

16 DEC.2025 TE ELECTRICAL (SEM-VI) C SCHEME PSPS QP CODE: 20001192

Duration: 3 hours

Total Marks : 80

Instructions:

1. Question No. 1 is compulsory
2. Attempt **any three** questions out of remaining **five** questions.
3. Assume suitable data, if necessary and justify the same.

Q1. Answer the following questions.

20

- A) Explain Slepain theory of arc interruption. 5
- B) Explain with neat sketch, the operation of ELCB. 5
- C) Explain the significance of TSM and PSM 5
- D) Compare static relay with electromagnetic relay 5

Q2. a) Explain with neat diagram, the construction and working of SF6 Circuit Breaker. 10

- Q2. b) (i) Explain applications of C.T. and P.T. in protection system 5
- (ii) Write a short note on Contactors 5

Q3. a) Explain the construction, working and operating characteristics of HRC Fuse. 10

Q3. b) Differentiate between impedance, reactance and MHO relay with the help of their characteristics. 10

Q4. a) Draw and explain the protection scheme for protection of induction motor against Single phasing. 10

Q4. b) Explain the construction and working principle of Induction Disc relay. 10

Q5.a) Explain the phenomenon of overreach and underreach in impedance relay and state the measure to overcome it. 10

Q5.b) Describe the differential protection scheme for star-delta connected transformer. 10

Q6. a) Draw the block diagram of Numerical relay and explain the function of each component used inside the relay 10

Q6. b) Write a short note on Phase comparison carrier current protection. 10
