Sub: ANALOG CIRCUITS (TEC-242)

Class Test-II

Faculty Name: Dr Balraj Singh

Time: 1 hr

M.M.: 20

5

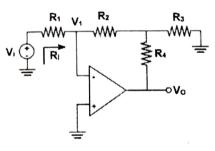
Note: Attempt all questions

1. Calculate the overall voltage gain of the Fig.1 circuit?

 $\stackrel{\textstyle >}{\underset{}_{}} R_3$ 5.6 k Ω R_5 3.9 k Ω 0.47 µF 2N 3903 C_1 2N 3903 15 µF 150 µF 150 μF

B Mre = 50

2. Find the gain of VO / Vi of the circuit of Fig.2



3. Define Input offset Voltage and Slew rate

5

2

3

4. Derive the expression for frequency of oscillation for BJT based phase shift oscillator 5

5. Fig-3 depicts the bipolar feedback amplifier. Assuming R1+R2 is not very large, $<<\beta<\infty$ and $V_A=\infty$, Determine the closed-loop voltage gain, input impedance and output impedance. 5

