

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?

[Contd...]

PART-B

*

5X10=50M

Instructions: 1) Answer any **five** questions.
2) Each question carries **ten** marks.
3) Answers should be comprehensive and the criterion 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 resistance. 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.

*

* * *

*