

SEMESTER END REGULAR EXAMINATIONS (AR20), JUNE - 2022

U.G.	ME			Degree	Bachelor of Technology		
Academic Year	2021-2022			Sem.	4 th		
Course Code	20ME401			Course Title			
	APPLIED THERMODYNAMICS						
Duration	3 Hours			Maximum Marks		60 (SIXTY)	
Remember %	25	Understand %	75	Apply %	-	Analyze %	-

SECTION-I

6 x 2 = 12 Marks

1.

No.	Questions (a to f)	RBT Level	COs
a	Define 2 stroke and 4-stroke IC engine	Remember	1
b	Differentiate between Ideal and actual valve timing diagram	Understand	1
c	List any two various anti knock additives	Remember	3
d	List the stages of combustion in CI engine	Remember	3
e	Define air-fuel ratio	Remember	3
f	What do you mean by multi-stage compressor	Remember	6

SECTION-II

4 x 12 = 48 Marks

No.	Questions (2 to 9)	RBT Level	COs	Marks
2	(a) Explain supercharging and its effect on an engine performance	Understand	1	6
	(b) Explain the working principle of a simple carburator	Understand	1	6
OR				
3	(a) How are the fuel injection system classified? Describe them briefly	Understand	2	7
	(b) Explain water cooling system in IC engine	Understand	2	5
4	(a) Describe the combustion phenomenon in SI engine	Understand	3	6
	(b) Explain the effect of turbulence in SI and CI engine	Understand	3	6
OR				
5	(a) Discuss the pre-ignition process occur in the SI engine	Understand	3	6
	(b) Explain the different phases of combustion in CI engine	Understand	3	6
6	(a) Discuss the basic performance parameters IC engines	Remember	4	6
	(b) Illustrate the measurement of Friction power(FP) by using Willans line method	Understand	4	6
OR				
7	(a) What are the major emissions that comes out of SI and CI engine exhaust	Understand	5	5
	(b) Explain the measurement of Friction Power(FP) by using Motoring test method	Understand	4	7
8	(a) Classify the air compressors	Remember	6	5
	(b) Explain the working principle of Reciprocating air compressor	Understand	6	7
OR				
9	(a) What is a Rotary compressor? How are Rotary compressors classified	Remember	6	7
	(b) Distinguish between Reciprocating and Rotary air compressor	Understand	6	5
