

3/12/2024 ELECTRICAL SEM-VI C SCHEME PSPS QP CODE: 10069718

Time: 3 Hours

Total Marks: 80

- NB:** (1) Question No. 1 is **compulsory**
 (2) **Answer** any **THREE** questions out of the remaining **FIVE** questions.
 (3) Assume suitable data if **necessary** and **justify** them
 (4) **Figure** to the **right** indicates **marks**

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| 1. (a) | Explain the necessity of protective scheme in power system. | 5 |
| (b) | Justify, why secondary of transformer should not be opened? | 5 |
| (c) | Explain different methods of arc interruption. | 5 |
| (d) | List the function of under frequency relay. | 5 |
| 2. (a) | Differentiate static and electromagnetic relay. | 10 |
| (b) | Describe the differential protective scheme for star - delta connected transformer. | 10 |
| 3. (a) | Sketch and explain single line diagram to show the measuring and protection scheme. | 10 |
| (b) | Illustrate the protective schemes employed for the protection against overload and winding temperature of induction motor. | 10 |
| 4. (a) | Describe the bus zone protection in detail. | 10 |
| (b) | Explain the construction, working principle and operation of vacuum circuit breaker. | 10 |
| 5. (a) | Explain the construction and working principle of SF ₆ circuit breaker with neat sketch. | 10 |
| (b) | Explain the types of protective schemes employed for the protection of transmission line. | 10 |
| 6. | Write a note on | 20 |
| (a) | Isolators | |
| (b) | Phase comparison scheme of carrier - current protection. | |