

CONTINUOUS INTERNAL EVALUATION-I

Semester: 8th

Course: Energy Engineering

Course Coordinator: Prof. Praveen K. Patil

Code: 18ME81

Date: 17/3/2023

Max. Marks: 50

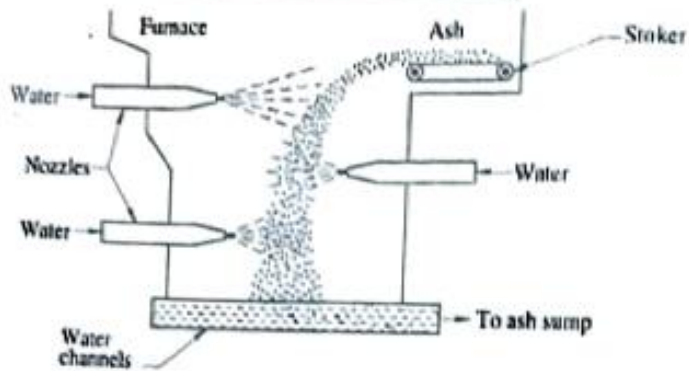
Duration: 1 Hour 30 Min

Scheme & Solution

Q. No.	Scheme	Marks Allocated
1a)	Sketch—3 Marks Working---6 Marks	9 marks
1b)	Sketch---3 Marks Explain ----- 6 Marks	9 Marks

1c)

Sketch---2 Marks
Explain----- 5Marks



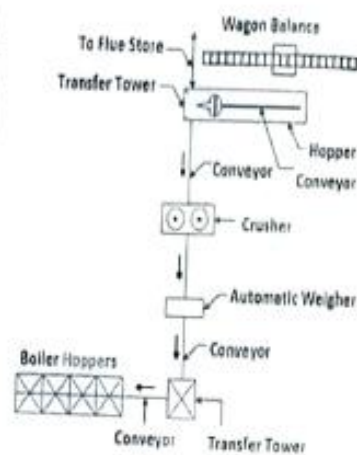
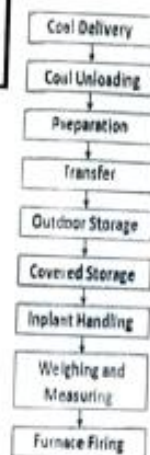
7marks

2a)

Sketch---3Marks
Explainwithsteps-----6Marks

Steps:

1. Coal delivery
2. Unloading
3. Preparation
4. Transfer
5. Outdoor storage (dead storage)
6. Covered storage (live storage)
7. Inplant handling
8. Weighing and measuring
9. Feeding the coal into furnace.



Coal Handling Layout

9marks

2b)

Sketch--3 marks

Description--5marks

Advantages ----- 1marks

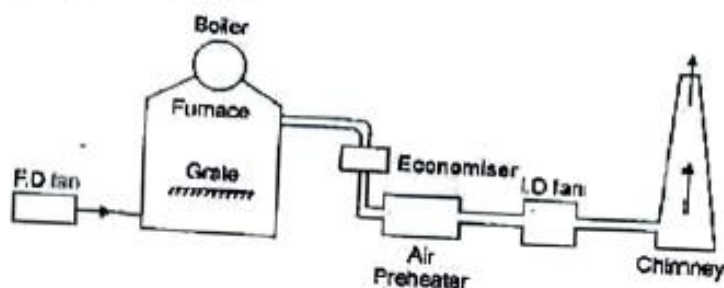
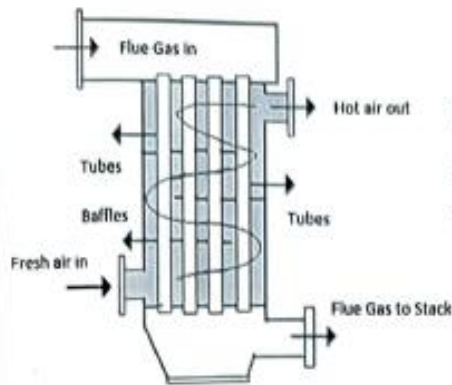


