# LESSON PLAN.

ACADEMY SESSION - SUMMER 2022

4th SEMESTER     W.E.F-10/03/2022   Total Period :- 48

Subject:- Fluid Mechanics

Abhoy Mohanta

| SL NO | MONTH | Week | Date | UNIT NO/PERIOD ALL | Topic to be covered as per Syllabus | Topic actually covered as per Syllabus | Short fall if any/syllabus | remarks |
|---|---|---|---|---|---|---|---|---|
| 1 | MARCH | 2nd Week | 11/03/2022 | 8 | Define fluid | | | |
| 2 | | | 12/03/2022 | | Description of fluid properties like Density, Specific weight, specific gravity, specific & volume | | | |
| 3 | | 3rd Week | 15/03/2022 | | solve simple problems | | | |
| 4 | | | 16/03/2022 | | Definitions and Units of Dynamic viscosity, kinematic viscosity, | | | |
| 5 | | 4th Week | 22/03/2022 | | surface tension Capillary phenomenon | | | |
| 6 | | | 23/03/2022 | | Doubt clearing class on 1st chapter | | | |
| 7 | | | 25/03/2022 | 8 | Definitions and units of fluid pressure, pressure intensity and pressure head | | | |
| 8 | | | 26/03/2022 | | Statement of Pascal's Law | | | |
| 9 | | 5th Week | 29/03/2022 | | Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure | | | |
| 10 | | | 30/03/2022 | | Pressure measuring instruments Manometers (simple & differential) | | | |
| 11 | APRIL | 1st Week | 02/04/2022 | | Bourdon tube pressure gauge | | | |
| 12 | | 2nd Week | 05/04/2022 | | (Simple Numerical) | | | |
| 13 | | | 06/04/2022 | | Solve simple problems on Manometer | | | |
| 14 | | | 08/04/2022 | | Doubt clearing class on 2nd chapter | | | |
| 15 | | | 09/04/2022 | 8 | Definition of hydrostatic pressure | | | |
| 16 | | 3rd Week | 12/04/2022 | | Total pressure and centre of pressure on immersed bodies | | | |
| 17 | | | 13/04/2022 | | (Horizontal and Vertical Bodies) | | | |
| 18 | | | 16/04/2022 | | Solve Simple problems | | | |
| 19 | | 4th Week | 19/04/2022 | | Archimedes 'principle, concept of buoyancy, meta center and meta centric height(Definition only) | | | |
| 20 | | | 20/04/2022 | | Concept of floatation | | | |
| 21 | | | 22/04/2022 | | Doubt clearing class on 3rd chapter | | | |
| 22 | | | 23/04/2022 | | Types of fluid flow | | | |

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| 23 | | **5th Week** | **26/04/2022** | **8** | **Continuity equation (Statement and proof for one dimensional flow)** | | | |
| 24 | | | **27/04/2022** | | **Bernoulli's theorem(Statement and proof)** | | | |
| 25 | | | **29/04/2022** | | **Applications and limitations of Bernoulli's theorem (Venturimeter, pitot tube)** | | | |
| 26 | | | **30/04/2022** | | **Solve simple problems** | | | |
| 27 | **MAY** | **1st Week** | **04/05/2022** | | **Doubt clearing class on 4th chapter** | | | |
| 28 | | | **06/05/2022** | | **-do-** | | | |
| 29 | | | **07/05/2022** | | **INTERNAL EXAMINATION** | | | |
| 30 | | **2nd Week** | **10/05/2022** | | **Revision Internal Exam** | | | |
| 31 | | | **11/05/2022** | **8** | **Define orifice & Flow through orifice** | | | |
| 32 | | | **13/05/2022** | | **Orifices coefficient & the relation between the orifice coefficients** | | | |
| 33 | | | **14/05/2022** | | **Classifications of notches & weirs** | | | |
| 34 | | **3rd Week** | **17/05/2022** | | **Discharge over a rectangular notch or weir** | | | |
| 35 | | | **18/05/2022** | | **Discharge over a triangular notch or weir** | | | |
| 36 | | | **20/05/2022** | | **Simple problems on above** | | | |
| 37 | | | **21/05/2022** | | **Doubt clearing class on 5th chapter** | | | |
| 38 | | **4th Week** | **24/05/2022** | **10** | **Definition of pipe** | | | |
| 39 | | | **25/05/2022** | | **Loss of energy in pipes** | | | |
| 40 | | | **27/05/2022** | | **Head loss due to friction: Darcy's and Chezy's formula (Expression only)** | | | |
| 41 | | | **28/05/2022** | | **Solve Problems using Darcy's and Chezy's formula** | | | |
| 42 | | **5th Week** | **31/05/2022** | | **Hydraulic gradient and total gradient line** | | | |
| 43 | **JUNE** | **1st Week** | **01/06/2022** | | **Doubt clearing class on 6th chapter** | | | |
| 44 | | | **03/06/2022** | **10** | **Impact of jet on fixed and moving vertical flat plates** | | | |
| 45 | | | **04/06/2022** | | **Derivation of work done on series of vanes** | | | |
| 46 | | **2nd Week** | **07/06/2022** | | **condition for maximum efficiency** | | | |
| 47 | | | **08/06/2022** | | **Impact of jet on moving curved vanes, illustration using velocity triangles, derivation of work, efficiency** | | | |
| 48 | | | **10/06/2022** | | **Doubt clearing class on 7th chapter** | | | |