





**Department of Mechanical Engineering**  
**Innovative Teaching Methods**

Activity Title	Quiz
Faculty Name/Department	Mrs. Yamini S / Mech
Mapped Course Name & Code	ME 8792 Power Plant Engineering
Date	19/9/2022
Benefitted Students (Year / Sem / Dept)	IV / VII / Mech
Topic	Basics on Power Plant Engineering
Description	<p>I have tried to make the questions relevant toward the evaluation of the engineer who has a background in Power Plant Engineering Saying that, knowing the answers to this quiz doesn't imply that one is capable of understanding the principles involved in power plants.</p> <p><i>(Rule: No passing Questions)</i></p>
Course Outcomes (CO)	CO3: Explain the layout, construction and working of the components inside nuclear power plants
Performance Indicator (PI)	1.3.1
Mail ID (for review)	mech.yamini@msajce-edu.in
Activity Photos	 



**Topics/ Questions:**

1. Rankine cycle efficiency of a good Steam Power Plant may be in the range of
  - a) 35 to 45%
  - b) 70 to 80%
  - c) 90 to 95%
  - d) 15 to 20%
2. In a typical layout of a 215MW reheat power plant, the feed in the boiler is at
  - a) 250 degree Centigrade
  - b) 238 degree Centigrade
  - c) 280 degree Centigrade
  - d) 230 degree Centigrade
3. Which of these is not auxiliary equipment in a power plant
  - a) Conveyors
  - b) Galvanizers
  - c) Fans
  - d) Crushers
4. In which of the following power plants spray ponds are used to cool the warm water coming from the condenser
  - a) Small power plants
  - b) Medium power plants
  - c) Both medium and large power plants
  - d) Large power plants
5. The efficiency of an Otto cycle is increased by increasing \_\_\_\_\_
  - a) pressure ratio
  - b) compression ratio
  - c) temperature ratio
  - d) none of the mentioned
6. The thermal efficiency of diesel engines is about \_\_\_\_\_
  - a) 30%
  - b) 15%
  - c) 50%
  - d) 70%



7. The effective inhibitor of pre-ignition is \_\_\_\_\_
- a) Alcohol
  - b) Lead
  - c) Water
  - d) none of the mentioned
8. Nuclear Reactors are used \_\_\_\_\_
- a) to produce heat for thermoelectric power
  - b) to propel ships, submarines, aircrafts
  - c) to produce fissionable material
  - d) all of the mentioned
9. Nuclear fuel in reactor lasts for \_\_\_\_\_
- a) more than 5 months
  - b) few weeks
  - c) few days
  - d) more than 5 years
10. Thorium-232 is converted into uranium-233 in a/an \_\_\_\_\_ nuclear reactor.
- a) heavy water moderated
  - b) fast breeder
  - c) thermal
  - d) enriched uranium
11. Air-Preheater in a steam power plant \_\_\_\_\_
- a) Raises the temperature of the furnace gases
  - b) Recovers the heat from the flue gases leaving the economizer
  - c) Improves combustion rate
  - d) All of the mentioned
12. Which of the following kind of a process does a Steam Power Plant undergoes
- a) Cyclic
  - b) Irreversible
  - c) Expansion
  - d) Adiabatic
13. Common size unit of a Steam Power Plant is...
- a) 500 MW(e)
  - b) 150 MW(e)
  - c) 300 MW(e)
  - d) 30 MW(e)
14. What % is the investment cost in Conventional steam



power plant more than those in the combined cycle plants?

- a) 40
- b) 30
- c) 60
- d) 20

15. Which of the following kind of a process does a 'Steam Power Plant' undergoes..

- a) Cyclic
- b) Irreversible
- c) Expansion
- d) Adiabatic

16. Calorific value of coal middling generated in coal washeries during washing of coal may be around \_\_\_\_\_ Kcal/kg.

- a) 1000
- b) 4000
- c) 6000
- d) 8000

17. The decrease in the atomic number is not observed in case of \_\_\_\_\_

- a) alpha emission
- b) beta emission
- c) gamma emission
- d) none of the mentioned

18. The maximum turbine flame temperature can be controlled by...

- a) amount of oxygen extracted
- b) amount of air supplied
- c) amount of air extracted
- d) none of the mentioned

19. For endothermic reactions, Gibbs free energy change has to be...

- a) Negative
- b) Positive
- c) zero
- d) none of the mentioned

20. Why Reheating of steam is used?



- a) to increase efficiency
- b) to increase work output
- c) to increase Turbine Inlet Temperature
- d) to reduce amount of fuel

**Marks:**

Group Name (if ITM is a group activity)	Reg No.	Topic	Marks
TEAM A	311819114001	Understanding of Basics of Power Plant Engineering.	30
	311819114002		
	311819114003		
	311819114004		
	311819114005		
TEAM B	311819114006		30
	311819114007		
	311819114008		
	311819114009		
	311819114010		
TEAM C	311819114011		20
	311819114013		
	311819114014		
	311819114015		
	311819114016		
TEAM D	311819114011		30
	311819114013		
	311819114014		
	311819114015		
	311819114016		
TEAM E	311819114017		30
	311819114018		
	311819114019		
	311819114020		
	311819114021		
TEAM F	311819114301		20
	311819114303		
	311819114304		
	311819114305		
	311819114306		
TEAM G	311819114307		30
	311819114308		
	311819114309		
	311819114310		



	311819114311		
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**Outcomes:**

Power plant Engineering allows you to get knowledge on different sources for generating the power. This means students can gather deeper knowledge on different types of powerplants and the costs involved in it. This improves the student's interest on the Internal Assessment Test.

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