



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours Part-I Examination, 2020

BOTANY

PAPER-BOTA-II

Time Allotted: 2 Hours

Full Marks: 50

The figures in the margin indicate full marks.

Candidates should answer in their own words and adhere to the word limit as practicable.

Answer any *three* questions from the following

16×3 = 48

1. State the diagnostic features of bryophytes. Draw and label the different parts of the sporophyte of *Anthoceros*. Mention the advanced characters seen in this sporophyte. State the amphibian nature of bryophytes. 4+4+4+4
2. Mention the characteristic features of Pteropsida. Describe the prothallus of *Dryopteris* with a diagram. State two characters of 'Progymnospermopsida'. Distinguish between microphyllous and megaphyllous leaves. 5+5+2+ (2+2)
3. What are 'telome' and 'mesome'? Explain the origin of fertile structures in Lycopsidea, Sphenopsida and Pteropsida with the help of the telome theory. 4+(4+4+4)
4. Differentiate between the development of male gametophyte of *Cycas* and *Pinus*. What is transfusion tissue? Mention its function. (6+6)+2+2
5. Mention the different organ genera of the reconstructed plant *Williamsonia sewardiana*. Describe its male and female fructifications with suitable diagrams. State its geological age and its geographical distribution. 4+5+ (2 $\frac{1}{2}$ + 2 $\frac{1}{2}$) +2
6. Describe the different modes of fossil preservation (after Schopf 1975) with examples. State the conditions for ideal fossilization. 12+4

[Two marks will be awarded for Neatness]

N.B. : Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.

—X—