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The Assam Royal Global University, Guwahati

Royal School of Life Sciences

B. Sc. Botany 2nd Semester

Semester End Examination, June 2023

Course Title: Gymnosperms and Angiosperms

Course Code: BOT142C201

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.

The figures in the right-hand margin indicate marks.

Section – A

1. Attempt **all** questions. (Maximum word limit 50) 2 x 8
- Which Gymnosperm is called as “living fossil” and why?
 - Give two differences between gymnosperms and angiosperms.
 - State the Pentoxylon theory of angiosperm origin.
 - Define basal angiosperms.
 - State the types of roots based on structure and mode of development.
 - What are seeds? State its types.
 - Define paleobotany? Who is regarded as the father of paleobotany in India?
 - What are the factors that can affect fossilization?

Section – B

2. Attempt **any two** of the following: 6 x 2
- Discuss the affinities of gymnosperms with pteridophytes.
 - Write a note on economical and ecological importance of gymnosperms.
 - With a neat labelled diagram explain the anatomical structure of stem of *Cycas*.
3. Attempt **any two** of the following: 7 x 2
- Write a note on basal monocots.
 - Describe the evolutionary trend in angiosperms.
 - Discuss the modification of tap roots based on both their storage and physiological functions.
4. Attempt **any two** of the following: 7 x 2
- Describe the various parts of a leaf with neat labelled diagram.
 - Describe the different parts of a flower and add a note on its functions.
 - Write a note on modified underground or subterranean stem.
5. Attempt **any one** of the following: 14 x 1
- Discuss the major periods of geological time scale and their pivotal events?
 - Give systematic classification of *Rhynia*. Discuss on the reproductive structures of *Rhynia* with a neat labelled diagram and draw its life cycle.