



**NAME 2018 ANNUAL MEETING
SELF-ASSESSMENT MODULE (SAM) EXAMINATION QUESTIONS**

SESSION 1 (Questions 1 - 11)

1. Based on presentation 1.1 by Michael Bell, select the one best true statement: Carfentanil is more potent than morphine by how many times?
 - A. 1
 - B. 10
 - C. 100
 - D. 1000
 - E. 10000

2. Based on presentation 1.1 by Michael Bell, select the one best true statement: Which of the following statements about carfentanil is most correct:
 - A. Carfentanil blood concentrations in acute intoxications are in a similar range as heroin and fentanyl
 - B. Carfentanil is detected in hospital urine toxicology screening
 - C. Carfentanil is often associated with spontaneous gastrointestinal hemorrhage
 - D. Carfentanil pharmacokinetics in humans is well known and occurs predominantly in the kidney
 - E. Carfentanil intoxication is treated with naloxone

3. Based on presentation 1.2 by Ashley Lukefahr, select the one best true statement: Which of the following blood sampling sites is least subject to postmortem drug redistribution, making it the current specimen of choice for most postmortem toxicological analyses?
 - A. Cardiac chambers
 - B. Femoral vein
 - C. Inferior vena cava
 - D. Subclavian vein
 - E. Portal vein

4. Based on presentation 1.2 by Ashley Lukefahr, select the one best true statement: Which of the following represents an advantage of blood over solid tissue specimens for postmortem toxicological analysis?
 - A. Less complex matrix
 - B. Less susceptible to contamination (e.g. in the setting of trauma)
 - C. Quality of specimen is independent of collection protocol
 - D. Reference data for most analytes is limited
 - E. Not susceptible to postmortem drug redistribution

5. Based on presentation 1.3 by Dhammi Hewa, select the one best true statement: Which of the following is an adulterant commonly mixed with heroin?
- A. Morphine
 - B. Naloxone
 - C. Quinine
 - D. Benzoylcegonine
 - E. Talc
6. Based on presentation 1.3 by Dhammi Hewa, select the one best true statement: Which of the following is a structurally unique synthetic opioid analgesic?
- A. Acryl fentanyl
 - B. Carfentanyl
 - C. 6-monoacetylmorphine
 - D. U-47700
 - E. Morphine
7. Based on presentation 1.4 by Nicole Yarid, select the one best true statement: The most effective means of informing timely public health and criminal justice responses to the opioid epidemic is through which of the following:
- A. Death certificates accurately completed by medical examiners and coroners.
 - B. Mandated reporting of drug overdose deaths to public health agencies.
 - C. Innovative real-time surveillance projects instituted by medical examiners.
 - D. Proactive modes of overdose death reporting utilizing the infrastructure for electronic death records.
 - E. Employing more epidemiologists to create interactive web-based dashboards reporting overdose statistics.
8. Based on presentation 1.4 by Nicole Yarid, select the one best true statement: The reliability of predicting the cause of death due to specific drug(s) following scene investigation and field drug tests is sufficient for:
- A. Issuing a death certificate listing cause of death as "probable drug overdose".
 - B. Notifying public health and criminal justice agencies to expedite their respective responses.
 - C. Excluding heart disease as an alternative cause of death.
 - D. Satisfying NAME guidelines for conducting autopsies in suspected drug overdose deaths.
 - E. Determining manner of death.

9. Based on presentation 1.5 by Richard Seeber, select the one best true statement: In this study, the majority of non-autopsied, presumed natural deaths in which illicit drugs of abuse were detected ended up being which manner of death?
- A. Accident
 - B. Natural
 - C. Homicide
 - D. Suicide
 - E. Undetermined
10. Based on presentation 1.5 by Richard Seeber, select the one best true statement: What is the name of the standards document wherein NAME publishes recommendations for which cases need full autopsies?
- A. Recommendations for Autopsy Standards
 - B. Forensic Autopsy Performance Standards
 - C. Autopsy Standards
 - D. Standards for Autopsy for Forensic Pathologists
 - E. Guidelines for Standard Autopsy Performance
11. Based on presentation 1.8 by Carl Schmidt, select the one best true statement: Acetaminophen is strongly associated with opiate toxicity. This is because:
- A. It causes acute liver failure.
 - B. It potentiates the onset of acute electrolyte disturbances in drug users.
 - C. It is commonly compounded with prescription narcotic analgesics, such as hydrocodone.
 - D. It causes a coagulopathy associated with small vessel thrombosis in pulmonary capillaries.
 - E. Glucuronidation by UGT1A1 and UGT1A6 prolongs the half life of opiates by interfering with their metabolism.

SESSION 2 (Questions 12 - 23)

12. Based on presentation 2.1 by Elizabeth Bundock, select the one best true statement: Epilepsy is diagnosed:
- A. When a person has a history of childhood febrile seizures.
 - B. When a person has a history of seizures only associated with drug/alcohol intoxication or withdrawal.
 - C. When a person has had ≥ 2 unprovoked seizures from known (e.g. developmental, trauma, tumor) or unknown cause.
 - D. Only by a neurologist.
 - E. When a person is in status epilepticus from any cause.

