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C09-AEI-606A

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BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2021
DAEIE - SIXTH SEMESTER EXAMINATION
POWER ELECTRONICS

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

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

1. List different types of thyristor family devices.
2. Draw the diagram of DIAC.
3. Lists the control modes of chopper.
4. Classify converters.
5. Classify inverters.
6. State the principle of cyclo converter.
7. Mention factors affecting the speed of dc motors.
8. Mention factors affecting the speed of ac motors.
9. List the advantages of SMPS.
10. List the storage batteries used in UPS.

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PART—B

15×4=60

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

11. Explain the constructional details of SCR.
12. (a) Draw the volt-ampere characteristics of DAIC.
(b) Explain the working principle of chopper.
13. Explain the working of single phase AC regulator.
14. Explain the working of PWM inverter.
15. Explain the speed control of Induction motor by using AC voltage controller.
16. Explain the speed control for DC shunt motor using chopper.
17. Draw and explain the block diagram of SMPS.
18. Draw and explain the emergency lamp circuit using SCR.

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