

PYQSide

NEET ORGANISMS AND POPULATIONS — POPULATION INTERACTIONS (PREDATION, COMPETITION, PARASITISM, COMMENSALISM, MUTUALISM, AMENSALISM) — PYQS

Max. Marks: 156

Questions: 39

Section A (MCQ)

Q.1 Choose the correct statements regarding population interactions between two species. Choose the correct answer from the options given below :

- A. In both parasitism and commensalism, only one species benefits and the other species is harmed.
- B. Both species benefit in mutualism.
- C. Both species benefit in commensalism.
- D. In parasitism, only one species benefits and the other species is harmed.
- E. In amensalism, one species is harmed and the other is unaffected. [NEET (UG) 2026]

- (1) A and B only (2) B and E only
(3) B, D and E only (4) A and D only

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full solution



Q.2 Which one of the following is an appropriate example of sexual deceit? [NEET (UG) 2026]

- (1) Sea anemone and clown fish
- (2) *Ophrys* and bumblebee
- (3) Female wasp and fig
- (4) Cuckoo and crow

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full solution



Q.3 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): Abingdon tortoise in Galapagos islands became extinct within a decade after goats were introduced.

Reason (R): Goats were more efficient at browsing than Abingdon tortoise.

In the light of the above statements, choose the most appropriate answer from the options given below:

[RE-NEET (UG) 2026]

- (1) A is not correct but R is correct
- (2) Both A and R are correct and R is the correct explanation of A
- (3) Both A and R are correct but R is not the correct explanation of A
- (4) A is correct but R is not correct

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Q.4 Match **List-I** with **List-II**. [RE-NEET (UG) 2026]

List-I		List-II	
A.	Both species are harmed	I.	Predation
B.	One species is harmed and the other is benefited	II.	Mutualism
C.	Both species are benefited	III.	Competition
D.	One is benefited while the other has no effect	IV.	Commensalism

- (1) A-III, B-I, C-II, D-IV (2) A-III, B-IV, C-II, D-I
(3) A-I, B-II, C-III, D-IV (4) A-II, B-I, C-IV, D-III

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Q.5 Epiphytes that are growing on a mango branch are an example of which of the following?

[NEET (UG) 2025]

- (1) Predation (2) Amensalism
- (3) Commensalism (4) Mutualism

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Q.6 Given below are two statements :

Statement-I: Fig fruit is a non-vegetarian fruit as it has enclosed fig wasps in it.

Statement-II: Fig wasp and fig tree exhibit mutual relationship as fig wasp completes its life cycle in fig fruit and fig fruit gets pollinated by fig wasp.

In the light of the above statements, choose the most appropriate answer from the options given below:

[NEET (UG) 2025]

- (1) Statement-I is correct but statement II is incorrect
 (2) Statement-I is incorrect but statement II is correct
 (3) Both statement I and statement II are correct
 (4) Both statement I and statement II are incorrect

Scan or tap for the full solution



Q.7 Given below are two statements:

Statement-I: Gause's competitive exclusion principle states that two closely related species competing for different resources cannot exist indefinitely.

Statement-II: According to Gause's principle, during competition, the inferior will be eliminated. This may be true if resources are limiting.

In the light of the above statements, choose the correct answer from the options given below :

[NEET (UG) 2024]

- (1) Both Statement-I and Statement-II are true.
 (2) Both Statement-I and Statement-II are false.
 (3) Statement-I is true but Statement-II is false.
 (4) Statement-I is false but Statement-II is true.

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Q.8 Match **List-I** with **List-II**:

List - I		List - II	
A.	Predator	I.	<i>Ophrys</i>
B.	Mutualism	II.	<i>Pisaster</i>
C.	Parasitism	III.	Female wasp and fig
D.	Sexual deceit	IV.	<i>Plasmodium</i>

Choose the correct answer from the options given below:

[RE-NEET (UG) 2024]

- (1) A-III, B-II, C-I, D-IV (2) A-IV, B-I, C-II, D-III
 (3) A-II, B-III, C-I, D-IV (4) A-II, B-III, C-IV, D-I

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Q.9 Match **List-I** with **List-II**.

