

## General Engineering (Mechanical) Paper 1 (2020-2021) Shift 2 (Memory Based)

- If Indicated power is 15 kW, calorific value is 40000 kJ/kg and mass flow rate of fuel is 0.001 kg/sec. Indicated thermal efficiency is \_\_\_\_\_.
- What is the value of pressure above which a boiler is considered as a high pressure boiler?
- Which refrigerant is used in the air refrigeration cycle?
- Which type of refrigeration system is used in air crafts ?
- What is the working substance in the Rankine cycle?
- In a carburizing flame in welding, which of the following is used in excess?  
A. Acetylene  
B. Oxygen  
C. Argon  
D. Air
- What is a pure substance?
- Which of the following is not a type of steel?  
A. austenite  
B. limonite  
C. pearlite  
D. martensite
- If the fuel ratio of a CI Engine is 17:1 to 18:1, then it is a \_\_\_\_\_.  
A. lean mixture  
B. Rich mixture
- Which of the following is a single stage impulse turbine?
- What is the range of compression ratio of CI Engine?
- What are dilatant fluids?
- Which of the following is an example of thixotropic fluid?

- Which of the following are examples of lower pairs?
- What is the unit of surface tension?
- Which of the following is the correct statement regarding PMM1?
- The COP of the heat pump is \_\_\_\_\_ than the COP of the refrigerator.
- Heat and work are which type of function.
  - A. point
  - B. path
  - C. both
- If the initial length is 200 mm and the final length is 220 mm. Percent elongation is \_\_\_\_\_.
- What is the range of specific speed for Kaplan turbines?
- In which component of VCRS, Heat is released ?
  - A. Condenser
  - B. Compressor
  - C. Evaporator
- What is the use of hydrogen in a three fluid refrigeration system ?
- Bell coleman cycle is also known as:
  - A. Reversed carnot cycle
  - B. Brayton cycle
  - C. stirling cycle
  - D. Reversed brayton cycle
- RTT Theorem uses which concept?
  - A. Moving control Volume
  - B. Fixed control Volume
  - C. control surface analysis
- When is an inclined tube manometer used?
- Which of the following is correct regarding hydrostatic pressure
  - A. force changes with direction
  - B. hydrostatic pressure directly proportional to depth of that point
  - C. it depends upon the density of the fluid
- Spheroidal cast iron is also known as:
  - A. Grey cast Iron
  - B. White cast Iron

- C. Malleable cast Iron
  - D. Ductile cast Iron
- What is the speed ratio of the Kaplan turbine?
  - A. 0.8
  - B. 0.9
  - C. 2
  - D. 0.5
- Process in which ice directly converts into vapour.
  - A. Vaporisation
  - B. Sublimation
  - C. Fusion
- Which type of boiler uses a fusible plug?
- What kind of combustion takes place in Fourth stage of an CI engine
  - A. controlled
  - B. uncontrolled
  - C. after burning
  - D. Ignition lag
- What is velocity head?
- Classification of steel is not done on the basis which parameter
  - A. Heat treatment
  - B. composition
  - C. Method of manufacturing
- What is a diffuser?
- Refrigeration system which uses waste heat
  - A. Steam Jet refrigerator
  - B. Vortex refrigerator
  - C. VARS
- If the pressure of the fluid is increased by reducing it to a smaller volume then the compressor is known as \_\_\_\_\_.
- What is the work of a compressor ?
- Rankine cycle efficiency can be increased by:
  - A. By increasing condenser pressure
  - B. By increasing the mean temperature of heat addition
  - C. By increasing the condenser temperature

- Which of the following gives correct relation for hydrostatic pressure = ..... x Depth of the point
  - A. Specific weight
  - B. Specific gravity
  - C. Density
  - D. Viscosity
- What is the unit of dynamic Viscosity?

