LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**

FIFTH SEMESTER – **APRIL 2024**

UPB 5503 – PLANT DISEASES AND MANAGEMENT

Date: 20-04-2024 Dept. No. Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

Draw diagrams / flowcharts wherever necessary.

	SECTION A - K1 (CO1)	
	Answer ALL the Questions	**(10 x 1 = 10)**
1.	**Fill in the blanks**	
a)	Unusual enlargement of plant cells is called _____.	
b)	Gum deposition are formed in response to _____.	
c)	Sooty or charcol like powdery symptom is called _____.	
d)	Bunchy top of Banana is a disease caused by _____.	
e)	Bordeaux mixture is a _____.	
2.	**State whether the following are True or False**	
a)	Excess water around the plant causes disease.	
b)	Phytoalexins are produced during infection in plants.	
c)	Damping off is caused by *Pythium*.	
d)	*Cuscuta* is an epiphytic plant.	
e)	Elimination of disease is possible by eradication of alternate host.	
	SECTION A - K2 (CO1)	
	Answer ALL the Questions	**(10 x 1 = 10)**
3.	**Choose the correct answer**	
a)	Outbreak of disease at irregular intervals and location i) Epidemic ii) Endemic iiii) Sporadic iv) Pandemic	
b)	One of the following is not an infection route i) Wound ii) Hydathodes iiii) Stomata iv) pit	
c)	*Ustilago* causes i) Smut of sorghum ii) Red rot of sugarcane iiii) Tikka disease iv) brown rust of wheat	
d)	Which of the following is a mycoplasma disease? i) Citrus canker ii) Bunchy top of banana iiii) Little leaf of brinjal iv) Root knot disease	
e)	The headquarters of plant quarantine is located at i) New Delhi ii) Dehradun iiii) Faridabad iv) Lucknow	
4.	**Answer the following**	
a)	Comment on Haustorium.	
b)	Write a note on PR proteins.	
c)	Comment on Club root of cabbage.	
d)	Give two examples of galls.	
e)	Enlist the advantages of disease forecasting.	

SECTION B - K3 (CO2)	
Answer any TWO of the following each in about 500 words.	**(2 x 10 = 20)**
5.	Construct the classification of diseases based on various criteria.
6.	Explain the components of the disease triangle and their significance.
7.	Illustrate the smut disease of sorghum with the control measures.
8.	Write notes on the causative organism, symptoms and control of bunchy top of banana.
SECTION C – K4 (CO3)	
Answer any TWO of the following each in about 500 words.	**(2 x 10 = 20)**
9.	Explain various plant and pathogen interactions during pathogenesis.
10.	Enlist and explain the various microbial antagonistic activity.
11.	Infer on the engineered disease resistance against various pathogens.
12.	Analyze the symptoms and control of Tikka disease of groundnut.
SECTION D – K5 (CO4)	
Answer any ONE of the following in about 1000 words.	**(1 x 20 = 20)**
13.	Describe the various host defence mechanism in plants against pathogen.
14.	Summarize the various events in the act of pathogenesis.
SECTION E – K6 (CO5)	
Answer any ONE of the following in about 1000 words.	**(1 x 20 = 20)**
15.	Discuss about the various spore stages and lifecycle of *Puccinia*
16.	Compile various strategies on Plant disease management.

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