

## Thermax Model Paper Questions

**Q1. Hysterisis loss is least affected by -**

- A. Temperature
- B. Frequency
- C. Weight
- D. Density

**Q2. The ladder will not be in equilibrium if**

- A. floor surface is smooth and wall surface is rough
- B. floor surface is rough and wall surface is rough
- C. floor surface is smooth and wall surface is smooth
- D. floor surface is rough and wall surface is smooth

**Q3. Effect of cavitation in Turbines -**

- A. Noise and Vibration
- B. Efficiency
- C. Decrease in life of blades
- D. All the above

**Q4. Washer is used:**

- A. to avoid wear
- B. to absorb vibration
- C. to protect bearing surface

**ANS: A**

**Q5. Elasticity of a fluid is measured by**

- A. Modulus of Elasticity

- B. Rigidity Modulus
- C. Bulk Modulus
- D. None of the above

**Q6. Compression ratio of the C.I. Engine**

- A. 8 to 10
- B. 10 to 15
- C. 16 to 20
- D. None

**Q7. Jigs are used for**

- A. turning
- B. milling
- C. drilling
- D. grinding

**Q8. First law of Thermodynamics deals with**

- A. Conservation of Mass
- B. Conservation of Momentum
- C. Conservation of Energy
- D. Conservation of Heat

**Q9. Which structure can be viewed by Naked Eye?**

- A. Micro Structure
- B. Grain
- C. Macro
- D. Atomic

**Q10. Thermal Conductivity of Water ----- with increase in temperature.**

- A. Increases with temperature
- B. Decreases then increases
- C. Increases then Decreases
- D. Does not change

**Q11. In which type of welding, chemical reaction takes place?**

- A. Resistance
- B. Thermit
- C. Forge
- D. Gas

**Q12. Expansion valves are used in pipes carrying ----**

- A. Water
- B. Steam
- C. Viscous fluid
- D. Air at high pressure

**Q13. Fusible plug is used -----**

- A. To control steam temperature.
- B. To put off the fire when the water level in the boiler falls below the alarming limit
- C. To avoid Explosion

**Q14. A fly wheel starts from rest and accelerates uniformly and reaches 25 rpm in 3 seconds. What will be the angular velocity(in rpm) after 10 seconds?**

- A. 20
- B. 25
- C. 45
- D. 50

**Q15. Idling mixture in Petrol Engines are ----**

- A. Rich
- B. Lean
- C. Variable

**Q16. When the Ice cubes present in the glass of water get melted, what will happen to the level of water ----**

- A. Increases
- B. Decreases
- C. Does not change

**Q17. In coal refineries magnets are used to separate ----.**

- A. dust
- B. iron particles
- C. Sand
- D. All the above

**Q18. Resistance to fatigue strength is measured by**

- A. Tensile Test
- B. Shear Test
- C. Endurance Limit

**Q19. Thermal Conductivity of Solids ----- with increase of temperature.**

- A. Increases
- B. Decrease
- C. Increases then Decrease
- D. Unpredictable

**Q20. Statistical processing is done to**

- A. improve the quality
- B. maintain the quality
- C. both 1 and 2
- D. to increase the profit

**Q21. Radio active materials emit -----**

- A. alpha
- B. beta
- C. Gamma
- D. All the above

**Q22. ON/OFF Control application Valve -**

- A. Ball valve
- B. Globe valve
- C. Needle valve
- D. Butter fly valve

**Q23. Radiator is made up of -----**

- A. Brass
- B. Steel
- C. Plastic
- D. Cast Iron

**Q24. Heat treatment of steel changes**

- A. Physical
- B. Chemical
- C. Mechanical properties

**Q25. Compiler is used**

- A. To convert High level programmes to the Language understandable by machines
- B. To convert the programmes from Digital to Analog.
- C. To compile the instructions in registers.
- D. Both B & C

**Q26. Manometer is effective for**

- A. High pressure
- B. Very High pressure
- C. Low pressure
- D. None of the above

**Q27. Which of the following has the maximum Head?**

- A. 33 inches Hg
- B. 756 mm of Hg
- C. 31.6 m of water
- D. 1.013 kg/sq.cm

**Q28. The oil of sp. gravity 0.9 and water are kept in two identical vessels, then the Hydro static Pressure at bottom of oil will be**

