

लोक सेवा आयोग  
नागरिक उड्डयन प्राधिकरण, प्राविधिक, इलेक्ट्रिकल इन्जिनियरिङ्ग, सातौ, वरिष्ठ अधिकृत पदको  
खुला प्रतियोगितात्मक लिखित परीक्षा  
२०८०/१०/१८

पत्र : द्वितीय  
समय : ३ घण्टा

पूर्णाङ्क : १००

विषय : सेवा सम्बन्धी

प्रत्येक Section को उत्तर छुट्टाछुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ । अन्यथा उत्तरपुस्तिका रद्द हुनेछ ।

**Section "A"**

**50 Marks**

1. Explain Ohm's Law and Kirchhoff's Current Law. 5
2. Explain how terminal voltage is regulated automatically in a synchronous generator. 5
3. What are the causes and effects of hunting in a synchronous motor? How can hunting effect be reduced? Explain. 10
4. Explain the working principle of hydroelectric power and solar power generation. 5+5=10
5. Explain the concept of steady state, sub-transient state and transient state of an alternator and corresponding reactance. Why making current of a circuit breaker is higher than its breaking current? Describe. 6+4=10
6. What are the factors to be considered while selecting cable for power distribution and consumer services? Explain different types of lightening arrestors and their respective function and use. 5+5=10

**Section "B"**

**50 Marks**

7. Differentiate between Taxiway lights and Runway lights in airport. 5
8. What is Management Information System (MIS)? Explain the importance of MIS in airport management. 3+2=5
9. What is the importance of preventive maintenance in electrical system? And, how does it differ from periodic maintenance? Explain. 10
10. What is Switched Mode Power Supply (SMPS)? Explain the basic components and functioning of SMPS. 5+5=10
11. Explain the different phases of a project management cycle with appropriate example. 10
12. Explain the key components of an Aeronautical Ground Lighting System and their functions. 10

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