

S.E. ELEC SEM III C-Scheme June 2026

(3 Hours)

Total Marks: 80

N.B: (1) Question No. 1 is compulsory.

(2) Attempt any three from the remaining questions.

(3) Figures to the right indicate full marks.

(4) Each question is of 20 Marks.

09/06/2026

Q.1	Attempt any 4 questions	Marks
A	Explain hysteresis loss. How can hysteresis loss be reduced?	5
B	Explain MMF and RMF. in distributed wind	5
C	Explain phenomenon of Back emf in D.C. motors what is its significance.	5
D	What is difference between PMMC and MI ?	5
E	Explain the working principle of thermo couple and thermistor.	5
F	What is MEMS technology and its applications in electrical field.	5
Q.2		Marks
A	Explain the concept of doubly excited machines and derive the expression for the electromagnetic torque.	10
B	Draw and explain armature reaction in D.C. motor what are the methods to overcome the same and derive the expression for the ampere turns required.	10
Q.3		Marks
A	Explain the working of Dynamo type Wattmeter with neat diagram and derivation.	10
B	Explain rheostatic braking and plugging of DC shunt motor.	10
Q.4		Marks
A	Give brief classification of transducers with examples how is the selection of transducers is made?	10
B	Explain working principles and features of Digital Tachometer,	10
Q.5		Marks
A	What is Energy and co energy, derive expression for these two energies	10
B	Compare between Series and parallel magnetic circuit.	10
Q.6		20
		Marks
A	Explain the static and dynamic characteristics of measuring instruments.	10
B	How measurement for R is done using Kelvin's double bridge, Draw diagram and derive the expression for the Kelvin's double bridge.	10