13. Based on presentation 2.1 by Elizabeth Bundock, select the one best true statement: When a person with epilepsy is found dead in bed, without signs of foul play or airway obstruction, with or without signs of seizure activity at the scene, and postmortem examination reveals no anatomic cause of death, the NAME position paper (Middleton, et al) suggests:
- A. Toxicology is unnecessary.
 - B. Gross examination of the unfixed brain is sufficient.
 - C. A blood spot card is the preferred specimen for potential genetic testing.
 - D. "Sudden Death Due to Epilepsy" can be used in the certification of cause of death.
 - E. A tongue bite confirms seizure activity.
14. Based on presentation 2.3 by Lauri McGivern, select the one best true statement: In the study presented, what was considered a major error on the death certificate
- A. The use of abbreviations
 - B. Multiple underlying causes of death in Part I
 - C. Underlying cause not on the last line of Part 1
 - D. Errors of sequencing
 - E. Inappropriate information included on the death certificate
15. Based on presentation 2.3 by Lauri McGivern, select the one best true statement: This list is used for the general analysis of mortality and for ranking the leading cause of death
- A. International Classification of Diseases, 10th Revision (ICD-10)
 - B. The Rankable Causes of Death
 - C. The 113 Selected Causes of Death
 - D. National Vital Statistics System
 - E. National Violent Death Reporting System
16. Based on presentation 2.4 by Carri Cottengim, select the one best true statement: What was the most common autopsy need identified by US MECs who certify SUID cases?
- A. Genetic testing
 - B. Histology
 - C. Toxicology
 - D. Witness Interviews
 - E. X-rays

17. Based on presentation 2.4 by Carri Cottengim, select the one best true statement: Which component of an investigation was routinely conducted by more than 85% of respondents when certifying cause of death in SUID cases?
- A. Family social history
 - B. Pregnancy history of infant's mother
 - C. Scene photos
 - D. Review of first responder records
 - E. Collection of scene materials
18. Based on presentation 2.5 by Michael Eckhardt, select the one best true statement: What is the most specific finding in a death due to hypothermia?
- A. Wischnewsky spots
 - B. Paradoxical undressing
 - C. Investigatory/scene findings
 - D. Cherry red lividity
 - E. Elevated beta-hydroxybutyric acid
19. Based on presentation 2.5 by Michael Eckhardt, select the one best true statement: What percentage of hypothermia cases have features of terminal burrowing behavior?
- A. 80 %
 - B. 90%
 - C. 30%
 - D. less than 25%
 - E. 50 %
20. Based on presentation 2.6 by Kasey Kreutz, select the one best true statement: A 27-year old male is discovered dead in his closet at home. Next to the decedent is a bucket with clear liquid. Toxicology tests reveal a carboxyhemoglobin level of 83%. A combination of which of the following chemicals would produce carbon monoxide?
- A. Sodium hypochlorite and ammonia
 - B. Formic acid and sulfuric acid
 - C. Sulfuric acid and sulfur
 - D. Hydrochloric acid and sodium cyanide
 - E. Sodium azide and sulfuric acid

21. Based on presentation 2.6 by Kasey Kreutz, select the one best true statement: A 54-year old male is found unresponsive in his vehicle by his wife. The man is pronounced dead at the scene. His wife is taken to the hospital complaining of headache and nausea. Inside the vehicle are unlabeled chemical bottles and a bucket of clear liquid subsequently determined to be acid. What is the suspected toxic compound causing death?
- A. Hydrogen sulfide
 - B. Hydrazoic acid
 - C. Hydrogen cyanide
 - D. Carbon monoxide
 - E. Chlorine gas
22. Based on presentation 2.7 by Julian Samuel, select the one best true statement: What is the maximum concentration of carbon dioxide that has been designated as being immediately dangerous to life?
- A. 10,000 ppm
 - B. 1,000 ppm
 - C. 25,000 ppm
 - D. 100,000 ppm
 - E. 2,500 ppm
23. Based on presentation 2.7 by Julian Samuel, select the one best true statement: What is the route of administration of CO₂ gas in carbon dioxide therapy baths?
- A. Inhalation
 - B. Ingestion
 - C. Transcutaneous absorption
 - D. Evaporation
 - E. Sublimation

SESSION 3(Questions 24 - 35)

24. Based on presentation 3.1 by Daniel Reidenberg, select the one best true statement: Suicide contagion occurs with what frequency?
- A. 1-5%
 - B. 6-10%
 - C. 10-20%
 - D. More than 20%
 - E. 0%

