

UNIT-III Steam Turbines

Fill in the Blanks (10)

1. A steam turbine converts the _____ energy of steam into mechanical energy.
Answer: Thermal
2. The rotating part of a steam turbine is called the _____.
Answer: Rotor
3. The stationary blades of a turbine are known as _____ blades.
Answer: Fixed
4. Steam turbines work on the principle of _____ of momentum.
Answer: Conservation
5. In an impulse turbine, the pressure drop occurs entirely in the _____.
Answer: Nozzle
6. The turbine shaft is directly coupled to a _____ to produce electricity.
Answer: Generator
7. A reaction turbine develops power due to both pressure and _____ energy changes.
Answer: Velocity
8. The device used to regulate steam flow into a turbine is called a _____ valve.
Answer: Control
9. The efficiency of a turbine depends on the condition of the _____ entering it.
Answer: Steam
10. The most commonly used steam turbine in power plants is the _____ turbine.
Answer: Reaction

Multiple Choice Questions (10)

1. A steam turbine converts:
 - A) Mechanical energy into heat energy
 - B) Heat energy into mechanical energy
 - C) Electrical energy into heat energy
 - D) Chemical energy into electrical energy**Answer:** B) Heat energy into mechanical energy
2. Which of the following is a type of steam turbine?
 - A) Impulse turbine
 - B) Reaction turbine
 - C) Both A and B
 - D) Centrifugal turbine**Answer:** C) Both A and B
3. In an impulse turbine, the pressure drop takes place in:
 - A) Moving blades
 - B) Condenser
 - C) Nozzles
 - D) Rotor**Answer:** C) Nozzles
4. The inventor of the impulse steam turbine is:
 - A) James Watt
 - B) Charles Parsons
 - C) Gustaf de Laval
 - D) Rankine **Answer:** C) Gustaf de Laval
5. The inventor of the reaction steam turbine is:
 - A) Charles Parsons
 - B) De Laval
 - C) Newcomen
 - D) Carnot**Answer:** A) Charles Parsons
6. The moving blades of a turbine are mounted on the:

- A) Casing
- B) Rotor
- C) Nozzle
- D) Governor

Answer: B) Rotor

7. Which device controls the speed of a steam turbine?

- A) Condenser
- B) Economizer
- C) Governor
- D) Superheater

Answer: C) Governor

8. Steam turbines are widely used in:

- A) Thermal power plants
- B) Nuclear power plants
- C) Marine propulsion
- D) All of the above

Answer: D) All of the above

9. The efficiency of a steam turbine is generally higher than that of:

- A) Steam engines
- B) Boilers
- C) Condensers
- D) Pumps

Answer: A) Steam engines

10. The output of a steam turbine is:

- A) Electrical energy
- B) Mechanical energy
- C) Chemical energy
- D) Pressure energy

Answer: B) Mechanical energy