

CBSE TEST PAPER-01
CLASS - XI BIOLOGY
(STRUCTURE ORGANISATION IN ANIMALS)

General Instruction:

- All questions are compulsory.
 - Question No. 1 to 4 carry one marks each. Question No. 5 to 9 carry two marks each. Question No. 10 to 11 carry three marks each.
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1. Name the kind of tissue which forms the lining of blood vessels.
2. Name the chemical which helps in transmitting nerve impulse at the synapse.
3. What is the main function of WBCs?
4. What are the excretory organs of insects called ?
5. Give the characteristic of epithelial tissues.
6. How many types of nephridia are found in earthworm based on their location?
7. What do you mean by haemopoiesis?
8. Differentiate between blood and lymph.
9. What are nissl's granules? Where are they found?
10. i) Give three differences between frogs and toads.
ii) What do you understand by open type of circulatory system?
11. What are the cellular components of blood?

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[ANSWERS]

1. Squamous epithelium.
2. Acetylcholine.
3. The main function of white blood cells is to help protect the human body from infection as well as other foreign materials.
4. The excretory organs of insects are called malpighian tubules
- 5.i) They cover the surfaces and line the cavities and as such they protect other tissues from mechanical injury, drying up, infection and harmful chemicals.
- ii) They form many useful exoskeleton structures like scales, hairs, feathers, claws, nails, etc.
- iii) They have secretory activity; many epithelia produce glands and secrete juices like mucous, gastric juice etc.
- iv) Epithelia that line the uriniferous tubules help in the elimination of the nitrogenous waste materials as urine.
6. On the basis of their location, three types of nephridia are found in earthworms. They are:
 - i) Septal nephridia: These are present on both sides of the inter-segmental septa behind the 15th segment. They open into the intestines.
 - ii) Integumentary nephridia: These lie attached to the body wall from the third segment to the last segment, which opens on the body surface.
 - iii) Pharyngeal nephridia: These are present as three paired tufts in fourth, fifth, and sixth segments.
7. Haemopoiesis is the formation of new erythrocytes from the haemopoietic tissue. The haemopoietic tissues in the young foetus in liver and spleen whereas in the adults, it is the bone marrow of long bone. The haemopoietic tissue synthesizes millions of RBC's every minute and its excess lot is stored in the spleen.
8. Any four:

BLOOD	LYMPH

i) It is vascular tissue	i) It is white (straw coloured) vascular tissue
ii) It is found in blood vessels.	ii) It is found in lymph vessels.
iii) It is made of plasma, erythrocytes, leucocytes & platelets. Neutrophils are most abundant.	iii) It is made of plasma, leucocytes, erythrocytes & platelets are absent. Lymphocytes are most abundant.
iv) It has haemoglobin	iv) Haemoglobin is absent
v) It helps in transport of materials inside the body.	v) It functions as middle man between blood & body cells.

9. Nissl's granules are endoplasmic reticulum which contain group of ribosome's on them. Nissl's granules are found in cyton of nerve cells.

10. a) Any three:

FROGS	TOADS
i) Scientific name of frog is <i>Rana tigrina</i>	i) Scientific name of toad is <i>Bufo melanostictus</i>
ii) Frogs are diurnal	ii) Toads are nocturnal
iii) Parotid glands absent	iii) Parotid glands present
iv) Skin moist & slipper	iv) Skin dry & rough.
v) amphibious animals	v) Terrestrial for egg laying.

b) Open circulatory systems pump blood into a hemocoel with the blood diffusing back to the circulatory system between cells. Blood is pumped by a heart into the body cavities, where tissues are surrounded by the blood. The open circulatory system is common to molluscs and arthropods.

11. Composition of blood : Blood is a fluid connective tissue found in practically all parts of the body. It circulates in the body through vessels called arteries and veins. The blood consists of two parts : plasma (liquid part) and corpuscles (solid parts). The blood corpuscles float in the plasma.

Plasma : Plasma is a faint yellow, slightly alkaline, somewhat viscous fluid.

Blood corpuscles : They are of three major types :

(a) Erythrocytes (RBCs):

- (i) These are circular disc-shaped, biconcave cells without a nucleus.
- (ii) They contain a red pigment haemoglobin which has great affinity for oxygen.
- (iii) They carry respiratory gases.
- (iv) They are 4.5 - 5 million in healthy female while 5 - 5.5 million in a normal healthy male.

(b) Leucocytes (WBCs):

- (i) They are colourless, nucleated and longer than RBC.
- (ii) Their count is 6000 -1,000 per m^3 of blood.
- (iii) Their main function is protection against foreign particles (germs) by ingesting them, through phagocytosis.
- (iv) They are of two types - agranulocytes and granulocytes.

(c) Thrombocytes (Blood platelets):

- (i) These are very small, irregular bodies, without any nucleus.
- (ii) Their cytoplasm contains distinct granules.
- (iii) Their number is about 250,000 per cm^3 .
- (iv) They helps in coagulation of blood