

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATION- Feb 2018

B.Tech IV Semester(BI & BT)

COURSE CODE: 15B11EC411

COURSE NAME: Basic Electronics

COURSE CREDITS: 4

MAX. MARKS: 25

MAX. TIME: 1 Hr 30 min

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1) Use mesh analysis to determine the current through the 15Ω resistor in the circuit of fig.1 (4)

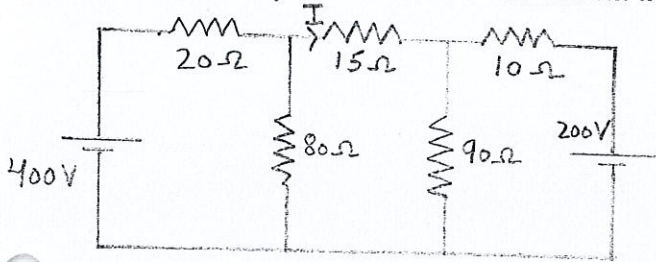


fig. 1

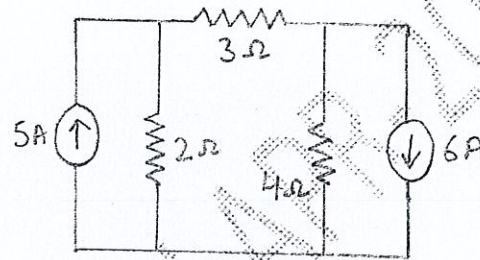


fig.2

Q2) Use nodal analysis to determine the voltage across the 3Ω resistor in the circuit of fig.2. (3)

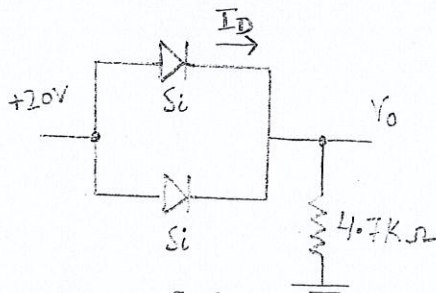


fig.3

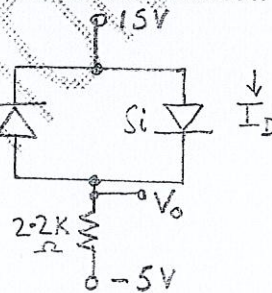


fig.4

Q3) Determine V_O and I_D for the networks of fig.3 and fig.4. (5)

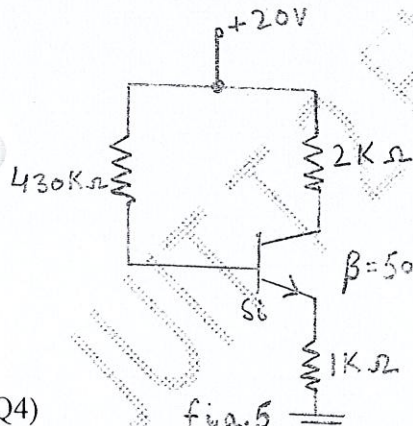


fig.5

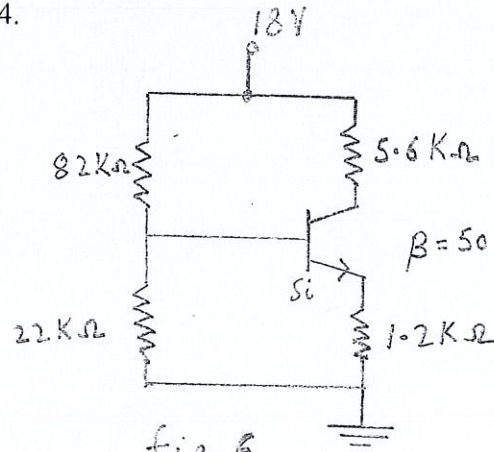


fig.6

- Q4)
- For the emitter bias network of fig. 5, determine I_B , V_{CE} , V_{BC} . (4)
 - For the voltage divider configuration of fig. 6, determine I_C and V_{CE} . (4)

Q5) Explain the working of Depletion type MOSFET using drain and transfer characteristics in the depletion and enhancement mode. (5)