

Reg. No. :



SNS COLLEGE OF TECHNOLOGY
(An Autonomous Institution, Affiliated to Anna University)
Coimbatore – 641 035.



B.E DEGREE END SEMESTER EXAMINATION, NOV / DEC 2022

III SEMESTER

AGRICULTURE ENGINEERING

19AGB301 – FARM TRACTORS

(REGULATION 2019)

TIME: THREE HOURS

MAXIMUM MARKS: 100

ANSWER ALL QUESTIONS

PART A — (10 x 2 = 20 Marks)

		CO	BL	Marks
1.	List the objectives of farm mechanization	CO1	APP	2
2.	State the possible firing orders of a 4 stroke cylinder engine	CO1	REM	2
3.	Define suction stroke	CO2	UND	2
4.	Classify the engine, based on the type of cylinder arrangement	CO2	ANA	2
5.	Define firing order and firing interval	CO3	UND	2
6.	What is the function of flywheel?	CO3	UND	2
7.	In IC engines, State alternative names of a)Tappet b)Cam Shaft Gear	CO4	REM	2
8.	List out the functions of thermostat valve?	CO4	REM	2
9.	What are the factors affecting Draft?	CO5	REM	2
10.	Explain the necessity of clutch in a tractor.	CO5	APP	2

PART B — (5 x 16 = 80 Marks)

11.	(a)	(i)	Discuss the working of a transmission system in a tractor	CO1	REM	8
		(ii)	List out the advantages and disadvantages of a cooling system	CO1	APP	8
			(OR)			

	(b)		Draw the diagram of an IC Engine and explain its components	CO1	UND	16
12.	(a)	(i)	Explain the working principle of a four stroke petrol engine	CO2	UND	10
		(ii)	Summarize the various classifications of Tractors	CO2	REM	6
			(OR)			
	(b)		Write short notes on front axle and wheel alignment in a tractor also Explain concept behind the turning ,in tractor wheel	CO2	UND	16
13.	(a)		Explain the tests carried out for a tractor performance	CO3	UND	16
			(OR)			
	(b)		Explain the types and functions of breaks in a tractor	CO3	APP	16
14.	(a)		Discuss the working of a Steering system in a tractor	CO4	ANA	16
			(OR)			
	(b)		Explain the construction of the flywheel with a neat diagram	CO4	ANA	16
15.	(a)		Explain the concepts of valve timing diagram and firing order.	CO5	APP	16
			(OR)			
	(b)		Distinguish between tractor and power tiller with its function.	CO5	ANA	16

CO – Course Outcome, Blooms Taxonomy Abbreviations: Rem - Remembrance, Und-Understanding, App - Apply, Ana - Analyze, Eva - Evaluate, Cre - Create

Note:

- 1. Part B Questions are to be taken from first half of the units and the choice of the questions are to be taken from second half of the units.**
- 2. In Part B,**
 - a. One question (either/or) must be Application oriented /CASE STUDY based from any one unit.**

- b. Four questions are either or type covering remaining four units.
3. In Part B, Out of 5 Questions, 3 Questions may have Sub divisions (8+8 / 10+6 / 9+7 mark split up's (out of 16) are permitted).
 4. The Question paper setters should constitute at least 40 % of Bloom's taxonomy levels like Remembering & Understanding and 60 % of like Applying & Analyzing during setting the question papers.
 5. Kindly ensure each "Either or Choice Questions" are in same BT Level.
 6. Fill Marks and BT Level against each question without fail.

Blooms Taxonomy Level (BTL)	Marks in each Divisions		Total Marks for each BTL	% of Distribution
	Part – A 2 Marks each	Part – B Either or choice Marks (16)		
Remember (Rem)	8	14	22	12
Understand (Und)	6	58	64	36
Apply (App)	4	40	44	24
Analyze (Ana)	2	48	50	28
Evaluate # (Eva)				
Create # (Cre)				
Total	20	160	180	100

#Depending upon the course, Eva/ Cre can be incorporated.