Bago University
Department of Zoology
Second Semester Examination, September 2019

Second Year (B.Sc) **Zool: 2111**
(Zoology Specialization) **Ichthyology**
Answer ALL questions **Time Allowed: (3) Hours**

I. State TRUE or FALSE to the following statements. **(10 marks)**

1. Scales are present in siluriformes fishes.
2. The integumentary system of fish comprises of the skin and its derivatives.
3. Intestine is relatively shorter in carnivorous than in herbivorous fishes.
4. The number of pyloric caeca may go up to two hundred in mackerel.
5. The skin of many fishes helps in respiration.
6. The medulla oblongata is the middle part of the brain.
7. Cranial nerves arise from the brain.
8. The gonads of fish develop from the coelomic epithelium.
9. In hapa breeding, the hapa is the fine netting, rectangular in shape.
10. The quality of fishing reflects the quality of living.

II. Complete the following statements with appropriate words. **(10 marks)**

1. The study of fishes is known as ------.
2. Fish body is covered with ------ and bony plates.
3. Fins are the chief ------ organs in fishes.
4. Rectum is almost completely devoid of ------ glands in fishes.
5. The formation of cells and fluid of the blood is known as ------.
6. There are ten ------ of cranial nerves in fishes.
7. The teleostean kidney is divided into head kidney and ------ kidney.
8. The spawning takes place within 3-6 hrs following the ------ dose.
9. Fish conservation also helps to maintain the balance of certain ------.
10. Fishes can serve as indicators of the health of ------system.

III. Answer ALL questions **(10 marks)**

1. Describe the two types of fins found in fishes.
2. State the structure of tongue of bony fish.
3. Describe the nature of peripheral nervous system of fish.
4. Name the three parts of nervous system of fishes.
5. State the factors influencing the spawning of fish.

IV. Answer ALL questions **(20 marks)**

1. Write an account on nature of placoid scale.
2. Describe the accessory respiratory organs of *Trichogaster* and *Clarias*.
3. List the parts of the alimentary canal modified for aerial respiration.
4. Tabulate the only six exotic fish species introduced to Myanmar.

V. Answer ANY THREE questions **(30 marks)**

1. State the characters of fish that deals with respiratory system and reproductive system.
2. Differentiate the Heterocercal tail type and Homocercal tail type.
3. List the types of marine teleostean kidney with external view.
4. Describe the differences between 'gymnovarian condition' and 'cystovarian condition'.
5. State briefly on sexual dimorphism in fishes.
6. Write an interesting account on fisheries conservation in Myanmar.

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