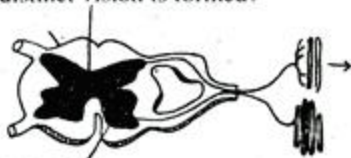


Model Question of HSC Examination 2015

(English Version)**Subject : Biology 2nd Paper (Creative)****Time : 2 Hours 10 Minutes****Full Marks—40****[Answer any four of the following questions]**

1. ► Students of zoology observed the grasshopper in the laboratory and found two compound eyes made of many simple eyes called Ommatidium. The Ommatidium forms two types of images. One is distinct and other indistinct depending on the intensity of light.

- a. What is metamorphosis? 1
 - b. What are the differences between nymph and larvae? 2
 - c. What are the different parts of an Ommatidium take part in the formation of image? 3
 - d. How indistinct vision is formed? 4
2. ►



- a. What is neuron. 1
- b. How does synapse work? 2
- c. Describe the given figure in the stem. 3
- d. Explain-response to stimuli with the figure. 4

3. ► In the environment lot of bacteria, virus are invading the body and causing disease. But we are able to protect the pathogens from infection by immune system. Memory cells are present in the body which also helps to protect the body from infection.

- a. What is immunity? 1
- b. Define antigen & antibody. 2
- c. How infection by the pathogens is prevented? 3
- d. How the cells which mentioned in the stem are formed in the human body? 4

4. ► Teacher told his students that the digestion of food starts from mouth and finish in the small intestine. The leaf like digestive gland is associated with the digestion of food. Finally digested soluble food is utilized for the formation of the body.

- a. What is peristalsis? 1
- b. How chyme is formed in the stomach? 2
- c. Explain-the leaf like digestive gland is associated with the digestion of all kind of foods. 3
- d. How digested soluble food is utilized in the formation of body? 4

5. ► The number of color blind man is greater than the female. Mr Kamal purchased a green sari from the market and presented to his wife. He said his wife that this is the green sari and it is your favourite color. After opening the sari, his wife found that the sari is not green.

- a. Why this is happened? 1
- b. What is sex-linked inheritance? 2
- c. Why male is more color blind than female? Explain it. 3
- d. Explain- the process of inheritance of the character which is mentioned in the stem with example. 4

6. ► Mr. Kamal told his student during class that Hydra is a multicellular animal. It has central cavity which performs circulation and digestion. Hydra has defensive cells which help the animal to capture food and protect themselves from the enemy.

- a. What is gastro vascular cavity? 1
- b. Differentiate between coelom and coelenteron. 2
- c. Describe the defensive cell of hydra? 3
- d. Explain how does Hydra protect themselves from the enemies with the help of the cell which is mentioned in the stem? 4

[Darken the circle (O) with black ball point pen from the alternatives]

- Retina is consisted with how many layers of cell?
 (a) 5 (b) 4
 (c) 3 (d) 2
- Photoreceptor Cell of retina is found in-
 i. Sclera ii. Choroid
 iii. Retina
 Which one is correct?
 (a) i (b) ii
 (c) iii (d) i, ii

Look at the stem and answer the questions 3



- Y part of the figure is known as -
 (a) Cerebellum (b) Pons
 (c) Thalamus (d) medulla oblongata
- Sequence of bones of middle ear-
 i. Mallius → Stapes → Incus
 ii. Mallius → Incus → Stapes
 iii. Incus → Mallius → Stapes
 Which one is correct?
 (a) i (b) ii
 (c) iii (d) i, ii
- What is the name of modern Horse-
 (a) Equus (b) Merichippus
 (c) Mesohippus (d) Pliohippus
- The cochlea is divided into how many canal or tubule?
 (a) 5 (b) 4
 (c) 3 (d) 2
- Ontogeny recapitulates phylogeny said by-
 (a) Haeckel (b) Weisman
 (c) Darwin (d) Wallace
- Which hormone is known as gonadotropin?
 (a) FSH (b) TSH
 (c) ACTH (d) ADH
- Adrenaline hormone is secreted from-
 (a) Pituitary Gland (b) Kidney
 (c) Thymus (d) Pancreas
- How many fin rays are found in pectoral fin of rohu fish?
 (a) 19 (b) 17
 (c) 15 (d) 13
- Total amount of blood is referred to how many percentage of body weight?
 (a) 4-5% (b) 5-6%
 (c) 7-8% (d) 8-9%
- Granulocyte are-
 i. Lymphocyte ii. Monocyte

