



## BIOLOGY

### BOOKS - GR BATHLA & SONS BIOLOGY (HINGLISH)

#### POPULATION : INTERACTIONS AND ATTRIBUTES

#### Multiple Choice Questions

1. Individuals of the same species inhabiting a particular locality constitute:

- A. Flora
- B. Fauna
- C. Population
- D. Community

**Answer: C**



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2. Group of organisms of the same species in a given area at a particular time is called:

- A. genera
- B. ecosystem
- C. community
- D. population

**Answer: D**



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3. Geometric representation of age structure is a characteristic of :

- A. Landscape
- B. Ecosystem

C. Population

D. Biotic community

**Answer: C**



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4. The abundance of a species population within its habitat is called :

A. niche density

B. absolute density

C. relative density

D. regional density

**Answer: A**



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5. What is the most important factor for the success of animal population

A. Natality

B. Adaptability

C. Interspecies activity

D. Unlimited food supply

**Answer: B**



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6. Which of the following factors is not concerned with population regulation in animals?

A. Hibernation

B. Territorialism

C. Hierarchy contest

D. Threatening displays



**Answer: A**



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7. A group of individuals of the same age within a population is called :

- A. Cline
- B. Clone
- C. Cohort
- D. Community

**Answer: C**



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8. Populations of individuals belonging to same genetic stock differing markedly in vegetative characteristics are :

A. ecads

B. flora

C. ecotype

D. ecotones

**Answer: A**



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**9. Genetically adapted population to a particular habitat is called:**

A. biome

B. niche

C. ecotone

D. ecotype

**Answer: D**



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10. Most interacting populations are :

- A. parasitic
- B. symbiotic
- C. coevolved
- D. mutualistic

**Answer: C**



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11. In a stable population, predation:

- A. is harmful
- B. is beneficial
- C. depletes the prey

D. increases the number of predators

**Answer: C**



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**12.** The disease normally present in the population is:

A. endemic

B. epidemic

C. endothermic

D. endocrinology

**Answer: A**



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**13.** One who studies human population trends and changes is called :

A. Statistician

B. Demographer

C. cartographer

D. Human ecologist

**Answer: B**



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**14.** July 11 is observed as

A. World AIDS Day

B. World Population Day

C. World Population Day

D. World Science and Technology Day

**Answer: B**



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15. Association of animals belonging to different species, where both partners are benefited, is called:

- A. colony
- B. sympathy
- C. mutualism
- D. commensalism

**Answer: C**



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16. Different types of interactions and the nature of interactions between species (A) and (B) are given in column I and II respectively. Choose the

correct answer from the answer key where they are matched:

Column I		Column II	
A	Mutualism	p	Beneficial to A no effect for B
B	Competition	q	Beneficial to both A and B
C	Parasitism	r	Beneficial to A and inhibitory for B
D	Predation	s	Beneficial to A and harmful to B
E	Commensalism	t	Harmful to both A and B

A. A = t, B = s, C = p, D = q, E = r

B. A = p, B = r, C = q, D = t, E = s

C. A = r, B = t, C = s, D = q, E = p

D. A = r, B = p, C = q, D = s, E = t

**Answer: C**



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17. Which of the following statements regarding species interdependence are true?

1. An association of two species where one is benefited and other remains unaffected is called mutualism.
2. An interspecific association where both partners derive from each other is called commensalism.
3. A direct food relation between two species of animals in which one animals kills and feeds on another is referred as predation.
4. A relationship between two species of organism where both the partners are benefited from each other is called symbiosis.

A. 1 and 4 only

B. 3 and 4 only

C. 1 and 3 only

D. 2 and 3 only

**Answer: B**



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18. Rhizobium bacterium and root nodules of pea (laguminous) plant is an example of

- A. symbiosis
- B. predation
- C. scavenging
- D. parasitism

**Answer: A**



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19. Symbiosis means:

- A. living together without harm
- B. living together with benefit to one partner
- C. living together with benefit to both partners
- D. living apart with benefit to one and harm to another partner

**Answer: C**



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**20. Symbiosis is shown by :**

A. Cuscuta

B. E. coli

C. Rafflesia

D. Monotropa

**Answer: B**



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**21. Rhizosphere microflora exhibits:**

A. Symbiosis

B. Parasitism

C. Commensalism

D. Space parasitism

**Answer: A**



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**22. Zoochlorellae and zooxanthallae present in Hydra are**

A. Predation

B. Symbiosis

C. Food chain

D. Commensalism

**Answer: B**



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23. The nature of interrelationship between corals and zooxanthellae is called :

- A. amensalism
- B. proto cooperation
- C. cleaning symbiosis
- D. physiological symbiosis

**Answer: D**



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24. The association between two species in which both benefit :

- A. Commensalism
- B. Proto cooperation
- C. Mutualism
- D. All of these

**Answer: C**



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**25.** A free-living nitrogen-fixing cyanobacterium which can also form symbiotic association with the water fern *Azolla* is :

A. *Nostoc*

B. *Tolypothrix*

C. *Chlorella*

D. *Anabaena*

**Answer: D**



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**26.** Lichens show:

A. mutualism

B. parasitism

C. saprophytism

D. commensalism

**Answer: A**



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27. Which one of the following is a matching pair of certain organism(s) and the kind of association ?

A. Shark and Sucker fish - Commensalism

B. Algae and Fungi in lichens - Mutualism

C. Orchids growing on trees - Parasitism

D. Cuscuta (dodder) growing on other flowering plants - Epiphytism

**Answer: B**

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28. There exists a close associatin between the algae and the fungus within a lichen. The fungus

- A. provides food for the alga
- B. releases oxygen for the alga
- C. fixes the atmospheric nitrogen for the alga
- D. provides protection, anchorage and absorpion

**Answer: D**

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29. Lichens are well known combination of an alga and a fungus where fungus has

- A. a parasitic relationship with the alga

- B. a symbiotic relationship with the alga
- C. an epiphytic relationship with the alga
- D. a saprophytic relationship with the alga

**Answer: B**



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**30.** Helotism is a term used for the symbiosis of

- A. Algae and Bacteria
- B. Pinus and Fungi
- C. Algae and Fungi
- D. Alage and Cycas

**Answer: C**



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31. Which of the following takes part in symbiosis of lichen ?

A. Algae - Fungi

B. Algae -Algae

C. Fungi - Fungi

D. Algae - Gymnosperm

**Answer: A**



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32. Select the correct match :

A. Symbiosis - Lichens

B. Autotrophs - Monerans

C. Phytoplankton - Ptozoa

D. Holozoic nutrition - Fungi

**Answer: A**



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**33.** Which one of the following pairs is correctly matched ?

