

Structural Organisation in Animals

NEET previous year questions · Biology

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

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1. NEET 2026 · Q146

Male frogs can be distinguished from female frogs due to the presence of

Statement I: Bulging eyes

Statement II: Vocal sacs

Statement III: Webbed digits in feet

Statement IV: Copulatory pad on first digit of fore limbs

Statement V: Olive green-coloured skin with dark irregular spots

Choose the correct answer from the options given below

(1) II and III only (2) III and V only

(3) I and II only (4) II and IV only

Answer (4)

Sol. Male frogs are distinguished from females by two secondary sexual characters: vocal sacs (used to amplify croaking during the breeding season) and a copulatory pad on the first digit of the fore limbs (to grip the female during amplexus). Bulging eyes, webbed digits, and olive-green skin with dark spots are common to both sexes. Hence only II and IV.

2. NEET 2026 · Q166

Choose the correct statements regarding frog's anatomy:

Statement I: Hepatic portal system is the special venous connection between liver and intestine.

Statement II: There are twelve pairs of cranial nerves arising from the brain.

Statement III: The ureters and oviducts open separately into the cloaca in female frogs.

Statement IV: Hind-brain consists of cerebellum, medulla oblongata and optic lobes.

Statement V: Sinus venosus joins the right atrium of heart.

choose the correct answer from the options given below:

(1) I, II and III only (2) II and IV only

(3) II and III only (4) I, III and V only

Answer (4)

Sol. The hepatic portal system is a special venous connection that carries blood from the intestine to the liver.

Frogs have 10 pairs of cranial nerves, not 12 pairs.

In female frogs, the ureters and oviducts open separately into the cloaca.

The optic lobes are part of the midbrain, while the hindbrain consists mainly of the cerebellum and medulla oblongata.

The sinus venosus opens into the right atrium of the heart.

Therefore, the correct statements are I, III and V only.

3. Re-NEET 2026 · Q103

In water, frogs respire using _____.

- (1) skin (2) buccal cavity
(3) lungs (4) trachea

Answer (1)

Sol. Submerged frogs rely entirely on CUTANEOUS respiration: the moist, thin, richly vascularised skin allows dissolved oxygen and carbon dioxide to diffuse directly across it. On land the frog switches to buccal cavity respiration and pulmonary respiration through the lungs. The skin route is the only one available underwater. NCERT Class 11, Structural Organisation in Animals.

4. Re-NEET 2026 · Q135

In frogs, the number of pairs of cranial nerves arising from the brain are _____.

- (1) 6 (2) 9 (3) 10 (4) 12

Answer (3)

Sol. The frog's brain gives off TEN pairs of cranial nerves. This is a useful comparative point: humans and other mammals have twelve pairs, so the frog figure is a common target for confusion between the two. NCERT Class 11, Structural Organisation in Animals.

5. NEET 2020 · Q13

If the head of cockroach is removed, it may live for few days because

- (1) the cockroach does not have nervous system.
(2) the head holds a small proportion of a nervous system while the rest is situated along the ventral part of its body.
(3) the head holds a 1/3rd of a nervous system while the rest is situated along the dorsal part of its body.
(4) the supra-oesophageal ganglia of the cockroach are situated in ventral part of abdomen.

Answer (2)

Sol. The cockroach can survive for a few days without its head because the major part of its nervous system, including segmental ganglia, is situated along the ventral part of its body. This allows basic functions to continue even without the head. Chapter: Structural Organisation in Animals.

6. NEET 2020 · Q57

Cuboidal epithelium with brush border of microvilli is found in

- (1) Ducts of salivary glands
(2) Proximal convoluted tubule of nephron
(3) Eustachian tube
(4) Lining of intestine

Answer (2)

Sol. Cuboidal epithelium with a brush border of microvilli is found in the proximal convoluted tubule of the nephron, where it increases the surface area for reabsorption. Chapter: Structural Organisation in Animals.

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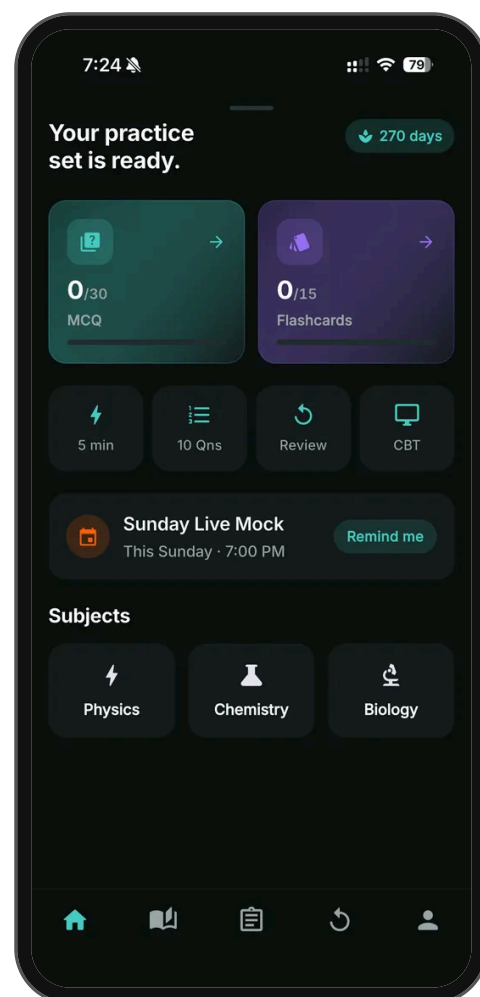
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