R16 Q.P. Code: 16EE230 Reg. No: SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR (AUTONOMOUS) B.Tech IV Year I Semester Regular Examinations Feb-2021 PRINCIPLES OF POWER QUALITY (Electrical and Electronics Engineering) Time: 3 hours Max. Marks: 60 (Answer all Five Units $5 \times 12 = 60$ Marks) UNIT-I What are the responsibilities of end users and suppliers of electric power supply? 12M OR i) Define notching, ii) What is meant by dc offset, iii) Define coupling, 2 **12M** iv) What is meant by surge, v) Define flicker UNIT-II 3 Draw and explain the impulsive and oscillatory transients 12M OR Mention the categories and characteristics of electromagnetic phenomena in power 12M systems? UNIT-III What are effects of harmonics? Explain harmonic distortion evaluation procedure? 12M OR Explain the brief description about the harmonic distortion evaluation. 12M UNIT-IV Explain the various power quality monitoring considerations. 12M OR Explain the categories of instruments to consider for harmonic analysis. 8 **12M UNIT-V** Explain the solid transfer switch transfer with the transfer operation? 9 12M

*** END ***

Explain the principle of DVR operation used for sag mitigation?

10

OR

12M