- A. Rhizobium - Parasite in the roots of leguminous plants
- B. Mycorrhizae - Mineral uptake from soil
- C. Yeast - Production of biogas
- D. Myxomycetes - The disease ringworm

**Answer: B**



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**34.** Mucorrhiza is :

- A. as association of algae with fungi

- B. a fungus parasiting root system of higher plants
- C. a symbiotic association of plant roots and certain fungi
- D. an association of Rhizobium with roots of leguminous plants

**Answer: C**



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**35. Mycorrhiza helps in :**

- A. disease resistance
- B. disease prevention
- C. food manufacturing
- D. nutrition uptaking

**Answer: D**



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36. VAM represents

- A. symbiotic fungi
- B. saprophytic fungi
- C. symbiotic bacteria
- D. saprophytic bacteria

**Answer: A**



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37. The association between the wood eating termites and cellulose digesting protozoans lodged in their gut represents :

- A. mutualism
- B. parasitism
- C. commensalism
- D. proto cooperation

**Answer: A**

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**38.** Match the following with correct combination :

Column I		Column II	
A	Mutualism	1	Tiger and Deer
B	Commensalism	2	<i>Cuscuta</i> on <i>Cissus</i>
C	Parasitism	3	Sucker fish and Shark
D	Predation	4	Crab and Sea anemone

A. A = 1, B = 2, C = 3, D = 4

B. A = 4, B = 3, C = 2, D = 1

C. A = 1, B = 3, C = 2, D = 4

D. A = 2, B = 3, C = 3, D = 1

**Answer: B**

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39. Match the following and choose the correct combination from the options given below

Column I (Population interaction)		Column II (Examples)	
A	Mutualism	1	Ticks on dogs
B	Commensalism	2	<i>Balanus</i> and <i>Chthamalus</i>
C	Parasitism	3	Sparrow and any seed
D	Competition	4	Epiphyte on a mango branch
E	Predation	5	Orchid <i>Ophrys</i> and bee

A. A=1, B=5, C=4, D=3, E=2

B. A=5, B=4, C=1, D=2, E=3

C. A=2, B=1, C=5, D=4, E=3

D. A=3, B=2, C=1, D=5, E=4

**Answer: B**



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**40.** A bird enters the mouth of a crocodile and feeds on parasitic leeches. The bird gets food and the crocodile gets rid of blood sucking leeches. Both the partners can also live independently. Such an association is :

- A. amensalism
- B. mutualism
- C. commensalism
- D. protocooperation

**Answer: D**



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**41.** Territoriality occurs as a result of :

- A. predation
- B. competition
- C. cooperation

D. parasitism

**Answer: B**



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**42.** Two species compete to each other even in presence of large quantity of food. The relationship is :

A. antagonism

B. mutualism

C. isolation

D. none of these

**Answer: B**



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43. The effect of intraspecific competition on niches to make them:

- A. larger
- B. smaller
- C. change location
- D. more triangular

**Answer: B**



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44. "Complete competitors cannot coexist" is true for :

- A. Primary succession
- B. Secondary succession
- C. Competitive exclusion
- D. Character displacement

**Answer: A**



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**45.** If the stronger partner is benefited and the weak partner is damaged, it is known as :

A. redation

B. allelopathy

C. symbiosis

D. commensalism

**Answer: A**



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**46.** Killing and consuming one's own kind or intraspecific predation is called :

- A. Parasitism
- B. Cannibalism
- C. Autophagy
- D. None of these

**Answer: B**

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**47. Select an animal which may be a prey and also a predator :**

- A. Frog
- B. Man
- C. Rabbit
- D. Lion

**Answer: A**

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48. In biotic community, which one of the following is a protective device ?

- A. Mimicry
- B. Symbiosis
- C. Commensalism
- D. Parasitism

**Answer: A**



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49. Some organisms resemble other organisms and thus escape from enemies. This phenomenon is known as :

- A. analogy
- B. mimicry

C. homology

D. variation

**Answer: B**



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**50.** Resemblance of one organism to another for protection and hiding:

A. Mimicry

B. Predation

C. Adaptation

D. Camouflage

**Answer: A**



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51. Mimicry is :

- A. protective adaption
- B. structural adaptation
- C. animal association adaptation
- D. regulated by environmental factors

**Answer: A**



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52. Which of the following insects mimic a dry leaf?

- A. Kalima
- B. Carausius
- C. Phyllium
- D. None of these

**Answer: A**



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**53. Both mimicry and model are harmful (unpalatable) of the predator :**

- A. Batesian mimicry
- B. Warning mimicry
- C. Mullerian mimicry
- D. Concealing mimicry

**Answer: C**



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**54. Assertion (A) : Leaf butterfly and stick insect show mimicry to dodge their enemies :**

Reason (R) : Mimicry is a method to acquire body colour blending with the surrounding.

- A. Both (A) and (R) are true and (R) is the correct explanation of (A)
- B. Both (A) and (R) are true but (R) is not the correct explanation of (A)
- C. (A) is true statement but (R) is false
- D. Both (A) and (R) are false

**Answer: A**



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**55.** Praying mantis is a good example of :

- A. Camouflage
- B. Social insect
- C. Mullerian mimicry
- D. Warning coloration



**Answer: A**



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**56.** Animals have the innate ability to escape from predation. Examples for the same are given below. Select the incorrect example.

- A. Melanism in moths
- B. Poison fangs in snakes
- C. Colour change in chameleon
- D. Enlargement of body size by swallowing air in puffer fish

**Answer: D**



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57. Match the Column I with Column II and select the correct option :

Column I		Column II	
A	Camouflage	1	<i>Dendrobates pumilio</i>
B	Batesian mimicry	2	Horse-shoe bat
C	Warning coloration	3	Monarch butterfly
D	Echolocation	4	Praying mantis

A. A=2, B=4, C=3, D=1

B. A=3, B=4, C=2, D=1

C. A=4, B=1, C=3, D=2

D. A=3, B=3, C=1, D=2

**Answer: D**



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

A. Predator is an organism that catches and kills other organism for food

B. Host is an organism which provides food to another organism

C. Amensalism is a relationship in which one species is benefited whereas the other unaffected

D. Parasite is an organism which always lives inside the body of other organism and may kill it

**Answer: A**



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**59.** The relationship between two organisms in which one obtains some benefit at the expense of the other is called :

A. symbiosis

B. scavenging

C. parasitism

D. commensalism

**Answer: C**



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**60.** A true parasite is one which :

A. is completely attached to the host

B. is not completely dependent on host

C. complete its life cycle in different hosts

D. wholly completes its life cycle in one host

**Answer: A**



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61. A parasite that lives within a plant tissue is called as

- A. epiphyte
- B. endophyte
- C. ectophyte
- D. none of these

**Answer: B**



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62. Collateral host means:

- A. host in which life-cycle is completed
- B. grass host
- C. infected host
- D. none of the above

**Answer: C**



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**63.** The organism which carries a disease from one organism to another is called:

- A. host in which life-cycle is completed
- B. vector
- C. inoculum
- D. sterilization

**Answer: B**



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**64.** Which of the following is a partial root parasite ?

A. Sandal wood

B. Mistletoe

C. Orobanche

D. Ganoderma

**Answer: A**



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**65.** Cuscuta is an example of

A. partial root parasite

B. partial stem parasite

C. complete stem parasite

D. complete root parasite

**Answer: C**



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66. Which of the following causes parasitic castration of crab

- A. Fasciola
- B. Nereis
- C. Palaemon
- D. Sacculina

**Answer: D**



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67. Obligate parasites are those organisms which :

- A. live only on living host
- B. live only on dead and decaying organic matter
- C. are essentially parasites but also can become saprophytes



D. are essentially saprophytes but also can become parasites

**Answer: A**



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**68.** Parasites capable of living without a host are called

A. facultative

B. permanent

C. obligate

D. none of these

**Answer: A**



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**69.** Which one of the following is categorised as a parasite in true sense

- A. The cuckoo (Koel) lays its eggs in crow's nest
- B. The female Anopheles bites and sucks blood from humans
- C. Human foetus developing inside the uterus draws nourishment from the mother
- D. Head louse living on the human scalp as well as laying eggs on the human hair

**Answer: D**



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70. When the organisms live together in such a manner that one organism is benefited while others have no effects, it is termed as :

- A. parasitism
- B. mutualism
- C. tautomerism

D. commensalism

**Answer: D**



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71. An interaction between two individuals where one is benefitted while the other is neither benefitted nor harmed is called as

