sand (d) Less abundant plants **30.** For aquatic organisms \_\_\_\_\_\_ of water becomes important. (a) Quantity (b) Quality (c) Conductivity (d) Specific gravity **31.** The salt concentration is measured as salinity in parts per \_\_\_\_\_ (a) Billion (b) Million (c) Hundred (d) Thousand **32.** The salinity of inland waters is (b) 4 (a) 3 (c) 5 (d) 2 **33.** The salinity of sea water is \_\_\_\_\_ (a) > 100(b) 30-35 (c) 60-80(d) 10–15 **34.** The salinity of a hyper saline lagoon is (a) Up to  $10^3$ (b)  $> 10^3$ (c) Up to  $10^2$ (d)  $> 10^2$ 35. The organisms which are tolerant of a wide range of salinities are (a) Salinotrophs (b) Euryhaline (d) Stenohaline (c) Salinosomes

36. The organisms which are restricted to a narrow range of salinity are known as (a) Salinosomes (b) Salinotolerants (c) Euryhaline (d) Stenohaline 37. Fresh water animals cannot live for long in sea water because they would face problems of (a) Vapour pressure (b) Purity (c) Osmotic (d) Thermal change **38.** For many animals, light is an important factors which regulates variations. (a) Nocturnal (b) Diurnal (c) Urinal (d) Crepuscular **39.** The activities of animals like foraging, reproductive and migratory depend on (a) Temperature (b) Water (c) Light (d) Air 40. Marine organisms, which live at a depth of > 500 m, receive solar energy in which form? (a) Different rays from visible spectrum (b) UV radiations (c) Cosmic rays (d) Infrared radiations **41.** The factors which affect percolation and water holding capacity of soil are (a) Soil composition (b) Grain size (d) All of these (c) Aggregation **42.** Vegetation in any area depends on (a) pH of soil (b) Mineral composition (c) Topography (d) All of these (a) Composition (b) Sediment (c) Grain size (d) Water holding capacity 44. The process to maintain constancy of its internal environment is (a) Equilibrium (b) Epimorphosis (c) Homeostasis (d) Apoptosis 45. The 'success' of mammals is due to (a) Presence of mammary glands (b) Efficient osmoregulation (d) Efficient magnetoreception (c) Efficient thermoregulation 46. 'Shivering' during cold is beneficial for mammals. It helps to (a) Decrease the body temperature (b) Increase the body temperature (c) No change in body temperature (d) None of these 47. Which is the most effective way to get relief from high temperature? (a) Oil secretion increases (b) Frequent urination (c) High water intake (d) Profuse sweating **48.** Thousands of migratory birds from Siberia come to in India. (a) Jim Corbett National Park (b) Nal Sarovar

(c) Keoladeo National Park (d) Manasarovar

**43.** The characteristics often determine the type of benthic animals than can thrive there.

**49.** In case of unfavourable conditions, many lower organisms develop \_\_\_\_\_\_ which helps them to survive. (a) Spores (b) Buds (c) Gametes (d) Clones **50.** In higher plants \_\_\_\_\_\_ helps to tide over periods of stress. (a) Roots (b) Fruits (c) Seeds (d) Stem 51. Higher plants survive stressful conditions by reducing their \_\_\_\_\_\_ activity. (a) Reproductive (b) Metabolic (c) Growth (d) Morphogenetic **52.** Bears undergo a period of \_\_\_\_\_\_ to escape stress during winter. (b) Aestivation (a) Hibernation (c) Sedation (d) Metamorphosis 53. Snails and fish undergo aestivation to avoid summer related problems of heat and \_\_\_\_\_ (a) Hygroscopicity (b) Desiccation (c) Efflorescence (d) Starvation 54. Under unfavourable conditions, many species of zooplankton which lives in small water bodies are known to enter (a) Diapause (b) Metapause (c) Neopause (d) Monopause **55.** Diapause is a stage of \_\_\_\_\_ (a) Perpetual development (b) Intermittent development (c) Suspended development (d) Sequential development 56. is any attribute of an organism that enables the organism to survive and reproduce in its habitat. (a) Mutation (b) Evolution (d) Conformation (c) Adaptation 57. Adaption includes \_\_\_\_\_\_ attribute of an organism. (b) Physiological (a) Behavioural (d) All of these (c) Morphological 58. Many adaptations of an organism have evolved over a long duration of evolution and are (a) Genetically unstable (b) Genetically fixed (d) Genetically extemporaneous (c) Genetically disadvantageous 59. in North American deserts is capable of meeting all its water requirements through its internal biochemical process. (a) Llama (b) Coyote (c) Kangaroo rat (d) Weasel **60.** By which biochemical process, kangaroo rat meets its water requirement? (a) Reduction of fats (b) Oxidation of proteins (c) Reduction of proteins (d) Oxidation of fats

61.	<ul><li>Water molecule is a by-product in which of the</li><li>(a) Reduction of fats</li><li>(c) Reduction of proteins</li></ul>	<ul><li>following process?</li><li>(b) Oxidation of proteins</li><li>(d) Oxidation of fats</li></ul>				
62.	Desert animals have the capability of forming (a) Hypotonic (c) Concentrated	urine. (b) Isosmotic (d) Dilute				
63.	<ul><li>Select the true statement from the following op</li><li>(a) Desert plants have thick cuticle on their bo</li><li>(b) Stomata are arranged superficially.</li><li>(c) Minimum loss of water through fat oxidati</li><li>(d) Special photosynthetic pathway occurs in a</li></ul>	tions: dy. on. lesert plants.				
64.	<ul> <li>An important feature regarding CAM pathway in desert plants</li> <li>(a) Enables stomata to increase the number of chloroplasts.</li> <li>(b) Enables stomata to remain open during any time.</li> <li>(c) Enables stomata to remain closed during day time.</li> <li>(d) Enables stomata to open during rainy weather.</li> </ul>					
65.	Some desert plants like have no le (a) Muehlenbeckia (c) Nephrolepis	<ul><li>(b) Opuntia</li><li>(d) All of these</li></ul>				
66.	<ul><li>Photosynthetic function in opuntia is performe</li><li>(a) Roots</li><li>(c) Fruits</li></ul>	d by (b) Flowers (d) Stems				
67.	In opuntia, leaves are reduced to (a) Thorns (c) Spines	<ul><li>(b) Prickles</li><li>(d) Buds</li></ul>				
68.	Allen's rule is with respect to (a) Reptiles (c) Aves	<ul><li>(b) Mammals</li><li>(d) Amphibia</li></ul>				
69.	Mammals from colder climates generally have loss. (a) Reduced (c) Longer	ears and limbs to minimize heat (b) Shorter (d) Wider				
70.	<ul><li>Aquatic mammals in polar seas have a thick lay</li><li>(a) Blubber</li><li>(c) Rubber</li></ul>	<ul> <li>(d) When</li> <li>(e) flubber</li> <li>(d) Stubber</li> </ul>				
71.	<ul><li>A thick layer of fat under the skin in aquatic m</li><li>(a) Food reservoir</li><li>(c) Conductor</li></ul>	ammals essentially acts as (b) Insulator (d) Heat generator				
72.	Visiting a place like Manali and Mansarovar referred to as (a) Motion Sickness (c) Acrophobia	<ul><li>gives you an uncomfortable feeling. This is</li><li>(b) Altitude Sickness</li><li>(d) All of these</li></ul>				

