

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE

B.Sc. (Hons.) Agriculture Summer 2018 - 19 Examination

Semester: 2nd

Date: 06/04/2019

Subject Code: 20107152

Time: 2:00 pm to 4:30 pm

Subject Name: Fundamentals of plant pathology

Total Marks: 50

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.**A. Fill in the blanks. (Each of 0.5 mark)****(05)**

1. 'Pathology' is a _____ word.
2. Sooty charcoal like powder is _____.
3. _____ is the abnormal increase in the no. of the cells.
4. Removal of diseased plants or their affected organs from field is known as _____.
5. Viruses are _____ organisms.
6. Fire blight of apple and pear is caused by _____.
7. Cell wall of bacteria is made of _____.
8. _____ is the Second link in the infection chain.
9. _____ is single stranded RNA molecule which lacks protein coat.
10. _____ is the abnormal increase in the size of the cells

B. Multiple choice type questions. (Each of 0.5 mark)**(10)**

- 1 Who is called as father of Plant pathology in India?

a) M. W. Beijerinck	c) Anton de Bary
b) E. J. Butler	d) P. A. Micheli
- 2 Who discovered satellite viruses?

a) Kassanis	c) Adolf Mayer
b) Anton de Bary	d) E. J. Butler
- 3 Which is the primary source of infection of late blight of potato?

a) Oospore	c) infected potato plant
b) infected tubers	d) all of the above
- 4 Who got Noble prize for crystallization of TMV?

a) W. M. Stanley	c) Diener and Raymer
b) Bawden	d) M. W. Beijerinck
- 5 *Pythium* fungus persist in the soil as dormant structure like....

a) Oospores	b) Chlamydo spores
c) Sclerotia	d) Perithecia
- 6 Domestic quarantine exist in India for:

a) Potato scab	b) Potato virus
c) Potato wart	d) Potato late blight
- 7 Which of the following is biocontrol agent?

a) <i>Pythium aphanidermatum</i>	c) <i>Trichoderma viride</i>
b) <i>Plasmopara viticola</i>	d) <i>Phytophthora infestans</i>
- 8 Name the structure which exerts a mechanical pressure on the host wall to cause infection

a) Appresorium	c) Rhizomorph
b) Stomatopodium	d) Hydathodes
- 9 Component of disease triangle are

a) susceptible host	c) Favourable environment
b) Virulent pathogen	d) All of the above
- 10 To the farmer's point of view which is the cheapest source for the management of the disease:

a) Cultural practices	c) Resistant variety
b) Physical control	d) Timely fungicidal spray
- 11 Destructive insect and pest act was passed in the year

a) 1912	c) 1920
b) 1914	d) 1910

- 12 The asexual stage of fungus is called
 a) Anamorph
 b) Teleomorph
 c) Holomorph
 d) None of the above
- 13 The Bengal famine was due to
 a) Brown spot of paddy
 b) Late blight of potato
 c) Downey mildew of grapevine
 d) Citrus canker
- 14 When entire thallus converted into one or more reproductive cells is known as
 a) Holocarpic
 b) Eucarpic
 c) Hermaphrodite
 d) Heterocarpic
- 15 Fusion of two compatible nuclei is known as
 a) Karyogamy
 b) Meiosis
 c) Mitosis
 d) Plasmogamy
- 16 Which fungicide known as Kittleson's killer?
 a) Captan
 b) Mancozeb
 c) Carbendazim
 d) None of the above
- 17 _____ disease occurs at irregular intervals and locations
 a) Epidemic
 b) Endemic
 c) Sporadic
 d) Pandemic
- 18 Disease introduced in India from Sri Lanka
 a) Brown spot of paddy
 b) Late blight of potato
 c) Citrus canker
 d) Downey mildew of grapevine
- 19 Plant Viruses are made up of
 a) Nucleic acid
 b) Protein coat
 c) Both a & b
 d) None of the above
- 20 Boudreaux mixture was discovered by
 a) P. M. A. Millardatt.
 b) P. A. Micheli
 c) P. A. Saccardo
 d) Adolf Mayer

Q.2 Do as Directed.

A. Define the following. (Any five out of seven)

(05)

1. Pathogen
2. Disease
3. Virion
4. Sign
5. Incubation period
6. Facultative parasite
7. Nematode

B. Answer the following. (Any five out of seven)

(05)

1. Enlist major objectives of plant pathology.
2. Enlist important plant pathogens.
3. Enlist events/steps of pathogenesis or infection process.
4. Enlist the source of survival of pathogen
5. Enlist the mechanism of biological control
6. Enlist different methods of eradication of pathogen.
7. What do you mean by internally and externally seed borne disease?

Q.3 Write short notes. (Any five out of six)

(10)

1. Disease triangle.
2. Asexual reproduction in fungi
3. Classification of plant diseases on the basis of their occurrence
4. Morphology and structure of plant viruses.
5. General principles of plant disease management.
6. Important points related to 'Irish Famine' and Bengal famine.

Q.4 Long Questions/Example (Attempt any three out of four)

(15)

1. Explain: survival of plant pathogens
2. Explain in brief: Infection process
3. Explain: cultural control of plant diseases.
4. Explain in brief: dispersal of plant pathogens.