



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours Part-I Examination, 2020

BOTANY

PAPER-BOTA-I

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.
All symbols are of usual significance.*

Answer any *three* questions from the following

16×3 = 48

1. (a) What is Gaidukov phenomenon? 2
- (b) Why Cyanophycean members are called Cyanobacteria? 2
- (c) Mention the salient features of Bacillariophyceae. 6
- (d) With the help of suitable diagram describe the ultrastructure of plastids. 2+4

2. (a) What do you mean by coprophillus fungus? Give an example. 1+1
- (b) What is trichogyne? Name a fungus where it is found. 1+1
- (c) What is dolipore septum? Where is it found? 1+1
- (d) What is prosorus? Describe the life cycle pattern of *Synchytrium* with suitable sketches. 2+8

3. (a) What is viroid? 1
- (b) Distinguish between plasmid and episome. Briefly state the role of plasmid in bacteria. 2+3
- (c) With labeled sketches describe the mechanism of transformation in Gram positive bacteria. Mention the differences between Gram positive and Gram negative bacterial transformation process. 7+3

4. (a) What is pandemic disease? 1
- (b) Write a short explanatory note on disease triangle. 5
- (c) Mention the different steps of Koch's postulates. 5
- (d) Write a note on the bacterial blight of rice. 5

5. (a) Name the causal organism of Late blight of potato. What are the symptoms of this disease? Describe the disease cycle and mention the control measures. 1+3+4+2
- (b) What is phytoalexin? Describe the role of phytoalexin in host defense. 1+5

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| 6. (a) Name the causal organism of cholera. | 1 |
| (b) Draw and briefly describe the structure of TMV. | 2+3 |
| (c) Elucidate any one of the reproductive structures of <i>Chara</i> . | 5 |
| (d) Write a note on the economic importance of Lichen. | 5 |

Two marks will be awarded for neat and tidy work on the answer sheets.

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.*

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