University of Information Technology & Sciences (UITS)
Department of CE

CT-1

Course: Fundamentals of Electrical Engineering (EEE 0713241)
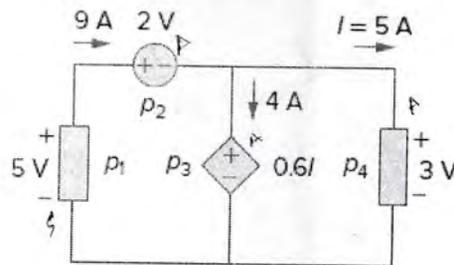
Marks: 20

Autumn- 2024

Date: 4/9/2024

Time: 30 minutes

1. Find the power delivered to an element at t = 5 ms if the current entering its positive terminal is i = 5cos 60πt A and the voltage is $v = (10 + 5 \int_0^t i\, dt)$ V. **[10]**

2. Compute the power absorbed or supplied by each component of the circuit in following Figure. **[10]**

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FEE CT 1 - CE

OOP CT 1

University of Information Technology & Sciences (UITS)

Department of Computer Science and Engineering

Class Test-1, Course Title: Object oriented programming language

Course Code: CSE 0613121

1. Describe How is Java platform independent language?

2. Differentiate between Procedural Programming language and Object-oriented programming language

3. Write a java program to manage student information for a school. Follow the steps below to implement the solution.

   i) Define a class **Student** with the following attributes:

   - name (String)
   - age (int)
   - grade (String)

   ii) Create a parameterized method that initializes the student's name, age, and grade.

   iii) Implement **a method** called **displayInfo()** that prints the student's details in a readable format.

   iv) In the main() method of the program:
   - Create two Student objects representing two different students.
   - Use the **displayInfo()** method to display the details of each student

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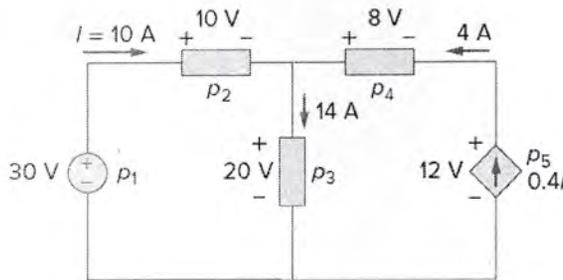Course: Fundamental of Electrical Engineering (EEE 0713121)

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1. The charge entering the positive terminal of an element is $q = 5\sin 4\pi t$ mC. **[10]** The voltage across the element (plus to minus) is $v = 3\cos 4\pi t$ V. Find the power delivered to the element at $t = 0.3$ s.

2. Find the power absorbed by each of the elements in the following Figure. **[10]**

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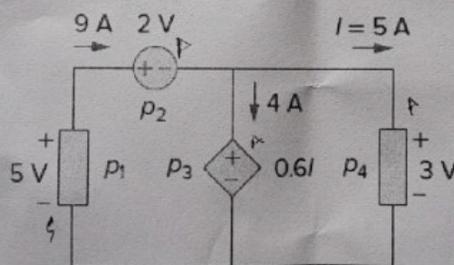Course: Fundamentals of Electrical Engineering (EEE 0713241)

Marks: 20

1. Find the power delivered to an element at $t = 5$ ms if the current entering its **[10]** positive terminal is $i = 5\cos 60\pi t$ A and the voltage is $v = (10 + 5 \int_0^t i\, dt)$ V.

2. Compute the power absorbed or supplied by each component of the circuit in **[10]** following Figure.

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FEE CT 3

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1. Use mesh analysis to find the current i_o in the circuit of Figure 1.   [6]
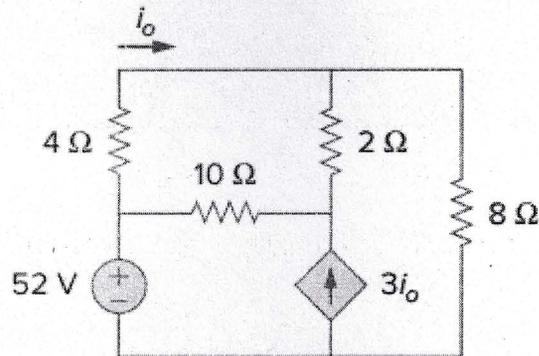

Figure 1

2. For the circuit in Figure 2, obtain v_1 and v_2. using nodal analysts   [4]
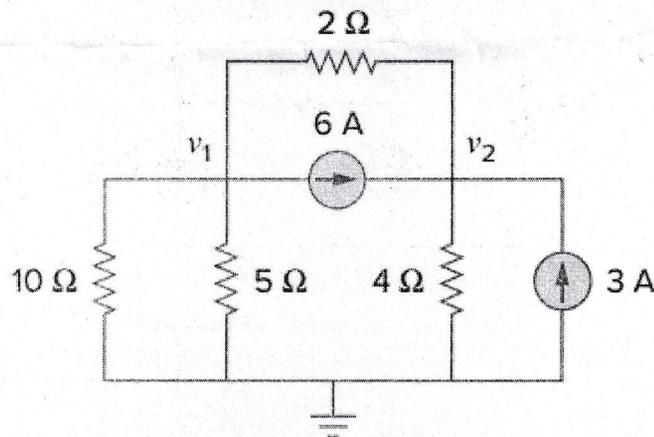

Figure 2