QUESTION BANK SUB-THERMAL ENGG II

GOVT.POLYTECHNIC,BHUBANESWAR SUB CODE – 403

MECHANICAL ENGG.

4TH SEMESTER

1. What is Carnot cycle and show process ?
2. What is Rankine cycle and show process ?
3. What are the disadvantages of Carnot vapour cycle ?
4. What is critical point in vapour cycle ?
5. Give the definition regarding Triple point.
6. What is the saturation liquid line and saturation vapour line ?
7. What is OTTO cycle and show it with diagram ?
8. What is Diesel cycle and show it with diagram ?
9. What is Dual cycle and show it with diagram ?
10. For the same compression ratio and heat input which cycle has more efficiency between OTTO cycle, DIESEL cycle and DUAL cycle ?
11. For the same peak temperature and pressure which cycle has more efficiency between OTTO cycle, DIESEL cycle and DUAL cycle ?
12. Difference between 2-stroke and 4-stroke engine ?
13. What is octane number and cetane number ?
14. What is enthalpy of formation and enthalpy of reaction ?
15. What is compression ratio and cut off ratio ?
16. What is the range of compression ratio in petrol engine and diesel engine ?
17. State Fourier law of heat conduction ?
18. What is difference between conduction and convection mode of heat transfer ?
19. What is Stefan Boltzman law in radiation heat transfer ?
20. What is black body,grey body and white body ?
21. What is difference between parallel flow heat exchanger and counter flow heat exchanger ?
22. Define the effectness of heat exchanger ?
23. Difference between heat pumps and refrigerator ?
24. What is Relationship between C.O.P of heat pump and Refrigerator ?
25. What is rich mixture,lean mixture and stoichiometric mixture in I.C engine ?
26. Differentiate between Ideal vapour compression refrigeration cycle and actual vapour compression refrigeration cycle ?
27. What is the difference between reflection and transmission ?

Multiple choice Questions.

1. For the same compression ratio the efficiency of dual combustion cycle is
2. Greater than diesel cycle and less than otto cycle.
3. Less than Diesel cycle and greater than otto cycle.
4. Greater than Diesel cycle
5. Less than diesel cycle
6. The heating of gas at constant volume is governed by
7. Boyle’s law
8. Charle’s law
9. Gay-Lussac law
10. Avagrado’s law
11. The thermal efficiency of a standard otto cycle for a compression ratio of 5.5 will be
12. 25%
13. 50%
14. 70%
15. 100%
16. In Diesel engine the duration between the time of injection and ignition is known as
17. Pre-ignition period
18. Delay period
19. Period of ignition
20. Burning period
21. The thermal efficiency of diesel engine is about
22. 15%
23. 30%
24. 50%
25. 70%