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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE –
RAIGAD -402 103

Winter Semester Examination – December - 2019

Branch: M.Tech Electrical (Electrical Power System)

Sem.:- I

Subject:- Advanced Power Electronics (MTEPS103/MTEE102)

Marks: 60

Date:- 12/12/2019

Time:- 3 Hr.

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly

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- | | (Marks) |
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| Q.1. | (12) |
| (a) State and Explain turn ON methods of SCR | |
| (b) Explain switching characteristics of IGBT with voltage and current waveform. | |
| Q.2. | (12) |
| (a) Explain in detail the operation of dual converter without circulating current. | |
| (b) Explain three phase semi converter with RLE Load. | |
| Q.3. | (12) |
| (a) Explain the operation buck-boost converter. List the advantages and disadvantages of this type of converter. | |
| (b) Write a short note on class D chopper. | |
| Q.4. | (12) |
| (a) Draw and Explain 180 degree mode operation of three phase inverter. | |
| (b) Write a short note on Harmonic reduction for inverter. | |
| Q.5. | (12) |
| (a) Write short notes on ZVS Multi-resonant Converter. | |
| (b) Describe the series resonant inverters with unidirectional switches in briefly. | |
| Q.6. | (12) |
| (a) Write short note on use of Power Electronics in HVDC transmission. | |
| (b) What is the maximum power point tracking? Explain it with block diagram? | |

Paper End
