

## Mechanical Engineering Department

Academic Year: 2019-20

Class: Final Year Semester: II (Div: A)

Course Outcome: CO1, CO2

Programme Outcome: PO1 & PO2

Date: 28/02/2020

### Innovative Teaching Method

**Title of Innovative teaching method:** Crossword Puzzle

1. **Name of faculty:** Mr. M. N. Sonawane
2. **Subject:** Energy Engineering (C407)
3. **Objective of method:**
  - I. Think individually and improve their problem solving skills.
  - II. Improve their test skills.
  - III. Recall information easily.
  - IV. Increase their vocabulary.
  - V. Develop critical thinking.
4. **Topic covered through activity:** Basics of power plant and details about thermal power plant
5. **Description of method with benefits**

Crossword puzzle board is made up of a series of white and black squares. The goal is to fill in the white boxes by solving the questions/ hints. An important thing to note is that the squares and the queries are numbered.

Students are advised to solve crossword puzzle on power plants. Hints of puzzle are based on knowledge of power plant as per scope of syllabus

Benefits:

  - I. It will increase vocabulary of students
  - II. Crossword puzzle is advantageous in self-correcting method due to the length of each word and the overlap of each answer with other answers.
  - III. It will help students to introduce students to different parts of power plant
6. **Roles and responsibilities:**

Teacher

- I. Introduce basic aspects of powerplant to students theoretically
- II. Ask them to go through virtual power plant visit to know more about different parts of power plant
- III. Provide crossword puzzle to students
- IV. Provide crossword puzzle to students and also provide marks after assessment of crossword

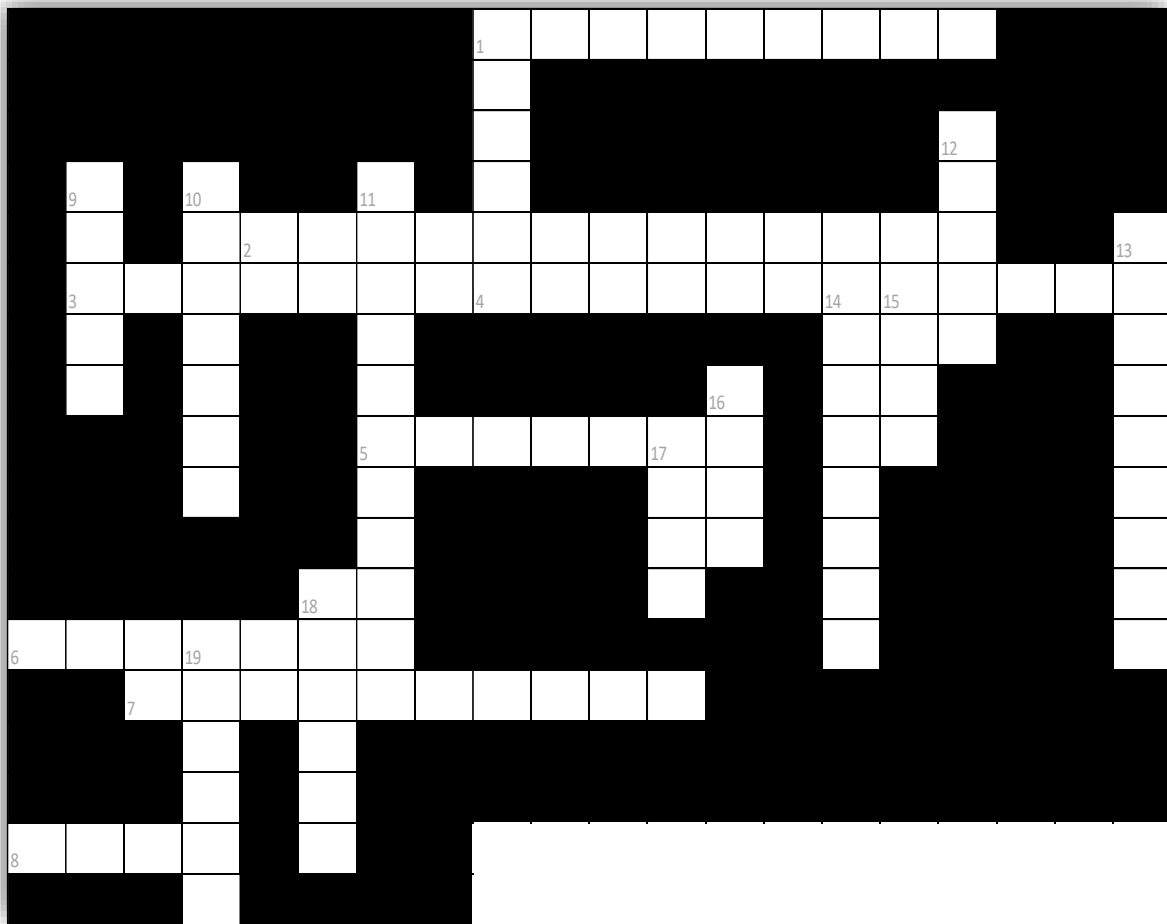
**Student**

- I. Understand basics of power plant and different essential parts of power plant and go through virtual industrial visit
- II. Attempt crossword puzzle and submit hard copy to subject teacher

**7. Assessment tools:**

Assessment of following crossword puzzle will be done. Correct answer of each hint will give 1 mark.

