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| Departemen_Perhubungan.wmf | FORM SKENARIO  LABORATORIUM/SIMULATOR/  WORKSHOP | Nomor Dokumen : FM.USW.01.02a |
| Tgl. Ditetapkan : 02 November 2015 |
| Revisi No : 02 |
| Tgl. Diberlakukan : 09 Januari 2017 |
| Made By : | Reviewer : |
| PIP SEMARANG | ANDY WAHYU HERMANTO, ST, MT | ADI OKTAVIANTO, S.T, M.M |
|  | Mengetahui | |
|  | Kepala Unit Laboratorium, Simulator dan Workshop | Kepala Bagian Adminitrasi Akademik dan Ketarunaan |
|  |  |  |
|  | YUSTINA SAPAN, S.ST, MM | Capt. BHARTO ARI RAHARJO |

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| Type Facilities :   * Laboratorium * Simulator * Other | Name Laboratorium/ Simulator/ Other :  Electric and Electronic Laboratory |

|  |  |
| --- | --- |
| **STCW Convention** | Electrical, electronic and control engineering at the operational level |
| **Function & Level** | Marine Engineering at The Operational Level (ATT : III / IV)\* |
| **Program** | Penggunaan Alat Ukur Analog Voltmeter |
| **Competence** | Monitor the operation of electrical, electronic and control systems |
| **REFERENSI STCW** | STCW code table AIII/6 page 201 |
| **aim of Exercise** | Taruna mampu mengoperasikan alat ukur Voltmeter |
| **Objective** | 1. Taruna memahami prosedur mengoperasikan alat ukur Voltmeter 2. Taruna dapat mengukur tegangan AC dan DC |
| **Exercise condition** | 1. Pengecekan alat ukur multimeter sebelum digunakan 2. Lakukan kalibrasi bila alat ukur belum sesuai dengan ketentuan 3. Baca dan pahami prosedur penggunaan alat ukur AC dan DC Voltmeter 4. Set Panel pada nilai tegangan AC tertentu 5. Set Panel pada nilai tegangan DC tertentu |

**INITIAL INFORMATION**

|  |  |
| --- | --- |
| **Briefing** | 10 minutes |
| **Exercise Duration** | 30 minutes |
| **Debriefing** | 10 minutes |

| **No** | **Time Frame (minutes)** | **Activity** | **Result** | | **Weight** | **Mark** | **Actual Time** | **Remark** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Y** | **N** |
|  |  | **Pendahuluan** |  |  |  |  |  |  |
| 1 |  | Siapkan alat ukur Multimeter |  |  |  |  |  |  |
| 2 |  | Pastikan alat ukur Multimeter dalam kondisi baik |  |  |  |  |  |  |
| 3 |  | Baca prosedur tentang penggunaan alat ukur Voltmeter |  |  |  |  |  |  |
|  |  | **Mengukur Arus listrik AC** |  |  |  |  |  |  |
| 1 |  | Set multimeter analog ke AC Voltmeter |  |  |  |  |  |  |
| 2 |  | Set Range / skala Amperemeter sesuai dengan arus listrik yang akan diukur |  |  |  |  |  |  |
| 3 |  | Lakukan pengukuran arus listrik AC pada panel yang telah di tentukan oleh dosen / Instruktur |  |  |  |  |  |  |
| 4 |  | Baca hasil pengukuran pada analog multimeter |  |  |  |  |  |  |
| 5 |  | Catat hasil pengukuran |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  | **Mengukur Arus listrik DC** |  |  |  |  |  |  |
| 1 |  | Set multimeter analog ke DC Voltmeter |  |  |  |  |  |  |
| 2 |  | Set Range / skala Amperemeter sesuai dengan tegangan yang akan diukur |  |  |  |  |  |  |
| 3 |  | Lakukan pengukuran arus listrik DC pada panel yang telah di tentukan oleh dosen / Instruktur |  |  |  |  |  |  |
| 4 |  | Baca hasil pengukuran pada analog multimeter |  |  |  |  |  |  |
| 5 |  | Catat hasil pengukuran |  |  |  |  |  |  |
|  |  | **Penutup** |  |  |  |  |  |  |
| 1 |  | Matikan alat ukur multimeter dengan mengarahkab pada posisi OFF |  |  |  |  |  |  |
| 2 |  | Simpan dan rapikan alat ukur multimeter |  |  |  |  |  |  |

\*Critical performance below must get record **“Yes”** mark will lead the final result to mark **FAIL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Critical Performance** | **Y** | | **N** |
| 1 | Siapkan alat ukur voltmeter sebelum digunakan |  | |  |
| 2 | Memahami prosedur penggunaan alat ukur Voltmeter |  |  | |
| 3 | Lakukan pengukuran Arus Listrik pada panel yang telah disiapkan |  |  | |
| 4 | Pembacaan tegangan pada alat ukur Voltmeter analog |  |  | |

**Time factor**

|  |  |  |  |
| --- | --- | --- | --- |
| <30 minutes = 1 | 31 – 40 minutes = 0.9 | 41 – 50 minutes = 0.8 | >50 minutes = 0.5 |

**Total Time : ………………minutes Time Factor : …………….**

**Total Score : Total Mark X Total Factor = …………… x ……………. = …………….**

**Final Result : PASS / FAIL ( Passing Grade = 70 )**