25. Based on presentation 3.1 by Daniel Reidenberg, select the one best true statement: When communicating the cause of death to a minor you should state it was a suicide?
- A. Always
 - B. Never
 - C. As long as the minor is over 10 years of age
 - D. Upon permission of a legal guardian
 - E. Only if they ask you
26. Based on presentation 3.2 by Richard Seeber, select the one best true statement: Which of the following is the most prevalent ketone body in the blood in the setting of acute diabetic ketoacidosis?
- A. Acetone
 - B. β -Ketopentanoate
 - C. Acetoacetate
 - D. Dihydropteroate
 - E. β -Hydroxybutyrate
27. Based on presentation 3.2 by Richard Seeber, select the one best true statement: Which of the following blood ketone values warrants further work-up for diabetic ketoacidosis?
- A. 0 mmol/L
 - B. 0.06 - 0.6 mmol/L
 - C. 0.6 - 1.0 mmol/L
 - D. 1.0 - 1.5 mmol/L
 - E. Greater than 1.5 mmol/L
28. Based on presentation 3.3 by Madeleine Opsahl, select the one best true statement: How is the drowning index (DI) calculated?
- A. (Weight of lungs + Weight of pleural effusion fluid) / Weight of spleen
 - B. (Weight of lungs + Weight of pleural effusion fluid) / Weight of liver
 - C. Weight of lungs / Weight of spleen
 - D. Weight of lungs / Weight of liver
 - E. (Weight of lungs + Weight of pleural effusion fluid) / (Weight of liver - Weight of spleen)
29. Based on presentation 3.3 by Madeleine Opsahl, select the one best true statement: What is the numerical threshold at which Sugimura et. al. found that DI is specific for drowning? (i.e., at which it can be said with reasonable certainty that the decedent drowned)
- A. $DI > 4.1$
 - B. $DI > 14.1$
 - C. $DI > 24.1$
 - D. $DI > 34.1$
 - E. $DI > 44.1$

30. Based on presentation 3.5 by Heather Maher, select the one best true statement: A gray top tube usually has what type of additive?
- A. EDTA
 - B. Sodium Chloride
 - C. Sodium Fluoride
 - D. None
 - E. Heparin
31. Based on presentation 3.5 by Heather Maher, select the one best true statement: What is the most ideal blood sample for DNA Banking?
- A. Purple Top EDTA Blood Tube
 - B. Gray Top Sodium Fluoride Tube
 - C. Red Top non preservative Tube
 - D. Blood Spot Card
 - E. Formalin fixed Tissue
32. Based on presentation 3.6 by Darin Wolfe, select the one best true statement: Which of the following is the most appropriate way to share a case photo online via social media?
- A. Uploading the photo while in the morgue.
 - B. Uploading the photo with no identifying information visible.
 - C. Uploading the photo with a time and date stamp visible.
 - D. Upload the photo of an organ or tissue on the cutting board with abundant blood in the background.
 - E. Upload the photo of a gunshot wound from a current homicide case.
33. Based on presentation 3.6 by Darin Wolfe, select the one best true statement: Which of the following is an appropriate "post" or "tweet" for a forensic pathologist on social media?
- A. "My case today was incredible. Cardiac amyloidosis in a 22 year old girl. I will definitely be publishing this."
 - B. "Just got out of court on the Jenkins trial. Looks like he's going to be guilty!"
 - C. "I've seen a disturbing number of carfentanil-containing toxicology specimens lately."
 - D. "Really tragic case today. A 12 month old was beaten to death by his dad. Hate these cases."
 - E. "Had a situs inverses case today! My Pathology Bucket List is complete!"

34. Based on presentation 3.9 by Sarah Avedschmidt, select the one best true statement: Suspicion of charred remains as a homicide involving postmortem burning include:
- A. unfamiliar outdoor place, an absence of any vital response and presence of an accelerant
 - B. familiar place, the presence of a vital reaction
 - C. found inside the home with a suicide note
 - D. Absence of burns on feet
 - E. witnessed by others
35. Based on presentation 3.9 by Sarah Avedschmidt, select the one best true statement: What is reported rate of unidentified cause of death for postmortem burning of corpses following a homicide?
- A. 5%
 - B. 4%
 - C. 3%
 - D. 2%
 - E. 1%

SESSION 4 (Questions 36 - 41)

36. Based on presentation 4.1 by Kimberly Repp, select the one best true statement: Which of the following are strengths of the National Violent Death Reporting System (NVDRS)?
- A. For each risk factor and circumstance collected, the choices “no,” “unknown,” and “missing” are recorded
 - B. Data from NVDRS are representative of the US
 - C. Law enforcement is required to provide their data and reports to NVDRS system
 - D. Data elements in the NVDRS are standardized across states participating in the system
 - E. Medicolegal death investigators verify the accuracy of their own data in NVDRS
37. Based on presentation 4.1 by Kimberly Repp, select the one best true statement: Public health uses surveillance data from death certificates to guide prevention efforts. Which of the following surveillance data is usually gleaned from the medicolegal death investigation rather than from the death certificate?
- A. Race/ethnicity information
 - B. Manner of death
 - C. Clusters of death
 - D. Drugs directly contributing to the death
 - E. Height and weight of decedent

