# ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

| Dicipline: Mech. | Semester: 4th | Name of the Teaching Faculty: Ajitav Sahoo | |
|---|---|---|---|
| Subject: F.M | No of Days/Week Class Allotted: 4 | Semester From date: 13/02/23 To date 23/05/23 | No.of Weeks: |

| WEEK | Class Day | Theory Topics |
|---|---|---|
| 1 | 1st | Define fluid |
| | 2nd | Fluid properties |
| | 3rd | Definition & units of dynamic viscosity, kinemate viscosity etc. |
| | 4th | Definition & units of fluid pressure. |
| | 5th | |
| 2 | 1st | Statement of Pascal's law |
| | 2nd | Concept of atmospheric pressure, gauge pressure. vacuum pressure. |
| | 3rd | Pressure measuring instruments. |
| | 4th | Manometers, Bourdon tube pressure gauge. |
| | 5th | |
| 3 | 1st | Solved simple problem on manometers. |
| | 2nd | Definition of hydraulic pressure |
| | 3rd | Total ~~Tost~~ pressure & centre of pressure. |
| | 4th | Solved simple problem. |
| | 5th | |

| WEEK | Class Day | Theory Topics |
|------|-----------|---------------|
| A | 1st | Archimede's principle |
| | 2nd | Concept of buoyancy, meta centre, meta-centric height |
| | 3rd | Concept of floatation |
| | 4th | Types of fluid flow |
| | 5th | |
| 5 | 1st | Continuity eqn. (statement & proof) |
| | 2nd | Bernoulis theorem details |
| | 3rd | Application & limitation of above |
| | 4th | Solved simple problem |
| | 5th | |
| 6 | 1st | Define orifice |
| | 2nd | Loss of energy in pipe |
| | 3rd | Head loss due to friction |
| | 4th | Solved simple problem |
| | 5th | |

| Dicipline: Meeh. | Semester: 4th | Name of the Teaching Faculty: Ajitav Sahoo | |
|---|---|---|---|
| Subject: F.M | No of Days/Week Class Allotted: 1 | Semester From date: 13/02/23 To date 23/05/23 | No.of Weeks: 60 |

| WEEK | Class Day | Theory Topics |
|---|---|---|
| 07 | 1st | Darcy's & chezy's formula |
| | 2nd | Hydraulic gradient & total gradient line |
| | 3rd | Impact of jet on flat plates |
| | 4th | Derivation of max. efficiency |
| | 5th | |
| 08 | 1st | Solved simple problems. |
| | 2nd | Impact of jet on curved vanes |
| | 3rd | Condition of max. efficiency |
| | 4th | Illustration of velocity triangles. |
| | 5th | . |
| 09 | 1st | Derivation of work done & efficiency |
| | 2nd | Solved simple problem |
| | 3rd | Revision of above topics |
| | 4th | Surprise test. |
| | 5th | Sougham Achangra |