A. predation

B. symbiosis

C. commensalism

D. parasitism

**Answer: C**



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72. An interaction between two individuals where one is benefitted while the other is neither benefitted nor harmed is called as

- A. Symbiosis
- B. Mutualism
- C. Succession
- D. Commensalism

**Answer: D**



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73. Small fish get stuck near the bottom of a shark and derives its nutrition from it. This kind of association is called as :

- A. predation
- B. parasitism
- C. commensalism

D. symbiosis

**Answer: C**



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**74.** A sucker fish (Remora) on a shark would exemplify:

A. Parasitism

B. Mutualism

C. Neutralism

D. Commensalism

**Answer: D**



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**75.** In commensalism:

- A. both partners are harmed
- B. both partners are benefited
- C. weaker partner is benefited
- D. none of the partners is benefited

**Answer: C**

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**76.** Study the following statements about Adamsia and select your answer from the answer codes:

1. It is a parasite
2. It is an example of commensalisms
3. It is called sea anemone
4. It is called hermit crab

Answer codes :

- A. 1 and 2 are correct

B. 2 and 3 are correct

C. 3 and 4 are correct

D. 1 and 4 are correct

**Answer: B**



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77. Sea anemone belongs to class

A. Amensalism

B. Ectoparasitism

C. Symbiosis

D. Commensalism

**Answer: C**



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78. Bacteria living in human large intestine feeding on undigested food without harming the host show :

- A. commensalism
- B. symbiosis
- C. proto cooperation
- D. mutualism

**Answer: A**



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79. Association between barnacle and Limulus is :

- A. Symbiosis
- B. Antagonium
- C. Ectocommensalism
- D. Endocommensalism



**Answer: C**



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**80.** Barnacles growing on the back of whale is an example for :

- A. mutualism
- B. commensalism
- C. parasitism
- D. amensalism

**Answer: B**



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**81.** The phenomenon in which one species inhibits the growth another species is called :

A. predation

B. amensalism

C. parasitism

D. commensalism

**Answer: B**



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**82.** The relationship between two species in which one is inhibited or harmed by the presence of the other is :

A. mutualism

B. symbiosis

C. amensalism

D. commensalism

**Answer: C**

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83. Amensalism is an association between two species where

- A. one species is benefited and other is unaffected
- B. one species is harmed and other is unaffected
- C. one species is harmed and other is benefited
- D. both the species are harmed

**Answer: A**

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84. When in two populations of organisms only one is harmful to the other, the relationship is called :

- A. symbiosis
- B. mutualism

C. amensalism

D. commensalism

**Answer: C**



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**85.** A compound produced by an organism which inhibits the growth of another organisms is :

A. antiseptic

B. antibiotic

C. antiallergic

D. anticoagulant

**Answer: B**



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**86.** Which of the following pairs are correctly matched ?

1. Amensalism - A population is inhibited whereas the other populations remain unaffected.
2. Predation - A population uses the other as its food.
3. Mutualism - Interaction favourable to both and obligatory.

Select the correct answer using the codes given below : Answer codes :

A. 1, 2 and 3

B. 1 and 2

C. 1 and 3

D. 2 and 3

**Answer: A**



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**87.** The relationship between a cow and a snake is called :

A. Neutralism

B. Symbiosis

C. Competition

D. Proto cooperation

**Answer: A**



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**88.** Example of negative interspecific relationship is :

A. Antibiosis

B. Symbiosis

C. Mutualism

D. Commensalism

**Answer: A**



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89. The world's problem No. 1 today is :

- A. Pollution
- B. Natural calamities
- C. Nuclear proliferation
- D. Population explosion

**Answer: D**



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90. The number of births per thousand people in the population is expressed as :

- A. Growth rate
- B. Conception rate
- C. Crude birth rate
- D. Reproduction rate

**Answer: C**



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**91.** If a population of 50 Paramecium present in a pool increases to 150 after an hour, what would be the growth rate of population ?

- A. 5 per hour
- B. 50 per hour
- C. 200 per hour
- D. 100 per hour

**Answer: D**



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**92.** If a population of 50 Paramecium present in a pool increases to 150 after an hour, what would be the growth rate of population ?



- A. 50
- B. 100
- C. 200
- D. 150

**Answer: C**



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**93.** 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 stabilise
- C. It will increase
- D. It will first decline and then stabilise

**Answer: C**



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**94.** The population of an area tends to decrease by :

- A. Mortality
- B. Immigration
- C. Natality
- D. All of these

**Answer: A**



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**95.** The permanent decrease in population number occurs the to :

- A. migration

B. natality

C. emigration

D. mortality

**Answer: D**



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**96.** The most important factor which determined the increase in human population in India during the 20th century :

A. Natality

B. Mortality

C. Immigration

D. Emigration

**Answer: A**



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97. Natality is the characteristic of population which means :

- A. the total number of individuals present per unit area at a given time
- B. the increase in number of individuals in a population under given environmental conditions
- C. loss of individuals due to death in a populations under given environmental conditions
- D. the movement of individuals into and out of population

**Answer: B**



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98. The inherent maximum capacity of an organism to reproduce or increase in number is called as :

- A. ecology
- B. ecosystem
- C. population
- D. biotic potential

**Answer: D**

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**99.** The unrestricted reproductive capacity of a population is called is :

- A. Ultimate level
- B. Proximate level
- C. Biotic potential
- D. Carrying capacity

**Answer: C**

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**100.** The measure of maximum rate of reproduction under optimal condition is known as :

- A. Population growth
- B. Biotic potential
- C. Carrying capacity
- D. None of these

**Answer: B**



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**101.** Maximum survival and reproductive capacity shown by a population under optimal environmental conditions is called:

- A. Carrying capacity
- B. Biotic potential

C. Natality

D. Vitality

**Answer: B**



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**102.** Which of the following is limited by the carrying capacity for a population growing logistically ?

A. Natality

B. Biotic potential

C. Environmental resistance

D. All of the above

**Answer: B**



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**103.** The physiological capacity to produce offsprings is called:

- A. mortality
- B. birth rate
- C. biotic potential
- D. crude natality

**Answer: C**



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**104.** Biotic potential or potential natality means :

- A. number of organisms in a biome
- B. potential of organism in biome
- C. number of maximum number in a population
- D. natural increase of population under ideal/optimum condition.



**Answer: D**



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**105.** 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 other force opposing is called :

- A. Fecundity
- B. Mortality
- C. Biotic potential
- D. Environmental resistance

**Answer: D**



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**106.** Which of the following is a measure of environmental resources that can sustain a population over a long period of time ?

- A. Biotic potential
- B. Reproductive potential
- C. Carrying capacity
- D. None of these

**Answer: C**



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**107.** The growth rate of population stabilizes after :

- A. stationary phase
- B. logarithmic phase
- C. carrying capacity
- D. negative acceleration phase

**Answer: C**



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**108.** Carrying capacity of a population is determined by :

- A. predation
- B. natality rate
- C. mortality rate
- D. limiting resources

**Answer: D**



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**109.** When population reaches carrying capacity :

- A. Mortality rate = Birth rate

B. Mortality rate  $>$  Birth rate

C. Mortality rate  $<$  Birth rate

D. None of the above

**Answer: A**



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**110.** In a graph of population, on x-axis time and on y-axis population is plotted. A parallel line to x-axis shows:

A. Natality equal to mortality

B. Natality decreases mortality increases

C. Natality constant mortality increases

D. Natality increases mortality decrease

**Answer: A**



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111. If  $N =$  population density at time  $t$ , then population density at time  $t + 1$  can be written as.  $N_{t+1} = N_t + [(A + B) - (C + D)]$ . Select the correct option for  $A, B, C$  and  $D$  in the above equation.

