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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech IV Year I Semester Supplementary Examinations August-2021**

**PRINCIPLES OF POWER QUALITY**

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

1 What is power quality? Why we are concern about power quality? 12M

**OR**

2 Explain about the power quality evaluation procedure. 12M

**UNIT-II**

3 What are the sources of transient over voltages? Explain clearly. 12M

**OR**

4 What are the principles of over voltage protection? Explain with diagram. 12M

**UNIT-III**

5 What is harmonic distortion? Discuss about the voltage versus current distortion. 12M

**OR**

6 Explain the power system quantities under non sinusoidal condition. 12M

**UNIT-IV**

7 Explain the applications for system maintenance, operation and reliability. 12M

**OR**

8 Explain about the permanent power quality monitoring equipment. 12M

**UNIT-V**

9 What is the need for current limiter? Discuss the operation of a Solid state current limiter. 12M

**OR**

10 What are the advantages of static var compensators? Discuss the operation of Static Series Compensators? 12M

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