

**M.Sc. BOTANY
THIRD SEMESTER
PLANT PATHOLOGY & MICROBIOLOGY
MSB-301**

Duration: 3 Hrs.

Marks: 70

PART : A (OBJECTIVE) = 20

PART : B (DESCRIPTIVE) = 50

[PART-B : Descriptive]

Duration: 2 Hrs. 40 Mins.

Marks: 50

[Answer question no. One (1) & any four (4) from the rest]

1. Write briefly about the symptoms, causal organism and mode of infection and control measures of "Abnormal leaf fall of Rubber". (2+1+4+3=10)
2. Discuss the special methods for the isolation of bacterial pure culture. (10)
3. Write a brief note on the physical and chemical control of micro organism. (10)
4. What is 'blast disease', write an account on the symptom, mode of parasitism and control measures of any cereal plant. (10)
5. Mention the different methods of plant disease control. Write an account on plant disease control by quarantine method. (10)
6. How plant disease is developed? What are the different stages of infection? Draw a schematic diagram of disease cycle. (10)
7. Write a note on antigen and antibody interaction. (10)
8. What is antibody? Write a note on monoclonal antibodies and its applications. (2+5+3=10)

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[PART-A : Objective]

Choose the correct answer from the following:

1×20=20

1. Who amongst the following scientist is a renowned plant pathologist?
 - a. Sir Joseph Delton Hooker
 - b. George Bentham
 - c. Gregor Johan Mendel
 - d. Edward John Butler
2. Who proved that 'late blight disease' of potato was caused by a fungus?
 - a. Anton de Bary
 - b. Louis Pasteur
 - c. Robert Koch
 - d. Charles Darwin
3. 'Victorin' a toxin produced during which of the following plant disease?
 - a. Rust of wheat.
 - b. Downy mildew of pea.
 - c. Powdery mildew of pea.
 - d. Victoria blight of oats.
4. 'Grey leaf spot of coconut' caused by which of the following organism?
 - a. *Phytophthora palmivorum*
 - b. *Pestalotiopsis palmivorum*
 - c. *Phytophthora meadii*
 - d. *Phytophthora colocasiae*
5. Yellow rust of wheat is caused by which of the following?
 - a. *Ustilago tritici*
 - b. *Albugo candida*
 - c. *Puccinia recondita*
 - d. *Puccinia striiformis*
6. 'Pityriasis versicolor' is caused by which of the following?
 - a. Histoplasma
 - b. Trichophyton spp.
 - c. Uicroporum furfur
 - d. None of the above
7. A population of a host in which all individuals have a particular character of resistance called:
 - a. Perthotrops
 - b. Pathovar
 - c. Pathotype
 - d. None of these
8. Membranous infolding in bacteria that initiate DNA replication is:
 - a. Mesosomes
 - b. Carboxysome
 - c. Magnetosome
 - d. Nucleosome
9. Recombination process occurring through the mediation of phages is a:
 - a. Conjugation
 - b. Transformation
 - c. Transduction
 - d. Transfection
10. Shape of bacteriophage is:
 - a. Brick shape
 - b. Helical shape
 - c. Bullet Shape
 - d. Tadpole shape
11. Dengue fever is caused by:
 - a. Bacteria
 - b. Virus
 - c. Fungi
 - d. Rickettsia
12. Which of the following is the first step in contact of the inoculums with that of the host?
 - a. The host
 - b. Infection
 - c. Penetration
 - d. None of these
13. The study of disease is called:
 - a. Pathology
 - b. Aetiology
 - c. Mycology
 - d. None of these
14. Blast disease of rice is caused by:
 - a. *Xanthomonas oryzae*
 - b. *Helminthosporium oryzae*
 - c. *Pyricularia oryzae*
 - d. *Ustilago tritici*

15. Rhizome rot of ginger is caused by:

- a. *Phytophthora infestans*
- b. *Pythium de Baryanum*
- c. *Pellicularia and Fusarium*
- d. *Alternaria solani*

16. Which of the following organism regarded as the first plant pathogen?

- a. Misteletoe
- b. *Puccinia graminis*
- c. *Ustilago sacchari*
- d. *Ustilago avenae*

17. T- cell mediates:

- a. Hormonal immunity
- b. Non specific defence
- c. Cell mediated immunity
- d. None of these

18. T-cells and B cells are originates in:

- a. Spleen
- b. Thymus
- c. Bone marrow
- d. Lymph nodes

19. The ratio of T-cells and B cells is:

- a. 3:1
- b. 1:3
- c. 1:1
- d. 1:2

20. Plasma cells are secreted by:

- a. T cells
- b. B Cells
- c. APC
- d. Macrophages

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA



[PART (A) : OBJECTIVE]

Duration : 20 Minutes

Serial no. of the
main Answer sheet

Course :

Semester : Roll No :

Enrollment No : Course code :

Course Title :

Session : 2017-18 Date :

Instructions / Guidelines

- The paper contains twenty (20) / ten (10) questions.
- Students shall tick (✓) the correct answer.
- No marks shall be given for overwrite / erasing.
- Students have to submit the Objective Part (Part-A) to the invigilator just after completion of the allotted time from the starting of examination.

Full Marks	Marks Obtained
20	

Scrutinizer's Signature

Examiner's Signature

Invigilator's Signature