- A. rate of immigration, mortality rate, natality rate
- B. rate of immigration, natality rate, mortality rate
- C. rate of emigration, natality rate, mortality rate
- D. mortality rate, natality rate, rate of immigration

**Answer: B**



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112. A population that has not reached the carrying capacity is likely to :

- A. decline in number
- B. grow exponentially

C. remain stable in number

D. grow but not at an exponential rate

**Answer: B**



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**113.** The number of individuals of the population who left the habitat and gone elsewhere during the time period under consideration is known as :

A. Immigration

B. Emigration

C. Migration

D. Natality

**Answer: B**



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114. The proportion of young individuals is highest in :

- A. stable population
- B. declining population
- C. expanding population
- D. both stable and declining population

**Answer: C**



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115. If natality and mortality of a population are nearly same it will be termed as :

- A. young population
- B. stable population
- C. declining population
- D. growing population

**Answer: B**



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**116.** If natality rate is parallel to mortality rate then population is :

- A. slowly increases
- B. slowly decreases
- C. remain stationary
- D. show J-shaped curve

**Answer: C**



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**117.** If in a population, natality is balanced by mortality then there will be :

- A. over population



B. zero population growth

C. increase in population growth

D. decrease in population growth

**Answer: B**



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**118.** Zero growth means :

A. natality is zero

B. natality balances mortality

C. natality is less than mortality

D. natality is more than mortality

**Answer: B**



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119. A protozoan reproduces by binary fission. What will be the number of protozoans in its population after six generations ?

A. 64

B. 24

C. 32

D. 128

**Answer: A**



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120. 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

**Answer: C**



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**121.** Population density of terrestrial organisms is measured in terms of individual per :

A. meter<sup>3</sup>

B. meter<sup>4</sup>

C. meter

D. meter<sup>2</sup>

**Answer: D**



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122. The formula for the calculation of population density is  $D = \frac{n/a}{t}$ ,

in this formula "a" represents :

- A. unit time
- B. area of the land
- C. population density
- D. whole world population

**Answer: B**



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123. The density of a population can be calculated by :

- A.  $D = \frac{S(\text{Space})}{N(\text{Number})}$
- B.  $D = \frac{N(\text{Number})}{S(\text{Space})}$
- C.  $D = \frac{S(\text{Size})}{W(\text{Weight})}$

D. None of the above

**Answer: B**



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**124.** Pertaining to human population, if there is decrease in competition, it would be the result of :

- A. Stable but high population density
- B. Explosion of population density
- C. High population density
- D. Low population density

**Answer: D**



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**125.** Which of the following factors regulate human life with reference to population density ?

- A. Availability of food, housing and health facilities
- B. Climatic conditions
- C. Urbanisation
- D. All of the above

**Answer: D**



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**126.** Which factor controls the population density ?

- A. Geographic factor
- B. Demographic factor
- C. Psychological factor
- D. Socio-economic factor

**Answer: B**



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**127.** Which of the following factors controls the human population density ?

A. Industry

B. Climate

C. Communication

D. Natural resources

**Answer: B**



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**128.** A high density of tiger population in an area can result in :

- A. predation
- B. proto cooperation
- C. interspecific competition
- D. intraspecific competition

**Answer: D**

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**129.** Study of trends in human population growth and predation of future development is called :

- A. Demography
- B. Biography
- C. Calligraphy
- D. Psychology

**Answer: A**



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**130. Population Growth**

- A. Mortality
- B. Natality
- C. Emigration
- D. None of these

**Answer: B**

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**131. A force which acts against the achievement of the highest possible level of population growth is known as :**

- A. Saturation level
- B. Carrying capacity

C. Population pressure

D. Environmental resistance

**Answer: D**



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**132.** The phase of the population growth when the natality is equal to mortality is called as :

A. plateau

B. lag phase

C. log phase

D. experimental phase

**Answer: A**



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**133.** In order for the human population to achieve zero population growth which of the following must occur ?

- A. There must be more post reproductive individuals than reproductive individuals
- B. There must be more prereproductive than reproductive individuals
- C. There must be the same number or fewer prereproductive individuals as there are reproductive individuals
- D. All of the above

**Answer: C**



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**134.** Human population growth is:

- A. lag
- B. stationary

C. exponential

D. none of these

**Answer: C**



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**135.** High growth at the time of exponential phase of human population growth curve is due to :

A. low birth and death rates

B. high birth and death rates

C. high birth and low death rates

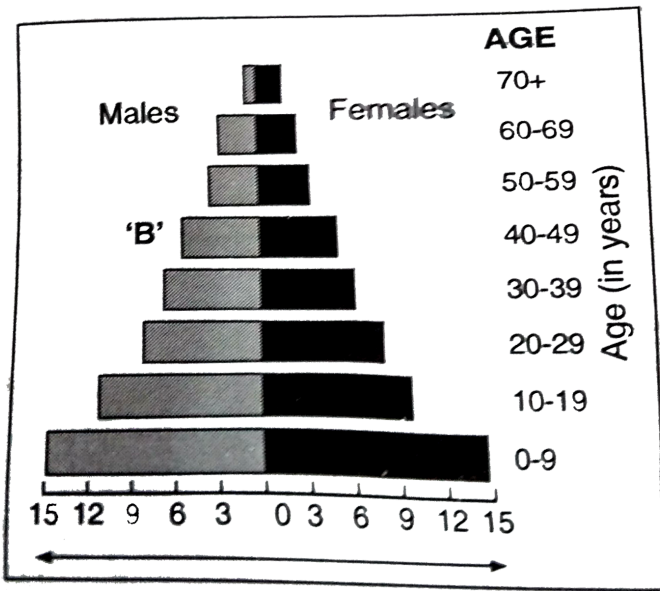
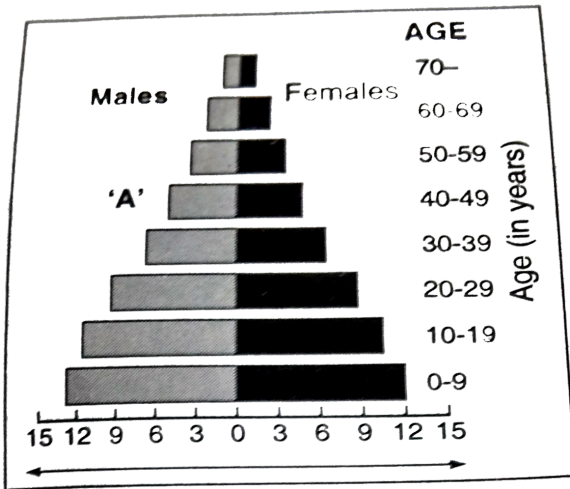
D. high birth and high death rates

**Answer: C**



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**136.** A country with a high rate of population growth took measures to reduce it. The figure below shows age-sex pyramids of populations "A" and "B" twenty years apart. Select the correct interpretation about them



Interpretations:

A. "A" is more recent and shows slight reduction in the growth rate

B. "A" is the earlier pyramid and no change has occurred in the growth rate

C. "B" is earlier pyramid and shows stabilised growth rate

D. "B" is more recent showing that population is very young

**Answer: A**

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**137.** Most important parameter for determining population growth is :

A. natality

B. vital index

C. population size

D. population growth curves

**Answer: C**

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**138.** A population that exceeds its environmental resources is most likely to :

- A. crash
- B. exceeds its biotic potential
- C. lower environmental resistance
- D. none of the above

**Answer: A**



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**139.** Ratio between mortality and natality is :

