

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, March 2022

BTech, Semester II

Roll No.....

ES1113: Fundamental of Automation Engineering II

Time: 2 hours

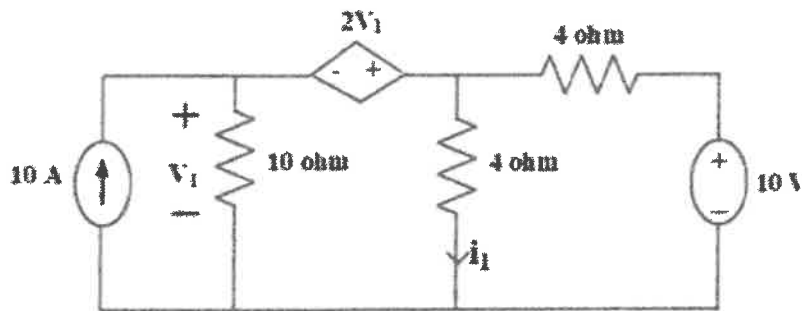
Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
4. Use of Programmable Calculator is not allowed.

Q.1 Determine i_1 using Nodal Analysis

06

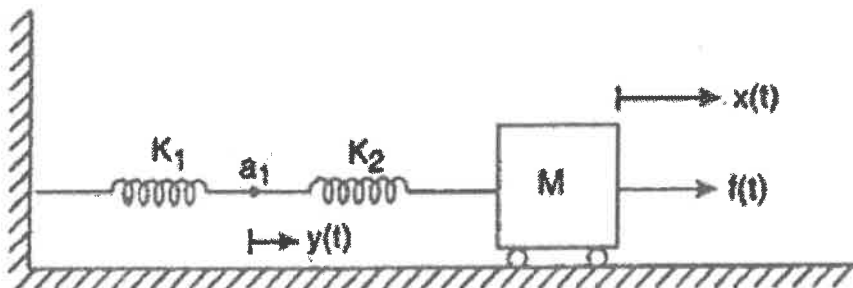


Q.2 Find the Laplace transform for the function $v(t) = 4u(-t-3) + 0.2 \sin(20t)$

06

Q.3 For the following mechanical system find : $X(s)/F(s)$

06



Q.4 Design a Water Level Indicator system using sensor and MSP430. Choose the sensor and detail it. Also control a led based upon some threshold value of water level. Write the flow chart for the system. Also write the code required **12**