Subject: SWITCH GEAR AND PROTECTION(**7G263**)

Class: III B.Tech (EEEA, B &C)-II Semester   **Academic Year:** 2019-2020

UNIT-III
ASSIGNMENT QUESTIONS

		Marks	Course Outcomes	Bloom's Level
1	Discuss the generators protection schemes against (i) stator faults (ii) rotor faults	10M	CO3	L1
2	An 11KV, 120MVA, star connected alternator has reactance of 1.5 per unit per phase and a negligible resistance. If is protected by a merz-price balance current system which operates when out of balance current exceeds 10% of the full load current. If the neutral point is earthed through a resistance of 4Ω, find the proportion of windings is protected against earth fault.	10M	CO3	L1
3	Explain the percentage differential relay protection for star/delta transformer with relevant diagram showing all essential details.	10M	CO3	L2
4	A 3-Ø transformer rated for 33/11KV is connected star/ delta and the corresponding CT on the LV side has a ratio of 300/5. Determine the ratio of transformer on the HV side.	10M	CO3	L1
5	Describe the construction, principle of operation and applications of Buchholz relay.	10M	CO3	L1
6	For a 10MVA, 132KV/6.6KV power transformer with delta-star connections, obtain the number of turns each current transformer should have, for the differential scheme to circulate a current of 5A in the pilot wires.	10M	CO3	L3
7	Discuss about restricted earth fault protection for alternators.	10M	CO3	L1
8	Describe the rotor protection against earth fault.	10M	CO3	L1
9	Discuss the abnormal conditions in a large alternator against which protection is necessary.	10M	CO3	L1
10	Outline inter- turn fault protection in alternators.	10M	CO3	L2
11	Discuss the basic principle of operation of a percentage differential relay for (i) internal fault (ii) through fault.	10M	CO3	L1
12	A 3-phase transformer rated for 33KV/6.6KV is connected star/delta and the protecting current transformer on the low voltage side have a ratio of 400/5. Determine the ratio of current transformer on the HV side.	10M	CO3	L1