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1st Sem, Level 5 / DVOC (Production Tech.)
Subject : General Mechanical Engineering - II

Time : 2 Hrs. M.M. : 50

SECTION-A

Note: Very short questions. Attempt all ten questions. (10x1=10)

Q.1 Define Heat.
Q.2 What is a thermodynamic process?
Q.3 Define Universal gas constant and give its value.
Q.4 Give the statement of first law of thermodynamics.
Q.5 What is an isochoric process?
Q.6 Name the processes in carnot cycle.
Q.7 What is a reversible process?
Q.8 Define Stochiometric air fuel ratio.
Q.9 Give the formula for efficiency of carnot cycle.
Q.10 What is the role of air cooler in a gas turbine.

SECTION-B

Note: Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

Q.11 Explain the equation of state for a thermodynamic process.

Q.12 Derive the relation between heat capacity and temperature

Q.13 Explain the equation of work done in adiabatic process.

Q.14 Explain the construction and working of petrol engine.

Q.15 What are the advantages and disadvantages of internal combustion engine?

Q.16 Calculate work done in raising the volume of a gas from 5 m^3 to 20 m^3 at a constant pressure of 30 N/m^2, isothermally.

Q.17 Show the equivalency of two statements of second law of thermodynamics?

Q.18 Explain the construction and working of steam condenser.

SECTION-C

Note: Long answer type questions. Attempt any one question out of two questions. (1x10=10)

Q.19 Explain the construction and working of Cochran Boiler.

Q.20 Classify steam turbines and explain any one.