



AgriToppers Classes

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AIEEA-PGS JRF (Junior Research Fellowship) Coaching Program

PLANT SCIENCE

STUDY PLANNER (*Concept build up*)

Number	Topic	Revision 1 (Write Date)	Revision 2 (Write Date)
0	Introduction, suggested reading list, approaches		
1	Cell Organelles		
2	Cell Division		
3	Prokaryotes, Eukaryotes & it's differences I & II		
4	DNA structure & forms		
5	DNA as genetic material		
6	DNA replication		



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7	Alleles & Genes		
8	Operon (lac & trp operon)		
9	Transcription & Translation (Basic concepts and process)		
10	Cytoplasmic inheritance I & II		
11	Polygenic inheritance		
12	Fungi introduction		
13	Sexual reproduction & Parasexuality in fungi		
14	Fungal Taxonomy :Stramenopiles (Oomycetes)		
15	Order: Peronosporales (Downy mildew fungi)		
16	Phylum: Chytridiomycota & Zygomycota		
17	Phylum: Ascomycota I & II		
18	Phylum: Basidiomycota & Deuteromycota		
19	Microscopy I, II & III		
20	Chromosome its structure & special types		
21	Structural & numerical chromosomal abberation I & II		
22	Genetic code		
23	Linkage and Crossing over		



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24	Sex determination and sex linkage		
25	Mutation		
26	Brief about Bacteria I & II		
27	Reproduction in bacteria		
28	Mode of entry of bacteria & Ralstonia races, biovars		
29	Rickettsia, Phytoplasma & Spiroplasma,		
30	Bacterial classification		
31	Brief about virus		
32	Bacteriophages, Viroid, Prions & Satellite RNA		
33	Rice diseases & its management		
34	Wheat diseases & its management		
35	Sorghum diseases & its management		
36	Maize, Bajra diseases & its management		
37	Red gram diseases & its management		
38	Chick pea diseases & its management		
39	Green gram, Black gram & Cowpea diseases & its management		



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40	Soyabean diseases & its management		
41	Sunflower diseases & its management		
42	Safflower, Mustard diseases & its management		
43	Groundnut diseases & its management		
44	Sugarcane diseases & its management		
45	Sesamum, Castor diseases & its management		
46	Tobacco diseases & its management		
47	Cotton diseases & its management		
48	Crop genetic resources		
49	Centres of diversity and Gene Banks		
50	Modes of reproduction & Pollination		
51	Systems of mating		
52	Male sterility & Self incompatibility		
53	Genetic variance, Heritability & Genetic advance		
54	General Breeding methods I		
55	General Breeding methods II		



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56	General Breeding methods III		
57	Stress resistance breeding		
58	Special breeding methods I		
59	Special breeding methods II		
60	IPR & different rights		
61	Varietal, Hybrid Seed production and release		
62	Scientists contribution in genetics & plant breeding		
63	Nitrogen fixation in legumes, Nitrification & C: N ratio		
64	Bio fertilizers, Fermentation & Beneficial microorganisms		
65	Brief about algae & Mycorrhiza		
66	Antibiotics		
67	Population genetics		
68	Disease of Horticultural crops and it's management I & II		
69	Disease of vegetable crops and it's management I & II		
70	Seed development, maturation & chemical composition		
71	Seed quality & factors affecting it		



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72	Seed production & certification		
73	Seed processing, drying & testing		
74	Seed treatment, storage & packaging		
75	Seed borne insects and pathogens		
GENERAL AGRICULTURE VIDEO LECTURES			
1	GA_Agronomy		
2	GA_Soil Science		
3	GA_Economics & Extension		
4	GA_Entomology		
5	GA_Agricultural Statistics		
6	GA_Horticulture		
7	GA_Plant Biotechnology		
8	GA_Genetics		
9	GA_Pathology		

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- ❖ Go through toppers notes for clear understanding and edge over others.
 - ❖ Clear doubts by available several interactive platforms when needed (Telephone, Whatsapp, Email).
 - ❖ For better understanding video lectures & reading of suggested books should go in side by side.



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STUDY PLANNER (<i>Reading tracker</i>)					
Text Book	50 % reading (Write date)	100 % reading (Write date)	1 st revision (Write date)	2 nd revision (Write date)	3 rd revision (Write date)
CORE SUBJECT: PLANT BIOTECHNOLOGY, PLANT PHYSIOLOGY, BIOCHEMISTRY					
1. Plant Physiology: V K Jain / Pandey & Sinha (Pick any one book)					
2. An expanding Horizon- B.D. Singh					
3. Genetics: B.D. Singh					
4. Fundamentals of Biochemistry: J L Jain					
5. Gene cloning & DNA analysis- T.A. Brown					
6. Plant Biotechnology- Slater					
7. Bios Instant Biochemistry: Hames & Hooper					
8. Techniques of Biophysics & Molecular Biology: Pranav Kumar					
GENERAL AGRICULTURE					
1. Nem Raj Sunda					
2. S. R. Kantwa					