

खुल्ला प्रतियोगिता लिखित परीक्षाको पाठ्यक्रम

सहायकस्तर

Assistant Electrical Lab

प्रथम पत्र (वस्तुगत)

पूर्णाङ्क: १×१००=१००

समय: ३:०० घण्टा

१. नेपालको भूगोल तथा जनसंख्या
२. नेपालको इतिहास, संस्कृति र सामाजिक व्यवस्था
३. राष्ट्रिय तथा अन्तर्राष्ट्रिय संघ तथा संगठनहरू
४. नेपालको आर्थिक विकास
५. समसामयिक नवीनतम घटनाक्रमहरू
६. पूर्वाञ्चल विश्वविद्यालयको ऐन २०५० (संशोधन सहित)
७. पूर्वाञ्चल विश्वविद्यालयको नियमावली २०५३ (संशोधन सहित)
८. कर्मचारी प्रशासन विधि पक्षहरू
९. शिक्षासँग सम्बन्धित निकायहरू तथा तिनको क्षेत्राधिकार
१०. नेपालमा विश्वविद्यालयहरूको स्थापना तथा विश्वविद्यालय अनुदान आयोग (UGC) सम्बन्धी ज्ञान

सहायकस्तर

Assistant Electrical Lab

द्वितीय पत्र (विषयगत)

पूर्णाङ्क: १००

समय: ३:०० घण्टा

1. Applied Math

- a. Types of unit and their conversion
- b. Interpretation of graphical representation
- c. Calculation of electrical parameters
- d. Application and calculation of different laws related to electrical fields.
- e. fundamental of AC circuits calculation
- f. Electrical machines and their calculation

2. Bench Work:

- a. Workplace Hazards and safety rules
- b. Use and caring of mechanical tools, instrument and machines.
- c. Performance of basic operations related to mechanical work, such as: measure, mark, cut bend, file, drill, rivet according to the specification
- d. Sheet metal works.
- e. Gas welding.

3. Electrical Installation:

- a. Selection of electrical tools, equipment, materials, fitting and safety device
 - b. Installation of panel board, capacitor bank, cable tray, lightning arrestor, PABX, telephone distribution board.
 - c. Interpretation lay out and wiring diagram
 - d. Board wiring and brick wall wiring.
 - e. Supporting accessories (PVC conduit, metal box, distribution box, L.T. cable etc.)
 - f. Performance wiring system and electrical safety test,
 - g. Connection and control of single & three phase motor system
- 4. Repair and Maintenance:**
- a. Repair and maintenance of Industrial machine and tools.
 - b. Lay out and wiring diagram of different types of electric machine/equipment and appliances.
 - c. Disassemble and assemble of various types of electrical machine and equipment.
 - d. Basic maintenance of transformer
 - e. Single phase and three phase motor rewinding.
 - f. Safety precautions for electrical repair and maintenance work.
- 5. Engineering Drawing and Computer Application:**
- a. Drawing of line, curve and plan of geometrical solids.
 - b. Freehand sketch and three-dimensional objects
 - c. Understanding of electrical symbols to use in different circuit diagram.
 - d. Understanding of electrical connection diagram in transmission & distribution system.
 - e. Development diagram of single phase & three phase motors' component, equipment, & machines.
 - f. Use of Computer Aided Drafting (CAD) Software
 - g. Use of AUTOCAD as electrical drafting tool
 - h. Construction of 2D Engineering Drawing using AUTOCAD.
 - i. Annotation of a drawing with Text, Dimensioning.
 - j. Edition of drawing using CAD Software
- 6. Electro-Technology:**
- a. Workplace safety: Personal, equipment, machine, tools including electrical rules
 - b. Identification of tools, equipment, machines, materials used in electrical system
 - c. Application of the standard terms and terminologies used by electricians.
 - d. Definitions and constitution of matter, and fundamental laws of electricity and electromagnetism.
 - e. Basic concept and utilization of power generation, transmission and distribution
 - f. Definition and solve problems in D.C. and A.C. single and three phase circuits
 - g. Principles of operation, function and construction of electrical machines.
 - h. Electrical measuring instrument and measurement.
 - i. Switchgear, control and protection devices
- 7. Power Distribution System:**
- a. Safety rules, tools and equipment.
 - b. NEA distribution rules and regulations.
 - c. 11KV & 400/230V overhead line construction standards of NEA.
 - d. Familiarize with 11 KV and 400V/230V distribution System.
 - e. Selection of proper ACSR conductors & ABC cables.
 - f. Familiarization with pole erection
 - g. String ACSR conductors on 11KV and 400/230V poles.
 - h. Olli stall fitting accessories of ABC Cable & ACSR conductors.
 - i. Installation of Stay on poles of 11 KV and 400/230 V lines.



- j. Installation of earthing on pole mounted transformers.
- k. Demonstration of 11 KV primary and 400/230V secondary distribution lines, Pole mounted transformers.
- l. Connection of service line to the consumers

8. Basic Electronics:

- a. Description of various electronics components.
- b. Interpretation of their characteristics and applications
- c. Calculation of the value of electronics components
- d. Testing of electronics components
- e. Design of electronic circuits using diodes
- f. Construction of voltage regulator with transistor and zener diode.
- g. Construction NOT, AND, OR, NAND, NOR Logic gate in IC.
- h. Application of safety precaution during electronics works

9. पू.वि. सम्बन्धी नियम

- पू.वि. सभा, प्राज्ञिक परिषद्, कार्यकारी परिषद्, विद्यापरिषद् र सेवा आयोगको काम, कर्तव्य र अधिकारबारे जानकारी
- पू.वि. शिक्षक कर्मचारी सेवा सम्बन्धी नियम २०५३ संशोधन सहित

