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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(EE) (2012 Onwards E-III) (Sem.-7,8)

POWER QUALITY MONITORING AND CONDITIONING

Subject Code : BTEE-805A

M.Code : 71942

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Answer briefly :**

- a. What are the sources of short interruption?
- b. List out few power conditioning equipment.
- c. Define the term "power quality" in power system.
- d. What is the effect transfer due to harmonics?
- e. List out atleast two IEEE and IEC standards.
- f. What is the need for power quality monitoring factor?
- g. What are the sources of sags and interruption?
- h. What is the need of computer analysis tools for transient studies?
- i. Give the monitoring objectives for power quality.
- j. How filtering is important in harmonic studies?

SECTION-B

2. Discuss the origin of short interruption in support of power quality.
3. What is long duration voltage variation? Explain the main reasons of long duration voltage variations.
4. What are the adverse effects of voltage sag? How can this be prevented?
5. Explain the power system response characteristics under the presence of harmonics.
6. Explain briefly about the power conditioning equipment.

SECTION-C

7. Categorize the major power quality problems and list the typical causes of the problems in each category.
8. How do the harmonics get injected into the power system? What are the current and voltage harmonics?
9. Write notes on :
 - a. Power acceptability curves
 - b. Voltage sag caused by the starting of motor.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.