

## B.Tech. IV Semester (Main/Back) Examination 2012

## Electrical Engineering.

## 4EE1 Power Electronics - II

Time : 3 Hours

Maximum Marks : 80

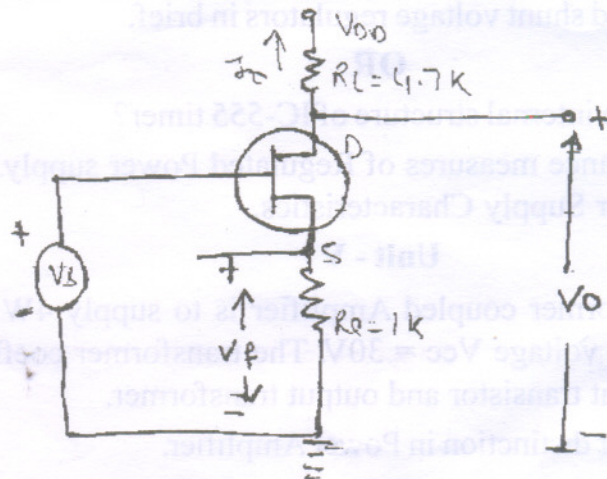
Min. Passing Marks : 24

**Instructions to Candidates:**

Attempt any **Five questions** selecting **one question** from **each unit**. All questions carry **equal marks**. (Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly.) Units of quantities used/ calculated must be stated clearly.

**Unit - I**

1. a) Explain the effect of negative feedback on gain and frequency response of an amplifier with the help of suitable diagram. (8)
- b) Calculate  $D$ ,  $D_{\mu f}$ ,  $A_{vf}$ ,  $R_{if}$ ,  $R_{of}$ ,  $R_{o'f}$  for the circuit shown below (fig. 1) The FET parameters are  $\mu=40$  and  $r_d = 40K$ . (8)



Or

1. a) An amplifier has a voltage gain of 200, before negative feedback is applied, when negative feedback with  $\beta = 0.25$  is applied the nominal gain changes by two percent, find the small change in gain  $dA_f/A_f$ . (8)
- b) State & explain stability criteria for feedback amplifier. (8)