- A. vital index
- B. population ratio
- C. cesus proportion



D. density coefficient

**Answer: A**



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**140.** In 2005, for each of the 14 million people present in a country, 0.028 were born and 0.008 died during the year. Using exponential equation, the number of people present in 2015 is predicted as

A. 25 millions

B. 17 millions

C. 20 millions

D. 18 millions

**Answer: B**



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141. A population growing in a habitat with limited resources shows four phases of growth in the following sequence:

- A. Acceleration-deceleration-lag phase-asymptote
- B. Asymptote-acceleration-deceleration-lag phase
- C. Lag phase- acceleration-deceleration-asymptote
- D. Acceleration-lag phase-deceleration-asymptote

**Answer: C**



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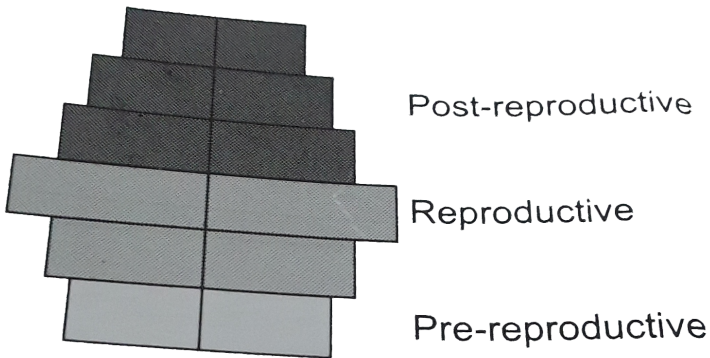
142. The age of pyramid with broad base indicates :

- A. High percentage of young individuals
- B. Low percentage of young individuals
- C. High percentage of old individuals
- D. Low percentage of old individuals

Answer: A

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



- A. Expanding population
- B. Vanishing population
- C. Stable population
- D. Declining population

Answer: D



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**144.** The concept that 'population tends to increase geometrically while food supply increases arithmetically' was put forward by :

- A. Isaac Newton
- B. Leo Tolstoy
- C. T.R. Malthus
- D. Charles Darwin

**Answer: C**



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**145.** According to which theory will the human population out run food supply ?

- A. Altrusian theory

B. Malthusian theory

C. Elton's theory

D. Kalthusian theory

**Answer: B**



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**146.** Which of the following equations corretly represents the exponential population growth curve ?

A.  $dN/dt = rN$

B.  $dt/dN = rN$

C.  $dN/rN = dt$

D.  $rN/dN = dt$

**Answer: A**



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**147.** If the rate of addition of new species increases with respect to the individual loss of the same population, then the graph obtained has :

- A. declined growth
- B. zero population growth
- C. exponential growth
- D. none of these

**Answer: C**



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**148.** If the rate of addition of new number increases with respect to the individual lost of the same population, then the graph obtained has :

- A. exponential growth
- B. declined growth

C. zero population growth

D. none of these

**Answer: A**



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**149.** Exponential growth in a population is shown by :

A. J-shaped curve

B. S-shaped curve

C. Hyperbolic curve

D. None of these

**Answer: A**



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150. Exponential growth occur in

- A. yeast
- B. bacterial
- C. asexual reproduction
- D. all of these

**Answer: C**



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151. In a population, the condition at which the rate of addition of new members is more than the rate of individuals lost indicates:

- A. zero population growth
- B. exponential growth
- C. fluctuating growth
- D. declining growth



**Answer: B**



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**152.** Phenomenal and rapid increase of population in a short period is called :

- A. natural increase
- B. population growth
- C. population explosion
- D. none of these

**Answer: C**



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**153.** Population explosion has occurred in the last :

A. 500 years

B. 300 years

C. 100 years

D. 50 years

**Answer: D**



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**154.** Populations explosion in India is due to:

A. Climate

B. Limited education

C. Increased natality

D. Political instability

**Answer: C**



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155. A logistic growth curve depicting a population that is limited by a definite carrying capacity is shaped like the letter :

A. J

B. L

C. M

D. S

**Answer: D**



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156. Match list I with list II and choose the correct option:

List I		List II	
A	Pacific salmon	1	Verhulst-Pearl Logistic growth
B	$N_t = N_0 e^{rt}$	2	Breeds only once in life time
C	Oyster	3	Exponential growth
D	$dN/dt = rN \frac{(K-N)}{K}$	4	A large number of small sized offsprings

A. A-4, B-3, C-1, D-2

B. A-3, B-4, C-1, D-2

C. A-3, B-1, C-4, D-2

D. A-2, B-3, C-4, D-1

**Answer: D**

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157. In sigmoid populations growth curve, the initial stage of the curve is called :

A. Plateau

B. Lag pahse

C. Log phase

D. Exponential phase

**Answer: B**



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**158.** In sigmoid growth curve, upper asymptote represents period of

A. equilibrium

B. establishment

C. positive acceleration

D. negative acceleration

**Answer: A**



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**159.** Human population follows :

- A. J-shaped population growth
- B. Z-shaped population growth
- C. S-shaped population growth
- D. All of the above

**Answer: C**



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**160.** Which one of the following factors has contributed most to the rapid rise of human population in the present century ?

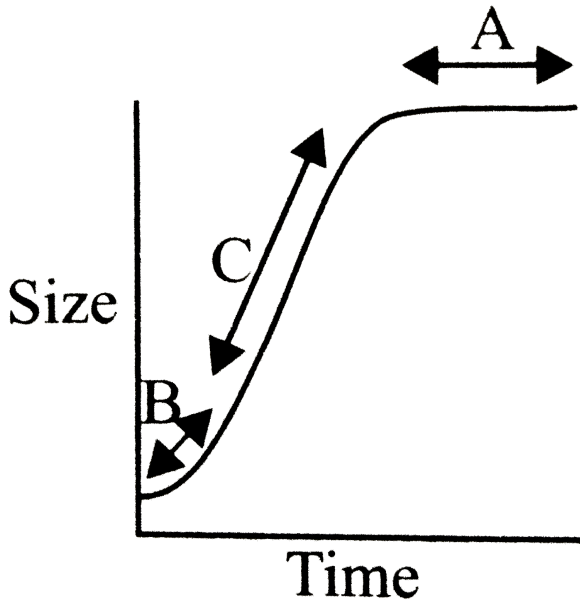
- A. Polygamy
- B. Increase in birth rate
- C. Decrease in infantile rate

D. Decrease in death rate of old people

Answer: C

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161. Given graph is drawn on the parameters of growth versus time. Here A,B and C respectively represent



A. Steady state phase, Lag phase and Log phase

B. Lag phase, Log phase and Steady state phase

C. Exponential phase, Log phase and Steady state phase

D. Slow growing phase, Lag phase and Steady state phase

**Answer: A**



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**162.** High increase in population is due to:

A. increase in average lifespan

B. better medical facilities

C. decrease in death rate

D. all of the above

**Answer: D**



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**163.** The impact of human population is directly related to:

- A. Food supply and housing
- B. Health and medical care
- C. Standard of living
- D. All of the above

**Answer: D**



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**164.** The type of population where pre-reproductive animals occur in large numbers is :

- A. stable
- B. growing
- C. declining
- D. fluctuating

**Answer: B**



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**165.** "A brief reduction in size of a population due to natural calamities usually leads to random genetic drift", for this statement, identify the correct example from the following:

- A. Long necked giraffe
- B. Industrial melanism
- C. Human population of Pitcairn Island
- D. Polydactylic dwarfs in Amish populations

**Answer: D**



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**166.** The eqn,  $\frac{\Delta N_n}{\Delta N t} = B$  represents which of the following?