- A. More than pressure of the water at the bottom
- B. Less than pressure of the water at the top
- C. Same
- D. Insufficient data

**Q29. High moisture content in the last stage of turbine will cause**

- A. Corrosion
- B. Low thermal efficiency
- C. Low Blade life
- D. All the above

**Q30. Chip breakers are used ---**

- A. To permit small chips
- B. to increase tool life
- C. For Safety

**Q31. What will happen to the specific volume of the water when it is heated from 0 degree Celcius?**

- A. Increases
- B. Decreases
- C. Remain Constant

**Q32. Where the bending stress is maximum for I Section Beam?**

- A. Neutral axis
- B. At the joint of wedge and flank
- C. where the shear stress is maximum
- D. Outer most of the fibres

**Q33. Heat is a substance of**

- A. internal energy
- B. thermal conductance
- C. enthalpy
- D. entropy

**Q34. Groove is given in which welding?**

- A. fillet
- B. butt
- C. lap
- D. both fillet and lap

**Q35. Pressure vessels are made by---**

- A. welding
- B. rivet
- C. both
- D. none of the above

**ANS: A**

**Q36. A carbon bar is of length 10m. Its temperature increased from 30C to 330C. What is the expansion degree?**

- A. 300
- B. 30
- C. 10
- D. 100

**Q37. For close transmission, which of the following fit is used?**

- A. transition
- B. interference
- C. clearance
- D. none of the above

**Q38. Calorie is a unit of**

- A. Specific heat
- B. Quantity of heat

**Q39. Heat is supplied at 30,000 J/s and output of 90kw. What is the thermal efficiency of the heat engine?**

- A. 30%
- B. 33%

- C. 40%
- D. 50%
- E. 50%

**Q40. Corrosion resistance of steel increases by**

- A. Cr,W,Va,Mo
- B. Cr
- C. Cr,Ni

**Q41.  $C_p / C_v$  of Gas ---- at varying temperatures.**

- A. Constant
- B. Increases
- C. Decreases

**Q42. The state of the refrigerant in the vapour compression cycle before throttling ----.**

- A. Wet
- B. Dry

**Q43. Feuler gauges are used to measure the ----.**

- A. clearance
- B. density
- C. dust particle content

**Q44. Reason for slipping when we walk on the Ice**

- A. Ice surface is smooth
- B. When we apply pressure on the Ice it gets melted

**Q45. Purpose of conducting Tensile Test**

- A. Ductility
- B. Resistivity
- C. Capacity
- D. Impedence

**Section 2 - Data Sufficiency:-**

**Find the answer using given two options:**

**Q46. What is the average speed of A & B?**

- a) A travels 4 miles / hour more than B
- b) A travels 60 meters

**Q47. How many Brothers does Mohan have?**

- a) Mohans sisters are twice as Brothers
- b) Mohans uncle has one Nephew

**Q48. One man got Birthday gift.**

- a) He got twice the amount of gift on that Birthday
- b) Number of gifts received is 4 fewer than he received on third birthday

**Q49. How many times is the calorific value of Bread greater than the apple?**

- a) Bread is  $\frac{1}{2}$  times more than Banana
- b) Banana is 3 times more than Apple

**Q50. If  $x=y^2$  then  $x^2-y=?$**

- a)  $x + y = 2$

b)  $x = 4$

**Q51. If  $K-1$  is a square and  $K < 17$ , what is  $K$ ?**

- a)  $K$  is even
- b)  $K$  is odd

**Q52. In an election  $P$ ,  $Q$ ,  $R$  are the contestants. They got the votes as follows. Can you find out who got the majority votes?**

- a)  $P = \frac{4}{3} * P$
- b)  $Q = \frac{2}{3} * R$

**Q53. Amar, Akbar, John & King have joined one Team each. Who joined football?**

- a) Not more than three joined one game.
- b) Amar & Akbar joined Base Ball, King joined Basket ball .

**Q54. Find an average speed of the two men.**

- a) Speed of one man = 100 kmph
- b) Distance traveled by another man = 25 km.

**Q55. What is the area of the unoccupied by the triangle if the triangle is completely inside the square?**

- a) A triangle compactibility inside the square
- b) Area relation