- 73. With the increase in altitude of a place
  - (a) Atmospheric pressure decreases
  - (c) Atmospheric pressure remain constant
- 74. The symptoms of altitude sickness are
  - (a) Nausea
  - (c) Fatigue
- 75. How acclimatization occurs in case of altitude sickness?
  - (a) Decrease RBC production
  - (c) Increased rate of breathing
- **76.** Which bacteria can flourish in hot springs and deep sea hydrothermal vents?
  - (a) Cyanobacteria
  - (c) Actinobacteria
- 77. Many fish thrive in Antarctic water where the temperature is \_\_\_\_\_
  - (a) Always above zero (b) Always above 4°C
  - (c) Always below zero (d) Sometimes below zero
- 78. How much pressure is experienced by marine invertebrates and fishes living at the great depths in oceans?
  - (a) < 100 times that of normal atmospheric pressure
  - (b) < 100 times that of hydrostatic pressure
  - (c) > 100 times that of hydrostatic pressure
  - (d) > 100 times that of normal atmospheric pressure
- 79. Which of the following animals lack the physiological ability to deal with high temperature in their habitat?
  - (a) Giant frilled lizard
  - (c) Kangaroo rat

- (b) Desert lizard
- (d) Weasel
- 80. What adaptation desert lizard shows to deal with high temperature?
  - (a) Bask in sun when body temperature drops.
  - (b) Move in shade when body temperature drops.
  - (c) Bask in sun when ambient temperature drops.
  - (d) Move in shade when ambient temperature drops.
- **81.** The main reason behind building burrows in soil by burrowing animals is
  - (a) To escape from predators.
  - (b) To derive nutrition parts of plants from underground.
  - (c) The mode of evolution chose burrows as a specific habitat.
  - (d) To hide and escape from the above-ground heat.

#### **Populations**

- **82.** Which of the following is not a population attribute?
  - (a) Majority of them live in groups in a well-defined geographical location.
  - (b) Share or compete for similar resources.
  - (c) Potentially interbreed
  - (d) Single individuals of any species cannot live in isolation.

- (b) Atmospheric pressure increases (d) Either (a) or (b)
- (b) Heart palpitations
- (d) All of these
- (b) Increased RBC production
- (d) Both (b) and (c)
- (b) Archaebacteria
- (d) Acidobacteria

83.	Individuals resulting performing ecological	from asexual reproduc studies.	tion	are also considere	ed _		while
	(a) Biome	(b) Ecosystem	(c)	Population	(d)	Species	
84.	As teakwood: Forest tr (a) Lotus (c) Squirrels	racts, : Wetl	and. (b) (d)	Rats Cormorants			
85.	To evolve certain desir (a) Species	red traits, natural selection (b) Biomes	on sh (c)	ould operate at Population	(d)	level. Genus	
86.	Population ecology is a (a) Population morphe (c) Population proteon	a bridge between evoluti ology nics	on a (b) (d)	nd Population genetic Population variatic	son		
87.	After poaching 3 lions death rate per capita. (a) 5.000	<ul><li>in certain forest of Gu</li><li>(b) 0.200</li></ul>	jarat	only 15 are left in 0.166	a ye	ar. Determi 0.800	ine the
88.	The population size of (a) 10	Siberian cranes at Bhar (b) 100	atpui (c)	wetlands in any ye 1000	ar is (d)	5	_
89.	<ul><li>Population size in any</li><li>(a) Population cluster</li><li>(c) Population abundation</li></ul>	given habitat is also kno nce	own a (b) (d)	s Population explosi Population density	on		
90.	<ul><li>Tiger census in our nat</li><li>(a) Tiger cubs</li><li>(c) Tiger faecal pellet</li></ul>	tional parks and tiger res	(b) (d)	s is done by countir Tiger pug marks Both (b) and (c)	ng		
91.	<ul> <li>Natality refers to</li> <li>(a) Number of births in a given geographical area.</li> <li>(b) Number of births in a given time period.</li> <li>(c) Number of births under influence of given environmental factor.</li> <li>(d) Number of deaths in a given time period.</li> </ul>						
92.	<ul> <li>A striking difference b</li> <li>(a) Immigration consist to a single species</li> <li>(b) Emigration consideration to a single species</li> </ul>	etween immigration and ders total number of spe lers total number of spec	emi ecies ecies i	gration is in a given habitat v n a given habitat wh	while	emigration mmigration	refers
	<ul> <li>(c) Immigration consecutive a single species</li> <li>(d) Immigration consists to a dominant single</li> </ul>	iders total number of to a single species. ders total number of spe gle species.	don ecies	ninant species in a in a given habitat v	a giv vhile	en habitat	while refers
93.	Identify the correct eq (a) $N = N_t + [(D + I) - (C) - N_{t+1}] = N_t + [(B + I) - (C) -$	uation for population de - $(B + E)$ ] D) - $(I + E)$ ]	nsity (b) (d)	at time t + 1 $N = N_t + [(B + I) - N_{t+1}] = N_t + [(B + I)]$	- (D - ) – (I	+ E)] <b>)</b> + E)]	

**94.** If a new habitat is just being colonized then which of the following options do you think would have a greater contribution towards population density?

