

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VIII ELECTRICAL :SUMMER- 2022
SUBJECT : HIGH VOLTAGE ENGINEERING

Day : Thursday
Date : 16-06-2022

S-13348-2022

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) Assume suitable data, if necessary.
- 4) Draw neat and labeled diagrams **WHEREVER** necessary.

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- Q.1** a) What are the factors affecting corona and what are the effects of corona? (05)
b) How breakdown in non-uniform fields takes place? (05)

OR

- Q.1** a) Explain Time-lag for breakdown. (05)
b) What is penning effect? (05)

- Q.2** a) What is different a between pure liquid and commercial liquid? (05)
b) Explain suspended particle mechanism. (05)

OR

- Q.2** a) Classify different liquid dielectrics. (05)
b) Explain effect of moisture content on breakdown strength of liquid dielectric. (05)

- Q.3** a) What is intrinsic breakdown in solid dielectric? (05)
b) Write a note on partial discharge. (05)

OR

- Q.3** a) Explain mechanism of breakdown in composite dielectric. (05)
b) Explain properties of composite dielectric. (05)

- Q.4** a) With neat sketch explain multistage impulse generator. (05)
b) How to generate high frequency AC high voltages. (05)

OR

- Q.4** a) Draw standard impulse wave shape and explain. (05)
b) Draw diagram of cascade transformer and explain. (05)

- Q.5** a) How to generate high frequency impulse current? (05)
b) Explain generating voltmeter with neat sketch. (05)

OR

- Q.5** a) How to measure high voltage using sphere gap. (05)
b) Explain series impedance voltmeter. (05)

- Q.6** a) Classify high voltage laboratories and explain one in detail. (05)
b) Write a note on high voltage laboratories in India and abroad. (05)

OR

- Q.6** a) Explain layout of high voltage laboratories. (05)
b) What is electromagnetic shielding in high voltage laboratories? (05)

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