BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VI ELECTRICAL : : SUMMER - 2022
SUBJECT : SWITCHGEAR & PROTECTION

Day : Monday
Date : 13-06-2022

S-13326-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat labelled diagrams **WHEREVER** necessary.
4) Use of non- programmable **CALCULATOR** is allowed.

Q.1 What is mean by current chopping? What are its adverse effects on power system? How to minimize the effect of current chopping? **(10)**

OR

Q.1 What are the various properties of SF6 circuit breaker? Also explain the working of single puffer SF6 circuit breaker with neat diagram. **(10)**

Q.2 Draw the neat diagram of directional over current relay and explain its working. **(10)**

OR

Q.2 With neat block diagram explain the working of static over current relay. **(10)**

Q.3 Explain the protection scheme to be used for 3 phase induction against single phasing. **(10)**

OR

Q.3 What is mean by incipient faults? What are the methods to protect the transformer against such types of faults? **(10)**

Q.4 Explain the reactance relay used in case of transmission line? What are its salient features? **(10)**

OR

Q.4 With neat diagram explain the high impedance differential protection of bus bars. **(10)**

Q.5 What are the various internal causes of over voltages in case of power system? Explain in brief. **(10)**

OR

Q.5 With neat diagram explain the working of metal oxide (ZnO) type lightning arrester used against over voltage protection. **(10)**

Q.6 What are the different types of bus bar arrangements used in case of substations? **(10)**

OR

Q.6 Draw the layout of 132 kV/ 22kV substation and explain the same. **(10)**

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