## COLLEGE OF ENGINEERING & TECHNOLOGY, SRM INSTITUTE OF SCIENCE AND TECHNOLOGY DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Cycle Test – I

SET-D

Academic Year: 2021-2022 (EVEN SEM)

Program offered: B.Tech

Year / Sem: I/II

Course Code and Title: 18EES101J/BASIC ELECTRICAL

AND ELECTRONICS ENGINEERING

**Maximum Marks: 25** 

Date and Time: 21/04/2022 and 12:30 pm to 01:20 pm

| Learning Assessment (CLA 1) |                      |                           |                          |  |  |
|-----------------------------|----------------------|---------------------------|--------------------------|--|--|
| Levels                      | Level of<br>Thinking | Weightage<br>Required (%) | Weightage<br>Provided(%) |  |  |
|                             | D                    | Kequirea (70)             | 1 10viucu( /0)           |  |  |
| 1                           | Remember             | 40%                       | 40%                      |  |  |
|                             | Understand           |                           | 4070                     |  |  |
|                             | Apply                | 60%                       |                          |  |  |
| 2                           | Analyze              |                           | 60%                      |  |  |

PART A (Answer all the questions)

| 3X4 IV | 141/17- | -14 | MAKIND |
|--------|---------|-----|--------|
|        | Ref     |     |        |

| Q.<br>No. | Questions  |     | Ref<br>ere<br>nce<br>to<br>PO | Bloom's<br>Taxonomy | Marks<br>Allotte<br>d | Marks<br>Score<br>d |
|-----------|--|-----|-------------------------------|---------------------|-----------------------|---------------------|
| 1.a       | What are active and passive elements?  | CO1 | 1                             | Understand          | 2                     |                     |
| 1.b       | What is a lumped circuit?  | CO1 | 1                             | Understand          | 2                     |                     |
| 2.        | Find 'R' equivalent and current flowing due to a source of 12V for the circuit shown in Figure . $\frac{25\Omega}{100\Omega} = \frac{100\Omega}{50\Omega}$ | CO1 | 1,2                           | Apply               | 4                     |                     |
| 3.        | State and prove the maximum power transfer theorem.  | CO1 | 1,2                           | Understand          | 4                     |                     |

| Q.<br>No. | Questions   | Refer<br>ence<br>to<br>CO | Refer<br>ence<br>to<br>PO | Blooms<br>Taxonomy | Marks<br>Allotted | Mar<br>ks<br>Scor<br>ed |
|-----------|---|---------------------------|---------------------------|--------------------|-------------------|-------------------------|
| 4a.       | Using nodal analysis, Find all node voltage in the given circuit. $\begin{array}{c ccccccccccccccccccccccccccccccccccc$   | CO1                       | 1,2                       | Apply              | 13                |                         |
|           | (OR)  |                           |                           |                    |                   |                         |
| 4b.       | For the circuit. Determine the following: a) the open circuit emf at the load terminals PQ b) the Thevenin's resistance at PQ c) the load current d) load power |                           | 1,2                       | Apply              | 13                |                         |

| Course Outcomes | Marks<br>Allotted | Marks Scored |  |  |
|-----------------|-------------------|--------------|--|--|
| CO1             | 25                |              |  |  |
| CO2             | -                 | -            |  |  |
| CO3             | -                 | -            |  |  |
| CO4             | -                 | -            |  |  |
| CO5             | -                 | -            |  |  |
| CO6             | -                 | -            |  |  |
| Total           | 25                |              |  |  |