



R18 Regulation

Subject code:2P5CB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech V Semester Supplementary Examinations, December 2024

Thermal Engineering-1 (ME)

Maximum Marks: 70

Date:28.12.2024

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20) Marks)		CO	Bloom Tx
1	Stoichiometric air-fuel ratio means?	1	L1
2	List the advantages of valve timing diagram?	1	L1
3	What is called flame front and flame velocity?	2	L1
4	What are the various losses of IC Engine?	2	L1
5	Define Indicated Power	3	L1
6	Define Friction Power	3	L1
7	Define Air Compressor	4	L1
8	Define Isothermal efficiency of a compressor	4	L1
9	What is Workdone Factor?	5	L1
10	Define Pressure coefficient	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	Explain cooling system for IC engines? [10M]	1	L2
	OR		
12	State and explain different combustion stages in SI engine? [10M]	1	L2
13	Discuss the various methods for improving the anti-knock quality of an SI engine. [10M]	2	L2
	OR		
14	What are the types of fuel injection systems? Explain anyone with a neat sketch? [10M]	2	L2
15	What is Brake Power? How do you measure BP with Rope Brake Dynamometer ? [10M]	3	L2
	OR		
16	What is the significance of Morse test. Explain in detail [10M]	3	L2
17	A) Explain the working of Axial Flow compressor with neat Sketch. [5M] B) Explain Velocity diagram of axial flow compressor. [5M]	4	L2
	OR		

18	Differentiate between Reciprocating and Rotary Compressors. [10M]	4	L2
19	Explain Air Conditioning Cycle with neat Sketch. [10M]	5	L2
	OR		
20	Explain the working of Central System in Air Conditioning with neat sketch. [10M]	5	L2