

Organisms and Populations

NEET previous year questions · Biology

9 questions from the official papers: NEET 2026 (3), Re-NEET 2026 (4), NEET 2020 (2). Each is followed by its answer and a worked solution written by BrainIt. Generated on 23 October 2026.



BrainIt

The NEET practice app that learns how you practise and tells you what to do next.

PYQs · Mock tests · Revision · Interactive 3D concepts · Analytics

Get it on
Google Play

Download on the
App Store



brainit.pro/app

1. NEET 2026 · Q156

Which of the following equations depicts Verhulst-Pearl logistic population growth?

- (1) $\frac{dN}{dt} = rN \left(\frac{K+N}{K} \right)$
- (2) $\frac{dN}{dt} = rN \left(\frac{K-N}{K} \right)$
- (3) $\frac{dN}{dt} = rN \left(\frac{K-N}{N} \right)$
- (4) $\frac{dN}{dt} = rN \left(\frac{K}{K-N} \right)$

Answer (2)

Sol. The Verhulst-Pearl logistic growth equation is $\frac{dN}{dt} = rN \left(\frac{K-N}{K} \right)$, where K is the carrying capacity, r is the intrinsic rate of natural increase and N is the population density at time t. The term (K-N)/K represents environmental resistance, so option (2) is correct.

2. NEET 2026 · Q165

Which one of the following is an appropriate example of sexual deceit?

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

Answer (2)

Sol. In sexual deceit the Mediterranean orchid *Ophrys* mimics a female bumblebee so that the male bee attempts pseudocopulation and inadvertently pollinates the flower. Female wasp and fig is mutualism, sea anemone and clown fish is commensalism, and cuckoo and crow is brood parasitism, so only *Ophrys* and bumblebee is sexual deceit.

3. NEET 2026 · Q180

Choose the correct statements regarding population interactions between two species.

Statement I: In both parasitism and commensalism, only one species benefits and the other species is harmed.

Statement II: Both species benefit in mutualism.

Statement III: Both species benefit in commensalism.

Statement IV: In parasitism, only one species benefits and the other species is harmed.

Statement V: In amensalism, one species is harmed and the other is unaffected.

Choose the correct answer from the options given below:

- (1) II and V only
- (2) I and II only
- (3) II, IV and V only
- (4) I and IV only

Answer (3)

Sol. In mutualism both interacting species benefit (II correct).

In parasitism one species benefits while the other is harmed (IV correct).

In amensalism one species is harmed while the other remains unaffected (V correct).

Commensalism benefits one species and leaves the other unaffected (not harmed), so Statement III is wrong, and Statement I is wrong because commensalism does not harm either partner.

Hence Statements II, IV and V are correct.

4. Re-NEET 2026 · Q161

Consider a population of 10 million cells. Given the per-capita birth rate of 0.002 (per unit time) and the per-capita death rate of 0.002 (per unit time), the expected number of cells after 10 generations is _____.

- (1) 1 million (2) 5 million
(3) 10 million (4) 100 million

Answer (3)

Sol. The intrinsic rate of natural increase is $r = b - d$.

Here the birth and death rates are identical, so $r = 0.002 - 0.002 = 0$ and the exponential growth equation $N_t = N_0 e^{rt}$ reduces to $N_t = N_0$. The population is at ZERO population growth and stays at 10 million however many generations pass. NCERT Class 12, Organisms and Populations.

5. Re-NEET 2026 · Q163

Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R.

Assertion (A): The logistic growth model of populations is considered more realistic than the exponential growth model.

Reason (R): Resources are finite.

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

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

Answer (1)

Sol. Exponential growth assumes unlimited resources and predicts a J-shaped curve rising without bound, which no real population sustains. Because resources are in fact finite, every habitat has a carrying capacity K beyond which it cannot support more individuals, and growth slows as the population approaches it - producing the S-shaped (sigmoid) logistic curve. Finite resources are therefore exactly the reason the logistic model is the realistic one. NCERT Class 12, Organisms and Populations.

6. Re-NEET 2026 · Q172

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:

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

Answer (1)

Sol. This is NCERT's standard illustration of competitive exclusion in the wild. Once goats were introduced to Abingdon Island they stripped the vegetation far more efficiently than the tortoises could, and the resulting shortage of food drove the tortoise to extinction within about ten years. Superior resource exploitation by the goats is therefore the direct cause of the tortoise's disappearance, so R explains A. NCERT Class 12, Organisms and Populations (interspecific interactions).