38. Based on presentation 4.2 by Daniel Perl, select the one best true statement: Interface astroglial scarring has been demonstrated in the brains of military service members showing persistent neurologic/behavioral symptomatology who have exposed to which of the following?
- A. Loud music at rock concerts
 - B. high velocity bullets
 - C. chronic opioid abuse
 - D. improvised explosive devices (IEDs)
 - E. a single severe impact traumatic injury such as a motor vehicle accident
39. Based on presentation 4.2 by Daniel Perl, select the one best true statement: Regarding the pattern of interface astroglial scarring seen in the brains of military service members exposed to blast, the distribution of scarring relates to
- A. Differences in tissue densities (i.e. brain vs CSF, gray vs white matter)
 - B. areas in which glutamate serves as the primary neurotransmitter
 - C. areas with excessive blood flow are more severely affected
 - D. differences in the integrity of the blood-brain-barrier
 - E. the principles of the coup-contre-coup phenomenon
40. Based on presentation 4.3 by Julia Berry, select the one best true statement: Which of the following is characteristic of a partial-thickness burn?
- A. Does not blister
 - B. Involves the epidermis, dermis, and subcutaneous tissue
 - C. Dry
 - D. Painful
 - E. Does not blanch to pressure
41. Based on presentation 4.3 by Julia Berry, select the one best true statement: Which of the following is characteristic of the burn injury pattern seen as a result of intentional immersion of a child into hot water?
- A. Primarily affects the upper body
 - B. Has irregular margins
 - C. Has uniform depth
 - D. Sparing of the extensor surfaces of the body
 - E. Damage to all areas of skin submerged in water

SESSION 5 (Questions 42 - 44)

42. Based on presentation 5.1 by Matthew Gamette, select the one best true statement: The amount of Coverdell funding provided by Congress to help labs and medical examiners in FY2018 was:
- A. 20 Million
 - B. 10 Million
 - C. 40 Million
 - D. 30 Million
 - E. 35 Million
43. Based on presentation 5.3 by Judy Melinek, select the one best true statement: In a 2013 survey of forensic pathologists, approximately how many reported that they are considered prosecution witnesses within their jurisdiction?
- A. 80%
 - B. 50%
 - C. 25%
 - D. 10%
 - E. 5%
44. Based on presentation 5.3 by Judy Melinek, select the one best true statement: You are being called to testify in a case where you performed the autopsy and the attorney claims that you won't be compensated because you are a "fact witness" and will not be proffering expert testimony. What do you do?
- A. Violate the subpoena and refuse to testify.
 - B. Ask what the scope of the testimony will be and educate the attorney about fees if the testimony requires expertise.
 - C. Comply with the subpoena and testify without payment.
 - D. Report the attorney to the State Bar for refusing to pay you.
 - E. Call the State Attorney General to complain about the attorney.

SESSION 6 (Questions 45 - 56)

45. Based on presentation 6.1 by MJ Menendez, select the one best true statement: What is a J1 visa
- A. An Immigrant Visa
 - B. A green card
 - C. A Non-immigrant Visa
 - D. For medical experts only
 - E. A temporary working passport

46. Based on presentation 6.1 by MJ Menendez, select the one best true statement: At the end of a J1 Visa training program the person must:
- A. Stay as long as they like in the US
 - B. Get a work Permit
 - C. Must return to country of most last permanent residence for 2 years before returning to US
 - D. Can go to any country for 2 years before returning to the US
 - E. Turn themselves in to the State Department
47. Based on presentation 6.3 by Anita Rajkumar, select the one best true statement: Which of the following plays the primary role in administering the J-1 Exchange visitor program?
- A. U.S. Department of State (USDS)
 - B. The Department of Homeland Security (DHS)
 - C. Education commissioner of Foreign Medical Graduates (ECFMG)
 - D. United states Citizen and Immigration Services (USCIS)
 - E. SEVIS
48. Based on presentation 6.3 by Anita Rajkumar, select the one best true statement: Of the following visa options listed below, which one can be attained by a foreign born medical graduate to continue their residency training in the United States?
- A. B2 Visa
 - B. EB-1 Visa
 - C. EB-2 Visa
 - D. H1b Visa
 - E. F1 Visa
49. Based on presentation 6.4 by Laura Knight, select the one best true statement: How many American Board of Pathology diplomates are required to participate in Continuous Certification (CC) as of April 2018?
- A. 1,002
 - B. 3,005
 - C. 6,424
 - D. 8,061
 - E. 9,998

50. Based on presentation 6.4 by Laura Knight, select the one best true statement: How many of the total American Board of Pathology diplomates required to participate in Continuous Certification (CC) as of April 2018 hold a Forensic Pathology certificate?
- A. 262
 - B. 326
 - C. 462
 - D. 562
 - E. 626
51. Based on presentation 6.5 by William Oliver, select the one best true statement: What is the most important relative predictor of base income for forensic pathologists?
- A. Subspecialty certification in Forensic Pathology
 - B. Race
 - C. Region
 - D. Experience
 - E. Hours worked
52. Based on presentation 6.5 by William Oliver, select the one best true statement: Among metrics of workplace satisfaction, which of the following is most important?
- A. Quality of leadership
 - B. Adequate time
 - C. Morgue facilities
 - D. Independence from influence by outside agencies
 - E. Access to adequate radiology services
53. Based on presentation 6.6 by Richard Harruff, select the one best true statement: The Medical Education Unit in Peradeniya, Sri Lanka, commenced its academic work in 1973 with two senior teachers from which of the following countries:
- A. Germany
 - B. India
 - C. United States
 - D. Portugal
 - E. United Kingdom