- A. Natality
- B. Mortality
- C. Growth rate
- D. All of these

**Answer: C**

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**167.** Bell-shaped polygonal pyramid indicates :

- A. moderate percentage of young individuals
- B. high percentage of young individuals
- C. low percentage of young individuals
- D. low percentage of old individuals

**Answer: A**

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**168.** The formula for exponential population growth is

A.  $dt/dN = rN$

B.  $dt/rN = dN$

C.  $rN/dN = dt$

D.  $dN/dt = rN$

**Answer: D**



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**169.** The official counting of population is known as :

A. Census

B. Enumeration

C. Population statistics

D. None of these

**Answer: A**



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**170.** The first census in India was carried out in :

A. 1871

B. 1881

C. 1891

D. 1901

**Answer: B**



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**171.** In India, census is recorded after every :

- A. 5 years
- B. 10 years
- C. 15 years
- D. None of these

**Answer: B**

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**172.** Which of the following is the most sparsely populated state of India?

- A. Manipur
- B. Rajasthan
- C. Meghalaya
- D. Arunachal Pradesh

**Answer: D**

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173. Which Indian state has least population growth and highest literacy ?

A. A.P.

B. U.P.

C. Kerala

D. Assam

**Answer: C**



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174. In India, human population is heavily weighed towards the younger age groups as a result of :

A. Short life-span and low birth rate

B. Long life-span of many individuals and low birth rate

C. Long life-span of many individuals and high birth rate

D. Short life-span of many individuals and high birth rate

**Answer: D**



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**175.** As per 1991 census, sex ratio (females per 1,000 males) in India is :

A. 929

B. 941

C. 972

D. 955

**Answer: A**



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**176.** To which population category India belongs?



- A. Low birth rate and low mortality rate
- B. Low birth rate and high mortality rate
- C. High birth rate and low mortality rate
- D. High birth rate and high mortality rate

**Answer: C**

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**177.** In India the population control programme launched in:

- A. 1955
- B. 1976
- C. 1951
- D. 1987

**Answer: C**

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**178.** Most populous country of the world is:

- A. India
- B. China
- C. Bangla Desh
- D. Indonesia

**Answer: B**



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**179.** Five most populated countries in the world are given as 1. Indonesia, 2. USA, 3. India, 4. China and, 5. Brazil.

Arrange them in sequence of decreasing population:

- A. 4,3,2,1,5
- B. 4,3,1,5,2

C. 3,2,4,1,5

D. 4,3,5,1,2

**Answer: A**



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**180.** In which of the following the birth rate is high and death rate is normal ?

A. Sweden

B. Indonesia

C. India and Morocco

D. America and Spain

**Answer: C**



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**181.** What per cent of world population lives in India ?

A. 10

B. 12

C. 15

D. 17

**Answer: D**



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**182.** If a student wants to study about birth rate, death rate, sex ratio, age distribution, etc., of a population, the information is obtained from :

A. census

B. life table

C. natality table

D. mortality table

**Answer: A**



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**183.** Certain characteristic demographic features of developing countries are

- A. high mortality, high density, uneven population growth and a very old age distribution
- B. high fertility, low or rapidly falling mortality rate, rapid population growth and a very young age distribution
- C. high fertility, high density, rapidly rising mortality rate and a very young age distribution
- D. high infant mortality, low fertility, uneven population growth and a very young age distribution

**Answer: B**





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**184.** Assertion (A) : The age-sex structure of human population in countries like France and Germany gives a steep pyramid.

Reason (R) : In countries like Sudan and India the population is increasing at a rapid rate.

- A. Both (A) and (R) are true and (R) is the correct explanation of (A)
- B. Both (A) and (R) are true but (R) is not the correct explanation of (A)
- C. (A) is true statement but (R) is false
- D. Both (A) and (R) are false

**Answer: B**



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**185.** If birth rate is 100, death rate is 10 and number of individual in population group is 1000, then what will be the percentage of natural

growth rate ?

- A. 9.0 %
- B. 0.09 %
- C. 0.9 %
- D. 90 %

**Answer: A**



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**186.** In India there is decline in female population as compared to males, this because of :

- A. number of female children are born less as there is more chance of prenatal death in case of female child
- B. less female reach reproductive age
- C. female infanticide

D. all of the above

**Answer: C**



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**187.** What is true about the isolated small tribal populations ?

- A. There is no change in population size as they have a large gene pool
- B. There is a decline in population as boys marry girls only from their own tribe
- C. Hereditary diseases like colour blindness do not spread in the isolated population
- D. Wrestlers who develop strong body muscles in their life time pass this character on to their progeny

**Answer: B**





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**188.** Which one of the following organisms reproduces sexually only once in its life time ?

A. Mango

B. Tomato

C. Eucalyptus

D. Banana plant

**Answer: C**



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**189.** Which one of the following helps in absorption of phosphorus from soil by plants

or

Which one of the following microbes forms symbiotic association with plants and helps them in their nutrition

- A. Glomus
- B. Aspergillus
- C. Azotobacter
- D. Trichoderma

**Answer: A**



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**190.** A nitrogen fixing microbe associated with the fern *Azolla* in rice fields is

- A. Frankia
- B. Spirulina
- C. Anabaena

D. Tolypothrix

**Answer: C**



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**191.** Which of the following statements is false regarding predators ?

- A. Tiger is an example of a predator.
- B. Predators keep populations under control.
- C. Predators help in maintaining species diversity in a community
- D. If a predator is not efficient, then the prey population would become extinct.

**Answer: D**



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192. Match the following :

Population Interaction	Example
A Predation	1 <i>Cuscuta</i> and hedge plants
B Commensalism	2 <i>Balanus</i> and <i>Chthamalus</i>
C Parasitism	3 Cactus and moth
D Competition	4 Orchid and mango

A. A=3, B=4, C=1, D=2

B. A=4, B=3, C=2, D=1

C. A=1, B=3, C=2, D=4

D. A=3, B=4, C=2, D=1

Answer: A



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193. Which of the following is a pioneer in xerarch succession ?

A. Sedges

B. Lichens

C. Bryophytes

D. Phytoplanktons

**Answer: B**



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**194.** Cuscuta is an example of

A. Predation

B. Ectoparasitism

C. Endothermic

D. Brood parasitism

**Answer: B**



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195. Which one of the following is a population ?

- A. All the plants in a forest
- B. All the oak trees in a forest
- C. A spider and some trapped flies in its web
- D. Earthworm that lives in a grassland along with other arthropods

**Answer: B**

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196. Which one of the following sets of items in the options (a-d) are correctly categorised with one exception in it ?

A. 

Items	Category	Exception
UAA, UAG, UGA	Stop codons	UAG

B. 

Items	Category	Exception
kangaroo, Koala, Wombat	Australian marsupials	Wombat

C.

Items	Category	Exception
Plasmodium, Cuscuta, Trypanosoma	Protozoan parasites	Cuscuta

D.

