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|  | **TUTORIAL 3** |
| 1 | In a common base connection, IE =1 mA, Ic=0.95 mA. Calculate the value of IB |
| 2 | In a common base connection, current amplification factor is 0.9. If the emitter current is 1 mA, determine the value of base current |
| 3 | In a CB connection, IC= 0.95 mA and IB= 0.05 mA. Find the value of α |
| 4 | In a CB connection, the emitter current is 1 mA. If the emitter circuit is open, the collector current is 50 uA. Find the total collector current. Given α= 0.92. |
| **5** | Find the value of β if (i) α = 0.9 (ii) α = 0.98 (iii) α = 0.99 |
| **6** | In a common base connection, α= 0.95. The voltage drops across 2 kΩ resistance which is connected in the collector is 2V. Find the base current. |
| **7** | Calculate IE in a transistor for which β=50 and IB= 20 µA |
| **8** | Find the α rating of the transistor shown in Figure below. Hence determine the value of IC using both α and β rating of the transistor. |
| **9** | A transistor has the following retings: IC(max) = 500 mA and βmax= 300. Determine the maximum allowable value of IB for the device. |
| **10** | Figure following shows the open circcuit failures in a transistor. What will be the circuit behavior in each case. |