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FOURTH SEMESTER   B.Tech.[AE]

MID SEMESTER EXAMINATION   (March-2019)

EE272   Automotive Electrical and Electronics

Time: 1.5 Hour   *Max. Marks:20*

Q1. How does the shifting of magnetic neutral axis problematic in a   **02**
DC machine.

Q2. Explain the working of voltage regulator under normal and   **05**
overvoltage condition employed in battery charging system of a
vehicle.

Q3. What is a transfer function. Derive the Transfer function of a   **04**
Armature controlled DC servomotor.

Q4. A voltage regulator circuit is to employed with the help of a   **04**
diode determine the output waveform for the given input.
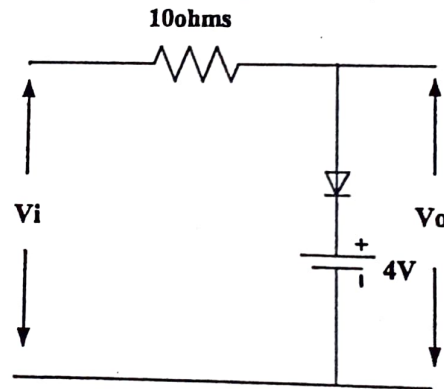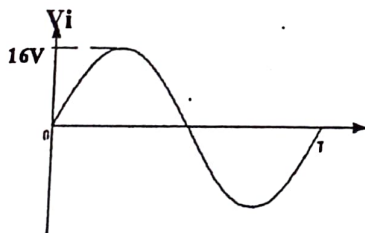
Q5. A shunt motor operates at a flux of 25mWb/pole, is lap wound   **05**
and has 2 poles and 360 conductors. The $R_a = 0.12\Omega$ and the
motor is designed to operate at 115V taking 60A in armature at
full load. Determine the value of external resistance to be
inserted in armature ckt so that the armature current shall not
excedd twice its full load value.

END