C14-M-**303**

4251

BOARD DIPLOMA EXAMINATION,(C-14)

JUNE-2019

DME - THIRD SEMESTER EXAMINATION BASIC ELECTRICAL & ELECTRONICS ENGINEERING

Time: 3 Hours Max. Marks : 80

PART -A

10X3=30M

Instructions: 1) Answer **all** the questions. Each question carries **Three** marks.
2) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1) Define ohm's law.

2) How much current flows through a 20Ω resistor when a voltage of 200V is applied across that resistor.

3) State Lenz's Law.

4) List out various types of D.C generators.

5) Define the terms (a) Amplitude and (b) frequency.

6) State power and power factor of an AC circuit containing pure resistive load.

7) State the relation among turns ratio, voltage ratio and current ratio in a transformer.

8) Mention the materials used for LED.

9) Draw a neat sketch of permanent magnet moving coil instrument.

10) What are the effects of electric shock?

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PART-B

5X10=50M

Instructions: 1) Answer any **five** questions.
2) Each question carries **ten** marks.
3) Answers should be comprehensive and the critertion for valuation is the content but not the length of answer.

11) (a) Define capacitance 4M
(b) Explain the dynamically and statically induced EMF. 6M

12) (a) State Fleming's right- hand rule. 4M
(b) State the laws of registance. 6M

13) (a) Draw the schematic diagram of DC long shunt compound motor.
(b) Draw the connection diagram of welding generator. 3M+7M

14) A circuit consists of 10Ω resistance in series with a inductance of 100mH. It is connected across 1-Φ supply of 230V, 50Hz. Find impedance, current flowing through a circuit, power factor and voltage drop across the resistor

15) (a) Draw the circuit diagram for single phase Induction motor.
(b) Draw the power flow diagram of DC generator. 5M+5M

16) (a) Explain working principle of an alternator. 5M+5M
(b) Draw a neat sketch of star-delta starter of a 3-Φ induction motor.

17) Draw the input and output characteristics of CB,CE and CC Configuration of a transistor.

18) Explain the construction and working principle of dynamometer type Wattmeter.

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