Sai Nath University

Assignment For B.TECH in Electrical Engineering 7st 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
BTEE 701	**Switchgear & Protection**
BTEE -702	**Utilization Of Electrical Power**
BTEE-703	**Communication Engineering**
BTEE -704	**Electronics Instrumentation**
BTEE 705	**Switchgear & Protection Practical**

SAI NATH UNIVERSITY

Cover page of Assignment

ID NUMBER …….

NAME …… ……

COURSE **B.Tech**……

STREAM Electrical……

SEM 7ST ……..

SUBJECT CODE ……..

SUBJECT NAME ……..

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

BTEE 701
Switchgear & Protection

Part A

1. What are the essential qualities of protection in a protective system? Discuss various zones of protection.
2. State merits and demerit of static relays.
3. What is an impedance relay? Explain its operating principal and characteristic on R-X diagram.
4. Describe the operating principal and constructional features of a directional relay.
5. What are the problems arises in differential protection applied to transformers.

Part B

1. Describe the following:
   a. Protection of Parallel feeder
   b. Earth fault protection.
2. What is percentage differential protection scheme? How it is used for protection of generators.

BTEE 702
Utilization Of Electrical Power

Part A

1. Discuss the factory lighting.
2. With a neat diagram, explain the construction and working of the sodium vapour lamp.
3. Discuss the factory lighting
4. State and explain the laws of illumination.
5. Explain the plugging and regenerative raking as applied to the traction motors.

Part B

6. Define the tractive effort and derive an expression of tractive effort for the propulsion of the train.
7. Write a note on hybrid vehicles.

BTEE-703
Communication Engineering

Part A

1. Write down the basic principle used in super heterodyne receivers?
2. How is PPM obtained from PWM?
3. Define entropy.
4. Draw the NRZ signaling format of given binary sequence 1101001.
5. Briefly explain the multiple access technique used in satellite link.

Part B

6. Explain a method of generation of an amplitude modulated signal and sketch the time domain waveform of message, carrier and modulated signals.
7. Explain the generation of frequency modulated signal using reactance modulation scheme with neat diagram.

BTEE-704
Electronics Instrumentation

Part A

1. What do you understand by thermodynamic reversibility?
2. Define thermal efficiency and brake power as applied to engines.
3. How a fire tube boiler is different from a water tube boiler?
4. Mention the purpose of governing steam engine.
5. What are the two classifications of steam turbine? Give examples.

Part B

6. Mention the function of water gauge, fusible plug, safety valve, economiser, superheater and air preheater.
7. Describe the construction of Babcock and Wilcox boiler.

BTEE-705
Switchgear & Protection Practical

Part A

1. To study the operation of definite time overcurrent relay.
2. To plot the characteristics of single pole over current or earth fault using static i.d.m.t. Relays
3. To study the operation of static over voltage relay
4. To plot the characteristics of electromagnetic idmt relay (model no.icm-21np)
5. To study the operation of static definite time reverse power relay (model apdr-21)

Part B

1. To plot the characteristics of fuse wire
2. To study directional over current relay (ACDR 11 HPD)