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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DEEE - SIXTH SEMESTER EXAMINATION

ELECTRIC TRACTION

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **four** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define average speed and schedule speed.
2. List the types of traction services.
3. List the methods to improve coefficient of adhesion.
4. What is the material used for catenary and what is the purpose of catenary?
5. Write a short note on automatic weight system.
6. List the different types of signal boards of OHE.
7. List the constituents of traction substation.
8. Write a brief note on interrupters.
9. State the method of obtaining unidirectional polarity.
10. List the requirements of train lighting.

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[Contd...

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PART—B

15×4=60

- Instructions :** (1) Answer *any four* questions.
(2) Each question carries **fifteen** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11.** Sketch and explain the speed time curves of urban and sub urban services.
- 12.** Derive the equation of maximum speed with trapezoidal speed-time curve.
- 13.** Explain the Booster transformer.
- 14.** Explain the suitability of different motors for traction.
- 15.** Explain the control of traction motor by auto transformer with a neat sketch.
- 16.** State the methods of raising and lowering of Pantograph.
- 17.** Describe the various constituents of supply systems.
- 18.** Explain the importance of location and spacing of substations.

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