

Q.22 Write short note on governing of steam turbines.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 What is Carburetion? Explain the factors which affect it.

Q.24 Write a short note on any 2 parts:-

- a) Pollutants in S.I & C.I Engines.
- b) Application of Jet Engines.
- c) Plunger Type Fuel Injection System

Q.25 A petrol engine uses 0.3kg of fuel per BHP hours of calorific value 10500 kcal per kg. The mechanical efficiency is 85% and compression ratio is 6.5. Calculate Brake thermal, Indicated thermal, ideal air standard and relative efficiency.

No. of Printed Pages : 4
Roll No.

221746

4th Sem / Mechanical Engg.

Subject : Thermodynamics - II

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Morse test is used for _____ cylinder engines.

- a) Multi cylindrical Petrol Engine
- b) Multi cylinder Diesel Engine
- c) Single cylinder Engine
- d) Both a and b

Q.2 Thermostat in water cooling system is used for

- a) Stopping circulation of water before a temperature
- b) Stopping circulation of water above a temperature
- c) Breaking the circuit in dangerous temperature range
- d) All of the above

Q.3 Governing of steam turbines causes the turbine _____

- a) To reduce fuel supply when fast speed
- b) To increase fuel supply when slow speed
- c) To keep the turbine within a speed limit
- d) All of the above

Q.4 Which of the following is not pollutant in SI engines

- a) Carbon monoxide b) Ammonia
- c) Nitrogen oxide d) Hydro carbons

Q.5 MPFI stands for

- a) Mega Pixel Front Indicator
- b) Multi Point Front Injector
- c) Multi point Fuel injection
- d) Multi Point Front Indicator

Q.6 The ideal thermal cycle is assumed to be

- a) Otto cycle b) Diesel cycle
- c) Carnot cycle d) Brayton cycle

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Find the carnot cycle efficiency, if $t_1=100$ degree and $t_2= 50$ degree.

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Q.8 Expand TDC and BDC.

Q.9 The Brake power is called so, because _____

Q.10 Volumetric efficiency = _____

Q.11 Which has better mechanical efficiency? (2 stroke / 4 stroke)

Q.12 Name two parts of Ram-jet engine.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain super charging.

Q.14 Explain the function and types of coolants.

Q.15 Explain MPFI Petrol injection system.

Q.16 Classify steam turbines according to various criterion.

Q.17 Write short note on Bharat stage emission standards.

Q.18 Compare jet and surface condensers.

Q.19 Give the layout of closed cycle gas turbine with its PV diagram.

Q.20 Classify various types of nozzles with diagram.

Q.21 Explain working of 4-stroke SI Engine with diagram.

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