Sai Nath University

ASSIGNMENT FOR DIPLOMA IN ELECTRICAL 6TH 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 4 long answer questions of 5 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:

- **June-18**

List Of Suggested Questions

The list of suggested questions is 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
DEEE601	UTILIZATION SYSTEM
DEEE602	MANUFACTURING SYSTEM
DEEE603	TESTING & MAINTAINANCE OF ELECTRICAL EQUIPMENT
DEEE604	PROJECT
DEEE605	PRACTICAL

SAI NATH UNIVERSITY

Cover page of Assignment

ID NUMBER	……
NAME	…… ……
COURSE	DIPLOMA……
STREAM	ELECTRICAL……
SEM	6^{TH} ……
SUBJECT CODE	……
SUBJECT NAME	……

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

DEEE601

SUB-UTILIZATION SYSTEM

Part A

1. Explain the different measurement techniques used for luminous intensity.

2. Explain in brief how heating is done in the following cases:

i) Resistance heating, ii) Induction heating iii) Dielectric heating.

3. Discuss the advantages and disadvantages of electric drive over other drives.

4. A) why a series motor is preferred for the electric traction

b) What are the advantages of electric braking over mechanical braking?

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Part B

5. For a quadrilateral speed-time curve of an electric train, derive expression for the distance between stops and speed at the end of the coasting period.

6. A) Compare Tungsten filament lamp with Fluorescent tubes.

b) Explain the different types of lighting schemes..

7. Describe the construction and working principal of (i) sodium vapour lamp (ii) mercury vapour lamp.

8. Explain in detail about resistance and arc welding.

MANUFACTURING SYSTEM

DEEE602

Part A

1.What are the various factors to be considered while selecting the site for diesel engine power plant?

2.What are the feeding systems of pulverized coal in to the furnace? What are the Two conditions to be satisfied to burn pulverized coal successfully.

3.Explain the different components used in steam power plant.

4.Describe with a neat sketch the working principle of a hydro electric power plant layout and its operation.

5.With help of a block diagram explain the main components of a open cycle gas turbine power plant.

Part B

6. a) Explain the function of a moderator. What is the criterion of its effectiveness?

b) What are the different fuels used in nuclear power plants.

7. List out the advantages and disadvantages of nuclear plants over conventional thermal plants.

8. a) Draw a chart showing operations and devices used in coal handling plant.

b) Describe different types of coal conveyors.

9. How nuclear reactors are classified?. Discuss the advantages and disadvantages of Pressurized Water Reactor.

SUB-TESTING & MAINTAINANCE OF ELECTRICAL EQUIPMENT

DEEE603

Part A

1.What routine tests are taken on the 1-PH I.M ? explain any one testing procedure in details.

2.Write the application of following to detect the fault & name the fault which can be detected by that test equipment.

A). Turns ratio testing B). Sonography (ultra sound tasting C). Megger testing

3. Write the effect of fault in the following.

A). Rotor of Sq. cage I.M not dynamically balanced

B). Polarity of HV & LV winding found exactly same

C). Yoke of DC motor got racked.

4. Explain the procedure of transformer oil in the transformer windings.

Part B

5. List out the reasons for development of excessive vibrations in a transformer & describe method of detection for any one reason .

6.) Name any four tests, used for the preventive maintenance of 3-ph I.M during working condition. Explain with neat sketch any one test in details.

7.Explain the concept of total productive maintenance (TPM).

8. Write short notes on any three a) Magnetic im-balance in transformer . b) Magnetic im-balance in Induction maotors c) Vibrations in a transformer d) vibration in a motor.

DEEE604

PROJECT LIST

1. 3 Phase Induction Motor With Soft Start
2. Induction Motor Speed & Direction Controller
3. Ac to High Voltage DC Using Voltage Multiplier Circuit
4. Accurate Room Temperature Controller Project
5. Advanced Wireless Power Transfer System
6. Automated Night Lighting System
7. Lamp Illumination Control With Precision

DEEE605

List of Practicals

1. Demonstrate various instruments use viz Ammeter, Voltmeter, Wattmeter, p.f meter etc for their identification and connecting procedure in a circuit.

2. To measure power and power factors in 3 Phase load by two wattmeter method

3. To determine the efficiency of a single phase transformer from the data obtained through open circuit and short circuit test

4. To connect the primary and secondary windings of a three phase transformer in a suitable circuit and to verify line and phase current and voltage relationship respectively

5. To connect a dc shunt motor with supply through a 3 point starter and to run the motor at different speeds with the help of a field regulator

6. To run a 3 phase squirrel cage induction motor with the help of a star-delta starter. To change the direction of rotation of the motor.

7. To measure power and power factor of a single phase induction motor.