

Roll No. ....

**OLE-24434**  
**B. Tech. 7th Sem. (EE)**  
**Examination – April, 2021**  
**HIGH VOLTAGE ENGINEERING**  
**Paper : EE-442-F**

*Time : Three hours ]*

*[ Maximum Marks : 100*

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*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

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**Note :** Attempt *five* questions in all, selecting one question from each Section. Question No. **1** is *compulsory*.

1. (a) What are the insulation characteristics of long air gaps ? 5
- (b) What is the effect of voltage gradient on surface of conductors ? 5
- (c) Explain phenomenon of corona. 5
- (d) Explain the phenomena of lightning stroke. 5

## **SECTION – A**

2. Explain conduction and breakdown in gases. 20
3. Explain conduction and breakdown in solids. 20

## **SECTION – B**

4. Explain the phenomena of electrostatic field of sphere gap. 20
5. Derive the relation for distribution of voltage gradient on sub conductors of bundle conductor. 20

## **SECTION – C**

6. Write short note on corona loss radio interference. 20
7. What are the advantages and disadvantages of corona loss in distribution system ? 20

## **SECTION – D**

8. What are the Theory and principles of wave shaping circuit ? 20
9. Short note on : 20
  - (i) Impulse generator
  - (ii) Layout of HV laboratory