

**H. P. Board of Departmental Examinations**  
**Departmental Examination of Engineering Officers of HPSEB Ltd.**  
**of Himachal Pradesh Session September, 2020**  
**PAPER-I (WORKS, STORE & COMMERCIAL ACCOUNTS/ MANUALS)**

**Time Allowed: 3 (Three) Hours**

**Maximum Marks: 300**

**Note:-**

- i) **Attempt any five questions. Three from Part-I and Two each from Part-II or Part-III as applicable.**
- ii) **Part-I is Compulsory for all Engineering Officers.**
- iii) **Part-II is meant for Electrical Engineers.**
- iv) **Part-III is meant for Civil/ Mechanical Engineers.**
- v) **Bare Acts/ Codes/ Rules/ Manuals/ Tariff Orders only are allowed.**

**PART- I (WORKS ACCOUNTS & STORES MANUAL)**

- Q. I) a) What are the procedures for acquisition and maintenance of stores? Please explain. [20]
- b) Who is responsible for keeping vigil on the liabilities for their settlement? In what cases liabilities are incorporated in accounts of work? [20]
- c) What are the duties and responsibilities of an Executive Engineer? [20]
- Q. II) a) What precautions should be observed to avoid losses on stores becoming surplus in HPSEBL? [20]
- b) What is the Accounting Procedure for the material received for the specific work? How the prices of Stores are fixed by the Divisional Officers maintaining stores in the HPSEB Ltd? [20]
- c) What is the procedure of physical verification of stores and who is competent for physical verification of each type of store? [20]
- Q. III) a) What points are kept in mind while preparing the Contract Document and who is responsible to execute such contracts? [20]
- b) Describe the various modes of Purchase. How the Tenders are processed, explain in detail. [20]
- c) Explain the testing & inspection procedure and Despatch of Material after issue of Purchase Order. [20]
- Q. IV) a) Explain how the accounts of cash are examined in HPSEB Ltd.? [20]
- b) Who are authorised to grant advances in HPSEB Ltd.? Explain. [20]

- c) How the transfer of charge is being done by the Divisional and Sub Divisional Officers? [20]
- Q. V) a) What are the precautions to be observed by the officials entrusted with the duty of signing of cheques on behalf of the Board? [20]
- b) What are the general instructions for checks are to be applied to the bills and personal claims of pay and allowances of staff? Explain in detail. [20]
- c) What are the various checks on delays of dealing the cases in the office? Explain in detail. [20]

**PART-II FOR ENGINEERING OFFICERS (ELECTRICAL)**

- Q. I) a) What do you understand by the Centralised Billing System in HPSEB Ltd.? How the recovery of arrears is done from the defaulting consumers? [20]
- b) What are the various remedial methods are taken for prevention of theft? How the supply to the consumer, who caught stealing energy, is reconnected? [20]
- c) What are the steps involved to release a connection to a consumer at 33kV? [20]
- Q. II) a) What are the conditions incorporated at the time of sanction of Load? [20]
- b) What procedure is to be followed when a meter is reported to be damaged or burnt by a consumer? [20]
- c) Who is responsible for the maintenance of consumer ledger and writing up of columns in respect of cash realisation? [20]
- Q. III) a) How the assessment and charging of energy pilferage is done from the consumers found stealing of Energy? [20]
- b) What action is to be required in case, the consumer withdraw to take load after issuance of PAC/ Sanction of load or delays in building the load up to sanctioned load. [20]
- c) What do you understand by Power Factor improvement? Explain the benefits and economics of Capacitors. Describe the guiding principles of installation of Capacitors. [20]
- Q. IV) a) What is the procedure for disposal of public money to bank? [20]
- b) List the reasons for disconnection of supply to the consumer premises on temporary and permanent basis and how the supply is restored? [20]

- c) Define the terms UNBALANCED LOAD, SEASONAL LOAD OF INDUSTRIES, DIVERSITY FACTOR, CAPTIVE GENERATOR, LOWER VOLTAGE SUPPLY SURCHARGE, WHEELING CHARGES, CONTRACT DEMAND VIOLATION CHARGES, OPEN ACCESS, DISTURBING LOAD PENALTY and TEMPORARY CHANGE of CONTRACT DEMAND. [20]

**PART-III FOR ENGINEERING OFFICERS (CIVIL/ MECHANICAL)**

- Q. I) a)** Describe the sequence of Operation for Construction of Tunnels. Explain in brief the terms Rock- Bolting and Shotcreting. [20]
- b)** Classify various type of Tunnels. What are the main points considered for the alignment of Tunnels. [20]
- c)** How the estimation of Rock Loads and Pressures is done before excavation of tunnels? Please explain. [20]
- Q. II) a)** What are the basic parameters required to be decided before taking up the detailed hydraulic design of barrages? [20]
- b)** What are the various factors considered in planning and layout of Barrages? Please explain. [20]
- c)** What are the various causes of failure of Barrages and Weirs? Please explain in detail. [20]
- Q. III) a)** What are the important clearances required to be taken for setting of a small hydro plant in Himachal Pradesh? Explain in detail. [20]
- b)** What are the basic and common components of medium/ high head mini hydro power project? Explain in brief. [20]
- c)** Explain in detail the design of unlined canals. [20]
- Q. IV) a)** What aspects are considered for proper Maintenance and operation of Diversion Structures? [20]
- b)** What are the different types of Fish Pass.? Explain in detail. [20]
- c)** Why there is necessity of Surge Shaft in a Hydro Electric Plant. Explain in detail. [20]