

PRACTICE SET
End Semester (1st Sem.) Examination, December – 2025

Program: M. Sc. (Ag.) Agronomy
Semester: 1st
Course: Agronomy of Major Cereals and Pulses
Course Code: 13A.AGRON.506

Course Outcomes:

At the end of the course the students will be able to

CO1: Analyze and apply advanced crop production technologies for improving the productivity, quality, and sustainability of major cereal and pulse crops across diverse agro-climatic zones.

CO2: Accurately estimate crop yield, compute growth and physiological indices, assess protein content in pulses, and evaluate crop performance under various management practices.

CO3: Critically evaluate post-harvest handling, processing, and quality enhancement techniques, and apply knowledge for reducing post-harvest losses in cereals and pulses.

CO4: Design, plan, and execute field experiments, analyze agronomic data statistically, and adopt standard seed production practices for quality seed production in cereals and pulses.

Unit / Module-1

Section: I (5 Marks questions, Lower order Thinking -LOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
1.	Discuss briefly soil and climatic requirement for wheat cultivation.	Understand	CO1
2.	Summarize the process of malting in barley.	Understand	CO3
3.	List the varieties of wheat and oat.	Remember	CO1
4.	Summarise the irrigation management of wheat.	Understand	CO2
5.	Describe the important growth stages of wheat.	Remember	CO2

Section: II (15 Marks questions, Higher Order Thinking- HOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
6.	Explain the recommended package of practices of wheat with its estimated yield in India and Jharkhand	Analyse	CO1
7.	Discuss the recommended package and practices of barley.	Analyse	CO1
8.	Explain the botanical description of wheat. Distinguish features of <i>Phalaris minor</i> and Wheat.	Analyse	CO2
9.	Evaluate the classification of wheat as per Aberg and Weibe.	Evaluate	CO2
10.	Recommend the package of practices of oats.	Evaluate	CO1

Unit/Module-2**Section: I (5 Marks questions, Lower order Thinking -LOT)**

Sl. No.	Model Questions	Blooms Taxonomy	CO
11.	Compare briefly the three sub-species of <i>O. sativa</i> under the following heads: origin, climate, leaf characters, plant character, awn character and starch content.	Understand	CO2
12.	Discuss the improved varieties of ragi, sorghum and rice.	Understand	CO1
13.	Discuss the importance of ragi as a climate resilient crop and its nutritional significance.	Understand	CO3
14.	Briefly illustrate the classification of maize along with their botanical names and bases of their classification.	Apply	CO3
15.	Illustrate the botanical description of rice with neat diagram.	Apply	CO2

Section: II (15 Marks questions, Higher Order Thinking- HOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
16.	Explain the recommended package of practices of maize and analyse its nutrient contents.	Analyse	CO1
17.	Compare the growth stages and yield of sorghum in irrigated versus rainfed environments.	Analyse	CO3
18.	Recommend the method of nursery preparation and transplanting of rice for Jharkhand.	Evaluate	CO4
19.	Categorize maize based on characteristics of kernels. Briefly explain the disease and pest management in maize.	Analyse	CO3
20.	Analyze the sowing time of rice. Evaluating the recommended practices of rice.	Analyse	CO1

Unit / Module-3

Section: I (5 Marks questions, Lower order Thinking -LOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
21.	Describe the economic importance and usages of lentil.	Remember	CO4
22.	Tabulate botanical name, origin, family and chromosome number of the following crops (a) Chickpea, (b) Field pea, (c)Lentil	Remember	CO2
23.	Prepare a chart depicting seed rate, sowing time, seed treatment, spacing and depth of sowing of lentil	Apply	CO4
24.	State the classification of lentil, chick pea and field pea.	Remember	CO2
25.	Summarise the classification of Indian gram and varieties of chick pea.	Understand	CO2

Section: II (15 Marks questions, Higher Order Thinking- HOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
26.	Compare the two broad groups of Indian gram: Desi type and Kabuli type .Explain the botanical description of chickpea with well labelled diagram and any three high yielding varieties of chickpea.	Analyse	CO2
27.	Distinguish between garden pea and field pea. Create a well labelled diagram of field pea along with its brief botanical description.	Create	CO4
28.	Review the recommended practices of lentil with important varieties suitable for Jharkhand.	Evaluate	CO1
29.	Evaluate the role of pulses in sustainable agriculture and soil fertility improvement. Briefly explain the botanical description and floral structure of chick pea with a labeled diagram.	Evaluate	CO3
30.	Appraise the production technology of field pea with important varieties suitable for Jharkhand.	Analyse	CO1

Unit / Module-4

Section: I (5 Marks questions, Lower order Thinking -LOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
31.	Discuss the botanical description of green gram.	Understand	CO2
32.	State the 3 varieties of pigeon pea, green gram and black gram.	Remember	CO1
33.	Summarise the fertilizer management and yield estimates of pigeon pea and green gram.	Understand	CO2
34.	Interpret the importances of pulses according to soil fertility management.	Understand	CO4
35.	State the economic importance of horse gram along with its botanical name, family, origin.	Remember	CO4

Section: II (15 Marks questions, Higher Order Thinking- HOT)

Sl. No.	Model Questions	Blooms Taxonomy	CO
36.	Depict a comparative protein content (%) of pulses and cereals. Explain any two constraints of pulse production.	Analyse	CO2
37.	Differentiate between Kharif and rabi pigeon pea. Explain its importance and usages.	Analyse	CO4
38.	Briefly explain the classification of black gram, pigeon pea and green gram along with three varieties of each crop.	Analyse	CO4
39.	Conclude the post-harvest handling of black gram and green gram.	Analyse	CO3
40.	Evaluate the harvesting, threshing, post harvest handling and storage of Pigeon pea, green gram and black gram.	Evaluate	CO3

Summary Sheet:**CO Wise**

CO	Q. No.	Marks
CO1	1,3,6,7,10,12,16,20,28,30,32	125
CO2	4,5,8,9,11,19,22,,24,25,26,31,36	120
CO3	2,13,14,17, 29,39,40	75
CO4	18,21,23,27,34,35,37,38	80
Total		400

Unit Wise

CO	Q.No.	Marks
CO1	1-10	100
CO2	11-20	100
CO3	21-30	100
CO4	31-40	100
Total		400

Bloom's Taxonomy Level (BLT) Wise

BTL	Q.No.	Marks
LOT	20	100
HOT	20	300
Total		400

Prepared By: Mrs. Archana Kumari**Reviewed By:** Dr. Neha Grace Angel Kisku

Disclaimer: - This is a practice set. The Question in End semester examination will differ from the practice set. This practice set is meant for practice only.