54. Based on presentation 6.6 by Richard Harruff, select the one best true statement: Which of the following best describes the educational level of forensic pathologists from Sri Lanka seeking positions for their overseas training?
- A. Five years of medical school.
 - B. Certification by Sri Lankan Post Graduate Institute of Medicine
 - C. Satisfactory completion of 250 forensic autopsies in a Regional Judicial Medical Examiner's Office.
 - D. A minimum of five years postgraduate training in forensic pathology and medicine.
 - E. Three years of supervised forensic pathology experience in the Colombo Office of the Sri Lanka Coroner's Office
55. Based on presentation 6.8 by Richard Goldstein, select the one best true statement: The diagnostic yield for the National Institutes of Health Undiagnosed Disease Network, involving living patients who had been seeking a diagnosis on average for over 6 years before enrollment, has been determined to be:
- A. <5%
 - B. 5-20%
 - C. 20-30%
 - D. 30-50%
 - E. >50%
56. Based on presentation 6.8 by Richard Goldstein, select the one best true statement: In a study of temporal lobe neuropathology in the Sudden Infant Death Syndrome, numerous observations were made in the hippocampus of SIDS infants. Which of the following observations in the dentate gyrus were described?
- A. Clusters of immature cells in the subgranular layer were equally present in explained and unexplained infant deaths
 - B. Ectopic granule cells in the molecular layer were equally present in explained and unexplained infant deaths
 - C. Focal granule cell bilamination and features of hypoxic injury were significantly correlated in unexplained deaths
 - D. Hyperconvolution of the dentate gyrus was specific to explained deaths
 - E. Focal granule cell bilamination was present in 41.2% of unexplained infant deaths ($p < 0.001$)

SESSION 7 (Questions 57 - 60)

57. Based on presentation 7.2 by Stanley Radio, select the one best true statement: Which of the following is an important microscopic feature of hypertrophic cardiomyopathy?
- A. Prominent lymphocytic inflammatory infiltrate.
 - B. Areas of coagulation necrosis of myocardium.
 - C. Thickened intramural arteries.
 - D. Marked fat infiltration of right ventricle accompanied by interstitial fibrosis and chronic inflammation.
 - E. Deposition of waxy amorphous material between myocytes.

58. Based on presentation 7.2 by Stanley Radio, select the one best true statement: Asymmetric septal hypertrophy and left ventricular outflow obstruction is often associated with which other gross feature?
- A. Ventricular aneurysm
 - B. Endocardial fibrous plaque
 - C. Fibrinous epicardial exudate
 - D. Constriction of aortic near ductal artery
 - E. Calcification of aortic annulus
59. Based on presentation 7.3 by Christopher Johnson, select the one best true statement: What is the most common histologically confirmed site of arterial rupture in TBSAH?
- A. Extracranial segment of vertebral artery between dura and C1-C2
 - B. Basilar artery
 - C. Intracranial segment of vertebral artery
 - D. Posterior inferior cerebellar artery
 - E. Intracranial segment of internal carotid artery
60. Based on presentation 7.3 by Christopher Johnson, select the one best true statement: What histological feature is not a characteristic finding in the region of a traumatic vertebral artery wall tear?
- A. Thrombosis and/or early neutrophilic inflammation
 - B. Break(s) in the internal elastic lamina with unruffling.
 - C. Red blood cells interposed between the smooth muscle cells of the tunica media.
 - D. Evidence of significant pre-existing wall pathology.
 - E. Amorphous segmental loss of smooth muscle nuclear staining ('stretch change').

SESSION 8 (Questions 61 - 70)

61. Based on presentation 8.1 by Ellen Moffatt, select the one best true statement: Please complete this sentence: True prevalence of sudden arrhythmic death
- A. Has been studied exhaustively
 - B. Is determined by eliminating other causes of sudden cardiac death (such as tamponade)
 - C. Can be determined by looking at small subsets of sudden collapses
 - D. Is done without toxicology, because it is not necessary
 - E. Isn't necessary
62. Based on presentation 8.1 by Ellen Moffatt, select the one best true statement: Those more likely to have sudden arrhythmic death have
- A. Coronary artery disease, particularly of the right coronary artery
 - B. Mitral valve prolapse
 - C. Aortic valve stenosis
 - D. Myocardial rupture
 - E. Trauma

