(b)

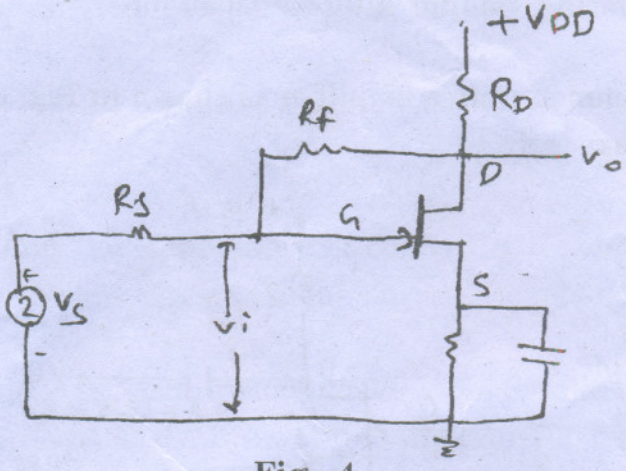

Fig. 4

Calculate the voltage gain with and without feedback for the circuit given in Fig. 4 with values, $g_m = 5$ mA/V, R_D=5.1 kΩ, R_s=1kΩ, R_f = 20 kΩ, r_d = 1 MΩ. 8

UNIT – V

5 (a) Draw the circuit of an Astable multivibrator and explain its working. 8

(b) Explain the Barkhausen criterion for sustained oscillations. Draw the R–C phase shift oscillator ciruit and describe its working. 8

OR

5 Write short notes on the following :

(a) Wien bridge oscillators

(b) Schmitt trigger. 16