**CROSS WORD PUZZLE ON POWER PLANTS**



(CLUES ARE ON NEXT PAGE)

NAME-	
ROLL NO-	
DIVISION-	
SUBJECT-	

<b>ACROSS</b>	<b>DOWN</b>
<p><b>1.</b> EQUIPMENT WHERE STEAM LOSSES HEAT</p>	<p><b>1.</b> THIS IS MADE FROM ANCIENT PLANT MATERIAL AND GIVES COAL MOST OF ITS ENERGY.</p>
<p><b>2.</b> ONE OF THE POLLUTANT BECAUSE OF INCOMPLETE COMBUSTION</p>	<p><b>9.</b> THE DIFFERENCE BETWEEN ATMOSPHERIC PRESSURE AND THE PRESSURE EXISTING IN THE FURNACE</p>
<p><b>3.</b> RAIN THAT HAS TURNED ACIDIC BECAUSE OF POLLUTION IN THE AIR (2 WORDS)</p>	<p><b>10.</b> EQUIPMENT THROUGH WHICH RESIDUAL BURNT GASES ARE EXPELLED OUT</p>
<p><b>4.</b> RESOURCES THAT ARE NOT REPLACEABLE AFTER THEY HAVE BEEN USED UP AND NEED TO BE CONSERVED.</p>	<p><b>11.</b> A DEVICE THAT CHANGES ELECTRICITY FROM ONE VOLTAGE TO ANOTHER VOLTAGE</p>
<p><b>5.</b> IN A POWER PLANT, IT'S WHERE COAL IS BURNED</p>	<p><b>12.</b> WATER IN A GAS PHASE</p>
<p><b>6.</b> PRACTICALLY EVERY FORM OF ELECTRIC POWER IS GENERATED USING THIS TYPE OF ENGINE</p>	<p><b>13.</b> DEVICE WHICH CONVERTS MECHANICAL ENERGY INTO ELECTRIC ENERGY</p>
<p><b>7.</b> AN ELECTRIC UTILITY GENERATING STATION. (2 WORDS)</p>	<p><b>14.</b> TOTAL HEAT CONTAINED BY BODY</p>
<p><b>8.</b> CARBON FUEL PRODUCED BY DISTILLATION OF COAL.</p>	<p><b>15.</b> A UNIT OF ELECTRIC POWER, EQUAL TO ONE JOULE OF WORK PER SECOND, AND NAMED AFTER AN INVENTOR</p>
	<p><b>16.</b> ENERGY THAT THAT IS TRANSFERRED FROM ONE BODY TO ANOTHER AS A RESULT OF DIFFERENCE IN TEMPERATURE</p>
	<p><b>17.</b> A MINERAL THAT LOOKS LIKE A SHINY BLACK ROCK. IT'S FORMED FROM PLANTS THAT WERE ONCE ALIVE</p>
	<p><b>18.</b> THE ABILITY TO DO WORK.</p>
	<p><b>19.</b> SEALED VESSEL IN A POWER PLANT WHERE WATER IS CONVERTED TO STEAM.</p>

## 7. Evaluation sheet of Attendee

<b>Roll NO</b>	<b>Name Of Student</b>	<b>MARKS OUT OF 20</b>
1	Aditya Ashok Aher	20
5	Ajay Harchand Kumbhar	20
6	Ankit Anil Khatri	20
8	Deepak Bhagwan Attarde	19
9	Atul Bajirao Bankar	20
10	Avirag Sandip Chavan	18
11	Divyesh Kishor Badgujar	19
13	Yogita Chandrakant Bagul	20
17	Madhura Dattatray Bhalerao	20
21	Diksha Ananda Bhoje	20
22	Mayur Prashant Bidwe	19
25	Amol Tanaji Borade	19
26	Nikita Gajendra Borade	20
28	Adesh Dilip Chaudhari	19
31	Ganesh Rajendra Dalavi	18
33	Apurva Ajay Danej	22
35	Sanket Prakash Deore	19
39	Pooja Rushikesh Dharmashale	20
43	Roshani Nandkishor Gaikwad	19
45	Gautam Rajiv Kumar	20
46	Harashada Pramod Gharate	19
48	Darshan Baban Gite	19
50	Samrudhi Sanjay Godse	20
51	Dipali Bapurao Gunjal	20
52	Sourav Sachittanand Gunjal	19
53	Chaitanya Narendra Hake	20
55	Aniket Dhananjay Hiray	20
57	Ashish Raosaheb Jadhav	20
59	Nishigandha Balasaheb Jadhav	20
60	Prajakta Sopanrao Jadhav	20
61	Raj Bharat Jadhav	20
62	Suyog Dnyaneshwar Jadhav	20
63	Adesh Keshav Kakad	20
64	Shubham Rajesh Kasture	20
67	Shashank Pramod Kele	19
Number Of Students Appeared For The Exam		35
Total Marks Scored By All Students		687
Average Marks		19.62
Target Value		12
Number Of Students Scoring More Than Target Value		35
% Of Students Scoring More Than Target Value		100
Target Level		3

## 8. Activity Picture



## 9. For review and critique contact: e-mail address of faculty and HOD

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Subject In charge

Dr. S. B. Sonawane  
Module Coordinator

Dr. A. B. Kakade  
NBA Coordinator

Dr. V. C. Shewale  
H.O.D