

**End Semester Examination (ESE), 2021**

Semester: 6<sup>th</sup> semester.

Subject: Thermal Engineering-II

Subject Code: ME- 602

Total Marks: 56

Time: 2 Hours 30 minutes.

All questions are compulsory

PART A =10X1=10 Marks		
Q. No	Description	Mark
1	What is the compression ratio of I.C. engine?	1
2	What a carburetor is used to supply?	1
3	For the same compression ratio of OTTO cycle and DIESEL cycle, which one is more efficient?	1
4	What, the process of breaking up or a liquid into fine droplets by spraying, is called?	1
5	Why is the reason for intercooling in multistage compressors?	1
6	Write two differences between 2 stroke and 4-stroke IC engine.	1
7	Write two applications of IC engine.	1
8	What is the main reason for providing intake air filters on compressors?	1
9	On which cycle a gas turbine generally works.	1
10	What is the mathematical expression for COP of a refrigerator?	1
PART B = 3X5 =15 Marks		
11	Write the three methods of improving thermal efficiency of a gas turbine.	3
12	Write the Cycle of operations for Dual combustion cycle with actual p-v diagram.	3
13	Write the Air standard efficiency and mean effective pressure of Otto cycle with its proper terminology.	3

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14	Write three practical applications of refrigeration cycle.	3
15	What are the advantages of multistage compression?	3
<b>PART C = 4X4 = 16 Marks</b>		
16	Write the principle and working of Turbojet and Ramjet principle.	4
17	Draw a neat-labeled sketch of a Vapor compression refrigeration cycle and explain its working.	4
18	What is compressor? What is its function? What are the classifications of compressor?	4
19	Write the basic principles of 4-stroke engine and 2-stroke engine.	4
<b>PART D = 5 X 3 = 15 Marks</b>		
20	What are the main components of IC engine? Define their operation or function. (at least <i>five</i> components)	5
21	Draw a neat-labeled sketch of a Vapor Absorption refrigeration cycle and explain its working in brief.	5
22	Write a paragraph of the following. a) Exhaust system b) Cooling system of IC engine	5

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