



**NAVRACHANA  
UNIVERSITY**

a UGC recognized University

**School:** School of Engineering and Technology  
**Program/s:** Electrical Engineering  
**Year:** 4th **Semester:** 7th  
**Examination:** End Semester Examination  
**Examination year:** December - 2021

**Course Code:** EE 405 **Course Name:** Switchgear and Protection  
**Date:** 06/12/2021  
**Time:** 2:30 pm to 4:30 pm

**Total Marks:** 40  
**Total Pages:**

**Instructions:**

- Write each answer on a new page.
- Use of a calculator is permitted.
- \* COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Attempt Any Four:	Marks	COs*	BTL#
Q.1	Explain direction relay requirements, its connections for operation and Electrodynamic type construction and working. Explain advantages of static relays.	10	CO6,CO8	2,3,4
Q.2	Why polarizing quantity is required? Explain polarized MHO relay and offset MHO relay.	10	CO4, CO%	4,5
Q.3	Explain Primary and Back up Protection. Explain Essential Qualities of Protection.	10	CO1, CO2	1,2
Q.4	Explain the following terms (i) Auto reclosure of circuit breaker (ii) requirement of CB and relay (iii) Fault area on impedance diagram (iv) Effect of arc resistance on the performance of distance relays (v) out of step tripping and blocking relays	10	CO1, CO3	1,2,3,4
Q.5	Explain any two types of each rotor and stator protection for AC Rotating machines.	10	CO4	4,5

\*\*\*\*\*End of Question Paper\*\*\*\*\*