

GOVERNMENT COLLEGE OF ENGINEERING, AMRAVATI.  
(An autonomous institute Govt. of Maharashtra)  
DEPARTMENT OF ELECTRICAL ENGINEERING

Class Test-2  
Max. Marks-15

B.Tech – 3<sup>rd</sup> semester  
Subject-EDC (EEU311)

Time- 1Hr  
Term: 17-18

- Note- 1. All Questions carry equal marks.  
2. All questions is compulsory.

- Q.1 Discuss the principle of operation of 3 point starter with neat and clean diagram.  
Q.2 Explain torque- current, speed- current and speed- torque characteristics of compound motor.  
Q.3 A 240V, 220A, 1000 rpm dc separately excited motor has an armature resistance of 0.05 ohm. The motor armature is fed from a variable voltage source with an internal resistance of 0.05 ohm. Calculate internal voltage of the variable voltage source when motor is operating in regenerative braking at 85% of the rated torque and 800 rpm.

\*\*\*\*\*Best Luck\*\*\*\*\*

**Department of Electrical Engineering,  
GOVERNMENT COLLEGE OF ENGINEERING, AMRAVATI.**

**Class Test-II**

**B.Tech.III Sem. (Mechanical)**

**I Term - 2015-16**

**Sub: Electrical Drives and Control (EEU 311)**

**Max.Marks: 15**

**Time: 1 Hour.**

**Instructions:** 1. Attempt any THREE questions. 2. All questions carry equal marks.

1. Derive the expression for torque in a d c motor. Draw torque-speed characteristics of d c shunt and series motor.
2. Differentiate between Mechanical braking and Electrical braking. State their relative advantages and disadvantages.
3. Explain with circuit diagram: a) Armature Control and b) Field Control of d c shunt motor.
4. A d c series motor has a total resistance of 0.4 ohms and takes a current of 30 A at 100 V. Its iron and friction losses amount to 500 Watts. Find: a) Back e.m.f., b) B.H.P. c) Overall efficiency.



# GOVERNMENT COLLEGE OF ENGINEERING AMRAVATI.

DEPARTMENT OF ELECTRICAL ENGINEERING

SEM:3rd  
MAX MARKS:15

CLASS TEST 2

SUB: Electric Drives And Control(EEU311)  
DATE:19/09/13  
TIME: 1Hr

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**SOLVE ANY THREE (ALL QUESTIONS CARRY EQUAL MARKS)**

- 1) Explain the principle of rotating magnetic field in three phase induction motor.
- 2) State the various types of starters employed for three-phase induction motor and explain any one of them with neat diagram.
- 3) Explain the regenerative braking of d.c. motor.
- 4) A 250-V, 14.92 KW shunt motor has a maximum efficiency of 88% and a speed of 700 r.p.m. When delivering 80% of its rated output. The resistance of its shunt field is  $100\Omega$ . Determine the efficiency and speed when the motor draws a current of 78A from the mains.