**ZOOLOGY - XII**

**SET I**

**A] Very short questions. [7×1 = 7]**

1. What is mast cell?
2. Mention the role of acrosome of sperm.
3. What is role of surrogate mother in test tube baby?
4. What do you mean by Autograft and Xenograft?
5. What are Bohr’s effect and dead space volume?
6. Give the name of two diseases caused due to the deficiency of vitamin A and D each.
7. Define the terms- bolus, chyme and chyle.
8. Where does fertilization occur in human?
9. What do you understand by polyculture fish farming?
10. Write two demerits of amniocentesis.

**B] Short questions. [3×5 = 15]**

1. Differentiate between Neuron and Neuroglia.
2. Explain the coelom formation process in frog.
3. Enlist the functions of liver.
4. Discuss the types of drugs and their effects.
5. What is menstruation? Explain in brief.
6. Mention structure and function of adrenal cortex.
7. What are vaccines? Describe their types.

**C] Long questions.**

1. Describe the mechanism of urine formation in human with labelled diagram. **[7.5]**

**OR**

What is DOTS? Discuss about causative agent, epidemiology, symptoms and control measures of Tuberculosis.

1. Describe the human Ear as stato- acoustic organ. **[8]**

**SET II**

**A] Very short questions. [7×1 = 7]**

1. What is the function of Nissl’s body of neuron?
2. Define Spermiogenesis and spermiation.
3. Define the terms natality, carrying capacity and biotic potential.
4. What is Natural pacemaker?
5. Differentiate between rennin and renin.
6. Name the photosensitive pigments found in human eye?
7. What do you mean by detoxification and deamination?
8. Differentiate between polyculture and integrated fish farming.
9. At what stage of pregnancy, amniocentesis is done?
10. What is holoblastic cleavage?

**B] Short questions. [3×5 = 15]**

1. Write short notes on T.S. of mammalian bone.
2. How does the fertilization take place in frog?
3. Define portal system. Explain about human portal system with suitable diagram.
4. Discuss about mechanism of breathing in human.
5. 'Pituitary gland is called master gland'. Justify it.
6. Describe about poultry farming in Nepal.
7. Explain about J-shaped and S-shaped population growth curves.

**C] Long questions.**

1. Explain in detail about male reproductive system of human with labeled diagram. **[7.5]**

**Or**

Define pathogen. Discuss about causative agent, epidemiology, symptoms and control measures of AIDS.

1. Describe about alimentary canal of human with suitable diagram. **[8]**

**SET III**

**A] Very short questions. [7×1 = 7]**

1. Which tissue rest on basement membrane?
2. Who is the father of electrocardiography?
3. Name causative agent of Kala-azar.
4. What give the colour and smell of urine?
5. Define Astigmatism and Cataract.
6. What type of egg found in Frog?
7. Define brooding.
8. Why transplantation of cornea in easier than other organs?
9. Define active and passive immunity.
10. Write full forms of ELISA and DOTS each.

**B] Short questions. [3×5 = 15]**

1. Discuss briefly about structure of myelinated and non-myelinated neurons.
2. Describe about areolar tissue.
3. Explain shortly structure of T.S. of human ovary with diagram.
4. Describe about role of thyroxine hormone with its disorders.
5. Write short notes on system of fish farming.
6. Discuss about structure of gastrula of frog.
7. Define Osmoregulation. How does kidney maintain osmoregulation in our body?

**C] Long questions.**

1. Discuss about human population growth, problems of overpopulation and control strategies. **[7.5]**

**Or**

Explain in detail about physiology of respiration in human.

1. Explain about symptoms, effects and control measure of socially significant disease which you have studied. **[8]**

**SET IV**

**A] Very short questions. [7×1 = 7]**

1. Why hepatitis is more dangerous than AIDS?
2. Mention the function of Haversian canal in bone.
3. Name the endocrine parts of pancreas and ovary.
4. Which muscles are involved in respiration?
5. What are Na- pump and synaptic vesicle?
6. Where does implantation of zygote take place in human?
7. Which hormone helps to maintain the osmoregulation in human?
8. Mention the two fate maps of ectoderm.
9. Define 2nd generation vaccine.
10. Mention any two chief properties of antibiotics.

**B] Short questions. [3×5 = 15]**

1. Differentiate between striped, unstriped and cardiac muscle.
2. What is Rh-factor? Describe about diseases caused by incompatibility of Rh-factor.
3. Define PEM. Write short on diseases caused by PEM.
4. “Pancreas is the heterocrine gland” justify it.
5. Differentiate between cerebrum and cerebellum of brain.
6. Define cleavage. Describe it by taking the egg of frog as an example.
7. What is IVF? Describe about process of IVF.

**C] Long questions.**

1. Discuss about pathogen, mode of transmission, pathogenicity or symptoms, diagnosis, and control measures of typhoid fever. **[7.5]**

**Or**

Describe about Physiology of digestion in human alimentary canal.

1. Explain in detail about nerve impulse conduction through axon and synapse. **[8]**

**SET V**

**A] Very short questions. [7×1 = 7]**

1. What do you mean by sarcomere?
2. Give the dental formulae of human.
3. What is the function of sertoli cell of testis?
4. What will be the possible blood groups of children from the parents of blood group 'O' and 'A'?
5. Write the name of membranes which cover the brain.
6. Define the terms psychedellic and psychotrophic drugs.
7. Define epiboly and yolk plug.
8. Define antibiotics.
9. Name any two popular varieties of poultry used in Nepal for culture.
10. Which hormones cause diabetes mellitus and diabetes insipidus?

**B] Short questions. [3×5 = 15]**

1. How does CO2 transport in the human body? Explain briefly.
2. Explain briefly about mode of transmission, pathogenicity and control measures of Ascariasis.
3. Describe the process of Neurulation in frog.
4. Discuss briefly about organ transplantation.
5. Explain structure and function of thyroid gland.
6. Differentiate between bone and cartilage?

7. How does sympathetic nervous system differ from parasympathetic nervous system?

**C] Long questions.**

1. Explain the internal structure and working mechanism of human heart. **[7.5]**

**Or**

Give an illustrative account on structure of retina of Eye and working mechanism of human Eye.

1. Describe about types of Cancer, its etiology, symptoms and control measures. **[8]**