

Enrolment No. HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL MID SEMESTER EXAMINATION, SEPTEMBER-2016

Subject Code: 2170908 Subject Name: Switchgear and Protection Time: 10:00 TO 10:50 Date: 24/09/2016 Sem: 7TH Total Marks: 20

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

QUE.1	(A)	1) Which one of the following relays has the capability of incipient the possible major fault	3
-		in a transformer?	
		A) Over current relay C) Buchholz relay	
		B) Differential relay D) Over fluxing relay	
		2) Which type of connection is employed for current transformers for the protection of star-	
		delta connected 3-phase transformer?	
		A) delta-delta C) star-star	
		B) delta-star D) star-delta	
		3) What is the preferred type of circuit breaker(CB) to be installed in extra high voltage AC	
		system? A) Bulk oil type CB C) Vacuum CB	
		A) Bulk oil type CBC) Vacuum CBB) Air blast CBD) Sulphur hexafluoride CB	
	(B)		3
	(B)	Define following terms:	3
		(I) Selectivity (II) Discrimination (III) Sensitivity	
QUE.2	(A)	What do you understand by "over reach" and "under reach" in distance relay protection?	3
	(B)	Explain the working and construction of SF6 circuit breaker with several advantages over different circuit breaker.	4
OR			
	(B)	Describe with a neat sketch the operating principle of an inverse type over current relay. How do plug settings control the pick- up current of such a relay?	4
QUE.3	(A)	Describe the principle of circulating current differential Protection.	3
	(B)	Explain power line carrier current protection by direction comparison showing schematic connection dia. of equipment used in it.	4
		OR	
	(A)	Discuss the method followed to make the differential relays immune to magnetizing inrush current?	3
	(B)	Explain the characteristic of different types of distance relays.	4