

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Agricultural and Plantation Engineering



Study Programme : Bachelor of Science Honours (Agricultural Engineering)
Name of the Examination : Final Examination
Course Code and Title : AGX3201 Basic Biology
Academic Year : 2024/2025
Date : 31st January 2026
Time : 09:30 -12:30 hr
Duration : 03 Hours

Index No. :

Examination Type: Closed Book Test

General Instructions

1. Read all instructions carefully before answering the questions.
2. Answers should be in clear handwriting.
3. Do not use red colour pen.
4. This question paper consists of two (02) sections.

Section 1

- Consists of 15 questions in five (5) pages.
- Answer all questions.
- All questions carry equal marks.
- Write answers only in the space provided.
- Please do not remove the question paper from the examination hall.
- You may spend one (01) hour to answer this section.

Section 11

- Contain six (06) questions.
- Answer any four (04) questions.
- You may spend two (02) hours to answer this section.
- All questions carry equal marks.
- Answer for each question should commence from a new page.

SECTION I: Answer all questions. Use the space given under each question.

1. Name the most abundant chemical component in living organisms.

.....

.....

2. Name (02) monosaccharides.

i.

ii.

.....

3. Mark the correct statements as "√" and incorrect as "X". Disaccharide is,

- i. produced when two monosaccharides linked together via glycosidic bond ☐
- ii. produced when more than two monosaccharides linked together via glycosidic bond ☐
- iii. Lactose is a disaccharide ☐
- iv. Strach is a disaccharide ☐
- v. Sucrose is a non reducing sugar composed of αD - glucose and αD - fructose. ☐

4. Mark the correct statements as "√" and incorrect as "X". Polysaccharides is,

- i. widely distributed in plants and animals, as a structural substance ☐
- ii. widely distributed in plants and animals, as food storage compounds ☐
- iii. Cellulose is a polysaccharides. ☐
- iv. Strach is a polysaccharides ☐
- v. Depending on the type of "sugar", Polysaccharides can be classified as "homopolysaccharides" or "heteropolysaccharides" ☐

5. (a) Name two (02) functions of Nucleic acids

i.

ii.

(b) Name two (02) types of Nucleic acids.

i.

ii.

6. Name the nitrogenous bases common to DNA and RNA.

7. Differentiate nucleoside and nucleotide

8. Differentiate between DNA and RNA.

9. What is the basic unit of an organism?

10. Name the factors that control the cell size.

i

ii

iii

11. Classify the cells of living organisms.

i

ii

12. Name the energy trapping molecule during cellular respiration.

13. What is meant by surface diffusion.

14. List the phases in Mitotic cell division.

15. Write the number of Chromosomes produced at the end of following cell division.

i Meiosis

ii Mitosis

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SECTION 2: Answer any four (04) questions.

1. Explain the activities of living things/organisms.
2. Explain the functions of proteins in living organisms.
3. Write an essay on structure of DNA.
4. Describe the function/s of plant cell organelles.
5. Explain glycolysis in cellular respiration.
6. Discuss the specificity of Meiosis in cell division.