



UNIT MERINYU ELEKTRIK

ELECTRICAL INSPECTORATE UNIT

SYLLABUS FOR WIREMAN EXAMINATION – 07/2015

| WIREMAN 2 (SINGLE PHASE) | UPGRADE TO WIREMAN 1 (THREE PHASE) |
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| A. THEORY | C. THEORY |
| <p>(1) Electricity Ordinance Chapter 50</p> <ul style="list-style-type: none"> i. Requirements of Electricity Ordinance ii. Electricity Rules <p>(2) Trade Orientation and Electrical Safety</p> <ul style="list-style-type: none"> i. Nature and scope of work of a wireman ii. Safety rules and regulations pertaining to working procedures iii. Electrical shock treatment iv. Occupational Safety and Health Act 1994 <p>(3) Basic Electricity</p> <ul style="list-style-type: none"> i. Basic theory and simple calculation ii. Ohm's Law <p>(4) Supply System</p> <ul style="list-style-type: none"> i. Standard Voltage ii. Variation of voltage and frequency iii. Single-phase two-wire distribution <p>(5) Consumer's circuit</p> <ul style="list-style-type: none"> i. Internal distribution ii. IEE Regulation for control iii. Relative rating of conductors and protection devices iv. Arrangements of final sub-circuits <p>(6) Conductors and Cables</p> <ul style="list-style-type: none"> i. Conductor materials ii. Insulation materials iii. Mechanical protection iv. Current-carrying capacity of cables <p>(7) Wiring System</p> <ul style="list-style-type: none"> i. Surface wiring ii. Regulations, location, types of cable <p>(8) Wiring Accessories</p> | <p>(1) Current Carrying Conductors</p> <ul style="list-style-type: none"> i. Types of cable ii. Current rating of cables iii. Voltage drop <p>(2) Types of Wiring (Wiring system,)</p> <ul style="list-style-type: none"> i. Surface Wiring ii. Conduit Wiring iii. Concealed Wiring iv. M.I.C.C Wiring v. Trunking vi. Rising Mains vii. Ducting viii. Armoured Cable <p>(3) Single and Three Phase Distribution</p> <ul style="list-style-type: none"> i. Switch Board ii. Switchgear iii. Measuring Instrument and Indicators (Single and Three Phase) <p>(4) Circuit Protection System</p> <ul style="list-style-type: none"> i. Types of Fault ii. Earth Fault Relay iii. Over-current Relay iv. Earthing System <p>(5) Testing of Installation (Single and Three Phases)</p> <p>(6) Types, uses and care of AC Motors</p> <p>(7) Starters amid Control of Electric Motors</p> <p>(8) Principles and applications of simple Control devices</p> <ul style="list-style-type: none"> i. Contactors, time switches, float switches, etc. |

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| <p>(9) Earthing</p> <ol style="list-style-type: none"> i. Definition of 'Earth' ii. Danger from earthed metal iii. IEE Regulations iv. Basic earthing requirements v. Methods of earthing <p>(10) Domestic Apparatus</p> <ol style="list-style-type: none"> i. Schematic diagram, working principle, and testing regulation on electric cookers, water heaters, bells, fans, etc <p>(11) Illumination</p> <ol style="list-style-type: none"> i. Incandescent filament lamps ii. High-pressure mercury-vapour discharge lamp iii. Sodium-vapour discharge lamps iv. Fluorescent lamps | |
| <p>B. PRACTICAL</p> | <p>D. PRACTICAL</p> |
| <p>(1) Single-phase wiring installation inclusive of the following:</p> <ol style="list-style-type: none"> i. Lighting points socket ii. Two-way switch iii. 13A/15A power points including water heater/ air-cond point with dipole switch iv. Isolator v. Consumer unit connections <p>(2) Single-phase motor connections</p> <p>NOTE: Type of installation is surface wiring or PVC conduit Pass Part A and B to be eligible for Wireman 2</p> | <p>(1) Three-phase wiring installation inclusive of the following:</p> <ol style="list-style-type: none"> i. Lighting points socket ii. Two-way switch iii. 13A/15A power points including water heater/ air-cond point with dipole switch. iv. Isolator v. Consumer unit connections <p>(2) Three-phase motor connections</p> <p>NOTE: Type of installation is GI piping Pass Part A, B, C and D to be eligible for Wireman 1</p> |