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DVOC (Level 5)
Sem 1st / Production Tech.

Subject : General Mechanical Engineering - II

Time : 2 Hrs.

M.M. : 50

SECTION-A

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

Q.1 Which of the following is a branch of thermodynamics?

- a) Equilibrium thermodynamics
- b) Classical thermodynamics
- c) Chemical thermodynamics
- d) All of the mentioned

Q.2 By first law of thermodynamics

- a) $Q = \Delta E - W$
- b) $Q = \Delta E + W$
- c) $Q = -\Delta E - W$
- d) $Q = -\Delta E + W$

Q.3 If petrol is used in a diesel engine, then _____.

- a) Low power will be produced
- b) efficiency will be low
- c) higher knocking will occur
- d) Black smoke will be produced.

- Q.4 Steam condensers are classified as _____.
- jet condensers and surface condensers
 - jet condensers and fast condensers
 - high condensers and surface condensers
 - Slow condensers and jet condensers
- Q.5 Why casing is used in turbine?
- Forms the outside wall of the main flow duct to remain concentric
 - Forms the inside wall of the main flow duct to remain concentric
 - Forms the outside wall of the main flow duct to not remain concentric.
 - None of the mentioned.
- Q.6 Thermodynamic process
- Q.7 Isothermal
- Q.8 External combustion
- Q.9 Condenser
- Q.10 Turbine

SECTION-B

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

- Q.11 What is Thermodynamic process ? Write in brief about it.
- Q.12 Explain second Law of Thermodynamics.
- Q.13 Write short note on carnot cycle.

- Q.14 How heat capacity and temperature are related to each other?
- Q.15 What is Horse power? How is it calculated.
- Q.16 What are the various factors affecting knock in spark ignition engine?
- Q.17 What are boiler mountings? Why are they provided?
- Q.18 What are the advantages and limitations of regenerative air preheated over the recuperative type?

SECTION-C

Note: Long answer type questions. Attempt any one question out of two questions. (10x1=10)

- Q.19 Explain the construction and working of cochran boiler.
- Q.20 Give the classification of steam turbine. Explain the principle construction and working of an impulse turbine with neat sketch.