Figure: Balanced draught

9marks

2c) Sketch--2 marks
Description--5marks

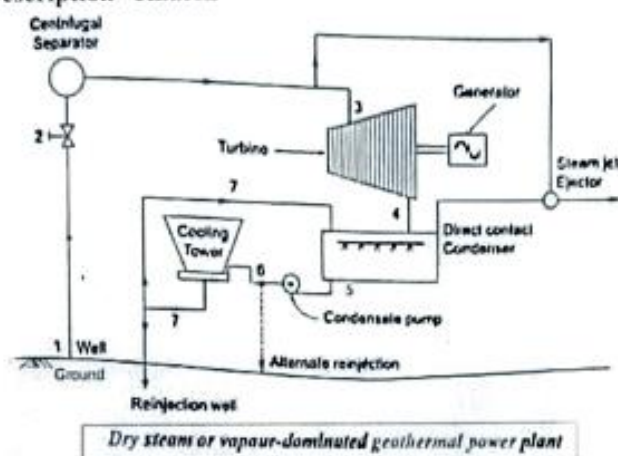


Sketch--2marks

Description: Construction and working of any one accessories —5 Marks

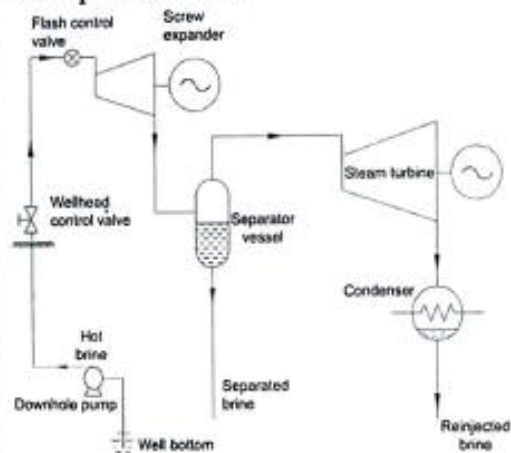
7marks

3a) Sketch--3 marks
Description--6marks



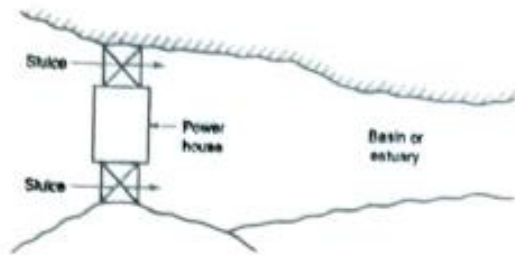
9 Marks

3b) Sketch--3 marks
Description--6marks



9marks

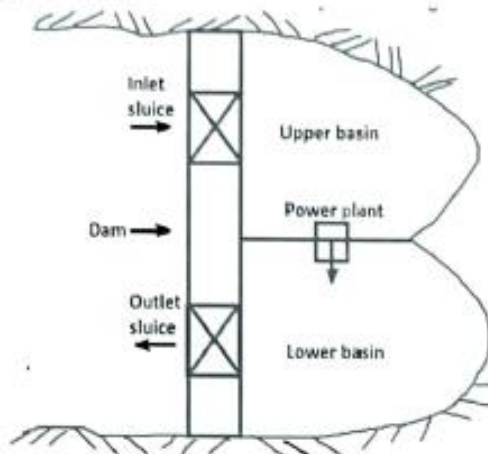
3c) Sketch--2 marks
Description--5marks



Single Basin One Way System of Tidal Power Plant

7 Marks

4a) Sketch--3 marks
Description--6marks



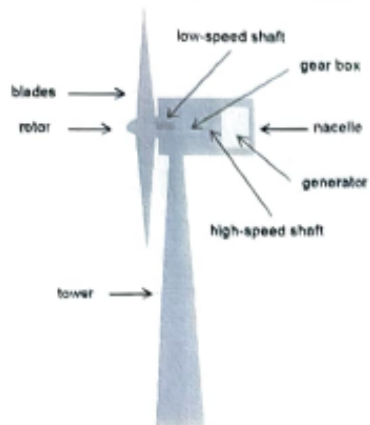
- **Advantages**
 - The energy is free – no fuel needed, no waste produced
 - Not expensive to operate and maintain
 - Can produce a great deal of energy
- **Disadvantages**
 - Depends on the waves – sometimes you'll get loads of energy, sometimes almost nothing
 - Needs a suitable site, where waves are consistently strong
 - Some designs are noisy. But then again, so are waves, so any noise is unlikely to be a problem
 - Must be able to withstand.

9 Marks

4b) Sketch--3 marks
Construction:---3Marks

- ☐ Frame
- ☐ Hubs
- ☐ Gearbox
- ☐ Wind mills
- ☐ RotorBlades
- ☐ Turbines
- ☐ Generator

9 Marks



Working of Wind Mills:---3Marks

9 Marks

4c)

Factors:

1. Windspeed-25km/h
2. site Accessibility
3. Altitudes of proposed site
4. Minimum risk of agro forestry operations
5. Low population density
6. Terrain and soil
7. Availability of power grid
8. Frequency of lighting strokes.
9. Availability of land.

7 Marks

Signature	<i>Praveen K Patil</i> 13/3/23	<i>[Signature]</i> 13/3	<i>[Signature]</i> 13/3
Name	Praveen K Patil	Prof.Karthik R	Dr.Nandeesh. Mathad
	Course Coordinator	Domain Expert	HOD

Figure 2.2.2.2: Sample copy of scheme paper