



## **ASSIGNMENT-1**

Course- B.TECH (4th year/ 7th sem)

Sub code-EET/EEE-473

Sub- Electric Drive

Last date of Submission- 06/11/2016

### **Instruction**

- 1) Write the responses to the assignment in your own handwriting.
- 2) Submit the responses to your HOD within the due date.
- 3) Write your name, program and Enrollment number clearly at the top of the page.

**Q1.**

- a) What are electric drives? Explain the special drives in brief?
- b) Explain the fundamentals of electric drive and multi quadrant operation of electric drive?

**Q2**

- a) What are the reasons for using load equalization in an electrical drive in brief?
- b) Explain the classes of motor duty of the electric drive?



## **ASSIGNMENT-2**

**Course-** B.TECH (4th year/ 7th sem)

**Sub code-** EET/EEE-473

**Sub-** Electric Drive

**Last date of Submission-**06/11/2016

### **Instruction**

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### **Q1**

- a) What is electric braking? Explain the types of electric braking in three phase induction and synchronous motor?**
- b) Explain the single phase and three phase controlled converter control of DC drives?**

### **Q2**

- a) Explain the harmonics, power factor and ripples in motor current chopper?**
- b) Explain the static voltage control scheme, static frequency control scheme and Cyclo-converter in brief?**

**MONAD UNIVERSITY**  
Village & Post Kastla, Kasmabad, P.O Pilkhuwa - 245101  
Tehsil Hapur (U.P), India  
E.E Department

Course: Power quality (B.tech EE 7<sup>th</sup>sem)

Code:EET/EEE - 472

Assignment No: 1

Due date of submission: 10.11.2016

**Instructions**

1. Write the responses to the assignment in your own handwriting.
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**Q.1**

- a) What is power quality? Discuss about the cause of power quality deterioration & source of power quality problem
- b) What are transients? Explain factors affecting the transients.

**Q.2**

- a) Explain about the short duration variations in details.
- b) Explain voltage fluctuation in details.

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E.E Department

Course: Power quality (B.tech EE 7<sup>th</sup>sem)

Code: EET/EEE - 472

Assignment No: 2

Due date of submission: 10.11.2016

Instructions

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Q.1

- a) **List the sources of sag and interruptions and mention the methods to improve voltage sags in utility system.**
- b) ***Discuss the role of Active Series Compensators in power quality improvement***

Q.2

- a) ***Explain about power quality improvement using motor generators sets.***
- b) ***Discuss about motor starting sags.***

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Tehsil Hapur (U.P), India  
E.C Department

**Course:** B.Tech (EE)-7<sup>th</sup> Sem.

**Subject:** Switchgear and Protection

**Assignment No:** 1

**Due date of submission:** 10.11.2016

## Instructions:

4. Write the responses to the assignment in your own handwriting.
5. Submit the responses to your HOD within the due date.
6. Write your Name, Programme and Enrolment No. clearly at the top of this page.

## Q.1

(a) What do you understand by the Zone of protection of a relay? What is a Blind spot? Why is it undesirable in a protection scheme?

(b) Draw and describe the operational details of an SF6 circuit breaker.

## Q.2

(a) How are the circuit breakers classified? Give details of the same.

(b) What are the different types of faults occurring in the power system?

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E.C Department

**Course:** B.Tech (EE)-7<sup>th</sup> Sem.

**Subject:** Switchgear and Protection

**Assignment No:** 2

**Due date of submission:** 10.11.2016

### **Instructions:**

1. Write the responses to the assignment in your own handwriting.
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**Q1. (a)** How do you quench an arc in a circuit breaker?

**(b)** Explain the construction and operating principle of over current relay with directional Scheme.

**Q2. (a)** With a neat schematic diagram, explain the protection of transformer with differential Protection scheme.

**(b)** Write brief notes on:

**(i)** Generator protection.

**(ii)** Bus bar protection

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E.C Department

**Course:** B.Tech (EE)-7<sup>th</sup> Sem.

**Subject:** Telemetry and Data transmission

**Assignment No:** 1

**Due date of submission:** 10.11.2016

### **Instructions:**

7. Write the responses to the assignment in your own handwriting.
8. Submit the responses to your HOD within the due date.
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### **Q.1**

- (a) Draw the block diagram of a telemetry system, identifying different part in it.
- (b) Explain the term FSK, PSK and DPSK.

### **Q.2**

- (a) Sketch a block diagram of differential pulse code modulation (DPCM) system and explain its operation.
- (b) Why Modems are needed for telephone communication? Explain their working with example.

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E.C Department

**Course:** B.Tech (EE)-7<sup>th</sup> Sem.

**Subject:** Telemetry and Data transmission

**Assignment No:** 1

**Due date of submission:** 10.11.2016

## **Instructions:**

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**Q1. (a)** Draw the block diagram of a signal conditioners scheme.

**(b)** Draw the block schematic diagram of TDM/PCM/FM system of tele-metering and make appropriate labels, both on the transmitting and receiving sides.

**Q2. (a)** Explain synchronous and asynchronous time division multiplexing of PCM signals.

**(b)** Define Remote control system and discuss its applications areas.



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EE Department

Course: B. Tech. EE- 7th Sem. (EHV AC & DC Transmission)

Assignment No: 1

Due date of submission: 10.11.2016

Instructions:-

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Q.1

- a) Give a detail description about the extra high voltage transmission of electrical power.
- b) What do you understand by bundled conductors? What are the crucial advantages of using it ?

Q.2

- a) Elaborate the term HVDC transmission. Also mention it's crucial significances and drawbacks.
- b) Elaborate a three core underground cable with neat diagram in detail. Also specify the causes of failure of underground cables.

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EE Department

Course: B. Tech. EE- 7th Sem. (EHV AC & DC Transmission)

Assignment No: 2

Due date of submission: 10.11.2016

Instructions:-

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Q.1

- a) What do you understand by grading of underground cables ? Also specify the several types of grading in underground cables.
- b) Explain the surge impedance in EHV lines in detail. Also mention the surge impedance loading.

Q.2

- a) Elaborate the methods of improving string efficiency of EHV line insulators.
- b) Express the following :-
  - i):- Span Lengths.
  - ii):- Sag.
  - iii):- Proximity Effect.