	<ul><li>(a) Mortality</li><li>(c) Immigration</li></ul>	(b) (d)	Natality Emigration					
95.	<ul> <li>While developing the theory of natural selection, Darwin observed that each species could realize fully its innate potential to grow in the number provided in a particular habitat</li></ul>							
96.	Study the following equation in context of population growth and choose the correct option $dN/dt = (b - d) \times N$ Substituting r in place of $b - d$ then							
	<ul> <li>(a) Extrinsic rate of natural dec</li> <li>(c) Intrinsic rate of natural incr</li> </ul>	crease (b) rease (d)	Intrinsic rate of n Extrinsic rate of r	atural natura	decrease l increase	(11)		
97.	The r value for Norway rat is(a) 0.15(b) 0.0	015 (c)	0.015	(d)	1.5			
98.	The r value for flour beetle is _(a) 0.15(b) 0.1	2 (c)	0.21	(d)	0.012			
99.	The r value for human population (a) 0.15 (b) 0.0	on in India is 502 (c)	0.0205	(d)	0.012			
100.	When N (population density) i (using equation (ii) as per quest (a) S (c) U	s plotted against tin tion 99) (b) (d)	ne sh J Inverted U	aped	graph is o	btained		
101.	The integral form of equation ( (a) $N = N_0 e^{rN}$ (c) $N_t = N_0 e^{rN}$	ii) as given in questi (b) (d)	on 98 is $\underline{\qquad}$ $N = N_0 e^{rt}$ $N_t = N_0 e^{rt}$					
102.	Any species growing exponenti population densities in a short t (a) Limited (c) Essential	ally under ime span (b) (d)	resource condi Unlimited Non-essential	tions of	can reach r	nassive		
103.	<ul> <li>Carrying capacity K means</li></ul>							
104.	If a population grows in a habit ment are observed (a) Lag $\rightarrow$ Acceleration $\rightarrow$ De (b) Log $\rightarrow$ Deceleration $\rightarrow$ Ac (c) Log $\rightarrow$ Acceleration $\rightarrow$ De (d) Lag $\rightarrow$ Acceleration $\rightarrow$ As	itat with limited reso celeration $\rightarrow$ Asymp celeration $\rightarrow$ Asymp celeration $\rightarrow$ Asymp ymptote $\rightarrow$ Deceleration	ources, then follow ptote ptote ptote ution	ving p	ohases of a	chieve-		

106.	Which of the following equation correctly desc	ribes sigmoid growth curve?
	(a) $dN/dt = rN\left(\frac{K-N}{r}\right)$	(b) $dN/dt = rN\left(\frac{K-N}{t}\right)$
	(c) $dN/dt = N\left(\frac{K-N}{N}\right)$	(d) $dN/dt = rN\left(\frac{K-N}{K}\right)$
107.	<ul><li>The reproductive fitness of a population in a ce</li><li>(a) Verhulst's fitness</li><li>(c) Lamarckian fitness</li></ul>	rtain habitat is also termed as (b) Darwin's fitness (d) Huxley's fitness
108.	<ul><li>In order to achieve maximum population in a h</li><li>(a) High r value</li><li>(c) Independent of r value</li></ul>	<ul><li>abitat, which of the following is correct?</li><li>(b) Low r value</li><li>(d) Optimum r value</li></ul>
109.	<ul><li>The organism breeding only once in its lifetime</li><li>(a) Atlantic tuna fish</li><li>(c) Pacific salmon fish</li></ul>	e is (b) Indian pomfret fish (d) Arctic whale
110.	<ul><li>Amongst plants, select the correct option which</li><li>(a) Banyan</li><li>(c) Oak</li></ul>	h breeds only once in lifetime. (b) Bamboo (d) Pine
111.	(a) Natality (c) Biomass	population size. (b) Mortality (d) Resources consumed
112.	<ul><li>Pick out the essential resources for a population</li><li>Food, Water, Air, Space</li><li>(a) Food and water</li><li>(c) Air and space</li></ul>	<ul><li>n in a given habitat from the following</li><li>(b) Food and space</li><li>(d) Water and space</li></ul>
113.	Nearly of all insects are known to (a) 25% (b) 35%	be phytophagous. (c) 45% (d) 10%
114.	<ul><li>Thorns are the most common morphological m</li><li>(a) Acacia</li><li>(c) Calotropis</li></ul>	<ul><li>(b) Cactus</li><li>(d) Both (a) and (b)</li></ul>
115.	<ul><li>Which of the following weed plant produces ca</li><li>(a) Acacia</li><li>(c) Calotropis</li></ul>	<ul><li>(b) Cactus</li><li>(d) All of these</li></ul>
116.	Which of the following substance are product browsers (count numbers)? <i>Nicotine, Caffeine, Quinine, Strychnine, Opium</i>	eed by plants as defense against grazers and

(d) 5 (a) 2 (b) 3 (c) 4

- (a) Wagner-Nelson logistic growth(c) Verhulst-Pearl logistic growth

105. The sigmoid curve of population growth is also known as

- (b) Lineweaver-Burk logistic growth
  - (d) Darwin's logistic growth

117.	In a field experiment, when all the starf more than(A)sp because of(B)cd (a) $A - 10$ , $B - Intra-specific$ (c) $A - 20$ , $B - Intra-specific$	ish were removed from an en pecies of invertebrates become completion. (b) A – 10, B – Inter-sp (d) A – 20, B – Inter-sp	closed intertidal area extinct within a year, pecific pecific			
118.	<ul> <li>Which of the following is true about predation.</li> <li>(a) They keep prey population under communication.</li> <li>(b) They may help in maintaining species of competition among competing press.</li> <li>(c) They are prudent in nature.</li> <li>(d) All the above</li> </ul>	ators? trol. s diversity in a community by y species.	reducing the intensity			
119.	<ul><li>Which butterfly is highly distasteful to its in its body?</li><li>(a) <i>Apis mellifera</i> (b) Viceroy</li></ul>	predator bird because of a spe (c) Monarch	<ul><li>cific chemical present</li><li>(d) <i>Apis indica</i></li></ul>			
120.	Who proposed the competitive exclusion(a) Gause(b) Robert May	principle? (c) Darwin	(d) Von Humboldt			
121.	Abingdon tortoise in Galapagos Islands were introduced on the island, because of t (a) Cows (b) Buffalos	became extinct within a deca he greater browsing efficiency (c) Goats	de after of introduced animal. (d) Camels			
122.	A species whose distribution is restricted to of a competitive superior species is found the competing species is experimentally re (a) Competitive exclusion (c) Interference competition	to a small geographical area be to expand its distributional rar emoved. This phenomenon is (b) Competitive release (d) Resource partitioni	ecause of the presence age dramatically when known as e ng			
123.	<ul><li>Who showed that five closely related spec avoid competition and coexist due to beha</li><li>(a) Connell</li><li>(c) Gause</li></ul>	cies of warblers living on the s avioural differences in their for (b) McArthur (d) Darwin	ame tree were able to rging activities?			
124.	<ul><li>In general, which of the following appears</li><li>(a) Herbivores</li><li>(c) Carnivores</li></ul>	s to be more adversely affected (b) Plants (d) Both (a) and (b)	d by competition?			
125.	<ul> <li>(c) Carnivores</li> <li>(d) Both (a) and (b)</li> <li>Gause's competitive exclusion principle states that <ul> <li>(a) Two unrelated species competing for the same resources cannot coexist indefinitely and competitively inferior one will be eliminated eventually.</li> <li>(b) Two closely related species competing for the same resources cannot coexist indefinitely and competitively inferior one will be eliminated eventually</li> <li>(c) Two unrelated species competing for the same resources can coexist indefinitely and can grow together.</li> </ul> </li> <li>(d) Two closely related species competing for the same resources can coexist indefinitely and can grow together.</li> </ul>					
126.	Connell's elegant field experiments show and competitively superior barnacle	ed that on rocky sea coasts o dominates the intert	f Scotland, the larger idal area and exclude			

