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EE/TE/SEM -V CBSSGS/P&SE

23/5/16

QP Code : 31125

(3 Hours)

Total Marks – 80

- N.B.:- (1) Question No.1 is compulsory.
(2) Attempt any three questions out of remaining five questions.
(3) Draw neat diagrams wherever it is necessary.

- Q 1. Answer the following questions. 20
- a) Explain the working principle of a current transformer.
 - b) Draw a single line diagram and show all the substation devices.
 - c) Explain the working principle of an electromagnetic relay
 - d) What is the role of isolator in power system? Explain.
- Q 2 a) What is meant by HRC fuse? Explain the construction and applications. 10
- Q 2 b) With a neat diagram, explain the working principle of Induction disc relay and mention its applications. 10
- Q 3 a) What type of protection is provided for induction motor? Explain. 10
- Q 3 b) Explain the working principle of a gas actuated relay. 10
- Q 4 a) Explain different types of circuit breakers in brief. 10
- Q 4 b) Derive an expression for RV and RRRV. 10
- Q 5 a) What are the different types of protections provided for the transformer. 10
- Q 5 b) Explain the 3 step protection provided for transmission line. 10
- Q 6 a) What are the protections provided for rotor of an alternator. 10
- Q 6 b) Derive an expression for the resistance to be provided between the neutral and earth of an alternator 10

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