

Mechanical Engineering Quiz 004 (Mixed)

Quiz Instructions

- Before attempting, carefully read the question text.
- Then choose the correct answer.
- Click on "**Submit**" to confirm your answer.
- Use the **Question List** in the upper left corner to jump to a certain question.

1. What happens to the specific volume of water when it is heated at 0°C?

- A) Decreases steadily
- B) Increases steadily
- C) First increases then decreases
- D) First decreases then increases

2. Which of the substance can be classified as pure substance?

- A) Humid air
- B) Soil
- C) Sand in water
- D) Baking soda

3. What is the value of latent heat of vapourization at critical point?

- A) Zero
- B) Greater than zero
- C) Less than zero
- D) Insufficient data

4. Which of the following represents an impossible cycle?

- A) $\oint \frac{dQ}{T} = 0$
- B) $\oint \frac{dQ}{T} > 0$
- C) $\oint \frac{dQ}{T} < 0$
- D) none of these

5. Which of the following is INCORRECT for reversible adiabatic process?

- A) $dS = 0$
- B) S is constant
- C) $dQ = 0$

D) Q is not constant

6. Which of the following methods of fuel ignition is used in a diesel engine?

- A) Spark plug
- B) Fuel injector
- C) Combustion chamber
- D) Heat from compressed air

7. Which of the following is the other name of an isentropic process?

- A) a reversible isothermal process
- B) a reversible adiabatic process
- C) a reversible isobaric process
- D) a reversible isochoric process

8. Which term best represents the calorific value of a gaseous fuel?

- A) kcal
- B) kcal/kg
- C) kcal/m²
- D) kcal/n

9. Which of the following is TRUE for supercharging?

- A) Supplying higher density of air at intake than the surrounding.
- B) Providing forced cool air at intake.
- C) Raising exhaust pressure
- D) Supplying excess fuel for raising load

10. How is the self-ignition temperature of petrol compared to that of diesel?

- A) Higher
- B) Lower
- C) Same
- D) Insufficient data

Answer Keys

| Question | Answer |
|----------|--------|
| 1 | D |
| 2 | D |
| 3 | A |
| 4 | B |
| 5 | D |

| Question | Answer |
|----------|--------|
| 6 | D |
| 7 | B |
| 8 | B |
| 9 | A |
| 10 | A |