



PRACTICE SET

End Semester (3rd Sem.) Examination, December– 2025

Program: B. Sc. (Hons.) Agriculture

Semester: 3rd

Course: Farm Machinery and Power

Course Code: 13A.212

Course Outcome:

After completion of the course the students will be able to-

CO1 Distinguish between various engine components and know the function of different types of engines and status of farm power in India.

CO2 Understand the importance of cooling system and will be able to perform small maintenance of cooling system and air supply system by themselves.

CO3 Comprehend various types of tillage, interculturing, sowing, and planting equipment, including the calibration of seed drills and the use of implements suited for plateau agriculture.

CO4 Practice modern agriculture equipments, including plant protection, harvesting, and threshing equipments.

Unit / Module-1

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

Sl. No.	Model Questions	Bloom Taxonomy	CO
1.	Discuss the present status and trends of farm power availability in India.	Remember	CO1
2.	Describe the major components of an internal combustion engine.	Understand	CO1
3.	Classify the different sources of farm power used in India and	Understand	CO1

	their relative contributions.		
4.	Discuss the role of renewable energy sources in meeting future farm power needs.	Understand	CO1
5.	Define important I.C. engine terms such as bore, stroke, compression ratio, and clearance volume.	Remember	CO1

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
6.	Analyze the relationship between indicated power, brake power, and mechanical efficiency through calculations.	Analyze	CO1
7.	Evaluate how wear and tear in piston–cylinder assemblies affect the efficiency and lifespan of engines.	Evaluate	CO1
8.	Explain how combustion chamber design influences the working efficiency of I.C. engines.	Analyze	CO1
9.	Analyze the working of fuel supply, ignition, cooling, and lubrication systems and their interdependence.	Analyze	CO1
10.	Evaluate the efficiency and economic viability of different sources of farm power under Indian conditions.	Evaluate	CO1

Unit / Module-2

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

Sl. No.	Model Questions	Bloom Taxonomy	CO
11.	Define the purpose of air cleaning and describe the working of any one type of air cleaner used in tractors.	Remember	CO2
12.	Describe the role of gearbox, differential, and final drive in transmitting power to the tractor wheels.	Understand	CO2
13.	Demonstrate the working principle and function of a hydraulic control system used for operating tractor implements.	Understand	CO2

14.	Discuss the advantages and limitations of different types of tractors used in Indian agriculture.	Understand	CO2
15.	Define cost analysis in the context of tractor operation and list the major cost components.	Remember	CO2

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
16.	Explain the complete power flow from the engine to the driving wheels of a tractor, explaining the function of each transmission component.	Analyse	CO2
17.	Analyse the working principles of a two-stroke cycle engine and four-stroke cycle engine with a neat sketch.	Analyse	CO2
18.	A four-stroke diesel engine operating at 800 p.m. user 0.11 kg of fuel in 4 min. While developing At torque of 7.65kg meter. Calculate the brake specific fuel consumption.	Evaluate	CO2
19.	Explain briefly about the different components of internal Combustion (I.C.) Engine with neat diagram.	Analyse	CO2
20.	Create a labelled schematic layout showing the integrated functioning of the fuel supply and lubrication systems in a diesel tractor.	Create	CO2

Unit / Module-3

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

Sl. No.	Model Questions	Bloom Taxonomy	CO
21.	Define tillage and mentioned the objective of tillage.	Remember	CO3
22.	Define seed Drill. List the functions of seed drill.	Remember	CO3
23.	Differentiate between primary tillage & secondary tillage	Understand	CO3

34.	Explain the importance of using appropriate harvesting and threshing equipment for different crops.	Understand	CO4
35.	Describe the working mechanism of a combine harvester.	Remember	CO4

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
36.	Analyze the efficiency and field performance of various plant protection equipment used in modern farming.	Analyze	CO4
37.	Evaluate the advantages and limitations of mechanized harvesting and threshing in Indian agriculture.	Evaluate	CO4
38.	Reconnect different types of sprayers and dusters used for plant protection and their mode of operation.	Evaluate	CO4
39.	Plan an integrated plant protection and harvesting schedule for paddy cultivation.	Create	CO4
40.	Differentiate between Harvesting and Threshing process. Enlist the types of tools used in harvesting. Sketch and classify the types of sickle with their name.	Analyze	CO4

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CO WISE

SUMMARY SHEET:

CO WISE

CO	Question No.	Marks
CO1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	100
CO2	11, 12, 13, 14, 15, 16, 17, 18, 19	100
CO3	21, 22, 23, 24, 25, 26, 27, 28, 29	85

CO4	31, 32, 33, 34, 35, 36, 37, 38, 39, 40	115
TOTAL		400

UNIT Wise

CO	Question No.	Marks
UNIT1	1-10	100
UNIT2	11-20	100
UNIT3	21-30	100
UNIT4	31-40	100
TOTAL		400

BLOOM'S Taxonomy Level (BTL) Wise

BTL	Question. No.	Marks
LOT	1, 2, 3, 4, 5, 11, 12, 13, 14, 15, 21, 22, 23, 24, 25, 31, 32, 33, 34, 35,	100
HOT	6, 7, 8, 9, 10, 16, 17, 18, 19,20, 26, 27, 28, 29, 30, 36, 37, 38, 39, 40	300
TOTAL		400

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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.