



DEPARTMENT OF MECHANICAL ENGINEERING

VISION

“To incorporate technical & professional skills in Mechanical Engineers to fulfil industrial & social needs”.

MISSION

- *To educate, guide, and mentor the students for academic excellence.*
- *To develop technical skills and discipline among the students as per the requirement of the industry.*
- *To impart ethics & social values by arranging social activities.*

Subject Name: Industrial Hydraulics and Pneumatics (22655)

Date :-

Assignment No :- 1

Course Outcome: 602.1

Topic Name :- Introduction to Hydraulic and Pneumatic System.

1. Draw and explain General Layout of Hydraulic system and state its advantages, disadvantages and applications.
 2. Draw and explain General Layout of Pneumatic system and state its advantages, disadvantages and applications.
 3. List and explain properties of Hydraulic fluid (Oils).
 4. Draw symbol used in Hydraulic and Pneumatic system
 5. Draw circuit diagram of Hydraulic and Pneumatic system using symbols (General Layout)
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Date of Submission :-

Assign By :- Mr. Rahul Gondhali



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Subject Name: Industrial Hydraulics and Pneumatics (22655)

Date :-

Assignment No :- 2

Course Outcome: 602.2

Topic Name :- Pumps and Actuators

1. Give detailed classification of pump
2. Construction and working of external gear pump with diagram
3. Construction and working of swash plate piston pump with diagram
4. Explain the criteria for selection of pump
5. Construction and working of turbine and vane motor
6. Construction and working of single and double acting cylinder

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Subject Name: Industrial Hydraulics and Pneumatics (22655)

Date :-

Assignment No :- 3

Course Outcome: 602.3

Topic Name :- Control valves

1. List and explain different type of valves
2. Construction and working of 4x2 DCV
3. Draw and explain working of directly operated pressure relief valve
4. Construction and working of 5x2 DCV
5. What are flow control valves how flow control is achieved by throttling and diversion also list type of flow control valve
6. Construction and working of pilot operated check valve

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Subject Name: Industrial Hydraulics and Pneumatics (22655)

Date :-

Assignment No :- 4

Course Outcome: 602.4

Topic Name :- Compressors Pneumatic Components and accessories in Fluid System

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1. Give construction and working of double acting reciprocating and turbo rotary compressor.
 2. What are hoses explain its construction along with advantage and disadvantage of rubber hose
 3. Comparison between reciprocating and rotary compressor
 4. Explain FRL unit with diagram
 5. Classification of valves used in pneumatic circuit
 6. Give function and classification of seals also list reason for failures of seals
 7. What are accumulator explain any one of them
 8. What are oil filters explain any one of them
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Subject Name: Industrial Hydraulics and Pneumatics (22655)

Date :-

Assignment No :- 5

Course Outcome: 602.5

Topic Name :- Oil Hydraulic Circuits

1. Draw diagram for Speed control of double acting cylinder using meter in circuit
 2. Differentiate between meter in and meter out circuit
 3. What is regenerative circuit explain
 4. What is sequencing explain sequencing circuit
 5. Draw hydraulic circuit for milling machine
 6. Remedies and fault detection in hydraulic circuit
 7. What are you advantages and disadvantages of meter in and meter out circuit
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Subject Name: Industrial Hydraulics and Pneumatics (22655)

Date :-

Assignment No :-6

Course Outcome: 602.6

Topic Name :- Pneumatic Circuits

1. Draw circuit diagram for pilot operated double acting cylinder
 2. Draw circuit diagram for speed control of bidirectional air motor
 3. Draw circuit diagram for sequencing of two double acting cylinder
 4. Draw time delay operation circuit diagram
 5. Pilot control single acting cylinder circuit diagram
 6. Draw circuit diagram for speed control of double acting cylinder
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