**Ministry of Education**

**Sector**: water services

**Occupation:Electro-Mechanical Equipment And Machinery Maintenance L-IV**

**Machineries and Equipment (Per candidate)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | **Qty** | **Unit** | **Specification** |
| 1 | Submersible pump | 1 | set | With complete accessories |
| 2 | Control panel | 1 | set | With complete accessories |
| 3 | Crane/rig | 1 | pc | Not less than 1 tone |
| 4 | Pipe treader | 1 | » | As required |
| 5 | grinder | 1 | » | Standard |
| 6 | Pipe cutter | 1 | » | As required |

**Tools (Per candidate)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | **Qty** | **Unit** | **Specification** |
| 1 | Screw driver | 1 | set | Standard |
| 2 | multimeter | 1 | pc | » |
| 3 | pliers | 1 | » | » |
| 4 | Cable cutter | 1 | » | » |
| 5 | spanner | 3 | » | 17/19/22/24 |
| 6 | Pipe wrench | 2 | » | 24”/36”/48” |
| 7 | Pipe clamp | 2 | » | standard  |
| 8 | hook | 2 | » | » |
| 9 | chisel | 1 | » | » |
| 10 | hammer | 1 | » | Medium |
| 11 | Hand gloves | 1 | pair | Standard |
| 12 | Hack saw | 1 | pc | Standard |
| 13 | Stand vice | 1 | pc | As required |

**Materials and Supplies (Per candidate)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Items** | **Qty** | **Unit** | **Specification** |
| 1 | elbow | 1 | pc | As required |
| 2 | Pipe | As required | » | » |
| 3 | nipples | » | » | » |
| 4 | socket | 1 | » | Standard |
| 5 | Pressure gage | 1 | pc | As required |
| 6 | Gate valve | 1 | » | As required |

Note: Materials and tools may be modified by the Assessor, depending on the actual job performed, and location & the standard electro-mechanical equipment installation and maintenance of the country.

**Consumable materials to be used:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Item description** | **Quantity** | **Unit** | **Specification** |
|  | paper | 2 | pcs | A4 |
|  | pen | 1 | pcs | any |
|  | Electrical wire | 12 | m |  1.5mm |
|  | Power cable  | 2  | pcs | As per the types of motor |

**Tools & equipment/machines Instrument**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Item description** | **Quantity** | **Unit** | **Specification** |
|  | Complete control board/switch board | 1 | pcs |  |
|  | submersible pump | 1 | pcs | 3 phase or single  |
|  | electrode sensor | 2 | pcs |  |
|  | VOM | 1  | pcs | Standard  |
|  | Electrician’s pliers | 1 | pcs | Standard |
|  | Long nose pliers | 1 | pcs | Standard |
|  | Set of screw drivers | 1 | set | Standard |
|  | Adjustable wrench | 1 | pcs | Standard |
|  | Hack saw with blade | 1 | pcs | Standard |
|  | Electrician’s knife | 1 | pcs | Standard |

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