



The Times Secondary School

Dillibazar, Kathmandu

First Terminal Examination – 2076

Grade: - XII

Set A

Full Marks:-75

Stream: Science

Pass Marks:-30

Subject: - Biology

Time : 3 hrs

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate the full marks

Use separate answer sheets for Group A and Group B

Group A “Botany”

1. Answer in very short.(any seven) [7× 1 =7]
 - a. What is epistasis?
 - b. Define casparian stripe.
 - c. What is test cross?
 - d. Give the function of protoderm.
 - e. What is passage cell?
 - f. Define ascent of sap.
 - g. What is root pressure?
 - h. Define callus.
 - i. State two characters of genetic code.
 - j. Define codon.
2. Answer in brief.(any five) [5 × 3=15]
 - a. Describe the characteristics of meristematic tissue.
 - b. Explain tunica corpus theory.
 - c. Describe the experiment to explain the process of osmosis by egg membrane method.
 - d. Mention the significance of Plasmolysis.
 - e. Explain the law of dominance with example.
 - f. Write the differences between monogenic and polygenic inheritance.
 - g. Give the applications of biotechnology.
3. Describe the anatomy of dicot stem in detail. Give the differences between anatomy of dicot stem and monocot stem.

Or

What is transpiration ?Describe the mechanism of transpiration.
4. Explain the dihybrid cross and describe law of independent assortment.

Group B “Zoology”

1. Answer in very short.(any seven) [7× 1 =7]
 - a. Define Residual Volume.
 - b. What are peyer’s patches?
 - c. Name the glands present in human eye.
 - d. What is the causative agent of kala – azar?
 - e. Give the location of Adam’s apple.
 - f. In which parts of body transitional epithelial tissue are found?
 - g. What is vestibule?
 - h. Write the full form of BCG vaccine.
 - i. Why is vitamin E called beauty vitamin?
 - j. Name the glands present in duodenum.
2. Answer in brief.(any five) [5 × 3=15]
 - a. Describe the histological structure of mammalian liver.
 - b. Draw a well labeled diagram of t.s. of human lung.
 - c. Write a note on prophylaxis of Tuberculosis.
 - d. Differentiate between skeletal muscle and visceral muscle.
 - e. Describe in brief the carbon dioxide transport in human body.
 - f. Describe the structure of human tooth.
 - g. What is meant by enteric fever? Write the symptoms and preventive measures of enteric fever.
3. What is cancer? Write the types, symptoms, causative agent and treatment of cancer. [7.5]

Or

Describe the structure of human ear with well labeled diagram.
4. Describe the structure of human kidney with necessary diagrams.[8]

The End



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Group A “Botany”

1. Answer in very short.(any seven) [7× 1 =7]
 - a. Define turgor pressure.
 - b. Write the cause of swelling wood in rainy season.
 - c. What do you mean by hypertonic solution?
 - d. Define quiescent center.
 - e. Give two examples of plant with lactiferous tissue .
 - f. Define homozygous.
 - g. What do you mean by non allelic interaction?
 - h. Define micropropagation.
 - i. Give the definition of gene pool.
 - j. Define multiple alleles with example.
2. Answer in brief.(any five) [5 × 3=15]
 - a. Write the differences between dominance and epistasis.
 - b. Describe the types of parenchyma.
 - c. Write down the application of plant tissue culture.
 - d. Describe the experiment to explain the process of osmosis in plant by potato osmoscope method.
 - e. Write the structure and function of RNA.
 - f. Describe the advantage and disadvantage of transpiration.
 - g. Write the structure and function of collenchyma.

3. Describe anatomical features of monocot root and point out its differences with dicot root.

OR

Explain the process of ascent of sap with reference to transpiration pull theory.

4. Describe the process of translation.

Group B “Zoology”

1. Answer in very short.(any seven) [7× 1 =7]
 - a. What is meant by expiratory reserve volume?
 - b. Which type of tissue lines coelom?
 - c. Write two important functions of carbohydrate.
 - d. Why is Hepatitis more dangerous than AIDS ?
 - e. Give the breathing rate of adult resting human.
 - f. Name three ear ossicles.
 - g. What is the cancer caused by Retro virus?
 - h. Where do you find Glisson’s capsule ?
 - i. Which tissue lines Bowmann’s Capsule?
 - j. What are first class proteins?
2. Answer in brief.(any five) [5 × 3=15]
 - a. Draw a well labeled diagram of v.s. of human eye.
 - b. Describe the internal structure of human kidney.
 - c. Differentiate between kwashiorkar and marasmus.
 - d. Describe the structure and function of cardiac muscle.
 - e. Write short notes on serum hepatitis.
 - f. Give a brief account on water soluble vitamins.
 - g. Describe the histological structure of human lung.
3. Describe the physiology of respiration in human. [7.5]

Or

Describe the alimentary canal of human with a well labeled diagram.
4. What do you mean by communicable disease? Write in detail about one bacterial disease that you have studied. [8]

The End