

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Regular End Semester Examination – Summer 2022

Course: B. Tech. Branch : Electrical Engg. & Allied Branches

Semester : IV

Subject Code & Name: (BTEEC402) POWER SYSTEM

Max Marks: 60

Date: 18/08/2022

Duration: 3.45 Hr.

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level/CO)	Marks
Q. 1 Solve Any Two of the following.		
A) Draw the schematic diagram of Thermal power plant and explain function of its main component.	(Remember)	6
B) Explain the major equipments used in electrical substation of power plant.	(Understand)	6
C) Draw the schematic diagram of Nuclear power plant and explain function of its main component.	(Remember)	6
Q.2 Solve Any Two of the following.		
A) Write a short note on transposition of power lines.	(Remember)	6
B) Explain the concept of self GMD for evaluating inductance of transmission lines.	(Understand)	6
C) Write a short note on Skin Effect, Ferranti Effect, Proximity Effect.	(Remember)	6
Q. 3 Solve Any Two of the following.		
A) Discuss the advantages and disadvantages of (i) pin-type insulators (ii) suspension type insulators.		6
B) Why are insulators used with overhead lines? Discuss the desirable properties of insulators.	(Application)	6
C) Discuss the various conductor materials used for overhead lines.	(Remember)	6
Q.4 Solve Any Two of the following.		
A) Discuss the terms voltage regulation as applied to transmission line	(Application)	6
B) Explain the classification of lines based on their length of transmission.	(Remember)	6
C) Deduce an expression for voltage regulation of a short transmission line, giving the vector diagram.	(Analysis)	6
Q. 5 Solve Any Two of the following.		
A) Write short notes on the following : (i) Distribution transformers (ii) 3-wire d.c. distribution	(Remember)	6
B) What are the design considerations of distribution system? Explain.	(Understand)	6
C) What are the advantages and disadvantages of d.c. transmission over a.c. transmission?	(Remember)	6

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