R13

Code: 13A99101

B.Tech I Year (R13) Supplementary Examinations December 2017
BASIC ELECTRICAL & ELECTRONICS ENGINEERING
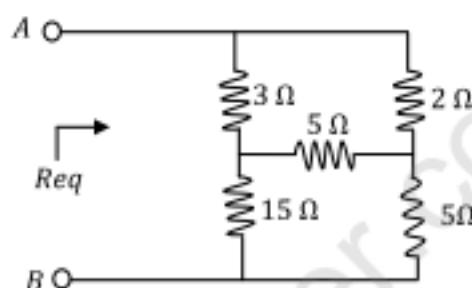### (Common to CSE and IT)

Time: 3 hours   Max. Marks: 70
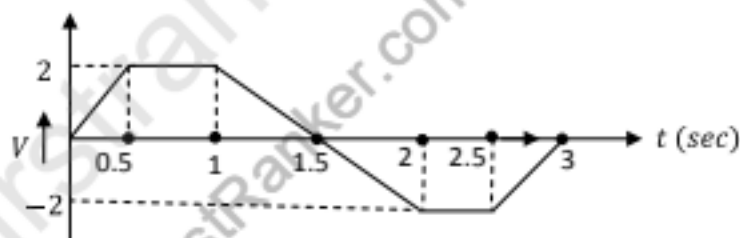
Answer all the questions
(Use single answer booklet only)
*****
PART – A

UNIT – I

1   Find the equivalent resistance between the terminals AB using Delta-Star transformation for the circuit shown below:
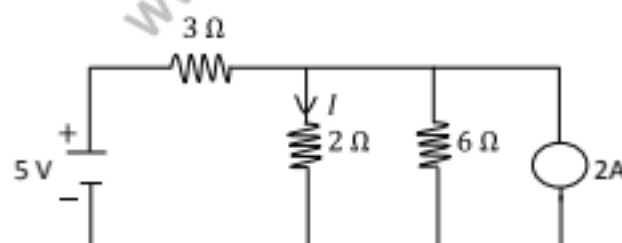

OR

2   Determine root mean square value, average value, peak factor and form factor for the following waveform.

UNIT – II

3   Find the current I through 2Ω resistance using superposition theorem for the circuit shown below:

OR

4   A two part network has the following z – parameters. Find the h – parameters and transmission parameters: $Z_{11} = 1\Omega$; $Z_{12} = Z_{21} = -02\Omega$; $Z_{22} = 0.6\Omega$.

UNIT – III

5   Explain in detail the principle of operation and characteristics of DC motors.
OR
6   With a neat diagram, explain the construction of 3 – phase induction motor.

FirstRanker.com
Firstranker's choice
www.FirstRanker.com   Page 1 of 2

Code: 13A99101

PART – B

UNIT – I

7   Explain the operation of forward bias and reverse bias PN junction Diode.

OR

8   Explain the operation of π section filter with bridge rectifier and also derive an expression for its stability factor.

UNIT – II

9   Draw and explain the input and output characteristics of a transistor in CC configuration.

OR

10   Describe the kind of operation that takes place in the enhancement mode MOSFET. How does this differ from depletion mode type?

UNIT – III

11   Explain the working of Colpitts oscillator and derive an expression for frequency of oscillation for Colpitts oscillator.

OR

12   Give the characteristics of an ideal Op-Amp.

*****

FirstRanker.com
Firstranker's choice
www.FirstRanker.com