Enrolment No._____

HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL

MID SEMESTER EXAMINATION, SEPTEMBER-2016

Subject Code: 2150904 **Date: 24/09/2016**

Subject Name: Elements Of Electrical Design **Sem: 5th**

Time: 10:00 TO 10:50 **Total Marks: 20**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

QUE.1 **(A)** Explain the following terms ANY THREE **3**

(1) Field form factor
(2) Carter's coefficient
(3) Stacking factor
(4) Gap contraction factor

(B) State types of DC starters. And explain any one in a short. **3**

QUE.2

(A) Derive the equation for calculation of MMF for air gap & teeth. **7**

OR

(A) What is carter's fringing curves? Discuss its application. **7**

QUE.3

(A) Write steps for designing single phase small transformer. **7**

OR

(A) Design a suitable 8 section starter for a 14.92 kW, 250V, 1000 rpm DC shunt motor from the following data: **7**
Maximum starting torque = Full load torque,
Armature circuit resistance = 0.4 ohm,
Full load efficiency = 0.85.

********** ALL THE BEST **********