- Neutrophil
 Which one is correct?
 (a) i (b) i & ii
 (c) i & iii (d) iii
- Which one is clotting protein?
 (a) Albumin (b) Serum globulin
 (c) Serum albumin (d) Fibrinogen
- Note: Question was not found.
 (a) (b)
 (c) (d)
- What amount of haemoglobin is found in each 100 ml of blood of in healthy man?
 (a) 10 gm (b) 12 gm
 (c) 14 gm (d) 16 gm
- Scale of rohu fish consist with-
 i. Cycloid type
 ii. Placoid
 iii. Ganoids type
 Which one is correct?
 (a) i & ii (b) ii & iii
 (c) i (d) ii
- Sinus venosus gets blood by-
 (a) Cardinal Vein
 (b) Ductus caverie
 (c) Subclavian vein
 (d) Transverse anastomosis
- How many factors is associated blood clotting?
 (a) 10 (b) 11
 (c) 12 (d) 13
- On the origin of species by means of natural selection published at-
 (a) 24 November 1858
 (b) 14 November 1858
 (c) 24 November 1859
 (d) 14 November 1859
- The life span of Mendel was-
 (a) 1822-1884 (b) 1822-1885
 (c) 1823-1885 (d) 1822-1892
- In which order of classification hydra is included?
 (a) Sporozoa (b) Insecta
 (c) Hydridae (d) Hydroida
- Which one is called totipotent?
 (a) Interstitial cells (b) Sensory cells
 (c) endocytes cell (d) nutritive cell.
- Flame cell is found in -
 i. Ascaris lumbricoids
 ii. Tenia solium
 iii. Fasciola hepatica
 Which one is correct?
 (a) i & ii (b) ii & iii
 (c) i & iii (d) i, ii & iii
- Natural Killer cell contain-
 i. Lysozyme ii. Perforin
 iii. Granzyme
 Which one is correct?
 (a) i & ii (b) ii & iii
 (c) i (d) ii

- Which one is dominant character of human eye?
 (a) Brown (b) Blue
 (c) Black (d) Grey
- Rete mirabile is found in -
 (a) Air bladder (b) Pancreas
 (c) Gill (d) Liver
- Which antibody is found in mucous membrane of nose?
 (a) IgM (b) IgG
 (c) IgD (d) IgA
- The tip of string of which nematocyst is open?
 i. Penetrant
 ii. Streptolene glutinant
 iii. stereolence glutinant
 Which one is correct?
 (a) i (b) ii
 (c) iii (d) i, ii & iii
- From which cell ovum is form?
 (a) Oocyte (b) Spermatocyte
 (c) spermatogonia (d) polar body
- How many hours of life time of sperm of hydra?
 (a) 38 (b) 43
 (c) 48 (d) 53
- Which one is right sequence of development of hydra?
 (a) Zygote → Morula → Blastula → gastrula
 (b) Zygote → Blastula → Morula → gastrula
 (c) Fertilization → Zygote → Blastula → gastrula
 (d) Fertilization → Zygote → Morula → gastrula
- If marriage between colour blind male and color blind carrier female then-
 i. One son and one daughter are color blind
 ii. One son and one daughter normal
 iii. One daughter color blind carrier
 Which one is correct?
 (a) i (b) ii
 (c) i & ii (d) i, ii & iii
- When Gregor Mendel published his Law?
 (a) 1866 (b) 1862
 (c) 1861 (d) 1860
- Which one is one known as lamprey?
 (a) Branchiostoma sp
 (b) Myxine sp
 (c) petromyzon sp
 (d) Lampetra sp
- Which one is called rubbish collecting cell of the body-
 (a) Neutrophil (b) Natural killer cell
 (c) Macrophage (d) B cell

1	(c)	2	(c)	3	(c)	4	(b)	5	(a)	6	(c)	7	(a)	8	(a)	9	(a)	10	(b)	11	(c)	12	(d)	13	(d)	14	(d)	15	(d)	16	(c)
17	(b)	18	(d)	19	(c)	20	(a)	21	(d)	22	(a)	23	(b)	24	(b)	25	(a)	26	(a)	27	(d)	28	(a)	29	(a)	30	(c)	31	(a)	32	(d)
33	(a)	34	(c)	35	(c)																										