

22:08 22% 4G

U Zain JO



THERMAL 🔥

Question 8/11

The Isolated system is always:

- d. All of the above
- c. An adiabatic system
- e. None of the above
- a. An Isothermal system
- b. An open system

SUBMIT ANSWER



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تعديل



Question 4/11

For an insulated piston-cylinder system that have work done on it, one of the following could increase

- c. It's internal energy
- a. It's temperature
- d. All of the above
- b. It's pressure
- e. None of the above

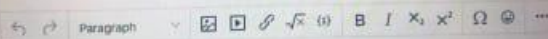
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**Question 9/11**

A piston-cylinder device contains 0.005 m<sup>3</sup> of liquid water and 0.9 m<sup>3</sup> of water vapor. The system has a pressure of 500 kPa while heat is transferred until the final temperature reached 200 C.

1. The initial temperature of the system in 0C was:
2. The final volume of the system in m<sup>3</sup> is:
3. The work during the process in kJ is:

Answer:

← → Paragraph 





## Question 8/11

Air enters an adiabatic nozzle steadily at  $127^{\circ}\text{C}$  with a velocity of  $100\text{ m/s}$  and leaves the nozzle at  $77^{\circ}\text{C}$ . The velocity at the nozzle exit is:

- a.  $561.30\text{ m/s}$
- d.  $333.14\text{ m/s}$
- e. None of the above
- b.  $648.46\text{ m/s}$
- c.  $461.11\text{ m/s}$

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Question 1/11

Fall 20... ..

Air is contained in a cylinder device fitted with a piston-cylinder. The piston initially rests on a set of stops, and pressure of 350 kPa is required to move the piston. Initially, the air is at 100 kPa and 27°C and occupies a volume of 0.4 m<sup>3</sup>. Determine the following, while the temperature increased to 1100 K

1. The boundary work done, in kJ is \_\_\_\_\_
2. The mass of the air in kg is \_\_\_\_\_
3. The amount of heat transferred to the air, in kJ is \_\_\_\_\_



Answer:

Paragraph

rch



Test name: Thermal and Fluid Sciences\_class2 - copy

Time left to complete the test: 0 h 44

### Question 3/11

The points that lay on the saturated liquid line on the P-V diagram has the same:

- c. Specific volume
- b. Temperature
- d. All of the above
- e. None of the above
- a. Pressure

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Submit answer



Question 4/11

Steam at 5 MPa, 300°C enters a turbine steadily with a velocity of 40 m/s. It leaves this turbine at 100 kPa with a quality of 80% and velocity 200 m/s. The mass flow rate of the steam is 8.5 kg/s. A heat loss of 30 KJ/kg occurs during the process. The power output of the turbine in kW is:

- b. 5550.4 kW
- a. 8878.2 kW
- d. 6771.0 kW
- e. None of the above
- c. 7853.9 kW

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Test name: Thermal and Fluid Sciences\_class1

Time left to complete the test: 0 h 22 min 26 sec

Question 7/11

Steam at 2.5 MPa, 300°C flows through a 30 cm diameter pipe with an average velocity of 10 m/s. The mass flow rate of this steam is:

- b. 23.97 kg/s
- a. 10.33 kg/s
- c. 7.14 kg/s
- e. None of the above
- d. 15.59 kg/s



Test name: Thermal and Fluid Sciences\_class2 - copy

**Question 5/11**

The specific volume of any fluid is:

- a. An Extensive property
- d. A Saturated vapor (vg)
- c. A Saturated liquid (vf)
- e. None of the above
- b. An intensive property

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Question 7/11

Refrigerant-134a flows through a pipe at 600 kPa, 30°C. The specific flow work required to move this fluid through a cross-section of the pipe is:

- b. 23.80 kJ/kg
- d. 24.83 kJ/kg
- c. 22.72 kJ/kg
- a. 21.59 kJ/kg
- e. None of the above

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THERMAL 

Test name: Thermal and Fluid Sciences\_class2 - copy

Time left to complete the test: 0 h 22 min 24 sec

Question 6/11

A rigid tank that contains a pure gas can go \_\_\_\_\_ process, as heat addition is occurred.

- a. Isothermal process
- c. Polytropic process
- d. All of the above
- b. Isobaric process
- e. None of the above

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