

RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	1	1	
<b>COURSE NAME</b>	Farm Equipment and Farm Machinery											
<b>CO Description</b>	Calculate field capacity, efficiency, economic parameters of machine uses for farming operations.											
<b>LO Description</b>	Explain farming operations, machines.											
SCHEME OF STUDY												
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks					
1	Farm mechanization. Farm machines and its classification. Machines for seed bed preparation, tilling, sowing, plant protection and irrigation, cutting, threshing operations on the farm. Hitching systems and controls of farm machinery.	Interactive classroom lecture method Handout, video display, tutorials	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	0	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.						
SCHEME OF ASSESSMENT												
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal							
1	Paper Pen Test	Student will be asked to explain two farming operations with suitable machines.	10	Test Paper + Rating Scale	Internal							
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)												
Part of TW												

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	1	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Calculate field capacity, efficiency, economic parameters of machine uses for farming operations.										
<b>LO Description</b>	Calculate field capacity, efficiency, economic parameters of machine uses for a given farming operation.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>				
	Calculation of field capacities and field efficiency. Calculations for economics of machinery usage: Fixed cost, variable cost, depreciation, estimated value method, straight line method, declining balance method. Comparison of ownership with hiring of machines.	Interactive classroom lecture method Handout, video display, tutorials	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	8	0	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>	<b>External / Internal</b>				
1	Theory Exam	Student will be asked to Calculate field capacity / efficiency/ “depreciation of machine” for a given farming operation.			10	Test Paper+ Rating Scale	External				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Theory Exam											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	2	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Student will be able to calculate draft of tilling tool, power requirement of tilling machine.										
<b>LO Description</b>	Explain process of seed-bed preparation, land reclamation.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>			<b>Remarks</b>		
	Introduction to seed-bed preparation, its classification. Land reclamation and earth moving equipment.	Interactive classroom lecture method Handout, video display, tutorials	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	4	0	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>				
	Paper Pen Test	Student will asked to explain the process of seed-bed preparation for a given crop	8	Test Paper + Rating Scale			Internal				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Progressive Test -1											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	2	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Calculate draft of tillage tool, power requirement of tilling machine.										
<b>LO Description</b>	Calculate draft of tillage tool, power requirement for tilling operations.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>				
	Machines used for primary tillage, secondary tillage, rotary tillage, deep tillage and minimum tillage. Measurement of draft of tillage tools and calculations for power requirement for tilling machines.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	2	4	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>		<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>				
	Laboratory Test by Observation	Student will be asked to Calculate a) draft of a given tillage tool b) power requirement of a given tilling machine		10	Observation Schedule /Check List /Rating Scales /Rubrics		External				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of External Practical Exam											

RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	2	3	
<b>COURSE NAME</b>	Farm Equipment and Farm Machinery											
<b>CO Description</b>	Calculate draft of tillage tool, power requirement of tilling machine.											
<b>LO Description</b>	Identify implements, major functional components used in tilling operations.											
SCHEME OF STUDY												
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks					
	Tillage machines like mould-board plough, disc plough, chisel plough, sub-soiler, harrows, puddler, cultivators, identification of major functional components. Attachments with tilling machinery.	Lab demonstration, hands on practice, lab assignment, quiz, assignments. Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	2	3	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.						
SCHEME OF ASSESSMENT												
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal							
	Laboratory Test	Student will be asked to identify major functional components, implements for a given tilling operation	8	Observation Schedule /Check List /Rating Scales /Rubrics	Internal							
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)												
Part of Internal Lab Work												

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>				Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
						M	0	2	6	0		
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>											
<b>CO Description</b>	Explain construction, working of sowing, planting, transplanting equipment.											
<b>LO Description</b>	Explain construction, working of sowing equipment for a crop.											
<b>SCHEME OF STUDY</b>												
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>					
	Sowing, equipment. Construction and working of seed drills, no-till drills, and strip-till drills.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	2	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.						
<b>SCHEME OF ASSESSMENT</b>												
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>				
	Theory Exam	Student will be asked to explain construction, working of sowing equipment for a given crop			10	Test Paper		External				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>												
Part of Theory Exam												

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	3	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Explain construction, working of sowing, planting, transplanting equipment.										
<b>LO Description</b>	Explain construction, working of planting , transplanting equipment for a crop										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>			<b>Remarks</b>		
	Introduction to planters, bed planters and other planting/transplanting equipment like sugarcane, potato, groundnut, water chestnut, paddy.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	2	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>		
	Theory Exam	Student will be asked to explain construction, working of planting/transplanting equipment for a given crop			10	Test Paper			External		
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Theory Exam											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>				Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
						M	0	2	6	0		
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>											
<b>CO Description</b>	Explain construction, working of sowing, planting, transplanting equipment.											
<b>LO Description</b>	Explain metering, calibration systems used in sowing equipment.											
<b>SCHEME OF STUDY</b>												
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>					
	Study of types of furrow openers and metering systems in drills and planters. Calibration of seed-drills/ planters. Adjustments during operation.	Interactive classroom lecture method Handout, video display, tutorials, Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	2	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.						
<b>SCHEME OF ASSESSMENT</b>												
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>				
	Theory Exam	Student will be asked to explain a metering/calibration system used in a given sowing equipment			10	Test Paper + Rating Scale		External				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>												
Part of Theory Exam												