7. Re-NEET 2026 · Q174

Match List-I with List-II.

List I	List II
P) Both species are harmed	I) Predation
Q) One species is harmed and the other is benefited	II) Mutualism
R) Both species are benefited	III) Competition
S) One is benefited while the other has no effect	IV) Commensalism

Choose the correct answer from the options given below:

- (1) P-III, Q-IV, R-II, S-I (2) P-I, Q-II, R-III, S-IV
(3) P-II, Q-I, R-IV, S-III (4) P-III, Q-I, R-II, S-IV

Answer (4)

Sol. Interspecific interactions are classified by the sign of the effect on each partner. Competition harms both (P-III, - -). Predation benefits one at the cost of the other (Q-I, + -). Mutualism benefits both (R-II, + +). Commensalism benefits one and leaves the other unaffected (S-IV, + 0). Writing the sign pairs out is

the quickest way to sort these. NCERT Class 12, Organisms and Populations.

8. NEET 2020 · Q47

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

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

Answer (2)

Sol. Secondary metabolites like nicotine, strychnine, and caffeine are produced by plants for defence against herbivores and pathogens. Chapter: Organisms and Populations.

9. NEET 2020 · Q50

Which of the following is not an attribute of a population?

- (1) Natality (2) Mortality
- (3) Species interaction (4) Sex ratio

Answer (3)

Sol. Species interaction is a characteristic of communities, not populations. Chapter: Organisms and Populations.

Questions: official NEET papers set by NTA. Solutions: BrainIt. BrainIt is independent and not affiliated with NTA. Online, with every chapter: brainit.pro/neet/biology/organisms-and-populations/pyq/

AFTER THIS PAPER

Turn this paper into a plan.

BrainIt is a NEET practice app. It learns how you practise and tells you what to do next.

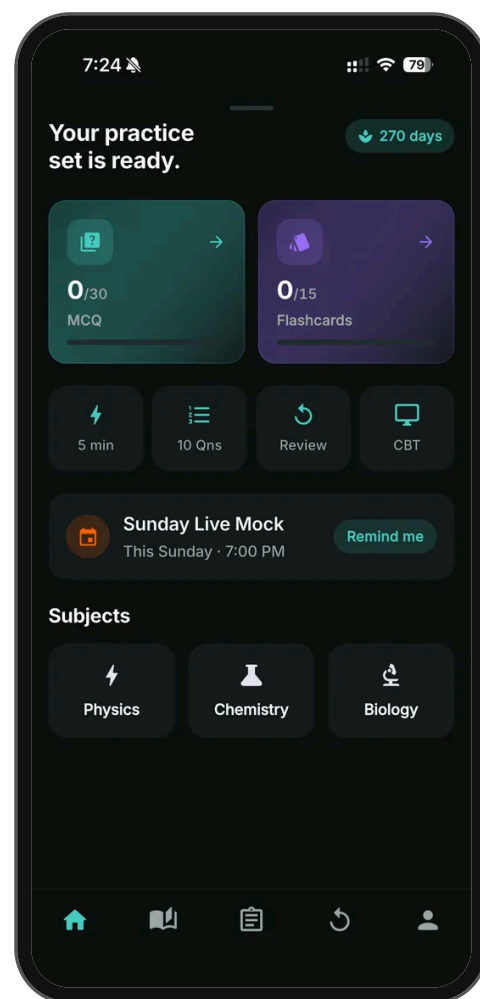
- **PYQs**
Previous-year questions, each with an explanation.
- **Mock tests**
Full and mini mocks on the CBT exam screen.
- **Revision**
Your mistakes come back for review, with flashcards.
- **Interactive concepts**
Learn by exploring 3D models, like the human body and the heart.
- **Analytics**
See your accuracy, speed and where you lose marks.
- **A daily plan**
It picks what to study next, every day.

Get it on
Google Play

Download on the
App Store



Scan with your phone camera,
or type **brainit.pro/app**



Take a free CBT mock

Real NEET questions on the exam screen, timed and marked for you.
No login.