RAFFLES UNIVERSITY

TEACHING PLAN: Crop Production Technology-I (Kharif crops)

SCHOOL: (SOAS) SCHOOL OF AGRICULTURAL SCINCES		**ACADEMIC SESSION: 2023 – 2024**		**FOR STUDENTS' BATCH: 2022-2026**
1	**Course No.**	**AAG-T-201**		
2	**Course Title**	**Crop Production Technology-I (Kharif crops)**		
3	**Credits**	**1+1**		
4	**Learning Hours**	**Contact Hours: 72** **Assessment: 9** **Guided Study: 9** **Total hours: 90**		
5	**Course Objective**	**1.** To know about the origin, distribution, climatic requirements and varieties of kharif crops **2.** To learn about the method of nursery preparation and transplanting in rice. **3.** To familiarize the students with the identification of common weeds in the kharif crops **4.** To study about the morphological description of Kharif crops. **5.** To learn the yield contributing characters and able to calculate the yield in the crops		
6	**Course Outcomes**	1. In the course study the students will be able to know about origin, geographical distribution, and economic importance of Kharif crops 2. In the course study the students will be able to know about Soil and climatic requirements, varieties, cultural practices and yield of Kharif crops. 3. Analysis of comparative benefits of the different Kharif crops 4. Constraints in production of oilseeds and pulses maybe identified through course content. 5. Production technology of kharif cereals and millets fulfil the need of human consumption and milch cattle.		
7	**Outline syllabus:**			
7.01	**Paper Code**	**Unit**	**Introduction**	**Page Numbers[1]**	**Lectures**
7.02	**AAG-T-202**	**Unit I (Kharif Cereals)**	**1.** An introduction of Kharif season: Cereal, Pulses, Oilseeds, Fibre & Fodder crops **2.** Crop production of Rice **3.** Crop production of Maize **4.** Crop production of Sorghum **5.** Crop production of Pearl millet **6.** Crop production of Finger millet	Volume-I(65-97) Volume-I(202-226)	**1** **4** **2** **1** **1** **1**
		Unit II (Kharif Pulses)	1. Crop production of Pigeon pea 2. Crop production of Mung bean 3. Crop production of Urd bean	Volume-I (320-378)	**2** **1** **1**
		Unit III (Kharif Oilseeds)	1. Crop production of Ground nut 2. Crop production of Soybean	Volume-II (80-118) Volume-II (119-167)	**2** **1**
		Unit IV (Fibre crops & Fodder crops)	1. Crop production of Cotton 2. Crop production of Jute 3. Crop production of Sorghum 4. Crop production of Cowpea 5. Crop production of Cluster bean 6. Crop production of Napier grass	Volume-II (469-527)	**3** **2** **1** **1** **1** **1**
8	**Course Evaluation**				
8.1	**CA: 10%**				

8.1.1	**Attendance**	25 %
8.1.2	**Homework**	2 Assignments, 50%
8.1.3	**Quizzes**	2 Quizzes, 25%
8.1.4	**Projects**	-
8.1.5	**Presentation**	-
8.1.6	**Any other**	Practical Examination- 30%
8.2	**MTE**	10%
8.3	**End-term examination: 50%**	
9	**Text Books & References**	
9.1	**Text book**	**1. Field crops Production, Foodgrain crops Volume-I, by Dr. Rajendra Prasad, Indian Council of Agricultural Research, New Delhi.** 2. **Field crop Production, Commercial crops Volume-II by Dr. Rajendra Prasad, Indian Council of Agricultural Research, New Delhi.**
9.2	**References**	1. Principles of Crop production, by Reddy SR, Kalyani publications. 2. Modern techniques of raising field crops Chhidda Singh,Prem Singh and Rajbir Singh 3. Crops of India N.R.Das 4. Principles Of Crop Production, by S.R REDDY, C NAGAMANI, Kalyani Publications. 5. A Manual on Crop Production Technology (Kharif and Kharif), Lokesh Kumar Jain 6. Agronomy of field crops S.R. Reddy. **7. Crop Production Technology I & II – Kharif and Rabi Crops – As per 5th Deans Committee Recommendations, B. S. Lalitha, N. Mavarkar, B. R. Premalatha, 2020**
9.3	**Video References**	1.

