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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(EE) PT (Sem.-7)

POWER SYSTEM-II (SWITCH GEAR & PROTECTION)

Subject Code : BTEE-602

M.Code : 74091

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**Write briefly :**

1. Define the term pilot with reference to power line protection.
2. What is over fluxing protection in transformer?
3. What is resistance switching?
4. Explain the problem associated with the interruption of capacitive current?
5. What are the types of air blast circuit breaker?
6. Define operating and resetting time of a relay.
7. Explain restricted earth fault relay.
8. Explain RRRV.
9. What is main advantage of pantograph isolator?
10. Mention two disadvantages of ungrounded neutral.

SECTION-B

11. Explain construction and working of HRC fuse.
12. Explain the functions of various components used in a substation in brief.
13. Describe the construction and principle of operation of valve type lightning arrester.
14. Explain Arc Extinction phenomena in circuit breaker by high resistance method.
15. Describe the construction and working of Buchholz relay.

SECTION-C

16. a) Explain Time Graded Protection for Radial Feeders.
b) Explain with a neat sketch construction and working of Differential Pilot-Wire Protection
17. What are the various types of over current relays? Discuss their area of application.
18. a) What is Peterson coil? What protective functions are performed by this device?
b) Determine the inductance of Peterson coil to be connected between the neutral and ground to neutralize the charging current of overhead line having the line to ground capacitive of $0.15\mu\text{f}$. If the supply frequency is 50Hz and the operating voltage is 132 KV, find the KVA rating of the coil.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.