**FORENSIC SCIENCES (FS)**

**BOARD EXAMINATION SUBJECT**

**Exam Weight – 15%**

**SUMMARY OF TOPICS, ITEM, and PERCENTAGE DISTRIBUTION**

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| **SPECIFIC PROFESSIONAL PRACTICE OUTCOMES FOR THIS SUBJECT:**  The registered criminologist can perform the following professional practice outcomes for his/her initial entry into the practice of the profession:   1. Utilize criminalistics or forensic science in the investigation and detection of crime. 2. Apply the principles and jurisprudence of criminal law, evidence, and criminal procedure. 3. Demonstrate competence and broad understanding of law enforcement administration, public safety, and criminal justice. 4. Internalize the concepts of human rights and victim welfare. 5. Effectively communicate orally and in writing using both English and Filipino. 6. Act in recognition of professional, social, and ethical responsibility. | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **(30%)** | | **(50%)** | **(20%)** | | |  |
| **Remembering** | **Understanding** | **Applying** | **Analyzing** | **Evaluating** | **Creating** |

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| **TOPICS** |  |  |  |  |  |  |  |  |  |
| 1. **PERSONAL IDENTIFICATION TECHNIQUES** | **2.70** | **18** | **2** | **3** | **9** | **2** | **2** | **-** | **18** |
| 1. **FORENSIC PHOTOGRAPHY** | **2.55** | **17** | **4** | **2** | **7** | **2** | **2** | **-** | **17** |
| 1. **FORENSIC CHEMISTRY AND TOXICOLOGY** | **1.80** | **12** | **4** | **2** | **6** | **-** | **-** | **-** | **12** |
| 1. **QUESTIONED DOCUMENTS** | **2.55** | **17** | **2** | **2** | **9** | **2** | **2** | **-** | **17** |
| 1. **LIE DETECTION TECHNIQUES** | **2.55** | **17** | **2** | **2** | **9** | **2** | **2** | **-** | **17** |
| 1. **FORENSIC BALLISTICS** | **2.85** | **19** | **3** | **2** | **10** | **2** | **2** | **-** | **19** |
| **TOTAL** | **15%** | **100** | **17** | **13** | **50** | **10** | **10** | **-** | **100** |

**FORENSIC SCIENCE – 15 %**

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| 1. **PERSONAL IDENTIFICATION TECHNIQUES**   **The registered criminologist can perform the competencies under the following sub-topics:** | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **Easy (30%)** | | **Moderate (50%)** | **Difficult (20%)** | | |
| **Remembering**  Recall information  Recognizing, listing, describing,  retrieving, naming, finding. | **Understanding**  Explain, Interpret, summarize, examine, paraphrase, classify. | **Applying**  Using the information in another familiar situation  Implementing carrying out, using, executing | **Analyzing**  Understanding,  Comparing, organizing, deconstructing, interrogating, finding | **Evaluating**  hypothesizing, critiquing, experimenting, judging | **Creating**  Generating  Designing, constructing, planning, producing, inventing**.** |
| **15%** | **100** |
| **2.70** | **18** |
| 1. Recognize the basic principles of personal identification; | **.30%** | **2** | **1** | **-** | **1** | **-** | **-** | **-** |
| 1. Demonstrate the ability in the application of Dactyloscopy as the gold standard in personal identification and other scientific and non-scientific techniques of personal identification in relation to crime detection and investigation (recognition, collection, preservation, classification, comparison, and identification of latent prints); | **.60%** | **4** | **1** | **-** | **2** | **1** | **-** | **-** |
| 1. Apply the techniques in detection, collection, preservation of forensic evidence relative to friction ridges and other means of personal identification; | **.60%** | **4** | **-** | **1** | **2** | **1** | **-** | **-** |
| 1. Utilize various forensic tools/equipment and employ systematic methods (ACE-V method) in processing latent prints/friction ridge details to ensure positive identification; and | **.60%** | **4** | **-** | **1** | **2** | **-** | **1** | **-** |
| 1. Demonstrate competence in the examination, identification, and presentation of evidence communicated in format and in content acceptable in court proceedings. | **.60%** | **4** | **-** | **1** | **2** | **-** | **1** | **-** |