List-I		List-II	
A.	Migratory flamingoes and resident fish in South American lakes	I.	Interference competition
B.	Abingdon tortoise became extinct after introduction of goats in their habitat	II.	Competitive release

List-I		List-II	
C.	<i>Chthamalus</i> expands its distributional range in the absence of <i>Balanus</i>	III.	Resource Partitioning
D.	Five closely related species of Warblers feeding in different locations on same tree	IV.	Interspecific competition

Choose the correct answer from the options given below:

[RE-NEET (UG) 2024]

- (1) A-I, B-IV, C-III, D-II (2) A-IV, B-I, C-II, D-III
 (3) A-III, B-I, C-II, D-IV (4) A-II, B-IV, C-III, D-I

Scan or tap for the full solution



Q.10 Given below are two statements:

Statement-I: Gause's 'Competitive Exclusion Principle' states that two closely related species competing for the same resources cannot co-exist indefinitely and competitively inferior one will be eliminated eventually.

Statement-II: In general, carnivores are more adversely affected by competition than herbivores.

In the light of the above statements, choose the correct answer from the options given below:

[NEET (UG) 2023]

- (1) Both Statement-I and Statement-II are false.
 (2) Statement-I is correct but Statement-II is false.
 (3) Statement-I is incorrect but Statement-II is true.
 (4) Both Statement-I and Statement-II are true.

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Q.11 Match **List I** with **List II**:

List I (Interaction)		List II (Species A and B)	
A.	Mutualism	I.	+ (A), 0 (B)
B.	Commensalism	II.	- (A), 0 (B)
C.	Amensalism	III.	+ (A), - (B)
D.	Parasitism	IV.	+ (A), + (B)

Choose the correct answer from the options given below:

[NEET (UG) 2023]

- (1) A-IV, B-I, C-II, D-III (2) A-IV, B-III, C-I, D-II
 (3) A-III, B-I, C-IV, D-II (4) A-IV, B-II, C-I, D-III

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Q.12 Match **List I** with **List II**.

List I (Interacting species)		List II (Name of interaction)	
A.	A Leopard and a Lion in a forest/grassland	I.	Competition
B.	A Cuckoo laying egg in a Crow's nest	II.	Brood parasitism
C.	Fungi and root of a higher plant in Mycorrhizae	III.	Mutualism
D.	A cattle egret and a Cattle in a field	IV.	Commensalism

Choose the correct answer from the options given below.

[NEET (UG) 2023]

- (1) A-I, B-II, C-IV, D-III (2) A-III, B-IV, C-I, D-II
(3) A-II, B-III, C-I, D-IV (4) A-I, B-II, C-III, D-IV

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Q.13 Which one of the following statements cannot be connected to Predation?

[NEET (UG) 2022]

- (1) It helps in maintaining species diversity in a community
(2) It might lead to extinction of a species
(3) Both the interacting species are negatively impacted
(4) It is necessitated by nature to maintain the ecological balance

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Q.14 While explaining interspecific interaction of population, (+) sign is assigned for beneficial interaction, (–) sign is assigned for detrimental interaction and (0) for neutral interaction. Which of the following interactions can be assigned (+) for one species and (–) for another species involved in the interaction?

[NEET (UG) 2022]

- (1) Predation (2) Amensalism
(3) Commensalism (4) Competition

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Q.15 Two butterfly species are competing for the same nectar of a flower in a garden. To survive and coexist together, they may avoid competition in the same garden by :

[NEET (UG) 2022 (Phase 2)]

- (1) Predating on each other
(2) Feeding at the same time
(3) Choosing different foraging patterns
(4) Increasing time spent on attacking each other

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Q.16 In spite of interspecific competition in nature, which mechanism the competing species might have evolved for their survival?

[NEET (UG) 2021]

- (1) Predation (2) Resource partitioning
(3) Competitive release (4) Mutualism

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Q.17 Amensalism can be represented as :

[NEET (UG) 2021]

- (1) Species A (+); Species B (0)
(2) Species A (–); Species B (0)
(3) Species A (+); Species B (+)
(4) Species A (–); Species B (–)

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Q.18 Secondary metabolites such as nicotine, strychnine and caffeine are produced by plants for their

[NEET (UG) 2020]

- (1) Nutritive value
(2) Growth response
(3) Effect on reproduction
(4) Defence action

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Q.19 Which one of the following population interactions is widely used in medical science for the production of antibiotics?