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	4	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Explain construction, working of crop harvesting equipment										
<b>LO Description</b>	Explain construction, working of cutting equipment for a crop.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>				
	Cutting mechanism, shear and impact cutting; Cutting machines: mowers, windrowers, reapers, reaper binders and forage harvesters. Forage chopping & handling equipment.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration Lab demonstration, hands on practice, lab assignment, quiz, assignments	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	2	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>		<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>				
	Paper Pen Test	Student will be asked to explain construction and working of cutting equipment for given crops		12	Test Paper+Rating Scale		Internal				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Progressive Test 2											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>				Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
						M	0	2	6	0	4	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>											
<b>CO Description</b>	Explain construction, working of crop harvesting equipment											
<b>LO Description</b>	Explain construction, working of threshing equipment for a crop.											
<b>SCHEME OF STUDY</b>												
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>					
	Threshing mechanics, threshers and its types. Straw combines, grain combines.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	2	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.						
<b>SCHEME OF ASSESSMENT</b>												
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>				
	Theory Exam	Student will be asked to explain construction, working of threshing equipment for a given crop			10	Test Paper		External				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>												
Part of Theory exam												

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	4	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Explain construction, working of crop harvesting equipment										
<b>LO Description</b>	Explain construction, working of harvesting equipment for a crop.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>				
	Maize harvesting & shelling equipment, Root crop harvesting equipment - potato, groundnut etc., Cotton picking & Sugarcane harvesting equipment.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	6	2	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>	<b>External / Internal</b>				
	Theory Exam	Student will be asked to explain construction, working of harvesting equipment for a given crop			10	Test Paper + Rating Scale	External				
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Theory Exam											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	5	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Select a suitable farm machine.										
<b>LO Description</b>	Explain materials, heat treatment processes for farm machinery.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>		<b>Remarks</b>			
	Materials used in farm machine components. Steels and alloys for agricultural application. Heat treatment processes for farm machine components. (Names)	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	8	0	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>			
	Theory Exam	Student will be asked to explain material, heat treatment process for farm machinery			10	Test Paper + Rating Scale		External			
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Theory Exam											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	5	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Select a suitable farm machine.										
<b>LO Description</b>	Explain test procedure of a farm machine selection.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>			<b>Remarks</b>		
	Testing of farm machine. Test codes & procedure. Interpretation of test results. Selection and management of farm machines for optimum performance.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	0	6	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>		<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>			
	Laboratory Test by Observation	Student will be asked to select a farm machine using test codes and manuals		12	Observation Schedule /Check List /Rating Scales /Rubrics			Internal			
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of Lab Work											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	5	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Select a suitable farm machine.										
<b>LO Description</b>	Supervise periodic maintenance, repair work of farm equipment, farm machinery.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>				
	Familiarization of components, components for periodic maintenance, adjustments, periodic maintenance, repair of components of- tillage machinery, seeding machinery, harvesting machinery, threshing machinery, plant protection and irrigation equipment.	Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	0	8	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>			<b>Maximum Marks</b>	<b>Resources Required</b>		<b>External / Internal</b>			
	Laboratory Test by Observation	Student will be asked to supervise maintenance, repair of a given farm equipment/machinery			10	Observation Schedule /Check List /Rating Scales /Rubrics		External			
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of External Practical Exam											

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code		Course Code		CO Code	LO Code	Format No. <b>4</b>
					M	0	2	6	0	5	
<b>COURSE NAME</b>	<b>Farm Equipment and Farm Machinery</b>										
<b>CO Description</b>	Select a suitable farm machine.										
<b>LO Description</b>	Supervise periodic maintenance, repair work of tractor.										
<b>SCHEME OF STUDY</b>											
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching –Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>			<b>Remarks</b>		
	Operation of tractor, attachment and adjustment of hitching system. Periodic maintenance of air cleaning, fuel supply, lubrication, cooling systems. Engine trouble shooting: problems, causes and remedies.	Interactive classroom lecture method Handout, video display, tutorials Lab demonstration, hands on practice, lab assignment, quiz, assignments.	Students will learn the processes through the discussion with the teacher on content provided by teacher and random quiz taken by them.	0	6	Text book, charts, Hand out/ lab manual, Power point presentation, Video Lectures.					
<b>SCHEME OF ASSESSMENT</b>											
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>		<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>			
	Laboratory Test by Observation	Student will be asked to supervise maintenance, repair of a given tractor		10	Observation Schedule /Check List /Rating Scales /Rubrics			External			
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>											
Part of End Semester Practical Exam											

## List of Experiments

S No	Title of Experiment	Equipment Required
1	To Measure field capacity of farm implements used on farm	Tractor, Disc Harrow, Cultivator, Measuring Tape, Stop Watch
2	To Measure field efficiency of farm implements used on farm	Tractor, Disc Harrow, Cultivator, Measuring Tape, Stop Watch
3	To measure the draft of different tillage implements under different soil conditions	Tractor, Tillage implement (plough, harrow, cultivator) Load Cell/Spring Dynamometer, Measuring Tape, Fuel Flow Meter
4	To measure fuel consumption of different tillage implements under different soil condition	
5	To Identify components of Mould Board plough and their function	Mould Board Plough
6	To make adjustments of Mould Board Plough	Mould Board Plough, Tools
7	To identify components of disc plough and their function	Disc Plough
8	To make adjustments in disc plough	Disc Plough, Tools
9	To identify components of disc harrow and their function	Disc Harrow
10	To make adjustments of disc harrow	Disc Harrow, Tools
11	To identify components of a cultivator and their function	
12	To identify different types of shovel and sweep used in a cultivator	
13	To identify components of a earth moving machinery and their function	
14	To demonstrate the working of earth moving machinery	
15	To identify components of seed cum fertilizer drill	
16	To demonstrate calibration method of seed cum fertilizer drill	
17	To identify types of mechanical paddy transplanters	
18	To identify components of mechanical paddy transplanters	
19	To identify types of weeding/ intercultural equipments	
20	To identify major components of sprayers and dusters	
21	To demonstrate adjustments in sprayers and dusters	