

## ASSIGNMENT QUESTIONS FOR TERM 1

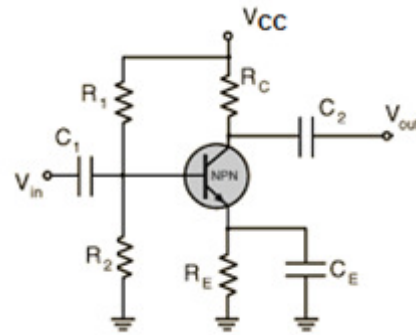
### II PU Electronics [40]

1. For the silicon transistor amplifier circuit shown in the diagram calculate the value of biasing resistor  $R_1$  for the voltage gain,  $A_V$  of 500.

Given

Output resistance  $Z_0 = R_C = 5 \text{ k}\Omega$ ,

$V_{CC} = 10 \text{ V}$ ,  $R_2 = 4.7 \text{ k}\Omega$ , and  $R_E = 0.1R_C$ .



2. Write the circuit diagram of a RC coupled audio amplifier (with components values) and discuss the circuit diagram in detail.
3. While combating COVID-19 public health administration has applied digital electronics. Examples like diagnostic tests, population surveillance etc.
  - a. Write a review on the same.
  - b. List some of the digital medical electronic instruments used during this pandemic.
  - c. Discuss one such instrument in detail with the components used in the device.
4. Why gray code is used in K-map instead of binary number system? Is column interchangeable with rows in the K-map? Justify your answer.

\*\*\*\*\*