63. Based on presentation 8.2 by Gregory Webster, select the one best true statement: Which of the following sample storage methods is recommended by the National Association of Medical Examiners for post-mortem genetic sequencing (“molecular autopsy”)?
- A. lavender top / EDTA
 - B. grey top / sodium fluoride and potassium oxalate
 - C. screw-top container / sodium fluoride
 - D. red top / no additive
 - E. tiger top / silica particles
64. Based on presentation 8.2 by Gregory Webster, select the one best true statement: What is the frequency of pathogenic or likely pathogenic variants during molecular autopsy in sudden unexplained death cases between 1 and 40 years of age?
- A. <1%
 - B. 5-10%
 - C. 20-30%
 - D. 50-60%
 - E. >90%
65. Based on presentation 8.3 by Ali Torkamani, select the one best true statement: Is polygenic risk for coronary artery disease unmodifiable and deterministic?
- A. Yes - polygenic risk for coronary artery disease is both unmodifiable and deterministic.
 - B. No - polygenic risk for coronary artery disease is modifiable and probabilistic.
 - C. Yes/No - polygenic risk for coronary artery disease is unmodifiable and probabilistic.
 - D. Yes/No - polygenic risk for coronary artery disease is modifiable but deterministic.
 - E. Unknown
66. Based on presentation 8.3 by Ali Torkamani, select the one best true statement: Can polygenic risk profiling identify a significant proportion of individuals at elevated risk for coronary artery disease?
- A. No - our knowledge of genetic risk factors is not sufficient to identify individuals at high risk for disease
 - B. Yes - polygenic risk profiling can identify groups of individuals who are at elevated risk for CAD
 - C. Yes - polygenic risk profiling can identify specific individuals who will develop CAD
 - D. No - genetic factors do not contribute significantly to CAD risk in the general population
 - E. Yes - our knowledge of polygenic risk factors is complete and deterministic

67. Based on presentation 8.4 by Gregory Schmunk, select the one best true statement: What is a TRISS score?
- A. The representation of the threat to life of a given injury.
 - B. The probability that an injured person will survive serious trauma based on age physiologic parameters and AIS.
 - C. A neurological scale to determine the level of impairment of consciousness of a patient.
 - D. A physiological scoring system which predicts death, where a higher score equates to increased survival.
 - E. A scoring system which is the square of the ISS of the 3 most severely injured body regions.
68. Based on presentation 8.4 by Gregory Schmunk, select the one best true statement: The best imaging modality for depicting fractures of the axial skeleton is:
- A. Fluoroscopy
 - B. Ultrasound
 - C. Direct Digital radiography
 - D. Computed tomography
 - E. Magnetic resonance imaging
69. Based on presentation 8.5 by Danielle McLeod-Henning, select the one best true statement: The Forensic Science R&D Program supports what research goals?
- A. Fundamental/Basic Research Only
 - B. Applied Research Only
 - C. Fundamental/Basic Research, Applied Research and Development
 - D. Development Only
 - E. Applied Research and Development
70. Based on presentation 8.5 by Danielle McLeod-Henning, select the one best true statement: Which of the following two purpose areas does the NIJ's Strengthening the Medical Examiner-Coroner System Program support?
- A. Forensic Science Research and Development
 - B. Support forensic pathology fellowships and support for medical examiner/coroner offices seeking accreditation.
 - C. DNA Backlog Assistance and DNA Capacity Building
 - D. Forensic Pathology Fellowships and Medical Student Interest Groups
 - E. Mmedical examiner and coroner offices whom are currently accredited.

SESSION 9 (Questions 71 - 76)

71. Based on presentation 9.1 by Christine Mattson, select the one best true statement: Approximately how many drug overdose deaths in the United States in 2016 involved opioids?
- A. 1,000
 - B. 10,000
 - C. 40,000
 - D. 100,000
 - E. 500,000
72. Based on presentation 9.1 by Christine Mattson, select the one best true statement: Which of the following substances have been driving the increases in opioid overdose deaths over the past 3 decades?
- A. Prescription pain relievers
 - B. Heroin
 - C. Fentanyl
 - D. Fentanyl analogs
 - E. Prescription opioids, heroin, and synthetic opioids (e.g. fentanyl and fentanyl analogs)
73. Based on presentation 9.2 by Alfredo Walker, select the one best true statement: Which of the following areas have kratom as an indigenous plant?
- A. Greenland
 - B. Jamaica
 - C. Southeast Asia
 - D. United Kingdom
 - E. United States
74. Based on presentation 9.2 by Alfredo Walker, select the one best true statement: Which classification best describes the pharmacological classification of mitragynine?
- A. Antipsychotic
 - B. Benzodiazepine
 - C. Opioid
 - D. Selective Serotonin Re-uptake Inhibitor (SSRI)
 - E. Cannabinoid

75. Based on presentation 9.3 by DeMia Pressley, select the one best true statement: The National Forensic Laboratory Information System is expanding their data collection to include data from the following entities?

	Medical Examiner Offices	Coroner Offices	Toxicology Laboratories	Crime Laboratories
A	X	X		X
B	X	X	X	
C			X	X
D	X		X	
E		X	X	

76. Based on presentation 9.3 by DeMia Pressley, select the one best true statement: Of the medical examiner and coroner offices responding to the survey, how many responded that their office was not accredited?