Items	Category	Exception
Typhoid, Pneumonia, Diphtheria	Bacterial disease	Diphtheria

**Answer: C**



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**197.** The sequence of successional stages that occur on sand is known as :

A. xerosere

B. lithosere

C. hydrosere

D. psammosere

**Answer: D**



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198. Which of the following causes parasitic castration of crab

A. Sacculina

B. Adamsia

C. Spongilla

D. None of these

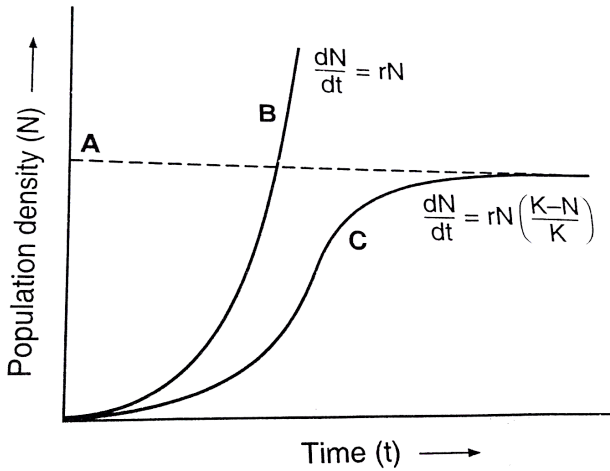
**Answer: A**



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199. Which is correctly labelled with respect to the given diagram ?



A. C = Exponential curve

B. A = Carrying capacity

C. B = Logistic curve

D. C = Carrying capacity

**Answer: B**



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**200.** An interaction between two individuals where one is benefitted while the other is neither benefitted nor harmed is called as

- A. predation
- B. mutualism
- C. amensalism
- D. commensalism

**Answer: D**



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**201.** The population limited to a particular geographic area is called as :

- A. alien
- B. natural
- C. endemic
- D. pandemic

**Answer: C**



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**202.** The tendency of population to remain in genetic equilibrium may be disturbed by :

- A. lack of migration
- B. lack of mutations
- C. random mating
- D. lack of random mating

**Answer: D**



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**203.** A biologist studied the population of rats in a barn. He found that the average natality was 250, average mortality 240, immigration 20 and

emigration 30. The net increase in populations is :

A. 15

B. 5

C. 10

D. zero

**Answer: D**



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**204.** Population growth curve is sigmoid, if the growth pattern is

A. logistic

B. geometric

C. exponential

D. accretionary

**Answer: A**



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205. Dominant species represents most abundant :

- A. first tree
- B. shrub that appears for the first time
- C. herb that binds the soil and provides organic matter to it
- D. species having major effect on physical environment

Answer: D



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206. match the following and select the correct option



- A. (A) (B) (C) (D)  
(ii) (i) (iv) (iii)
- B. (A) (B) (C) (D)  
(i) (ii) (iii) (iv)

- C. (A) (B) (C) (D)  
(iv) (i) (iii) (ii)
- D. (A) (B) (C) (D)  
(iii) (ii) (iv) (i)

**Answer: A**



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**207.** An orchid growing as an epiphyte on a mango tree is an example for:

- A. parasitism
- B. predation
- C. mutualism
- D. commensalism

**Answer: D**



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**208.** The population growth is generally described by the following equation :  $\frac{dN}{dt} = rN\left(\frac{K - N}{K}\right)$  What does 'r' represent in the given equation ?

- A. death rate
- B. carrying capacity
- C. population density at time t
- D. intrinsic rate of natural increase

**Answer: D**



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**209.** The number of individuals of the population who left the habitat and gone elsewhere during the time period under consideration is known as :

- A. natality
- B. mortality

C. emigration

D. immigration

**Answer: C**



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**210.** The interaction between life organisms of one of the following pairs is an example for commensalism.

A. Cuckoo and crow

B. Wasps and fig tree

C. Orchid and mango tree

D. Cattle or sheep and grass

**Answer: C**



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211. Which one of the following causes population explosion ?

- A. Decrease in infant mortality rate and increase in death rate.
- B. Decrease in death rate, maternal mortality rate and infant mortality rate.
- C. Decrease in death rate and increase in maternal mortality rate.
- D. Decrease in infant mortality rate and decrease in number of people in reproductive age.

Answer: B

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212. Find the incorrect match :

	I	II	III
1.	Crab	<i>Sacculina</i>	Interaction ++
2.	Human being	Mosquito	Interaction - +
3.	Sea anemone	Hermit crab	Interaction + 0

A. 3 and 1

B. 2 only

C. 1 only

D. 2 and 3

**Answer: A**



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**213.** Which of the following is correct ?

A. Population change = (Birth + immigration) + (death + emigration)

B. Population change = (Birth + immigration) - (death + emigration)

C. Population change = (Birth + emigration) + (death - immigration)

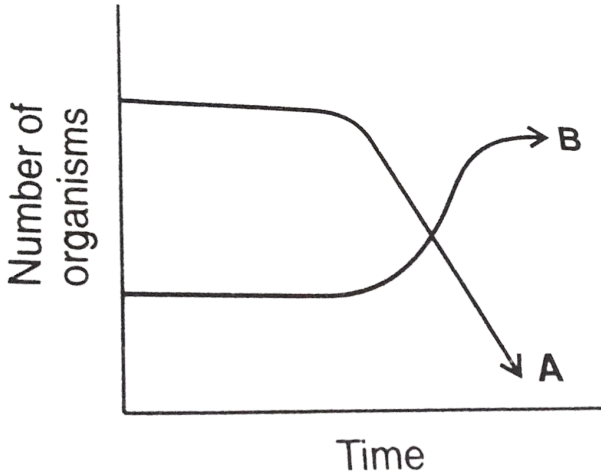
D. Population change = (Birth - immigration) - (death + emigration)

**Answer: B**



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214. The following graph depicts changes in two populations (A and B) of herbivores in a grassy field. A possible reason for these changes is that :



- A. Both plant populations in this habitat decreased
- B. Population A produced more offspring than population B
- C. Population B competed more successful for food than population A
- D. Population A consumed the members of population B

Answer: C

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**215.** A cuckoo laying eggs in the nest of other species of birds is an example of :

- A. hyperparasitism
- B. adelphoparasitism
- C. ectoparasitism
- D. broodparasitism

**Answer: D**



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**216.** One of the following pair of animals is an example of commensalism :

- A. Sacculina - Crab
- B. Golden Jackal - Tiger
- C. Ascaris - Man

D. Plasmodium - Anopheles

**Answer: B**



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**217.** In which of the following interaction both partners are adversely affected ?

A. Predation

B. Parasitism

C. competition

D. Mutualism

**Answer: C**



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

- A. Ecosystem
- B. Population
- C. Ecological niche
- D. Biotic community

**Answer: D**



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**219.** When does the growth rate of a population following the logistic model equal zero ? The logistic model is given as  $dN/dt = rN(1-N/K)$ :

- A. when  $N/K$  equals zero
- B. when  $N/K$  is exactly one.
- C. when death rate is greater than birth rate.

D. when N nears the carrying capacity of the habitat.

**Answer: B**



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**220.** Gause's principle of competitive exclusion states that:

- A. No two species can occupy the same niche indefinitely for the same limiting resources.
- B. Larger organisms exclude smaller ones through competition.
- C. More abundant species will exclude the less abundant species through competition.
- D. Competition for the same resources excludes species having different food preferences.

**Answer: A**



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221. Competitive exclusion principle stating that inferior species is eliminated eventually after prolonged competition was given by

A. C. Darwin

B. G.F. Gause

C. MacArthur

D. Verhulst and Pearl

**Answer: B**



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222. If '+' sign is assigned to benefited interaction '-' sign to detrimental and '0' sign to neutral interaction, then the population interaction represented by '+-' refers to:

A. Parasitism



B. Mutualism

C. Amensalism

D. Commensalism

**Answer: A**



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**223.** Which of the following is correct for r-selected species ?

A. Small number of progeny with small size

B. Small number of progeny with rate large size

C. Large number of progeny with small size

D. Large number of progeny with large size

**Answer: C**



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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

**Answer: B**



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2. Ecotone is

- A. A polluted area
- B. The bottom of a lake
- C. A zone of developing community

D. A zone of transition between two communities

**Answer: D**



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**3. Biosphere is**

- A. composed of all living organisms present on earth which interact with the physical environment.
- B. composed of the plants present in the soil.
- C. a component in the ecosystem.
- D. life in the outer space.