smaller barnacle \_\_\_\_\_ from that zone

	<ul><li>(a) Chthamalus, Balanus</li><li>(c) Chthamalus, Chthamalus</li></ul>	(b) (d)	Balanus, Balanus Balanus, Chthamal	lus	
127.	According to Darwin which competition is a po (a) Inter-specific (b) Intra-specific	otent (c)	force in organic ev Both (a) and (b)	oluti (d)	on? None of these
128.	<ul><li>In some shallow South American lakes, which of is zooplanktons of lake?</li><li>(a) Visiting flamingos</li><li>(c) Both (a) and (b)</li></ul>	of the (b) (d)	e following compete Resident fishes None of these	for t	he same food that
129.	<ul><li>Find out the true statement.</li><li>(a) Totally unrelated species could also competible</li><li>(b) Resources need not to be limiting for comp</li><li>(c) In interference competition, feed efficience interfering and inhibitory presence of the order of the</li></ul>	ete fo petiti y of other	or the same resource on to occur. one species might species, even if reso	s. be re ource	educed due to the es are abundant.
130.	<ul><li>Which of the following are adaptations of paras</li><li>(a) Loss of unnecessary sense organ</li><li>(c) High reproductive capacity</li></ul>	site? (b) (d)	Loss of digestive s All of these	yster	n
131.	Liver fluke belongs to the class (a) Cestoda (b) Trematoda	(c)	Hirudinaria	(d)	Turbellaria
132.	Liver fluke completea its cycle in how many in (a) 1 (b) 2	term (c)	ediate hosts? 3	(d)	4
133.	<ul><li>Human liver fluke has two intermediate hosts in</li><li>(a) Snail and hydra</li><li>(c) Snail and fish</li></ul>	n its (b) (d)	life cycle; these are Crustacean and fish Mosquito and snai	h 1	
134.	<ul><li>Effect of parasite on host</li><li>(a) Reduce survival</li><li>(c) Reduce its population density</li></ul>	(b) (d)	Reduce growth and All of these	d rep	roduction
135.	Malarial parasites require which vector to sprea (a) Snail (b) Fish	ad to (c)	other hosts Housefly	(d)	Mosquito
136.	<ul><li>Find out the correct example of ectoparasite.</li><li>(a) Lice on humans</li><li>(c) Copepods in marine fishes</li></ul>	(b) (d)	Ticks on dogs All are correct		
137.	Cuscata, a parasitic plant that is commonly and in the course of a	four evol	nd growing on hed ution	ge p	lants has lost its
	<ul><li>(a) Root and stem</li><li>(c) Root and leaves</li></ul>	(b) (d)	Leaves and chlorop Leaves and stem	ohyll	
138.	Female mosquito requires our blood for(a) Respiration(b) Locomotion	(c)	Digestion	(d)	Reproduction
139.	<ul><li>Which of the following is not a parasite?</li><li>(a) Tapeworm</li><li>(c) Liver fluke</li></ul>	(b) (d)	Female anopheles : Lice	moso	quito

- 140. Find out the false statement.
  - (a) Parasite that feeds on the external surface of the host organism are called ectoparasite.
  - (b) The life cycle of endoparasite are more complex because of their extreme specialization.
  - (c) Parasitism evolved in so many taxonomic groups from plants to higher vertebrates.
  - (d) Endoparasites have greatly complex morphological and anatomical features along with high reproductive potential.
- 141. Example of brood parasitism
  - (a) Cuckoo (koel) and crow
  - (c) Parrot and pigeon

- (b) Crow and parrot
- (d) Koel and parrot
- **142.** Find out the incorrect statement.
  - (a) In brood parasitism (of Koel and Crow), the eggs of parasitic bird have evolved to resemble the host's egg in size and colour to reduce the chance of the host bird detecting the foreign eggs and ejecting them from the host.
  - (b) Majority of parasite harming the host.
  - (c) Many parasites have evolved to be host specific in such a way that both host and the parasite tend to coevolve.
  - (d) Monarch butterfly acquires chemical by feeding on a poisonous weed in its adult stage, that chemical makes it highly distasteful to its bird.
- 143. Which of the following shows commensalism?
  - (a) Sea anemone and clown fish
  - (c) Lice and human
- 144. Commensalism is shown by all except
  - (a) Orchid on mango branch
  - (c) Sea anemone and clown fish
- 145. Lichens are mutualistic relationship between
  - (a) Fungus and photosynthetic algae
    - (c) Fungus and roots of higher plants
- 146. Mycorrhizae are association between
  - (a) Fungus and photosynthetic algae
  - (c) Fungus and cyanobacteria
- 147. Pseudocopulation helps in pollination in(a) Fig plant(b) Orchid
- 148. The best example of co-evolution
  - (a) Fig trees and pollinator species of wasp
  - (c) Sea anemone and clown fish
- 149. Fruit of fig species provide
  - (a) Egg laying site to female wasp for oviposition
  - (b) Developing seed as food for the developing wasp larvae
  - (c) Both (a) and (b)
  - (d) None of these
- 150. Select the incorrect statement.
  - (a) The mediterranean orchid ophrys employs sexual deceit to get pollinated.
  - (b) In mycorrhazial association, fungi helps the plant in the absorption of essential nutrients from the soil.

- (b) Lichens
- (d) Mycorrhizae
- (b) Cattle egret and grazing cattle
- (d) Cuckoo (Koel) and crow
- (b) Fungus and cyanobacteria
- (d) Both (a) and (b)
- (b) Fungus and roots of higher plants
- (d) Fig plant and wasp
- (c) Cuscuta (d) Sunflower
- (b) Fungus and cyanobacteria
- (d) All of these

- (c) Pinus seeds cannot germinate and establish without the presence of mycorrhizae.
- (d) When resources are unlimited, the growth is usually logistic but when resources become progressively limiting, the growth pattern turns exponential.
- **151.** In Ophrys, one petal of female flower bears an uncanny resemblance to the female of the bee in which of the following aspect?

(a) Size	(b) Colour	(c) Markings	(d) All of these
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152. Fill in the blanks A, B, C, and D respectively.

