# APJ  ABDUL KALAM  TECHNOLOGICAL UNIVERSITY
## Scheme for Valuation/Answer Key
*Scheme of evaluation (marks in brackets) and answers of problems/key*
### SEVENTH SEMESTER B.TECH DEGREE EXAMINATION (S), MAY 2019
### Course Code: EE465

### Course Name: Power Quality

Max. Marks: 100                                                                          Duration: 3 Hours

## PART A
### *Answer all questions, each carries 5 marks.*
Marks

| | | |
|---|---|---|
| 1 | Explanation – 3 marks | 5 |
| | Figure – 2 marks | |
| 2 | Explanation -2.5 marks each | 5 |
| 3 | Definition- 2.5 marks | 5 |
| | Significance -2.5 marks | |
| 4 | Objectives – 5 marks | 5 |
| 5 | Diagram- 2 marks | 5 |
| | Explanation – 3 marks | |
| 6 | Explanation – 5 marks | 5 |
| 7 | Explanation – 2.5 marks each | 5 |
| 8 | 2.5 marks each | 5 |

## PART B
### *Answer any two full questions, each carries 10 marks.*

| | | | |
|---|---|---|---|
| 9 | a) | Explanation – 2.5 marks each | 5 |
| | b) | Equation and substitution – 3 marks | 5 |
| | | Answer- 0.428          2 marks | |
| 10 | a) | need of power quality standards- 3 marks | 10 |
| | | the various IEEE standards for power quality – 7 marks(any five IEEE standars) | |
| 11 | a) | Comparison -5 marks | 5 |
| | b) | Explanation – 5 marks | 5 |

## PART C
### *Answer any two full questions, each carries 10 marks.*

| | | | |
|---|---|---|---|
| 12 | a) | $a_n = 0$ | 10 |

$$b_n = \frac{8}{T} \int_0^{T/4} x(t) \sin\left(\frac{2\pi nt}{T}\right) dt$$

Expression and derivation – 10 marks

13  a)  Definition – 2 marks                                                                                      (4)

Major flicker sources- 2 marks

b)  block diagram- 3 marks                                                                                      (6)

explanation – 3 marks

14  a)  Aperiodic signals can be analysed by Fourier transform. Expression of Fourier  (5)

transform and significance

b)  5 points – 1 mark each                                                                                       (5)

## PART D
### *Answer any two full questions, each carries 10 marks.*

15     Procedure with steps                                                                                    10

16     Powerquality issues- 10 marks                                                                       10

17  a)  Procedure – 5 marks                                                                                     5

b)  Comparison – 5 marks                                                                                       5

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