**FORENSIC SCIENCE – 15 %**

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| 1. **FORENSIC PHOTOGRAPHY**   **The registered criminologist can perform the competencies under the following sub-topics:** | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **(30%)** | | **(50%)** | | **(20%)** | | | | |
| **Remembering**  Recall information  Recognizing, listing, describing,  retrieving, naming, finding. | **Understanding**  Explain, Interpret, summarize, examine, paraphrase, classify. | **Applying**  Using the information in another familiar situation  Implementing carrying out, using, executing | | **Analyzing**  Understanding,  Comparing, organizing, deconstructing, interrogating, finding | | **Evaluating**  hypothesizing, critiquing, experimenting, judging | | **Creating**  Generating  Designing, constructing, planning, producing, inventing**.** |
| **15%** | **100** |
| **2.55** | **17** |
| 1. Explain the scientific and technical principles of forensic photography | **.30%** | **2** | **-** | **1** | **1** | | **-** | | **-** | | **-** |
| 1. Identify the types of photography and their application to law enforcement operations e.g. surveillance, crime scene, etc | **.60%** | **4** | **1** | **1** | **2** | **-** | | **-** | | **-** | | |
| 1. Distinguish analog and digital photography and the operation of various photographic equipment, its parts & functions in forensic investigation | **.30%** | **2** | **1** | **-** | **1** | **-** | | **-** | | **-** | | |
| 1. Process photographic exhibits i.e. fingerprint, ballistic, questioned documents, etc. | **.75%** | **5** | **1** | **-** | **2** | **1** | | **1** | | **-** | | |
| 1. Examine the legal aspects of photographic evidence, write forensic findings in a format generally accepted by the scientific community and in a language clear to the court of law | **.60%** | **4** | **1** | **-** | **1** | **1** | | **1** | | **-** | | |

**FORENSIC SCIENCE – 15 %**

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| 1. **FORENSIC CHEMISTRY AND TOXICOLOGY**   **The registered criminologist can perform the competencies under the following sub-topics:** | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **(30%)** | | **(50%)** | **(20%)** | | |
| **Remembering**  Recall information  Recognizing, listing, describing,  retrieving, naming, finding. | **Understanding**  Explain, Interpret, summarize, examine, paraphrase, classify. | **Applying**  Using the information in another familiar situation  Implementing carrying out, using, executing | **Analyzing**  Understanding,  Comparing, organizing, deconstructing, interrogating, finding | **Evaluating**  hypothesizing, critiquing, experimenting, judging | **Creating**  Generating  Designing, constructing, planning, producing, inventing**.** |
| **15%** | **100** |
| **1.80** | **12** |
| 1. Explain the principles of forensic chemistry and toxicology in relation to crime detection and investigation | **.45%** | **3** | **1** | **1** | **1** | **-** | **-** | **-** |
| 1. Demonstrate accepted protocols for handling chemical and biological evidence (blood, semen, fiber, explosives, drugs, etc.) from the crime scene to the courtroom | **.30%** | **2** | **1** | **-** | **1** | **-** | **-** | **-** |
| 1. Recognize standardized tests and appropriate laboratory equipment in processing biological evidence and physical evidence | **.45%** | **3** | **1** | **1** | **1** | **-** | **-** | **-** |
| 1. Apply scientific procedures in the recognition, collection, and preservation of drugs, poisons, and other toxicological concerns | **.30%** | **2** | **1** | **-** | **1** | **-** | **-** | **-** |
| 1. Generate case reports and present factual reports in support of a court trial | **.30%** | **2** | **-** | **-** | **2** | **-** | **-** | **-** |

**FORENSIC SCIENCE – 15 %**

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| 1. **QUESTIONED DOCUMENTS**   **The registered criminologist can perform the competencies under the following sub-topics:** | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **(30%)** | | **(50%)** | **(20%)** | | |
| **Remembering**  Recall information  Recognizing, listing, describing,  retrieving, naming, finding. | **Understanding**  Explain, Interpret, summarize, examine, paraphrase, classify. | **Applying**  Using the information in another familiar situation  Implementing carrying out, using, executing | **Analyzing**  Understanding,  Comparing, organizing, deconstructing, interrogating, finding | **Evaluating**  hypothesizing, critiquing, experimenting, judging | **Creating**  Generating  Designing, constructing, planning, producing, inventing**.** |
| **15%** | **100** |
| **2.55** | **17** |
| 1. Explain the scientific principles of identification and examination of standards and questioned documents | **.30%** | **2** | **1** | **-** | **1** | **-** | **-** | **-** |
| 1. Illustrate and apply the protocol in the selection and examination of standards and questioned documents | **.45%** | **3** | **1** | **-** | **2** | **-** | **-** | **-** |
| 1. Demonstrate the techniques in restoring and deciphering erasures and obliterations in the handwriting, signature, and other questioned documents | **.60%** | **4** | **-** | **1** | **2** | **-** | **1** | **-** |
| 1. Utilize the different equipment in questioned document examinations in identifying and differentiating writing characteristics | **.60%** | **4** | **-** | **1** | **2** | **1** | **-** | **-** |
| 1. Prepare document examination reports and testify forensic findings | **.60%** | **4** | **-** | **-** | **2** | **1** | **1** | **-** |