**Answer: A**



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4. Ecological niche is

A. the surface area of the ocean

B. an ecologically position and functional role of a species within the community

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

**Answer: C**



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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

**Answer: D**



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6. Salt concentration (salinity) of the sea measured in parts per thousand

is:

A. 0 – 5

B. 30 – 45

C. 10 – 15

D. 30 – 70

**Answer: B**



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7. Formation of tropical forests needs mean annual temperature and mean annual precipitation as:

- A.  $30 - 50^{\circ}C$  and 100-150 cm
- B.  $18 - 25^{\circ}C$  and 150-400 cm
- C.  $5 - 15^{\circ}C$  and 50-100 cm
- D.  $5 - 15^{\circ}C$  and 100-200

**Answer: B**



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8. Which of the following forest plants controls the light conditions at the ground?

- A. Herbs
- B. Shrubs
- C. Tall trees

D. Lianas and climbers

**Answer: C**



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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 may not survive because of change in its micro climate.
- C. It will grow well because it is planted in the same locality.
- D. It grows very well because the plant gets more sunlight

**Answer: B**



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10. If a population of 50 Paramecium present in a pool increases to 150 after an hour, what would be the growth rate of population ?

- A. 5 per hour
- B. 50 per hour
- C. 200 per hour
- D. 100 per hour

**Answer: D**



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11. What would be the per cent growth or birth rate per individual per hour for the same population mentioned in the previous question ?

- A. 100
- B. 200
- C. 50



D. 150

**Answer: B**



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12. 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 stabilise
- C. It will increase
- D. It will first decline and then stabilise

**Answer: C**



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13. What parameters are used for tiger census in our country's national parks and sanctuaries?

- A. Pug marks only
- B. Faecal pellets only
- C. Actual head counts
- D. Pug marks and Faecal pellets

**Answer: D**



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14. 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

**Answer: C**



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15. A protozoan reproduces by binary fission. What will be the number of protozoans in its population after six generations?

A. 64

B. 128

C. 24

D. 32

**Answer: A**



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16. In 2005, for each of the 14 million people present in a country, 0.028 were born and 0.008 died during the year. Using exponential equation, the number of people present in 2015 is predicted as :

- A. 25 millions
- B. 20 millions
- C. 17 millions
- D. 18 millions

**Answer: C**



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17. Amensalism is an association between two species where :

- A. one species is harmed and other is benefitted.
- B. one species is harmed and other is unaffected.
- C. one species is benefitted and other is unaffected.

D. both the species are harmed.

**Answer: B**



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**18.** Lichens are the associations of :

A. fungus and algae

B. fungus and virus

C. bacteria and fungus

D. algae and bacterium

**Answer: A**



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**19.** Which of the following is a partial root parasite ?

- A. Mistletoe
- B. Orobanche
- C. Ganoderma
- D. Sandal wood

**Answer: D**

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**20.** Which one of the following organisms reproduces sexually only once in its time ?

- A. Mango
- B. Tomato
- C. Eucalyptus
- D. Banana plant

**Answer: B**



21. Which of the following statements/s is/are wrong ?

I. Many plants are dependent on sunlight to meet their photoperiodic requirement for flowering.

II. The UV component of the spectrum is harmful to many organisms.

III. The tiger census in our national parks and tiger reserves is often based on actual head counts.

IV. Some desert plants like Opuntia, have no leaves- they are reduced to spines.

V. In brood parasitism the parasitic bird lays its eggs in the nest of its host and does not allow the host incubate them.

A. III only

B. II and IV only

C. III and V only

D. I, II and IV only

**Answer: C**



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**22.** Consider the following statements.

- A. Temperature is the most ecologically relevant environmental factor.
- B. Temperature increases progressively from the equator towards the poles and from plains to the mountain tops.
- C. Diversity is not an important characteristic of living organisms.
- D. Mango trees do not and cannot grow in temperate countries like Canada and Germany.

Of the above statements:

- A. B and D are correct
- B. A and B are correct
- C. A and C are correct
- D. A and D are correct



**Answer: D**



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23. Biome distribution with respect to annual temperature and precipitation is given below. Identify grassland and coniferous forest by selecting the correct option:



A. A and B

B. B and E

C. B and D

D. C and D

**Answer: B**



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24. Which one of the following statements is incorrect ?

- A. In amensalism one species is harmed and other is benefited.
- B. commensalism is the interaction in which one species benefits and other is neither harmed nor benefited.
- C. The association of cattle egret and grazing cattle is a classic example of commensalism.
- D. Competition occurs when closely related species compete for the same resources.

**Answer: A**



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25. Different species are represented by A, B,C,D,G,P,Q,R and S. Which of the following represents a community?



A. (i)

B. (ii)

C. (iii)

D. None of these

**Answer: B**



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**26.** Read the following five statements (A to E) and select the option with all correct statements.

(A) Our intestine is a unique habitat for hundreds of species of microbes.

(B) Snow leopards are found in the forests of Kerala and Tamil Nadu.

(C) Some snails and fish go into hibernation to avoid summer.

(D) Many freshwater animals cannot live for long in sea water and vice versa because of the osmotic problems.

(E) The availability of light on land is closely linked with that of temperature.

A. (A), (D) and (E)

B. (B), (C) and (E)

C. (A), (C) and (D)

D. (A), (B) and (D)

**Answer: A**

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27. Representation of age pyramids for human population is given below.

Identify A, B and C by selecting the correct option:



A. *A*            *B*            *C*  
Declining   Stable   Expanding

B. *A*            *B*            *C*  
Stable   Expanding   Declining

C. *A*            *B*            *C*  
Expanding   Stable   Declining

D. *A*            *B*            *C*  
Stable   Declining   Expanding

**Answer: C**



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**28.** Different factors affecting population density are given below. I,B,D and E represent:



- A. Emigration, immigration, natality, mortality
- B. Immigration , natality, mortality, emigration
- C. Immigration, mortality, natality, emigration
- D. Immigration, natality, emigration, mortality

**Answer: B**



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29. Consider the following statements.

A. The productivity and distribution of plants has nothing to do with water.

B. Next to temperature, water is the most important factor influencing the life of organisms.

C. Mammals from colder climates generally have longer ears and limbs to minimise heat loss.

D. Life on Earth originated in water and is unsustainable without water.

Of the above statements:

A. A and B are correct

B. A and D are correct

C. B and C are correct

D. B and D are correct

**Answer: D**



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30. Select the correct option:



- A. (A) (B) (C) (D)  
(ii) (i) (iv) (iii)
- B. (A) (B) (C) (D)  
(i) (iv) (iii) (ii)
- C. (A) (B) (C) (D)  
(iv) (i) (ii) (iii)
- D. (A) (B) (C) (D)  
(iii) (iv) (ii) (i)

Answer: C



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31. The following diagrams are the age pyramids of different populations.



Select the correct statements regarding the above:

- A. A-It is a pyramid-shaped age pyramid indicating decreased population growth.

- B. B-It is an inverted bell-shaped pyramid indicating stable population.
- C. C-It is urn-shaped pyramid indicating increased population growth.
- D. All statements are incorrect.

**Answer: B**



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**32.** Image of an eminent ecologist is given below. Correctly identify him:



- A. Ramdeo Misra
- B. Ernst Haeckel
- C. Georgii Gause
- D. Joseph Grinnell

**Answer: A**



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