- A. None
- B. Half
- C. Nearly two-thirds
- D. Nearly three-quarters
- E. All

SESSION 10 (Questions 77 - 78)

77. Based on presentation 10.2 by Kathryn Pinneri, select the one best true statement: Which of the following would be considered an indirect disaster related death?

- A. A drowning death related to driving into flood waters.
- B. An electrocution from a power line broken during a hurricane.
- C. A death from renal failure due to inability to obtain dialysis following a hurricane.
- D. A cancer related death in a hospice patient occurring 1 week prior to an oncoming storm.
- E. A motor vehicle collision due to excess water on the road during a tropical storm.

78. Based on presentation 10.2 by Kathryn Pinneri, select the one best true statement: Where should the disaster name go on a death certificate for a non-natural disaster-related death?

- A. In the cause of death section.
- B. Nowhere.
- C. In the contributory conditions section.
- D. In the how injury occurred section.
- E. The box on the death certificate denoting a disaster related death should be checked and the disaster listed there

SESSION 11 (Questions 79 - 85)

79. Based on presentation 11.1 by Jane Turner, select the one best true statement: Hemotympanum results from fracture of which of the following bones?
- A. Frontal
 - B. Occipital
 - C. Temporal
 - D. Parietal
 - E. Ethmoid
80. Based on presentation 11.2 by Andrew Falzon, select the one best true statement: Regarding suicidal behavior in the pediatric age group:
- A. Young children are not capable of contemplating suicidal acts
 - B. Suicide is the tenth leading cause of death in 12 year olds
 - C. Once a child has made a suicide attempt, the risk that he or she eventually completes suicide increases significantly
 - D. Most cases of drug overdose in the pediatric age group are accidental
 - E. A history of psychopathology in family members is not correlated with suicidal behavior in children
81. Based on presentation 11.2 by Andrew Falzon, select the one best true statement: The understanding of death in young children includes:
- A. Children first acknowledge death in the pre-school period
 - B. Pre-school children typically understand the finality of death
 - C. Understanding that death results from the breakdown of bodily functions is a concept developed early in childhood
 - D. The understanding of death is negatively correlated with age
 - E. Boys generally have a greater fear of death than girls
82. Based on presentation 11.3 by Ken Obenson, select the one best true statement: In forensic practice a critical value may be defined as any examination result that "prompts expeditious testing/monitoring of a decedent's relatives". Which of the following autopsy diagnoses is least likely to be classified as a "critical value"?
- A. Fentanyl overdose in a 32 year old male
 - B. Hypertrophic cardiomyopathy in a 5 year old girl
 - C. Ischemic coronary artery disease in a 75 year old male
 - D. Metastatic pancreas carcinoma in a 45 year old male
 - E. Smoke inhalation and thermal injuries in a 62 year old female

83. Based on presentation 11.3 by Ken Obenson, select the one best true statement: You conclude an autopsy on a healthy 23 year old male with multiple perforating gunshot wounds on the chest. However you observe features on his body that require consideration of a critical value report. The most likely one is:
- A. Enlarged yellow fatty liver with gallstones
 - B. Extensive (at least one hundred) colonic polyposis
 - C. A surgically absent spleen
 - D. Unusually tall, with long limbs
 - E. A berry aneurysm of the Circle of Willis
84. Based on presentation 11.4 by Evan Matshes, select the one best true statement: Post-traumatic meningitis in children is most commonly associated with:
- A. intraventricular hemorrhage
 - B. basilar skull fracture
 - C. subdural hemorrhage
 - D. brain contusions
 - E. fungal infection
85. Based on presentation 11.4 by Evan Matshes, select the one best true statement: Which of the following is a recognized risk factor for the development of meningitis in infants and children:
- A. Non-impact head trauma (“shaken baby syndrome”)
 - B. Ingestion of honey
 - C. Direct extension of infection from sinuses or middle ears
 - D. Cerebral arterio-venous malformation
 - E. Impact head trauma without associated skull fracture

SESSION 12 (Questions 86 - 98)

86. Based on presentation 12.1 by Sally Aiken, select the one best true statement: During relaxed or unconscious freefall from a height, the human body tends to assume which orientation?
- A. Vertical, feet first
 - B. A random orientation, depending on height of fall.
 - C. Horizontal
 - D. Vertical, head first
 - E. A random orientation, depending on body habitus

