

**The Assam Royal Global University, Guwahati**

**RSBSC**

**B.Sc Biochemistry Sem 6<sup>th</sup>**

**Semester End Examination, July 2022**

**Course Title: Microbiology**

**Course Code: BCH152D601**

**Time:3hrs**

**Maximum Marks:70**

**Note: Attempt all questions as per instructions given.**

*The figures in the right-hand margin indicate marks.*

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**Section – A**

1. Attempt **all** questions. (Maximum word limit 50) 2 x 8
- a. What do you mean by abiogenesis and biogenesis?
  - b. What is spontaneous generation?
  - c. Mention the important characteristics of virus.
  - d. What are virioids?
  - e. What are lithotrops?
  - f. What are nitrifying bacteria?
  - g. What is synchronous growth?
  - h. What is minimum inhibition concentration?

**Section – B**

2. Attempt **any two** of the following: 6x2
- a. Discuss the swan necked flask experiment with its significance and diagram.
  - b. Write the salient characteristics of fungi and algae.
  - c. Write the contribution of L. Pasteur and R. Koch in the field of microbiology.
3. Attempt **any two** of the following: 7x2
- a. Write about the structure and function of bacterial plasma membrane.
  - b. Write the difference between bacterial and archae cell wall structure.
  - c. What is Gram staining? What components are used in the test? Write its significance.
4. Attempt **any two** of the following: 7x2
- a. Write about the different techniques involved in dry heat sterilization.
  - b. Draw and discuss the growth curves for both monoauxic and diauxic bacterial growth.
  - c. Discuss the different filtration methods used in microbiology.
5. Attempt **any two** of the following: 7x2
- a. Write the different characteristic features of bacteria.
  - b. What are antimicrobial drugs? How can you determine the level of microbial activity?
  - c. Write how penicillin inhibit bacterial growth.