

DIRECTORATE OF GOVERNMENT EXAMINATIONS CHENNAI 600 006
HIGHER SECONDARY FIRST YEAR EXAMINATION - MAY-2022
BIO-ZOOLOGY-ANSWER KEY

Marks: 35
8×1=8

SECTION -1

Note : (1) Answer all the questions.
(2) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

QUES NO	A Type	B Type
1	(d) Organ of corti	(c) Iodine
2	(b) Insects	(a) Closure of semilunar valves
3	(c) Iodine	(d) Both (b) and (c)
4	(b) Myocytes	(d) Organ of corti
5	(d) Both (b) and (c)	(d) Segments 14 -17
6	(b) Emulsification	(b) Insects
7	(d) Segments 14 -17	(b) Emulsification
8	(a) Closure of semilunar valves	(b) Myocytes

SECTION - 2

(4 X 2 = 8)

Note : Answer any four questions.		Marks	Total Marks				
9	Compare schizocoelom with enterocoelom : <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Schizocoelom</td> <td style="width: 50%; padding: 5px;">Enterocoelom</td> </tr> <tr> <td style="padding: 5px;">The body cavity is formed by splitting of mesoderm</td> <td style="padding: 5px;">The body cavity is formed from the mesodermal pouches of archenteron.</td> </tr> </table>	Schizocoelom	Enterocoelom	The body cavity is formed by splitting of mesoderm	The body cavity is formed from the mesodermal pouches of archenteron.		2
Schizocoelom	Enterocoelom						
The body cavity is formed by splitting of mesoderm	The body cavity is formed from the mesodermal pouches of archenteron.						
10	Components of blood of frog : Plasma [60%] and blood cells [40%] includes red blood cells, white blood cells and platelets.		2				
11	Peculiar characters of DUCK : <ul style="list-style-type: none"> The body is fully covered with oily feathers. They have a layer of fat under their skin which prevents it from getting wet. They lay eggs at night or in the morning. The ducks feed on rice bran, kitchen wastes, waste fish and snails. 	2 X1= 2	2				

12	Role of Charles Darwin in relation to concept of species : In 1859 Charles Darwin in his book Origin of species explains the evolutionary connection of species by the process of natural selection.		2
13	Different types of WBC : Granulocytes : Neutrophils, eosinophils and basophils. Agranulocytes : Lymphocytes and monocytes.	1 1	2
14	Homeostasis : Maintenance of constant internal environment of the body by the different coordinating system.		2

SECTION - 3

(3 X 3 = 9)

Answer any three questions. Question No. 19 is Compulsory.		Marks	Total Marks
15	Characteristic features of bi-radially symmetrical animal :- Write any two characteristic features of bi-radially symmetrical animal example: Pleurobrachia and ctenoplana.	2 1	3
16	Economic importance of Frog :- (I) Frog is an important animal in the food chain; it helps to maintain our ecosystem. (ii) Frog are beneficial to man, since they feed on insects and helps in reducing insect pest population. (iii) Frogs are used in traditional medicine for controlling blood pressure and for its anti aging properties. (iv) In USA, Japan, China and North East of India, frogs are consumed as delicious food as they have high nutritive value.	3 X 1 = 3	3
17	L.S of Human Kidney:- Diagram Parts(Any two)	2 1	3
18	(i). The cones are responsible for colour vision and works best in the bright light. So we can perceive colours only in bright light. (ii). Blind spot is the region of our eye that devoid of photo receptors.	2 1	3

19	Thymus gland acts as Endocrine gland as it secretes four hormones such as thymulin, thymosin, thymopoietin and thymic humoral factor (THF) Thymus gland act as Lymphoid organ by the production of immuno competent "T" lymphocytes.		3
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SECTION-4 (2 X 5 = 10)

Answer All the questions		Marks	Total Marks
20 (a)	Function of liver apart from bile secretion:- 1. Destroys aging and defective blood cells 2. Stores glucose in the form of glycogen or disperses glucose into the blood stream with the help of pancreatic hormones 3. Stores fat soluble vitamins and iron 4. Detoxifies toxic substances. 5. Involves in the synthesis of non essential amino acids and urea.	1 1 1 1 1	5
20 b	Various techniques adopted in cattle breeding : Inbreeding. Outbreeding. Artificial insemination Multiple ovulation embryo transfer technology (MOET)	1 1 1 ½ 1 ½	5
21 a	Mechanism of breathing :- Events in inspiration. Events in Expiration. OR Flow chart of inspiration Flow chart of expiration	2 ½ 2 ½ 2 ½ 2 ½	5
21 b	Fundamental distinct features of chordates : Notochord. ----- Explanation Nerve cord. ----- Explanation. Pharyngeal gill slits. ----- Explanation Diagram and parts	1 1 1 1+1	5