GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Engineering

M.Tech Power System Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - G2PI201T - Advanced Power System Protection

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Compare a protective system with a protective scheme.	K1	(2)
2)	Explain back-up protection employed for the protection of an alternator.	K2	(4)
3)	Illustate pole slipping phenomenon in case of an alternator? What measures are taken if pole slipping occurs?	K2	(6)
4)	Explain what you understand by selectivity and stability of protective relay.	K3	(9)
5)	Make use of speed of operation to classify protective relays .	K3	(9)
6)	Interpret the term ‘pilot’ with reference to power line protection. What are the different types of pilots which are presently employed? Discuss their fields of application.	K5	(10)
7)	What are the various types of numerical overcurrent relay? How can numerical overcurrent relay be realized?	K4	(12)
8)	What is carrier aided distance protection? What are its different types? Discuss the permissive under-reach transfer tripping scheme of protection.	K5	(15)
9)	An 11 kV, 100 MVA generator is grounded through a resistance of 6 W. The CTs have a ratio of 1000/5. The relay is set to operate when there is an out of balance current of 1 A. What percentage of the generator winding will be protected by the percentage differential scheme of protection ?	K5	(15)
10)	Analyse the working principle, types and applications of thermal relays.	K6	(18)