

Q1. first law of thermodynamics for cyclic system

- (a) $\oint dq = \oint dw$
- (b) $\oint dq \neq \oint dw$
- (c) $\oint dq > \oint dw$
- (d) $\oint dq < \oint dw$

Q2. second law of thermodynamics consists

- (a) kelvin plank statement
- (b) Clausius statement
- (c) Both
- (d) None of these

Q3. In which material carbon percentage less than 0.2 %

- (a) Mild steel
- (b) HSS
- (c) alloy steel
- (d) None of these

Q4. Zeroth law based on which properties

- (a) pressure
- (b) volume
- (c) temperature
- (d) enthalpy

Q5. Throttling process constant term?

- (a) entropy
- (b) enthalpy
- (c) internal energy
- (d) None of these

Q6. Porter governor based question

Q7. one question is on Axial stiffness

Q8. In which type of casting permanent mould casting is used

- (a) die casting
- (b) sand casting
- (c) centrifugal casting
- (d) None of these

Q9. Air pre heater is used in boiler for which reason

- (a) to regulate the temperature of steam
- (b) to increase the temperature of flue gases
- (c) to increase the temperature of water
- (d) None of these

Q10. Which one is not Boiler accessories

- (a) Economizer
- (b) Air Preheater
- (c) Feed Pump
- (d) Water level indicator

Q11. Superheater is used for

- (a) to increase the temperature of steam
- (b) to increase the temperature of vapour above its saturation point
- (c) to increase the temperature of water
- (d) None of these

Q12. In VCRS system how many processes are there

- (a) 3
- (b) 4
- (c) 5
- (d) None of these

Q13. H - S diagram based question, what will happen when a gas is compressed?

- (a) decreases enthalpy
- (b) increases enthalpy
- (c) increases entropy
- (d) None of these

Q14. Which one is not an Air standard cycle assumptions

- (a) air is a working fluid
- (b) specific heats are constant
- (c) compression is isentropic
- (d) expansion is isobaric

Q15. Stirling cycle heat rejection

- (a) constant volume
- (b) constant pressure
- (c) adiabatically
- (d) isentropic

Q16. numerical question based torsional equation

$$\frac{T}{J} = \frac{G\theta}{L} = \frac{\tau}{r}$$

T = ?

Q17. Manometer column based on question, pressure on the bottom surface?

- (a) $P = \rho gh$
- (b) $p = P_{atm}$
- (c) $p = P_{atm} + \rho gh$

(d) None of these

Q18. Block on a horizontal surface, friction force when it just start to move

Q19. Friction losses in pipe formula, hydraulic diameter based

$$h_f = \frac{fLv^2}{2gd_h}$$

Q20. centre of pressure and centre of gravity position based

- (a) *C.P* can be above C.G
- (b) *C.P* can not be above C.G
- (c) *C.P* can not coincide with C.G
- (d) None of these

Q21. Hot working process is done at

- (a) above recrystallization
- (b) below recrystallization
- (c) at recrystallization
- (d) None of these

Q22. Wax pattern casting is used in

- (a) Jewellery manufacturing
- (b) plastic items
- (c) iron manufacturing
- (d) None of these

Q23. Mist lubricating system uses in

- (a) 4 – stroke CI engine
- (b) 4 – stroke SI engine
- (c) 2 – Stroke engine
- (d) None of these

Q24. Quantity governing is used in which engines

- (a) CI Engine
- (b) SI engine
- (c) Can be used in both
- (d) None of these

Q25. In Constant pressure heat addition processes, added heat is equal to

- (a) change in enthalpy
- (b) change in internal energy
- (c) change in entropy
- (d) None of these

Q26. Hermittically sealed compressor based question

Q27. Which type of turbines produces higher heads

- (a) pelton turbines
- (b) Francis turbines
- (c) Kaplan turbines
- (d) none of these

Q28. overall efficiency of turbine is equal to

- (a) $\eta_{over} = \eta_{mech} \times \eta_{hyd}$
- (b) $\eta_{over} = \eta_{mech} \times \eta_{mano}$
- (c) $\eta_{over} = \eta_{mano} \times \eta_{hyd}$
- (d) None of these

Q29. 2-stroke engines used in

- (a) motorcycle
- (b) truck
- (c) scooter
- (d) cars

Q30. Humidity is measured by--->Hygrometer

Q31. Suicidal Packets---->Lysosome

Q32. Powerhouse of Cell---->Mitochondria

Q33. What is the chemical formula of ammonia

- (a) NH_3Cl
- (b) NH_3
- (c) NH_4Cl
- (d) None of these

Q34. PMM2 violates the following

- (a) kelvin plank statement
- (b) clausius statement
- (c) zeroth law
- (d) None of these

Q35. 2 Question on Blood relations

Q36. Question on Syllogism

Q37. Question on Direction

Q38. Question on triangle counting

Q39. Question on Mirror image and embedded figures

Q40. Question on mathematical operation and non verbal