190811

B.VOC. AUTOMOTIVE MANUFACTURING
and
B.VOC. AUTOMOTIVE MECHATRONICS

Subject: Fundamentals of Electrical

Subject Code: ABEE-102

Semester: 2nd (Re-appear)

Batch: 2017-20

Theory (External): 35 Marks

Time: 03 hours

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nstructions to the Students

. This Question paper consists of two Sections. All sections are compulsory.

Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.

Section B comprises 6 essay type questions out of which students need to do any 5. Each question carries 5 marks.

Read the questions carefully and write the answers in the answer sheets provided.

Do not write anything on the question paper.

Wherever necessary, the diagram drawn should be neat and properly labelled

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SECTION –A (OBJECTIVE TYPE QUESTIONS)

(10x1=10 Marks

Q1 All questions are compulsory

a) Write the relationship between voltage, charge and capacitance

b) Explain Kirchhoff's law in detail.

c) What do you mean by cable? Explain its various types.

d) Name the various color coding scheme of Resistors with the value they are representing.

e) State the difference between Neutral and Earth wires?

f) List out the advantages of three phase system over single phase system.

g) Differentiate between push button and relay operation.

h) Explain any two types of fuses used in electrical installation?

i) Write short note on design of rotor of three phase induction motor.

j) Write down the various parts of DC machine with their function in brief.

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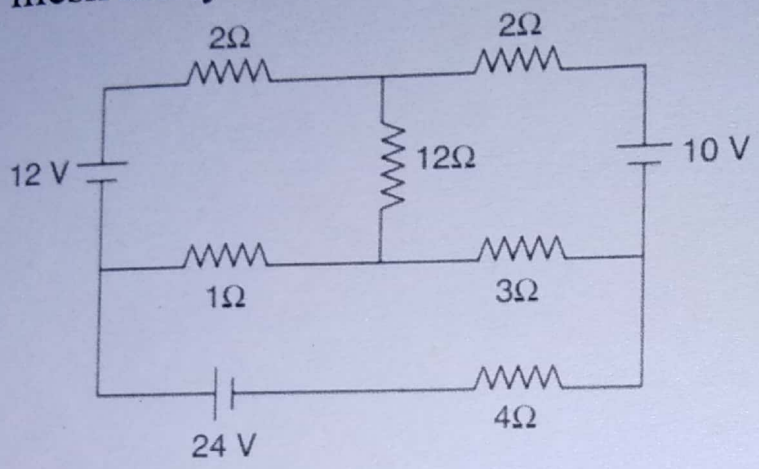
SECTION –B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

Q1 Determine the current in the 4Ω branch in the circuit by using mesh analysis shown in fig1.



Q2 a) Write down the various tools used in electric system.

b) Write down the symbol of various component of electrical system.

Q3 Derive the relation between the line and phase voltage in a star connected circuit.

Q4 Draw and explain Star-Delta starter in detail.

Q5 Explain the working of single phase transformer in brief.

Q6 What do you mean by synchronous machine? Write down the various differences between synchronous and induction machine in reference to construction and use.

*****END OF PAPER*****

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