

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Supplementary Examination- 2026

B.Tech-I Semester (BT/BI)

COURSE CODE(CREDITS):25B11EC112(4)

MAX. MARKS: 75

COURSE NAME: BASIC ELECTRONICS FOR LIFE SCIENCES

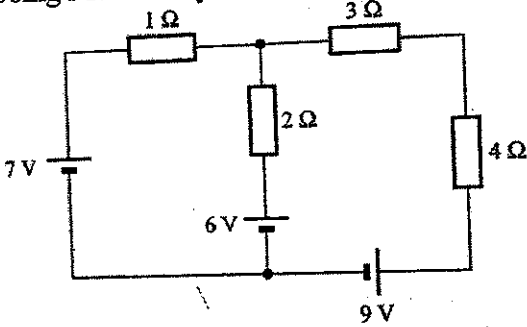
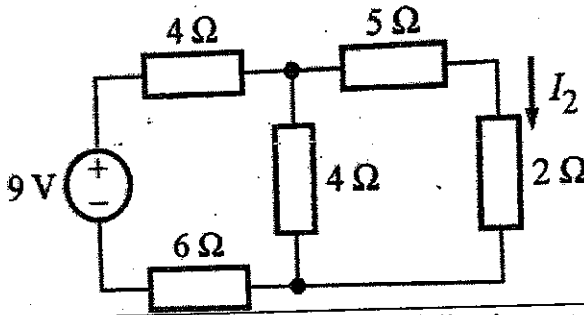
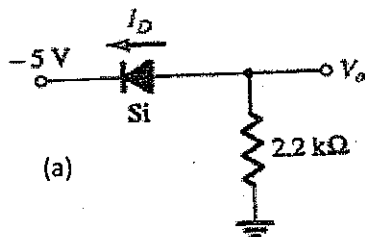
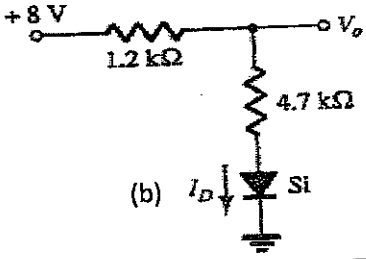
COURSE INSTRUCTORS: MUNISH SOOD

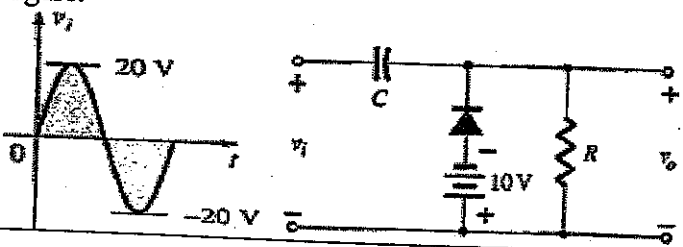
MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems.

(C) Scientific calculators are allowed.

Q.No	Question	CO	Marks
Q1	Using Mesh analysis determine the voltage across $2\ \Omega$ resistor. 	1	10
Q2	Using Thevenin's theorem, calculate the current I_2 through $2\ \Omega$ resistor. 	2	15
Q3	Determine the level of V_o and I_D for the following networks.  (a)  (b)	2	15

Q4	Determine V_o for the network, for the input shown in following figure. 	3	15
Q5	a) Apply DeMorgan's Theorem $(A + B)\overline{CD} + E + \overline{F}$ b) Simplify the following Boolean expression $\overline{AB} + A\overline{C} + \overline{A}\overline{B}C$	4	10
Q6	a) Perform 2's complement subtraction of the signed binary numbers: $10001000 - 11100010$ b) Convert $B2F8_{16} = ()_{10}$ c) Convert $7526_8 = ()_2$ d) Add the following BCD numbers: $1001+1001$ (e) Convert the following Binary number to Gray Code: $1110 = ?$	4	10