

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-II Semester (BI/BT)

COURSE CODE(CREDITS): 18B11EC212

MAX. MARKS: 15

COURSE NAME: Basic Electrical Science

COURSE INSTRUCTORS: Dr. Alok Kumar

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

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

Q.1 In the Given Fig.1, find the following.

- a) Voltage V_{ab} b) current i c) sum of powers into R_1 , R_2 and the 2-V battery

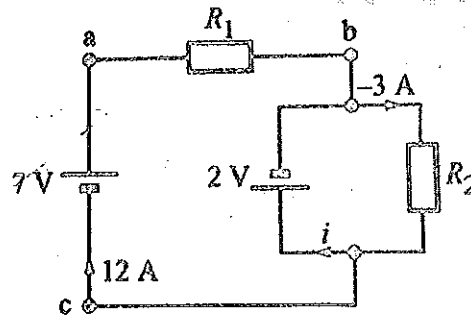


Fig.1

[CO1] [3Marks]

Q.2 Find the equivalent resistance across the points E and F in Fig. 2.

[CO1] [3Marks]

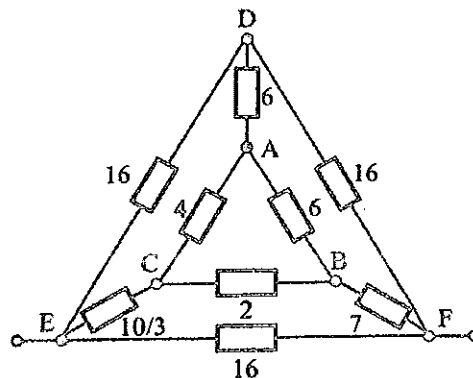


Fig.2

Q.3 Determine the value of v in the given Fig.3

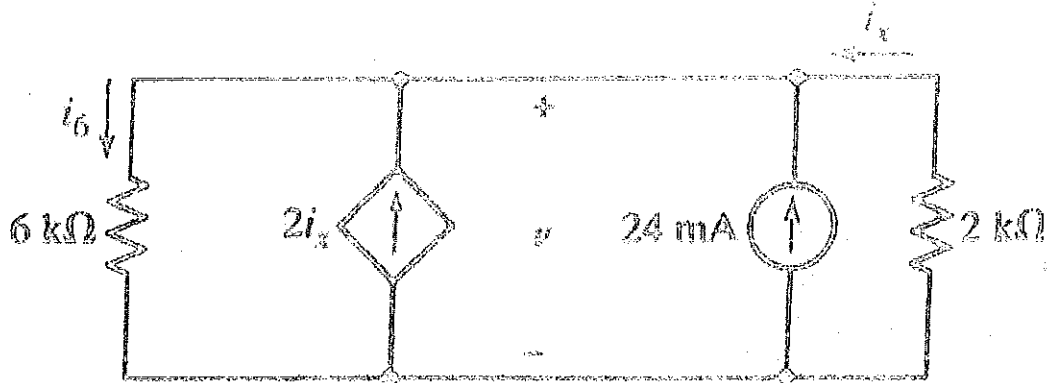


Fig.3

[CO1] [3Marks]

Q.4 A toaster rated at 1000 W, 240 V is connected to a 220 V supply. Will the toaster be damaged? Will its rating be affected?

[CO1] [2Marks]

Q.5 Find the current flowing through 1KΩ resistor using Thevenin theorem in the given Fig.4.

[CO1] [4Marks]

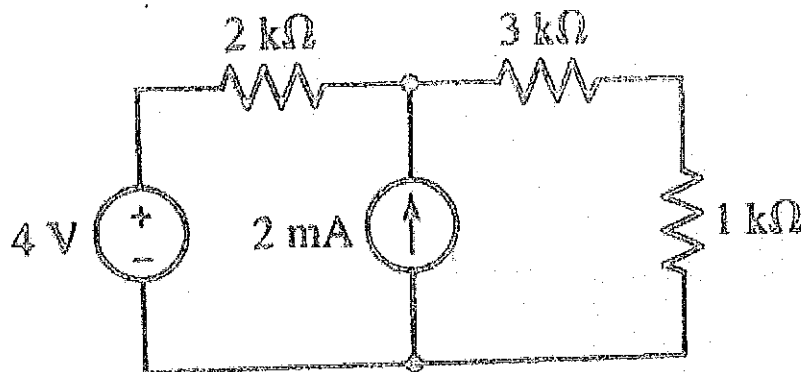


Fig.4