87. Based on presentation 12.1 by Sally Aiken, select the one best true statement: In series of decedents who die after jumping from a bridge into water, which area of the body is most likely to have traumatic injuries?
- A. Central nervous system
 - B. Thorax
 - C. Spine
 - D. upper extremities
 - E. lower extremities
88. Based on presentation 12.2 by Heather MacLeod, select the one best true statement: The SDY Case Registry has developed tools for:
- A. Death scene investigation, family interview and autopsy
 - B. Autopsy, death scene investigation and toxicology
 - C. Family interview, autopsy and direct to consumer genetic testing
 - D. Death scene investigation, family interview and infectious disease testing
 - E. Autopsy, family interview and head circumference
89. Based on presentation 12.2 by Heather MacLeod, select the one best true statement: One of the goals of the SDY Case Registry is to promote:
- A. Standardization of information collected on autopsies for young sudden deaths
 - B. Standardization of information collected on autopsies for deaths from chronic medical conditions
 - C. Standardization of information collected on autopsies for childhood accidents
 - D. Standardization of information collected on autopsies for childhood cancers
 - E. Standardization of information collected on autopsies for adult deaths
90. Based on presentation 12.4 by Theodore Brown, select the one best true statement: What is the primary purpose of manner of death determination?
- A. Public health and vital statistics
 - B. Financial purposes, including payment of insurance premiums
 - C. Justice system use
 - D. Provide social and cultural meaning of death
 - E. Religious purposes
91. Based on presentation 12.4 by Theodore Brown, select the one best true statement: What is the most common manner of death determined in autoerotic asphyxial hanging deaths?
- A. Accident
 - B. Natural
 - C. Suicide
 - D. Homicide
 - E. Undetermined

92. Based on presentation 12.5 by Yolanda Nash, select the one best true statement: How does the Consumer Product Safety Commission (CPSC) use data reports received from medical examiners?
- A: The CPSC makes all data available online for the general public to view.
 - B: CPSC ensures autopsies are timely when there are deaths associated with consumer products.
 - C: CPSC staff determine causal relationships between consumer products and fatalities for every MECAP reported.
 - D: CPSC reports product-related injury data to the National Center for Health Statistics.
 - E: MECAPs provide evidence for campaigns, product safety standards and to determine need for product recalls and bans
93. Based on presentation 12.6 by Kendall Crowns, select the one best true statement: With how much force does a horse kick?
- A. Between 8000 - 10,000 Newtons
 - B. Between 1,000 - 2,000 Newtons
 - C. Between 800 - 1,000 Newtons
 - D. Between 11,000- 12,000 Newtons
 - E. Between 14,000 – 15,000 Newtons
94. Based on presentation 12.6 by Kendall Crowns, select the one best true statement: Which of the following is the most common fatal equine-related injury?
- A. Biting injuries of the neck
 - B. Blunt trauma to extremities
 - C. Blunt trauma to the chest and abdomen
 - D. Blunt trauma to the head and neck
 - E. Biting injuries of the extremities
95. Based on presentation 12.7 by Linda Iles, select the one best true statement: In the setting of post mortem CT angiography, aortic dissection:
- A. Is always an antemortem phenomenon.
 - B. Is not a recognized artefact of post mortem arterial puncture and contrast infusion.
 - C. Should always be confirmed on the unenhanced, precontrast scan.
 - D. Should be ignored.
 - E. Is the definitive cause of death.
96. Based on presentation 12.7 by Linda Iles, select the one best true statement: Infusion of contrast in post mortem angiographic examination can be performed using:
- A. Only a modified heart lung machine.
 - B. Only a trademarked specialised perfusion apparatus.
 - C. Only an embalming pump.

- D. Either an embalming pump, a modified heart lung machine or trademarked specialised perfusion apparatus.
- E. Only a scalpel and a bone saw.

97. Based on presentation 12.8 by Christian Torres, select the one best true statement: A recognized method for the rehydration of desiccated finger tips to allow for obtaining fingerprints utilizes:

- A. Hydrochloric acid
- B. Potassium hydroxide
- C. Copper sulfate
- D. Cyanoacrylate
- E. Formaldehyde

98. Based on presentation 12.8 by Christian Torres, select the one best true statement: Currently described rehydration techniques for use in cases where the body has desiccated fingertips have a turnaround time of:

- A. Less than 5 minutes
- B. 1-2 hours
- C. 12-24 hours
- D. 24-72 hours
- E. 2-4 weeks

OPTIONAL WORKSHOP 1 (Questions 99-100)

99. Based on presentation W1 by Michelle Aurelius, select the one best true statement: According to Daniel Goleman's Leadership That Gets Results, a landmark 2000 Harvard Business Review study, what are the six leadership styles effective leaders use?

- A. Coercive, authoritative, affiliate, democratic, pacesetting, and coaching.
- B. Self-awareness, self-management, social awareness, social skill, influence, and teamwork.
- C. Coercive, affiliate, social skill, influence, coaching, and teamwork.
- D. Democratic, pacesetting, coaching, self-awareness, self-management, and social awareness.
- E. Affiliate, democratic, pacesetting, self-management, social awareness, and social skill.

100. Based on presentation W1 by Michelle Aurelius, select the one best true statement: According to Daniel Goleman's Leadership That Gets Results, a landmark 2000 Harvard Business Review study, what leadership style had the most positive impact on the organization?

- A. Coercive.
- B. Authoritative.
- C. Affiliate.
- D. Democratic.
- E. Pacesetting.