



### Sheet (1)

1. What is the difference between BJT and FET?
2. With sketch state the difference between the depletion and enhancement types of MOSFET?
3. Compare between two types of:
  - a) J-FET and MOSFET.
  - b) N-Channel and P-Channel of Enhancement MOSFET.
  - c) N-Channel and P-Channel of Depletion MOSFET.
4. Explain with draw the operation of:
  - a) N-Channel Depletion MOSFET.
  - b) P-Channel Enhancement MOSFET.
5. Determine the following for the network of Fig.1.
  - (a)  $I_{DQ}$  and  $V_{GSQ}$ .
  - (b)  $V_{DS}$ .
  - (c)  $V_D$ .
  - (d)  $V_S$ .

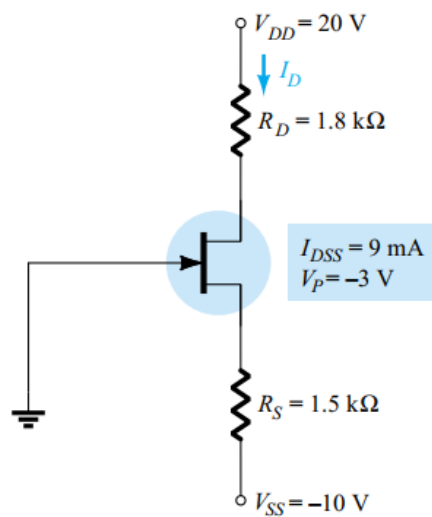


Fig.1

6. For the  $n$ -channel depletion-type MOSFET of Fig. 2, determine:

(a)  $I_{DQ}$  and  $V_{GSQ}$ .

(b)  $V_{DS}$ .

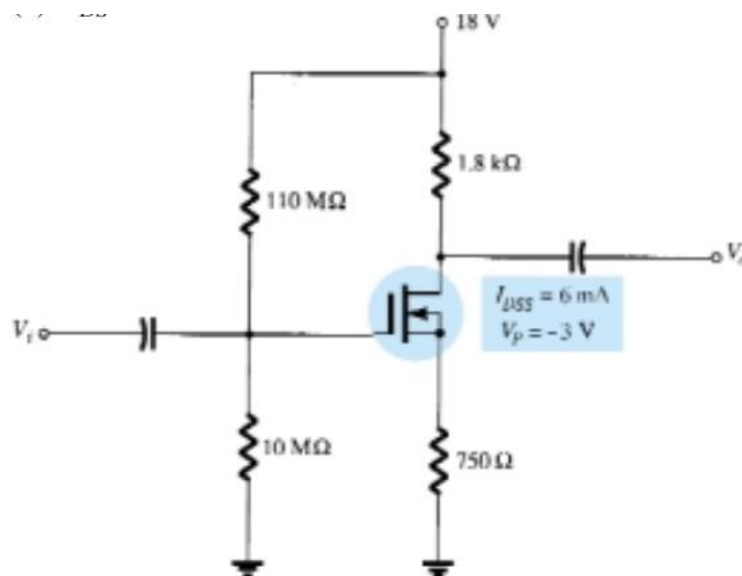


Fig.2.

7. Determine the following for the network of Fig. 3.

(a)  $I_{DQ}$  and  $V_{GSQ}$ .

(b)  $V_D$ .

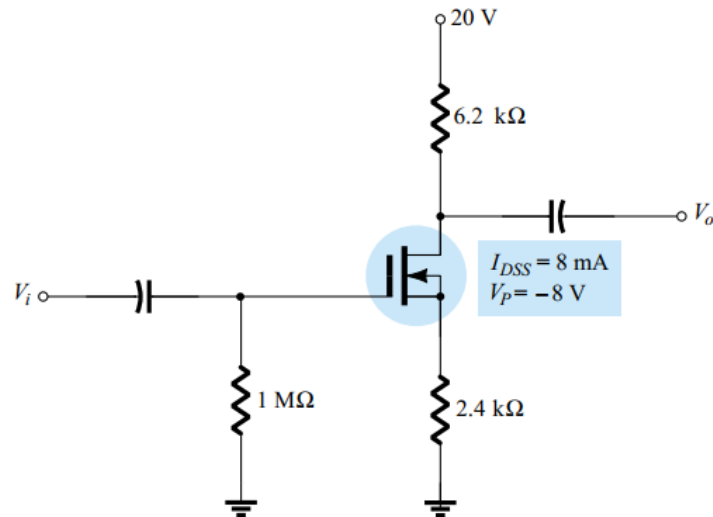


Fig. 3

8. Determine  $I_{DQ}$  and  $V_{DSQ}$  for the enhancement-type MOSFET of Fig. 4.

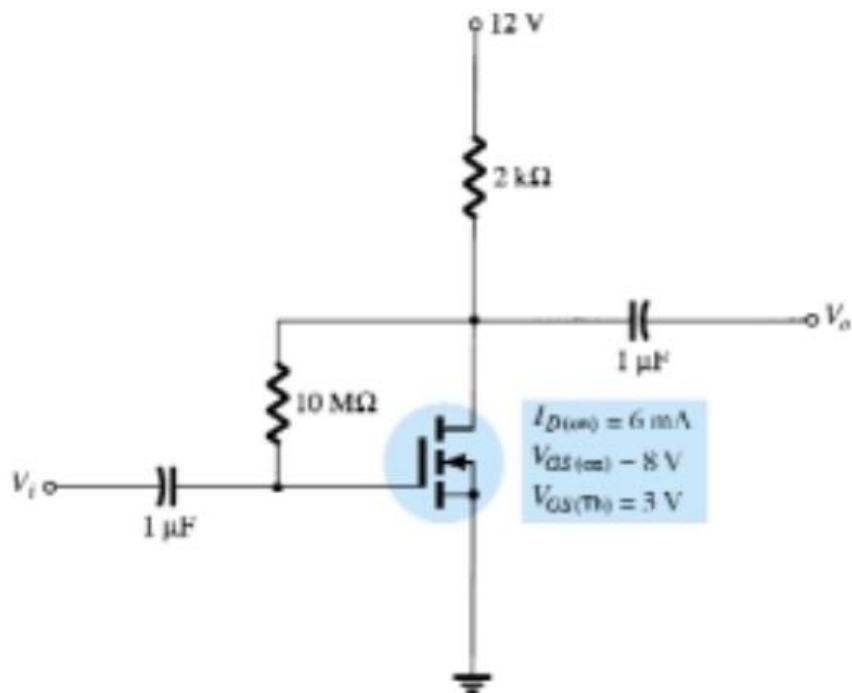


Fig 4.