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Roll No.

BOT-553

Applied Mycology and Plant Pathology

M. Sc. BOTANY (MSCBOT-12/13/16/17)

Second Year, Examination, 2018

Time : 3 Hours

Max. Marks : 80

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Attempt the questions contained in these Sections according to the detailed instructions given therein.

Section-A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. Write in detail on medicinal and nutritive value of edible mushrooms.
2. Describe the role of fungi in biodegradation.
3. Describe nematode diseases of plants.
4. Describe plant diseases of cereals.

Section-B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. Describe in short about mycorrhizae.

(B-3) P. T. O.

2. Describe in short about fungi as biopesticides.
3. Discuss fungal biotechnology in brief.
4. Describe in short how fungi are related to pollution ?
5. Describe symptoms of *two* bacterial diseases of plants.
6. Describe in brief about host-pathogen interaction.
7. Describe any *one* plant disease of any cash crop.
8. Describe any *one* fungal disease of any fruit.

Section-C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (1) mark each. All the questions of this Section are compulsory.

Choose the correct option for each of the following questions :

1. Which one of the following statements is correct ?
 - (a) Viruses are obligate parasites
 - (b) Viruses are facultative parasites
 - (c) All fungi are pathogenic
 - (d) Bacteria are always harmful to mankind
2. Ergot is obtained from a species of :
 - (a) *Neurospora*
 - (b) *Penicillium*
 - (c) *Claviceps*
 - (d) *Aspergillus*
3. The mushroom 'dhingri' is :
 - (a) *Agaricus bisporus*

- (b) *Agaricus campestris*
 - (c) *Podaxon podaxis*
 - (d) *Morchella* sp.
4. Citric acid is produced by :
- (a) *Aspergillus niger*
 - (b) *Rhizopus oryzae*
 - (c) *Fusarium moniliformae*
 - (d) *Penicillium notatum*
5. *Fusarium oxysporum* causes :
- (a) Wilt disease of pigeon pea
 - (b) Red rot of sugarcane
 - (c) Blast of rice
 - (d) Leaf spot of rice

Indicate whether the following statements are True or False :

- 6. *Synchytrium* is an obligate parasite.
- 7. *Aspergillus niger* produces ethanol.
- 8. *Agaricus* belongs to Homobasidiomycetidae.
- 9. *Plasmodium brassicae* causes club root disease of cabbage.
- 10. Leaf spot disease of groundnut is caused mainly by *Cercospora personata*.