Species A	Species B	Name of Interaction
+	+	Mutualism
_	—	_A_
+	—	_B_
+	_	Parasitism
+	0	_C_
_	0	_D_

(+) Beneficial (-)detrimental (0) Neutral

(a) A: Commensalism, B: Predation, C: Amensalism, D: Competition

- (b) A: Predation, B: Parasitism, C: Commensalism, D: Amensalism
- (c) A: Competition, B: Predation, C: Commensalism, D: Amensalism
- (d) A: Competition, B: Predation, C: Amensalism, D: Commensalism

153. In which of the following interaction only one of the species is benefited?

- (a) Mutualism (b) Competition
- (c) Parasitism and predation (d) Amensalism
- 154. Which of the natural habitat on earth is inhabited just by a single species?(a) Hot vents(b) Forest(c) Polar region(d) None of these
- 155. The following breeds many times during their lifetime except
  - (a) Birds (b) Mammals
  - (c) Amphibians (d) Pacific salmon fish

156. Which of the following produce large number of small sized offsprings?(a) Oyster(b) Pelagic fishes(c) Mammals(d) Both (a) and (b)

- **157.** Populations evolve to maximize their
  - (a) Health fitness
  - (c) Mental fitness

- (b) Body fitness
- (d) Reproductive fitness
- 158. Find out the correct statement.
  - (a) Under particular set of selection progresses, organism evolve towards the most efficient reproductive strategy.
  - (b) In amensalism, one species is farmed whereas the other is benefited.
  - (c) Some species of insects and frogs are cryptically coloured (camouflaged) to avoid being detected easily by the prey.

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- (d) 'Biological Control' methods adopted in agricultural pest control are based on the ability of the prey to regulate predator population.
- 159. What type of human population is represented by the adjacent pyramid?



- (a) Expanding population (b) Vanishing population
- (c) Stable population

- (4) Declining population
- ible population





- (a) P: Desert, Q: Tropical forest, R: Temperate forest, S: Coniferous forest
- (b) P: Grassland, Q: Temperate forest, R: Desert, S: Arctic and Alpine tundra
- (c) P: Arctic and Alpine tundra, Q: Coniferous forest, R: Temperate forest, S: Tropical forest
- (d) P: Coniferous forest, Q: Grassland, R: Desert, S: Tropical forest
- **161.** The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do (A), (B) and (C) represent respectively?



- (a) A: Conformers, B: Partial regulators C: Regulators
- (b) A: Partial regulators, B: Conformers, C: Regulators
- (c) A: Regulators, B: Partial regulators, C: Conformers
- (d) A: Conformers, B: Regulators, C: Partial regulators



#### Questions 162 to 167 are based on the above diagram.

162. Graph 'a' is represented by the formula:

(a) 
$$\frac{dN}{dt} = rN$$
  
(b)  $\frac{dN}{dt} = N$   
(c)  $\frac{dN}{dt} = rN\left(\frac{K-N}{K}\right)$   
(d)  $\frac{dN}{dt} = N\left(\frac{K-N}{K}\right)$ 

**163.** Graph 'b' is represented by the formula:

(a) 
$$\frac{dN}{dt} = rN$$
  
(b)  $\frac{dN}{dt} = N$   
(c)  $\frac{dN}{dt} = rN\left(\frac{K-N}{K}\right)$   
(d)  $\frac{dN}{dt} = N\left(\frac{K-N}{K}\right)$ 

- 164. What is the meaning of K?
  - (a) Intrinsic rate of natural reproduction
  - (c) Carrying capacity
- 165. Plot b is known as
  - (a) Exponential growth curve
  - (c) Verhulst-Pearl Logistic growth curve
- 166. Which of the growth curve is considered a more realistic one?
  - (a) Curve a
  - (c) Both (a) and (b)
- 167. Identify A, B, C and D in this figure.

- (b) Population density at time zero
- (d) Population density after time t
- (b) Logistic growth curve
- (d) Both (b) and (c) (c)
- (b) Curve b
- (d) None of these



- (a) A: Immigration (I), B: Emigration (E), C: Natality (B), D: Mortality (D)
- (b) A: Natality (B), B: immigration (I), C: Mortality (D), D: Emigration (E)
- (c) A: Mortality (D), B: Emigration (E), C: Natality (B), D: Immigration (I)
- (d) A: Mortality (D), B: Natality (B), C: Emigration (E), D: Immigration (I)
- 168. Identify A, B and C in the below figure of age pyramid for human population?



- (a) A: Declining, B: Stable, C: Expanding
- (c) A: Expanding, B: Stable, C: Declining
- 169. Biotic potential refers to
  - (a) Increase of population under optimum conditions.
  - (b) Increase of population under given conditions.
- (b) A: Stable, B: Expanding, C: Declining(d) A: Stable, B: Declining, C: Expanding

- (c) Increase of population under natural conditions.
- (d) Increase of population under climatic conditions.
- **170.** A population has more young individuals compared to the older individuals. What would be the status of the population after some years?
  - (a) It will decline
  - (b) It will stabilize
  - (c) It will increase
  - (d) It will first decline and then stabilize
- 171. What parameters are used for tiger census in our country's national parks and sanctuaries?
  - (a) Pug marks only
  - (b) Pug marks and faecal pellets
  - (c) Faecal pellets only
  - (d) Actual head counts
- 172. Which of the following would necessarily decrease the density of a population in a given habitat?
  - (a) Natality > mortality
- (b) Immigration > emigration
- (c) Mortality and emigration (d) Natality and immigration
- 173. A protozoan reproduces by binary fission. What will be the number of protozoans in its population after six generations? (c) 64 (d) 32
  - (a) 128 (b) 24
- 174. Diapause is
  - (a) Adaptation to terrestrial life.
  - (b) Stage of suspended development seen in unfavourable conditions in many zooplankton species in lakes and ponds.
  - (c) Method of migration from stressful habital to a more hospitable area.
  - (d) It is a type of symbiosis.
- 175. Amensalism is an association between two species where
  - (a) One species is harmed and other is benefited.
  - (b) One species is harmed and other is unaffected.
  - (c) One species is benefited and other is unaffected.
  - (d) Both the species are harmed
- 176. Lichens are the associations of
  - (a) Bacteria and fungus (b) Algae and bacterium
  - (c) Fungus and algae (d) Fungus and virus
- **177.** Which of the following is a partial root parasite?
  - (a) Sandal wood (b) Mistletoe
  - (c) Orobanche (d) Ganoderma
- 178. Which one of the following organisms reproduces sexually only once in its life time?
  - (a) Banana plant
  - (c) Tomato

- (b) Mango
- (d) Eucalyptus

**179.** Which plant is pollinated by the below insect?



(a) Orchid flower(c) Sunflower

- (b) Fig flower(d) Lotus flower
- 180. The below diagram represents which flower?



- (a) Orchid flower
- (c) Sunflower

- (b) Fig flower
- (d) Rose flower
- **181.** The below diagram shows some insects laying eggs in the fruit. Find out the insects from the following.