[NEET 2018]

- (1) Commensalism (2) Mutualism
(3) Parasitism (4) Amensalism

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Q.20 Mycorrhizae are the example of :

[NEET 2017]

- (1) Fungistasis (2) Antibiosis
(3) Mutualism (4) Amensalism

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Q.21 Gause's principle of competitive exclusion states that -

[NEET 2016 (Phase 1)]

- (1) Larger organisms exclude smaller ones through competition
(2) More abundant species will exclude the less abundant species through competition
(3) Competition for the same resources excludes species having different food preferences
(4) No two species can occupy the same niche indefinitely for the same limiting resources

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Q.22 If '+' sign is assigned to beneficial interaction, '-' sign to detrimental and '0' sign to neutral interaction, then the population interaction represented by '+' '-' refers to [NEET 2016 (Phase 2)]

- (1) parasitism (2) commensalism
(3) mutualism (4) amensalism

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Q.23 The principle of competitive exclusion was stated by [NEET 2016 (Phase 2)]

- (1) MacArthur (2) G. F. Gause
(3) Verhulst & Pearl (4) C. Darwin

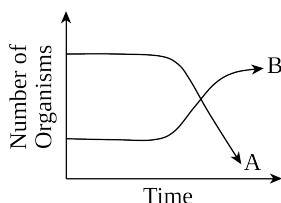
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Q.24 In which of the following interactions both partners are adversely affected? [AIPMT 2015]

- (1) Competition (2) Predation
(3) Mutualism (4) Parasitism

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Q.25 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: [AIPMT 2015 (Cancelled)]



- (1) Population B competed more successfully for food than population A
(2) Population A consumed the members of population B
(3) Both plant populations in this habitat decreased
(4) Population A produced more offspring than population B

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Q.26 A sedentary sea anemone gets attached to the shell lining of hermit crab. The association is : [NEET 2013]

- (1) Commensalism (2) Amensalism
(3) Ectoparasitism (4) Symbiosis

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Q.27 Which one of the following is not a parasitic adaptation ? [NEET 2013 (Karnataka)]

- (1) Loss of digestive organs
(2) Loss of unnecessary sense organs
(3) Development of adhesive organs
(4) Loss of reproductive capacity

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Q.28 *Cuscuta* is an example of : [AIPMT 2012 (Mains)]

- (1) Ectoparasitism (2) Predation
(3) Endoparasitism (4) Brood parasitism

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Q.29 Which one of the following is categorised as a parasite in true sense? [AIPMT 2011 (Prelims)]

- (1) The female *Anopheles* bites and sucks blood from humans
(2) Head louse living on the human scalp as well as laying eggs on human hair
(3) The cuckoo (koel) lays its eggs in crow's nest
(4) Human foetus developing inside the uterus draws nourishment from the mother

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Q.30 Which one of the following is most appropriately defined? [AIPMT 2010 (Mains)]

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

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Q.31 Study the four statements (a–d) 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 starfish *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 2010 (Prelims)]

- (1) b and c (2) a and d (3) c and d (4) a and b

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full solution



Q.32 A high density of elephant population in an area can result in :- [AIPMT 2007]

- (1) Mutualism
(2) Interspecific competition
(3) Predation on one another
(4) Intraspecific competition

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full solution



Q.33 Praying mantis is a good example of- [AIPMT 2006]

- (1) Warning colouration (2) Camouflage
(3) Mullerian mimicry (4) Social insects

Scan or tap for the
full solution



Q.34 Niche overlap indicates- [AIPMT 2006]

- (1) Sharing of one or more resources between the two species
(2) Mutualism between two species
(3) Active cooperation between two species
(4) Two different parasites on the same host

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full solution



Q.35 Animals have the innate ability to escape from predation. Examples for the same are given below. Select the incorrect example [AIPMT 2005]

- (1) Poison fangs in snakes
(2) Enlargement of body size by swallowing air in puffer fish
(3) Colour change in chameleon
(4) Melanism in moths

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full solution



Q.36 Mycorrhiza is an example of :- [AIPMT 2003]

- (1) Ectoparasitism (2) Decomposers
(3) Endoparasitism (4) Symbiotic relationship

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full solution



Q.37 Cause of mimicry is - [AIPMT 2002]

- (1) offence (2) concealment
(3) defence (4) both (2) and (3)

Scan or tap for the
full solution



Q.38 Which type of association is found in between entomophilous flower and pollinating agent ? [AIPMT 2002]

- (1) Cooperation (2) Co-evolution
(3) Mutualism (4) Commensalism

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full solution



Q.39 Two different species can not live for long duration in the same niche or habitat. This law is : - [AIPMT 2002]

- (1) Dollo's rule (2) Weismann's theory
(3) Allen's law (4) Gause's hypothesis

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full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	3	2	2	1	3	4	4	4	2	2	1
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	4	3	1	3	2	2	4	4	3	4	1
Ques.	23	24	25	26	27	28	29	30	31	32	33
Ans.	2	1	1	4	4	1	2	4	4	4	2
Ques.	34	35	36	37	38	39					
Ans.	1	1	4	4	2	4					