**FORENSIC SCIENCE – 15 %**

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| 1. **LIE DETECTION TECHNIQUES**   **The registered criminologist can perform the competencies under the following topics:** | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **(30%)** | | **(50%)** | **(20%)** | | |
| **Remembering**  Recall information  Recognizing, listing, describing,  retrieving, naming, finding. | **Understanding**  Explain, Interpret, summarize, examine, paraphrase, classify. | **Applying**  Using the information in another familiar situation  Implementing carrying out, using, executing | **Analyzing**  Understanding,  Comparing, organizing, deconstructing, interrogating, finding | **Evaluating**  hypothesizing, critiquing, experimenting, judging | **Creating**  Generating  Designing, constructing, planning, producing, inventing**.** |
| **15%** | **100** |
| **2.55** | **17** |
| 1. Explain the scientific principles and the theory of psycho-physiology applicable to lie detection and truth verification | **.45%** | **3** | **2** | **-** | **1** | **-** | **-** | **-** |
| 1. Demonstrate procedures and techniques in the use of the polygraph and examine other various lie detection techniques (Voice Stress Analysis, Iris Examination, Psycho-physiological detection of deception i.e body language/eye movements, etc.) with adherence to the rule of law | **.45%** | **3** | **-** | **1** | **2** | **-** | **-** | **-** |
| 1. Analyze and interpret indications of truth and deception using the polygraph machine and other similar equipment | **.60%** | **4** | **-** | **1** | **2** | **-** | **1** | **-** |
| 1. Demonstrate ability to construct polygraphic questions following the various acceptable formats used by the scientific community | **.45%** | **3** | **-** | **-** | **2** | **1** | **-** | **-** |

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| 1. Demonstrate competence in the examination, interpretation of polygraphic evidence and communicate findings in a format acceptable by the scientific community and the courts | **.60%** | **4** | **-** | **-** | **2** | **1** | **1** | **-** |

**FORENSIC SCIENCE – 15 %**

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| 1. **FORENSIC BALLISTICS**   **The registered criminologist can perform the competencies under the following sub-topics:** | **Percentage Weight**  **and**  **Distribution** | **Number of Items**  **and Distribution** | **(30%)** | | **(50%)** | **(20%)** | | |
| **Remembering**  Recall information  Recognizing, listing, describing,  retrieving, naming, finding. | **Understanding**  Explain, Interpret, summarize, examine, paraphrase, classify. | **Applying**  Using the information in another familiar situation  Implementing carrying out, using, executing | **Analyzing**  Understanding,  Comparing, organizing, deconstructing, interrogating, finding | **Evaluating**  hypothesizing, critiquing, experimenting, judging | **Creating**  Generating  Designing, constructing, planning, producing, inventing**.** |
| **15%** | **100** |
| **2.85** | **19** |
| 1. Recognize the scientific foundation and principles of firearms identification in support of the admissibility of ballistic related evidence | **.30%** | **2** | **-** | **1** | **1** | **-** | **-** | **-** |
| 1. Identify the types of firearms according to design, mechanism, action and make a basis for the handling and examination of these kinds of evidences | **.30%** | **2** | **1** | **-** | **1** | **-** | **-** | **-** |

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| 1. Classify the types of ammunition according to design, component parts, mechanism, and purpose to assist the examiner in the specific type of ballistic examination to be conducted | **.60%** | **4** | **1** | **1** | **2** | **-** | **-** | **-** |
| 1. Distinguish class and individual characteristics of firearms as basis for firearms identification | **.75%** | **5** | **-** | **-** | **3** | **1** | **1** | **-** |
| 1. Utilize the laboratory equipment and tools used in the examination of ballistic exhibits in aid to report writing and case presentation in court | **.60%** | **4** | **-** | **-** | **2** | **1** | **1** | **-** |
| 1. Explain the nature and characteristics of low and high explosives. | **.30%** | **2** | **-** | **2** | **-** | **-** | **-** | **-** |