- (a) Wasp
- (b) Culex

- (b) Female anopheles
- (d) Honeybee

# **ASSERTION AND REASON QUESTIONS**

Read the **assertion** and **reason** carefully to mark the correct option out of the options given below:

- (a) If both the assertion and the reason are true and the reason is a correct explanation of the assertion.
- (b) If both the assertion and reason are true but the reason is not a correct explanation of the assertion.
- (c) If the assertion is true but the reason is false.
- (d) If both the assertion and reason are false.
- 182. Assertion: Ecology is basically concerned with four levels of biological organization, organism, populations, communities and biomes.
   Reason: Ecology is a subject which studies the interactions among organisms and between the organism and its physical environment.
- **183.** Assertion: Temperature is the most ecologically relevant environmental factor. Reason: Temperature affects the kinetics of enzyme.
- 184. Assertion: Many species of small plants (herbs and shrubs) growing in forests are adapted to photosynthesize optimally under very low light conditions.Reason: These plants are constantly overshadowed by tall, canopied trees.
- 185. Assertion: The availability of light on land is closely linked with that of temperature.Reason: Sun is the source for both light and temperature.
- 186. Assertion: Mammals can thrive weather they live in Antarctica or in Sahara desert. Reason: Success of mammals is largely due to their ability to maintain a constant body temperature.
- 187. Assertion: Very small animals are rarely found in Polar regions.Reason: Small animals have a larger surface area relative to their volume; they tend to lose body heat very fast when it is cold outside.
- **188.** Assertion: Mammals from colder climates generally have shorter ears and limbs. Reason: It is to maximize the heat loss.
- 189. Assertion: Predators can help in maintaining species diversity in a community.Reason: It is by reducing the intensity of competition among competing prey species.
- 190. Assertion: Mycorrhizae are association between fungi and roots of higher plants.Reason: Lichens represent mutualistic relationship between fungus and photosynthetic algae or cyanobacteria.
- **191.** Assertion: Parasitism and predation are considered to be negative interactions. **Reason :** Parasites and predators limit the population of their host species.
- **192.** Assertion: Cuscuta lost its chlorophyll and leaves in the course of evolution. Reason: Cuscuta is a total parasite.
- **193.** Assertion: The life cycle of endoparasite is more complex. Reason: Endoparasite show extreme specialisation.

- 194. Assertion: Parasite may reduce population density of its host.Reason: Parasite may reduce survival growth and reproduction of host.
- **195.** Assertion: Kangaroo rat use minimal water for removal of excretory product. Reason: Kangaroo rat has the ability to concentrate urine.
- 196. Assertion: We maintain a constant body temperature to 37°C, in summer when outside temperature is more than our body temperature.Reason: We sweat profusely in summer, which brings down the body temperature.
- **197.** Assertion: Desert lizards have physiological ability to main body temperature. Reason: Desert lizards are warm blooded animals.
- **198.** Assertion: Population ecology, an important area of ecology. Reason: It links ecology to population genetics and evolution.
- **199.** Assertion: Total number is not an easily adoptable measure for population size. **Reason:** If the population is huge and counting is impossible and time consuming.
- 200. Assertion: The size of a population for any species is not a static parameter.Reason: It doesn't depend on food availability, predation pressure and adverse and adverse weather.
- **201. Assertion:** Immigration contributes to decrease in population. **Reason:** Emigration contributes to increase in population.
- **202.** Assertion: Female mosquito is not considered as parasite although it needs our blood for reproduction.

Reason: Parasitism is aimed to obtain either food or shelter.

- 203. Assertion: Photosynthesis is an essential life process of plants.Reason: Small plants growing in forest are adapted to other process than photosynthesis because they are over-shadowed by tall canopied trees.
- **204.** Assertion: Due to change in seasons, temperature also changes.**Reason:** To cope up with this, plants can regulate the internal body temperature.
- **205.** Assertion: A particular species in nature can achieve exponential growth. Reason: Availability of unlimited resources makes it possible.

# **PREVIOUS YEAR QUESTIONS**

1. Which one of the following is most appropriately defined?

[AIPMT MAINS 2010]

- (a) Host is an organism which provides food to another organism.
- (b) Amensalism is a relationship in which one species is benefited whereas the other is unaffected.
- (c) Predator is an organism that catches and kills other organism for food.
- (d) Parasite is an organism which always lives inside the body of other organism and may kill it.

- 2. Study the four statements (1 to 4) given below and select the two correct ones out of them.
  - (A) A lion eating a deer and a sparrow feeding on grain are ecologically similar in being consumers.
  - (B) Predator star fish Pisaster helps in maintaining species diversity of some invertebrates.
  - (C) Predators ultimately lead to the extinction of prey species.
  - (D) Production of chemicals such as nicotine, strychnine by the plants are metabolic disorders. The two correct statements are
    - [AIPMT PRE 2010]
  - (a) (B) and (C) (b) (C) and (D) (c) (A) and (D) (d) (A) and (B)
- **3.** The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do A, B and C represent respectively?



<sup>[</sup>AIPMT PRE 2010]

[AIPMT PRE 2010]

- (a) A: Conformer, B: Regulator, C: Partial regulator
- (b) A: Regulator, B: Partial, C: Conformer regulator
- (c) A: Partial, B: Regulator, C: Conformer regulator
- (d) A: Regulator, B: Conformer, C: Partial regulator
- **4.** Which two of the following changes (1 to 4) usually tend to occur in the plain dwellers when they move to high altitudes (3500 m or more)?
  - (A) Increase in red blood cell size(C) Increased breathing rate
- (B) Increase in red blood cell production
- (D) Increase in thrombocyte count

The changes occurring are

(a) (B) and (C) (b) (C) and (D) (c) (A) and (D) (d) (A) and (B)

5. Which one of the following is one of the characteristics of a biological community?

(a) Stratification (b) Natality (c) Mortality (d) Sex-ratio

6. Consider the following statements (A to D) each with one or two blanks.

[AIPMT MAINS 2011]

- (A) Bears go into <u>(a)</u> during winter to <u>(b)</u> cold weather.
- (B) A conical age pyramid with a broad base represents  $\_(c)$  human population.
- (C) A wasp pollinating a fig flower is an example of <u>(d)</u>.
- (D) An area with high levels of species richness is known as <u>(e)</u>.

Which one of the following options, gives the correct fill ups for the respective blank numbers from (a) to (e) in the statements?

- (a) (c) stable (d) commensalism, (e) marsh
- (b) (a) aestivation, (b) escape, (c) stable, (d) mutualism
- (c) (c) expanding, (d) commensalism, (e) biodiversity park
- (d) (a) hibernation, (b) escape, (c) expanding (e) hot spot
- 7. The logistic population growth is expressed by the equation

[AIPMT MAINS 2011] (a)  $dt / dN = Nr\left(\frac{K - N}{K}\right)$ (b)  $dN/dt = rN\left(\frac{K - N}{K}\right)$ (c) dN/dt = rN(d)  $dN/dt = rN\left(\frac{N - K}{N}\right)$ 

**8.** Consider the following four conditions (A-D) and select the correct pair of them as adaptation to environment in desert lizards.

