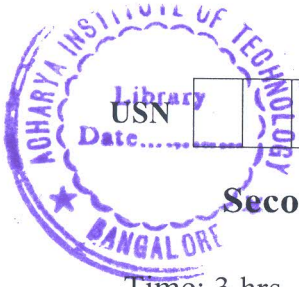


CBCS SCHEME

18EPS21



Second Semester M.Tech. Degree Examination, June/July 2019 Insulators for Power System

Time: 3 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Discuss the mechanical stress on insulators with reference to wind, ambient I conductor temperature, shack load and icing load. (10 Marks)
b. Discuss the main sections of insulators and its classification with reference to IEC and IEEE/ANSI standards. (10 Marks)

OR

- 2 a. Discuss the properties of main materials of an insulator. (10 Marks)
b. Discuss different elements of insulator and how these are considered with respect to critical conditions. (06 Marks)

Module-2

- 3 With a block diagram, demonstrate the different stages of wet process manufacturing of porcelain insulator. (16 Marks)

OR

- 4 Describe briefly the method, significance and applicability of
i) Puncture withstand test ii) Thermal shock test iii) porosity test
iv) Routine electrical and mechanical test for ceramic insulators. (16 Marks)

Module-3

- 5 Compare positive and negative attributes of different insulator materials and list recommended insulator material for pollution condition. (16 Marks)

OR

- 6 Explain the assessment for pollution site security and selection of transmission line insulators based on security. (16 Marks)

Module-4

- 7 Explain the different factors and concepts of ice flash over process. (16 Marks)

OR

- 8 Appraise the influence of ice morphology on flash over path. (16 Marks)

Module-5

- 9 a. Explain the concepts of deterioration test results for protein, glass and polymer insulators. (10 Marks)
b. Evaluate the desecration test results and discuss the effect of deterioration of all types on insulator. (06 Marks)

OR

- 10 a. Discuss the aim and purpose artificial pollution test. (06 Marks)
b. List with suitable securities of caparison of artificial pollution test. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.