Sai Nath University

Assignment For Diploma in Automobile Engineering vth Sem.

The Assignment will consist of two parts, A and B. Part A will have 5 short answer questions(40-60 words) of 4 marks each. Part B will have 2 long answer questions of 10 marks each

All questions are compulsory.

These Assignments should be completed and submitted in written form by the student to his/her respective Faculty/ Examiners. Assignment Submission Dates are:

- Nov-17

List Of Suggested Questions

The list of suggested questions are for students to practice. Although optional, we recommend that students solve these questions, as they will help them in preparing for exams as well as in clearing the important concepts of the subject.

List of Practical and suggested practical's

The list of practical's should be done by the students in their Lab Sessions. These are the basic practical's, which each student should be able to do himself independently. While the list of suggested practicals are optional, but it is recommended that students should perform those practical so as to have a thorough knowledge of the subject

Education Delivery Schedule (EDS)

As per University Semester scheme, the minimum contact hours of each paper has been Divided into two hours theory and practical class.
The faculty will maintain this attendance paper wise for his/her batch.

Subject Code	Subject Name
DEAE-501	**Industrial Organization & supervisory Management**
DEAE-502	**Fluid Power**
DEAE-503	**Advanced Manufacturing Process**
DEAE-504	**Machine Design**
DEAE-505	**Metrology & Quality Control**
DEAE-506	**Practical Machine Design**

SAI NATH UNIVERSITY

Cover page of Assignment

ID NUMBER ……

NAME …… ……

COURSE Diploma Engineering……

STREAM Automobile……

SEM 5th ……

SUBJECT CODE ……

SUBJECT NAME ……

Assignments will be completed by the Student in his/her own handwriting.

DEAE-501

[Industrial Organization & supervisory Management]

Part A

1. Explain the Indian industry and its stages ?
2. Explain the fundamental and growth of the Indian manufacturing industry ?
3. Explain the stages of scientific technological revolution in india ?
4. Define major area of Indian industry ?
5. Explain GATT ?

Part B

1. What is partnership , explain its features ?
2. What do you understand by factory act , explain industrial act ?

DEAE-502
[Fluid Power]
Part A

1. Differentiate Between Liquids and Gases .
2. State and prove the pascal's Law.
3. The diameters of a pipe at section 1 and 2 are 15 cm and 20 cm respectively.Find the discharge through the pipe if velocity of water at section 1 is 4 m/s .Determine also the velocity at section 2 .
4. Derive Bernoulli's equation for liquids.
5. Define the stream function.

Part B

1. Explain the general principles of (a) Pelton Wheels (b) Kaplan Turbines

   (c) Francis Turbine.

2. A horizontal nozzle discharging into the atmosphere. The inlet has a bore area of 600 mm2 and the exit has a bore area of 200 mm2 . Calculate the flow rate when the inlet pressure is 400 Pa. Assume there is no energy loss.

DEAE-503
[Advanced Manufacturing Process]
Part A

1. What is milling machine, write about its types with neat sketch.
2. Write with neat sketch boring tool nomenclature .
3. Write different methods of gear manufacturing.
4. What is honing and lopping describe in brief .
5. What is modern machining method, its principle ,process, advantage and applications.

Part B

1. What is milling accessories and milling attachment ,describe with neat sketch .
2. What is CNC machine , write fixed cycle for writing part programming .

DEAE-504
[Machine Design]
Part A

1. What is elasticity and plasticity.
2. What is factor of safety.
3. What is bolted joint.
4. Derive the formula for safe design of bolted joint.
5. What is spring and its types.

Part B

1. What is riveted joint and write about types of riveted joint with neat sketch.
2. What is machine design and describe the procedure of machine design.

DEAE-505
[Metrology & Quality Control]
Part A

1. Write Concept of mass production, Interchangibi1ity, selective assembly.
2. What is precision and accuracy?
3. Write about Spirit level and Sine bar with neat sketch.
4. Write Construction & Working of universal bevel protractor.
5. What is primary texture and secondary texture.

Part B

1. Write about vernier caliper with neat sketch.
2. What is mechanical comparator describe with neat sketch.

DEAE-606
[Practical Machine Design]
Part A

1. Write the requirements of gear material.
2. Write the advantages and limitations of Hydrostatic Bearing.
3. According to uniform wear theory, prove that for maximum torque capacity of plate clutch, Ri=0.577 R0 .
4. explain the significance of pressure angle in cam and follower design.
5. With neat sketch explain force analysis of Helical gear.

Part B

1. A single stage spur gear box is used to transmit 15 kW power at 1440 rpm of pinion.
   The desire transmission ratio is 4:1
   Assume 20 degree FD in-volute profile and material C55Mn1 for pinion and gear.
   i) Find the module
   ii) Check gear for Lewis Dynamic Load
   iii) Check gear for wear strength
   iv) Write Constructional Details.
2. Design a Bevel gear pair for following specification,
   Rated power = 25KW
   Input speed = 960 rpm
   Output speed = 240 rpm
   Shafting intersecting angle = 75 degree.