#### The conditions:

- (A) Burrowing in soil to escape high temperature.
- (B) Losing heat rapidly from the body during high temperature.
- (C) Bask in sun when temperature is low.
- (D) Insulating body due to thick fatty dermis.

and (D) (c) (A) and (B)

#### [AIPMT PRE 2011] (d) (C) and (D)

9. What type of human population is represented by the following age pyramid?



[AIPMT PRE 2011]

- (a) Stable population
- (b) Declining population
- (c) Expanding population
- (d) Vanishing population

10. Which one of the following is categorized as a parasite in true sense?

[AIPMT PRE 2011]

- (a) Human foetus developing inside the uterus draws nourishment from the mother.
- (b) Head louse living on the human scalp as well as laying eggs on human hair.
- (c) The cuckoo (koel) lays its eggs in crew's nest.
- (d) The female Anopheles bites and sucks blood from humans.
- 11. Cuscuta is an example of
  - (a) Brood parasitism
  - (c) Endoparasitism

- (b) Predation
- (d) Ectoparasitism

#### [AIPMT MAINS 2012]

12. People who have migrated from the planes to an area adjoining Rohtang Pass about six months back

[AIPMT PRE 2012]

- (a) Have more RBCs and their haemoglobin has a lower binding affinity to  $O_{2}$ .
- (b) Are not physically fit to play games like football.
- (c) Suffer from altitude sickness with symptoms like nausea, fatigue, etc.
- (d) Have the usual RBC count but then haemoglobin has very high binding affinity to O<sub>3</sub>.
- **13.** A biologist studied the population of eats in a barn. He found that the average natality was 250, average mortality is 240, immigration is 20 and emigration to be 30. The net increase in population is
  - (b) 15 (a) 10 (c) 05 (d) Zero

**14.** A sedentary sea anemone gets attached to the shell lining of hermit crab. The association is [AIPMT 2013]

- (a) Ectoparasitism (b) Symbiosis (c) Commensalism (d) Amensalism
- **15.** Just as a person moving from Delhi to Shimla to escape the heat for the duration of hot summer, thousands of migratory birds from Siberia and other extremely cold northern regions move to
  - (a) Western Ghat
  - (b) Meghalaya
  - (c) Corbett National Park
  - (d) Keolado National Park
- Leaves become modified into spines in
  - (a) Opuntia (b) Pea (d) Skin cotton
  - (c) Onion
- 17. The following graph depicts changes in two populations (A and B) of herbivore in a grassy field. A possible reason for these changes is that
  - Number of organisms В Δ Time

[AIPMT 2015]

- (a) Both plant populations in this habitat is decreased.
- (b) Population B compound is more successful for food than population A.
- (c) Population A produces more offspring than population B.
- (d) Population A consumed the members of population B.



[AIPMT 2014]

[AIPMT 2015]

[AIPMT 2013]

(c) Population

- 18. In which of the following interactions both partners are adversely affected? [RE-AIPMT 2015]
  - (a) Predation
  - (c) Mutualism (d) Competition

**19.** An association of individuals of different species living in the same habitat and having functional interactions is:

- (a) Biotic community
- (b) Ecosystem

(b) Parasitism

- (d) Ecological niche
- 20. Gause's principle of competitive exclusion states that:
  - (a) More abundant species will exclude the less abundant species through competition
  - (b) Competition for the same resources excludes species having different food preferences
  - (c) No two species can occupy the same niche indefinitely for the same limiting resources
  - (d) Larger organisms exclude smaller ones through competition
- 21. When does the growth rate of a population following the logistic model equal zero? The logistic model is given as dN/dt = rN(1-N/K): [NEET I, 2016]
  - (a) When N/K is exactly one
  - (b) When N nears the carrying capacity of the habitat
  - (c) When N/K equals zero

(a) Chemosynthetic bacteria

- (d) When dearth rate is greater than birth rate
- 22. It is much easier for a small animal to run uphill than for animal, because: [NEET I, 2016]
  - (a) It is easier to carry a small body weight
  - (b) Smaller animals have a higher metabolic rate
  - (c) Small animals have a lower O<sub>2</sub> requirement
  - (d) The efficiency of muscles in large animals is less than in the small animals
- 23. The primary producers of the deep-sea hydrothermal vent ecosystem are

[NEET - II, 2016] (b) Blue-green algae

(c) Coral reefs (d) Green algae

#### **24.** Which of the following is correct for reselected species? [NEET - II, 2016]

- (a) Large number of progeny with large size
- (b) Small number of progeny with small size
- (c) Small number of progeny with large size
- (d) Large number of progeny with small size

# **25.** If '+' sign is assigned to beneficial interaction, '-' sign to detrimental and '0' sign to neutral interaction, then the population interaction represent by '+' '-' refers to [NEET - II, 2016]

- (a) Amensalism (b) Commensalism
- (c) Parasitism (d) Mutualism

#### **26.** The principle of competitive exclusion was stated by

- (a) G. F. Gause (b) MacArthur
- (c) Verhulst and Pearl (d) C. Darwin

[RE-AIPMT 2015]

[NEET - I, 2016]

[NEET - II, 2016]

# NCERT EXEMPLAR QUESTIONS

#### 1. Autecology is the

- (a) Relation of a population to its environment
- (b) Relation of an individual to its environment
- (c) Relation of a community to its environment
- (d) Relation of a biome to its environment
- **2.** Ecotone is
  - (a) A polluted area
  - (b) The bottom of a lake
  - (c) A zone of transition between two communities
  - (d) A zone of developing community
- 3. Biosphere is
  - (a) A component in the ecosystem
  - (b) Composed of the plants present in the soil
  - (c) Life in the outer space
  - (d) Composed of all living organisms present on earth which interacts with the physical environment.
- 4. Ecological niche is
  - (a) The surface area of the ocean.
  - (b) An ecologically adapted zone.
  - (c) The physical position and functional role of a species within the community.
  - (d) Formed of all plants and animals living at the bottom of a lake.
- 5. According to Allen's Rule, the mammals from colder climates have
  - (a) Shorter ears and longer limbs (b) Longer ears and shorter limbs
  - (c) Longer ears and longer limbs (d) Shorter ears and shorter limbs
- 6. Salt concentration (Salinity) of the sea measured in parts per thousand is
  (a) 10-15
  (b) 30-70
  (c) 0-5
  (d) 30-35

Formation of tropical forests needs mean annual temperature and mean annual precipitation as
 (a) 18-25°C and 150-400 cm
 (b) 5-15°C and 50-100 cm

- (c) 30-50°C and 100-150 cm (d) 5-15°C and 100-200 cm
- 8. Which of the following forest plants controls the light conditions at the ground?
  - (a) Lianas and climbers (b) Shrubs
  - (c) Tall trees (d) Herbs
- **9.** What will happen to a well growing herbaceous plant in the forest if it is transplanted outside the forest in a park?
  - (a) It will grow normally.
  - (b) It will grow well because it is planted in the same locality.
  - (c) It may not survive because of the change in its micro climate.
  - (d) It grows very well because the plant gets more sunlight.