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code.Unit I (1)	✓	✓	✓	✓	✓
Paper Code. Unit I (2)	✓	✓			✓
Paper Code. Unit I (3)	✓	✓			✓
Paper Code. Unit I (4)	✓	✓			✓
Paper Code. Unit I (5)	✓	✓			✓
Paper Code. Unit I (6)	✓	✓			✓
Paper Code.Unit II (1)	✓	✓		✓	
Paper Code. Unit II(2)	✓	✓		✓	
Paper Code. Unit II(3)	✓	✓		✓	
Paper Code.Unit III (1)	✓	✓		✓	
Paper Code.Unit III (2)	✓	✓		✓	
Paper Code.Unit IV (1)	✓	✓	✓		✓
Paper Code.Unit IV (2)	✓	✓	✓		✓
Paper Code.Unit IV (3)	✓	✓	✓		✓
Paper Code.Unit IV (4)	✓	✓	✓		✓
Paper Code.Unit IV (5)	✓	✓	✓		✓
Paper Code.Unit IV (6)	✓	✓	✓		✓

QUESTION BANK

Section A

1. What is the rice inflorescence is known as –
2. What is blind hoeing?
3. Explain pegging?
4. ICPH – 8 is a variety of which crop
5. The optimum pH of soil for rice cultivation is ranges from –
6. Where is sorghum originated?
7. Khaira Disease caused due to ___?
8. NRC of Soybean is located at?
9. Cause of POP pod in groundnut is due to the deficiency of which element?
10. Striga is a crop associated weed of _____plant?
11. FS-68 is a variety of _____?
12. What is casual organism of Tikka disease in groundnut?
13. The optimum seed rate for maize crop
14. What is the Test weight of Bajra?
15. Where is ICRISAT located at –
16. What is the botanical name of Finger Millet / Ragi

Section B

17. Explain Mixed farming
18. Explain Evapo-transpiration
19. What are forage crops?
20. Explain Crop rotation.
21. Explain Inter cropping?
22. What is Depog
23. Write a short note on Wet rice nursery method.
24. Explain SRI method of Rice nursery.
25. Write the name of Biofertilizer for the following crops-
    a) Rice
    b) Maize
    c) Soybean
    d) Moong/ Urd
26. Differentiate between Bunch and spreading type of Ground nut.
27. Differentiate between American cotton and Desi cotton?
28. Give reason for Bad boll opening in cotton?
29. What is puddling and its importance?
30. Write about the importance of weed management in Kharif crops?
31. Enlist the advantages of transplanting in pearl millet?

Section C

32. Describe the cultivation of maize under the following heads:
    a) Soil & Climate
    b) Improved variety
    c) Seed & seed treatment
    d) Fertilizer management
    e) Plant protection
33. Give the reason for low yield of pulses in India. Explain in detail about the recent developments in production for higher yield of moongbean and mothbean in Rajasthan?
34. Explain the fertilizer management in pulses crops?
35. Describe the crop production technology of Sugarcane under the following heads:
    a) Climatic & Soil requirement

b) Improved variety
c) Seed and seed treatment
d) Sowing methods
e) Fertilizer management
f) Irrigation management

36. Describe the suitable production technology of rice under following heads
    a) Time of sowing and method of sowing
    b) Seed rate and seed treatment
    c) Improved Varieties
    d) Integrated Weed Management
37. Describe the cultivation of mung bean under following heads
    a) Improved Varieties
    b) Nutrient Management
    c) Seed rate and seed treatment
    d) Intercropping
38. Describe the cultivation of sorghum under following heads
    a) Improved Varieties
    b) Seed rate
    c) Disease & Pest Management
    d) Intercultural Operation
39. Describe the cultivation of Cowpea under following heads
    a) Improved Varieties
    b) Nutrient Management
    c) Seed rate and Seed treatment
    d) Intercropping
40. Describe the cultivation of cotton under following heads
    a) Improved Varieties
    b) Nutrient Management
    a) Pest Management
    d) Critical Stages of Irrigation
41. Describe the cultivation of Groundnut under following heads
    a) Seed rate and Seed treatment
    b) Improved Varieties
    c) Pegging
    d) Disease Management
42. Describe the suitable production technology of soyabean crop under following heads
    a) Time of sowing and method of sowing
    b) Seed rate and seed treatment
    c) Improved Varieties
    d) Integrated Weed Management
43. Describe the cultivation of Urd bean under following heads
    a) Seed rate and Seed treatment
    b) Improved Varieties
    c) Intercropping
    d) Insect and Pest Management
44. Give the taxonomic classification of Rice. Explain the irrigation schedule of Rice.
45. Write about Rice Nursery methods in brief.
46. Write about the Transplanting methods of Rice.