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Question Paper Code: 51001

M.E. DEGREE EXAMINATION, NOV 2018

First Semester

Power Electronics and Drives

15PPE101 - ANALYSIS OF ELECTRICAL MACHINES

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Construct the general expression of stored magnetic energy CO1- App (20)
Or
(b) Develop Air gap mm calculation and per phase machine inductance using physical machine data CO1- App (20)
2. (a) Outline the expression for transformation of a balanced set. CO2- U (20)
Or
(b) Explain transformation of variables. CO2- U (20)
3. (a) Construct the solution of dynamic characteristic by Laplace transformation. CO3- App (20)
Or
(b) Develop torque equation for dc machine. CO3- App (20)
4. (a) Build the transformation for rotor circuits. CO4- App (20)
Or
(b) Develop the voltage and torque equations in reference frame variables. CO4- App (20)

5. (a) Develop the Park equations for synchronous machine. CO5- App (20)
Or
(b) Model the computer simulation synchronous machine. CO5- App (20)