

14/12/2024 ELECTRICAL SEM-VII C SCHEME M&SG (DLOC-IV) QP CODE: 10066910

Time : 3 Hours

Total Marks : 80

- N.B. : (1) Question No 1 is Compulsory.**
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

- 1 Attempt ANY FOUR [20]**
- a State the essential components of micro-grid.
 - b Define smart grid and elaborate it's need in current situation.
 - c What is autonomy in renewable source?
 - d Evaluate advantages and disadvantages of wind power system in micro-grid.
 - e Draw a block diagram of smart meter.
- 2 a Draw schematic diagram of A.C. microgrid and elaborate it along with its advantages, disadvantages, and limitations. [10]**
- b Elaborate the significance of Energy storage devices in micro grid. [10]**
- 3 a Elaborate the procedure of islanding of micro grid under fault on the main grid side. [10]**
- b Give importance of anti-islanding in case of grid connected solar system [10]**
- 4 a Draw a block diagram on de-centralized control and elaborate its working, advantages and limitations [10]**
- b What is black start. Elaborate role of micro grid in it. [10]**
- 5 a Elaborate advanced metering system. [10]**
- b Enlist various communication methods used for smart grid and elaborate any one in detail. [10]**
- 6 a Elaborate the role of Electric vehicles in smart grid. [10]**
- b Describe the resilience and self-healing characteristics of smart grid [10]**
