

**Topic :- Structural Organisation in Animals**

- 1 **(d)**  
**Lymphoid tissue** consists of spleen, tonsils, lymph nodes, thymus gland, Peyer's patches, liver, etc. Such organs secrete lymph, producing lymphocytes so are known as lymphoid organs. The spleen is the largest mass of lymphatic tissue in the body. Lymphoid tissue share responsibility with myeloid tissue (red bone marrow) for producing agranular leucocytes.
- 2 **(b)**  
Earthworm is a reddish-brown terrestrial invertebrate that lives in the moist soil, rich in humus. They are soft and naked, hence cannot survive in the dry earth. Therefore, they lives in the burrows made by boring and swallowing the soil
- 3 **(b)**  
Red blood cells (RBC<sub>s</sub>) or erythrocytes are the most abundant of all the cells in blood. They are devoid of nucleus in most of the mammals and are round or biconcave in shape. It is biconcave because such a shape has increase surface area (for O<sub>2</sub>transfer) and allows easy squeezability of the RBC<sub>s</sub> through the blood vessels.
- 4 **(b)**  
A-Gall bladder; B-Lungs; C-Fat bodies; D-Kidney; E-Rectum; F-Urinary bladder
- 5 **(a)**  
Clitellum divides the body of earthworm into three regions; preclitellar, clitellar and postclitellar segments
- 6 **(d)**  
A-Fat storage area  
B-Nucleus  
C-Plasma membrane
- 7 **(a)**  
An average adult person has about 6.8 litres of blood
- 8 **(b)**  
Simple epithelium is composed of a single layer of cells and functions as a lining for body cavities, ducts and tubes
- 9 **(a)**  
In earthworms, the blood glands are present on the 4th, 5th and 6th. They produces blood cells and haemoglobin which gets dissolved in the blood plasma. Blood contains leucocytes only
- 10 **(d)**  
Basophils (one of the types of granulocytes) secrete histamine, serotonin, heparin, etc., and are involved in inflammatory reactions. They are probably like mast cells of connective tissue.

- 11 **(b)**  
 Squamous epithelium - Skin of frog  
 Columnar epithelium - Stomach  
 Ciliated epithelium - Bronchioles  
 Stratified squamous epithelium - Oesophagus  
 Glandular epithelium - Salivary gland
- 12 **(c)**  
 The body wall of the earthworm is covered by non-cellular cuticle, epidermis, circular muscles and longitudinal muscles, coelomic epithelium
- 13 **(a)**  
 There are ten pairs of cranial nerves arising from the brain of frog
- 14 **(a)**  
 In *Pheretima* fertilization is external (outside the body) within specialised structures called cocoons. These are hard shell structures containing mature sperms, eggs cells and nutritive fluid. These hard structures are developed due to hardening of clitellar secretions
- 15 **(c)**  
 Epithelial tissue has a free surface, which faces either a body fluid or the outside environment and thus provides a covering to body parts
- 16 **(c)**  
 Specialised connective tissues includes cartilage, bone, adipose and blood. In all connective tissues, except blood the cells secretes collagen. Blood's a fluid connective tissue containing plasma, RBCs and WBCs. Cells of connective tissues secretes fibres of structural proteins called collagen or elastin. This fibres provides strength, elasticity and flexibility to the tissues
- 17 **(a)**  
 Cartilage is a specialised connective tissue, which is solid, pliable and resists compression
- 18 **(c)**  
 Glandular epithelium consists of specialised columnar or cuboidal cells, which are specialised for secretion. They may be unicellular, *e.g.*, goblet cells of alimentary canal or multicellular, *e.g.*, salivary gland
- 19 **(d)**  
 There are about 500 species of the earthworms all over the world
- 20 **(a)**  
 Septal nephridias, present on both the sides of the intersegmental septa from the segment is 15 to the last that opens into the intestine of earthworm's excretory system

| <b>ANSWER-KEY</b> |           |           |           |           |           |           |           |           |           |           |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Q.</b>         | <b>1</b>  | <b>2</b>  | <b>3</b>  | <b>4</b>  | <b>5</b>  | <b>6</b>  | <b>7</b>  | <b>8</b>  | <b>9</b>  | <b>10</b> |
| <b>A.</b>         | <b>D</b>  | <b>B</b>  | <b>B</b>  | <b>B</b>  | <b>A</b>  | <b>D</b>  | <b>A</b>  | <b>B</b>  | <b>A</b>  | <b>D</b>  |
|                   |           |           |           |           |           |           |           |           |           |           |
| <b>Q.</b>         | <b>11</b> | <b>12</b> | <b>13</b> | <b>14</b> | <b>15</b> | <b>16</b> | <b>17</b> | <b>18</b> | <b>19</b> | <b>20</b> |
| <b>A.</b>         | <b>B</b>  | <b>C</b>  | <b>A</b>  | <b>A</b>  | <b>C</b>  | <b>C</b>  | <b>A</b>  | <b>C</b>  | <b>D</b>  | <b>A</b>  |
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