GOVT. POLYTECHNIC, BHADRAK

Internal Assessment

Session:2022-2023

Electrical engg. 5th sem   Sub: EC-II (Th.2),F.M=20 ,Time:1hr

1.Answer the following .   [2 x 5]
   a. Define slip and slip speed of induction motor .
   b. Define pitch factor.
   c. Define voltage regulation of an alternator.
   d. What is cogging ?
   e. State Ferrari's principle.

2.Answer any **two** questions.   [5 x 2]

a. Derive the emf equation of synchronous generator.

b. Explain Double revolving field theory of 1ϕ Induction motor.

c. A 60KVA,220V,50Hz,1ϕ alternator has effective armature resistance of 0.016Ω and armature leakage reactance of 0.07 Ω.Calculate the voltage induced in the armature when the alternator is delivering rated current at a load power factor **i.** Unity p.f **ii.** 0.7 lagging p.f **iii.**0.7 leading p.f.