10.	If a population of 50 pa would be the growth ra (a) 50 per hour	aramoecium present in a te of that population? (b) 200 per hour	poc (c)	l increases to 150 at 5 per hour	fter a	n hour, then what 100 per hour
11.	What would be the per tion mentioned in the p (a) 100	cent growth or birth rat previous question (Quest (b) 200	te pe tion (c)	r individual per hou 1O)? 50	r for (d)	the same popula- 150
12.	A population has more the status of the popula (a) It will decline (c) It will increase	e young individuals com ution after some years?	pare (b) (d)	d to the older indivi It will stabilize It will first decline	dual and	s. What would be then stabilize
13.	<ul><li>What parameters are us</li><li>(a) Pug marks only</li><li>(c) Faecal pellets only</li></ul>	sed for the tiger census i	n ou (b) (d)	r country's national p Pug marks and fae Actual head counts	parks cal p	s and sanctuaries? ellets
14.	<ul><li>Which of the followin habitat?</li><li>(a) Natality &gt; mortalit</li><li>(c) Mortality and emig</li></ul>	g would necessarily de y gration	crea (b) (d)	se the density of a Immigration > emi Natality and immig	popu grati gratio	ulation in a given ion on
15.	A protozoan reproduce lation after six generati (a) 128	s by binary fission. What ions? (b) 24	t wi (c)	ll be the number of p	oroto (d)	zoans in its popu- 32
16.	In 2005, for each of th died during the year. U predicted as (a) 25 million	the 14 million people pre- sing the exponential equ (b) 17 million	esent iatio (c)	in a country, 0.028 n, the number of peo 20 million	wer ople	re born and 0.008 present in 2015 is 18 million
17.	Amensalism is an asso (a) One species is harr (b) One species is harr (c) One species is ben (d) Both the species an	ciation between two spe med and other is benefitt med and other is unaffec efitted and other is unaff re harmed.	cies ted. ted. ècte	where d.		
18.	Lichens are the associa (a) Bacteria and fungu (c) Fungus and algae	itions of is	(b) (d)	Algae and bacteriu Fungus and virus	m	
19.	Which of the following (a) Sandal wood	g is a partial root parasite (b) Mistletoe	e? (c)	Orobanche	(d)	Ganoderma
20.	<ul><li>Which one of the follo</li><li>(a) Banana plant</li><li>(c) Tomato</li></ul>	wing organisms reprodu	ces s (b) (d)	sexually only once in Mango Eucalyptus	n its	life time?

Answer Keys												
Practice Questions												
1. (c)	2. (b)	3. (b)	4. (d)	5. (c)	6. (c)	7. (d)	8. (d)	9. (d)	10. (d)			
11. (d)	12. (b)	13. (c)	14. (c)	15. (c)	16. (d)	17. (b)	18. (c)	19. (a)	20. (b)			
21. (d)	22. (b)	23. (c)	24. (b)	25. (c)	26. (a)	27. (b)	28. (c)	29. (a)	30. (b)			
31. (d)	32. (c)	33. (b)	34. (d)	35. (b)	36. (d)	37. (c)	38. (b)	39. (c)	40. (d)			
41. (d)	42. (d)	43. (b)	44. (c)	45. (c)	46. (b)	47. (d)	48. (c)	49. (a)	50. (c)			
51. (b)	52. (a)	53. (b)	54. (a)	55. (c)	56. (c)	57. (d)	58. (b)	59. (c)	60. (d)			
61. (d)	62. (c)	63. (d)	64. (c)	65. (b)	66. (d)	67. (c)	68. (b)	69. (b)	70. (a)			
71. (b)	72. (b)	73. (a)	74. (d)	75. (d)	76. (b)	77. (c)	78. (d)	79. (b)	80. (a)			
81. (d)	82. (d)	83. (c)	84. (d)	85. (c)	86. (b)	87. (c)	88. (a)	89. (d)	90. (d)			
91. (b)	92. (b)	93. (d)	94. (c)	95. (c)	96. (c)	97. (c)	98. (b)	99. (c)	100. (b)			
101. (d)	102. (b)	103. (b)	104. (a)	105. (c)	106. (d)	107. (b)	108. (a)	109. (c)	110. (b)			
111. (c)	112. (b)	113. (a)	114. (d)	115. (c)	116. (d)	117. (b)	118. (d)	119. (c)	120. (a)			
121. (c)	122. (b)	123. (b)	124. (d)	125. (b)	126. (d)	127. (a)	128. (c)	129. (d)	130. (d)			
131. (b)	132. (b)	133. (c)	134. (d)	135. (d)	136. (d)	137. (b)	138. (d)	139. (b)	140. (d)			
141. (a)	142. (d)	143. (a)	144. (d)	145. (d)	146. (b)	147. (b)	148. (a)	149. (c)	150. (d)			
151. (d)	152. (c)	153. (c)	154. (d)	155. (d)	156. (d)	157. (d)	158. (a)	159. (d)	160. (c)			
161. (d)	162. (a)	163. (c)	164. (c)	165. (d)	166. (b)	167. (a)	168. (c)	169. (a)	170. (c)			
171. (b)	172. (c)	173. (c)	174. (b)	175. (c)	176. (c)	177. (a)	178. (d)	179. (a)	180. (b)			
181. (a)												

## Assertion and Reason Questions

182. (b) 183. (b) 184. (a) 185. (a) 186. (a) 187. (a) 188. (c) 189. (a) 190. (b) 191. (c) 192. (a) 193. (a) 194. (a) 195. (a) 196. (a) 197. (d) 198. (a) 199. (a) 200. (c) 201 (d) 202. (a) 203. (b) 204. (a) 205. (b)

#### **Previous Year Questions**

1. (c)	2. (d)	3. (d)	4. (a)	5. (a)	6. (d)	7. (b)	8. (a)	9. (b)	10. (b)
11. (d)	12. (a)	13. (d)	14. (b)	15. (d)	16. (a)	17. (b)	18. (d)	19. (a)	20. (c)
21. (a)	22. (b)	23. (a)	24. (d)	25. (c)	26. (a)				

### NCERT Exemplar Questions

1. (b)	2. (c)	3. (d)	4. (c)	5. (d)	6. (d)	7. (a)	8. (c)	9. (c)	10. (d)
11. (b)	12. (c)	13. (b)	14. (c)	15. (c)	16. (b)	17. (b)	18. (c)	19. (a)	20. (a)