

NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA
ELECTRONIC DEVICES AND CIRCUITS (ECPC 201)

Class Test- 2nd (2024-2025)

Time: 50 min.

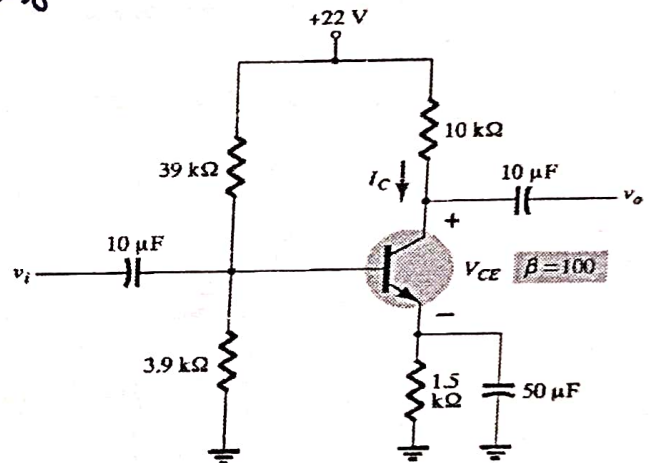
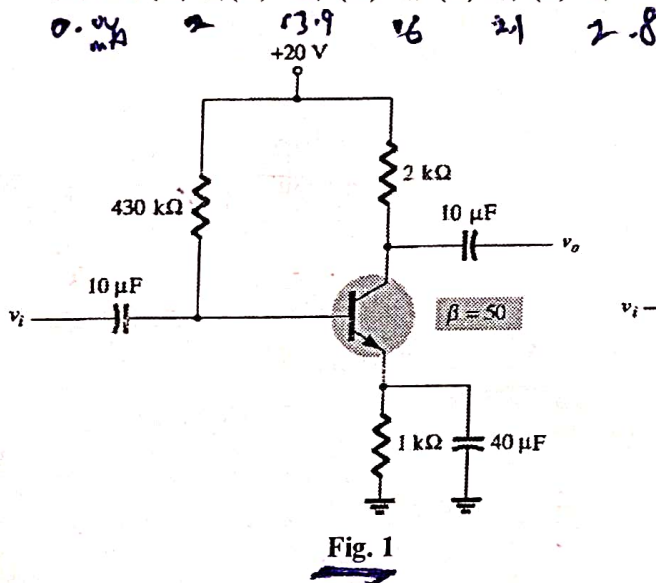
MM. 15

NOTE: Attempt any three questions. Question 1 and Question 4 are compulsory. Assume suitable data, if required.

✓ Q. 1 Draw the schematic diagram and explain the working of Common Base *n-p-n* transistor also draw its Input and output characteristics. [5]

✓ Q. 2 For the emitter-bias network of Fig. 1, determine: [5]

(a.) I_B , (b.) I_C , (c.) V_{CE} , (d.) V_C , (e.) V_E , (f.) V_B .

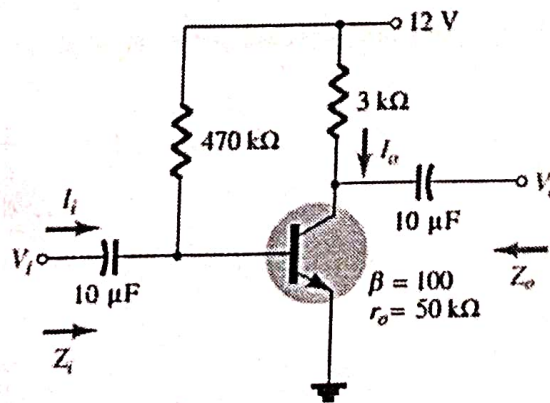


OR

✗ Q.3 Determine the dc bias voltage V_{CE} and the current I_C for the voltage divider configuration of Fig.2

Q.4 For the network of Fig. 3:

(a.) Determine r_o , (b.) Find Z_i (with $r_o = \infty\Omega$), (c.) Calculate Z_o (with $r_o = \infty\Omega$), (d.) Determine A_v (with $r_o = \infty\Omega$), (e.) Repeat parts (c) and (d) including $r_o = 50\text{ k}\Omega$ in all calculations and compare results. [5]



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