

New England College of Occupational and Environmental Medicine
Annual Conference 2017 ABPM MAINTENANCE OF CERTIFICATION (MOC) - QUESTIONS

Please email, mail or fax to NECOEM, 22 Mill St, Groveland, MA 01834, 978-373-5597, necoem@comcast.net

Your name _____

Your email _____

*** Your answers must be written on the Attendance Verification form.**

Larson, Huyck, Cohen, Bentley

1. Injured workers frequently disclose their trauma symptoms to their treating providers. True or False
2. Asking about trauma symptoms, even with injuries that seem minor, can help identify reasons for delayed recovery or can help with early identification of barriers to return to work. True or False
3. Primary indications for EMR treatment are:
 - a. Recurrent injury movie running in the head,
 - b. avoidance behaviors,
 - c. hypervigilance
 - d. all of the above
4. Contraindications to EMR treatment are: _____
5. The goal of the two phases of EMR treatment are:
 - a. RE-ESTABLISH OBSERVATIONAL EGO and
 - b. REPROCESS THE TRAUMATIC MEMORY
 - c. Both of the above
6. During the first phase of EMR treatment, you tell patients to run the movie:
 - a. Forward in black and white as an observer
 - b. Backward in black and white as part of the movie
 - c. Forward in color as an observer
 - d. Backward in color as part of the movie
7. During the second phase of EMR treatment, you tell patients to run the movie:
 - a. Forward in black and white as an observer
 - b. Backward in black and white as part of the movie
 - c. Forward in color as an observer
 - d. Backward in color as part of the movie
8. At the completion of the first phase of treatment, the patient should never run the movie forward again. True or False
9. After treatment is complete, the patient can run the movie backward in color on their own to help control residual symptoms. True or False

Leikin – Medical Perspectives on Risk and Fitness

10. Marijuana pharmacology differs from that of ethanol in that marijuana _____
 - a. has several active metabolites.
 - b. has a shorter half life.
 - c. has a small volume of distribution.
 - d. is far more predictable than that of ethanol.
11. Impairment from marijuana can easily be diagnosed from blood or urine analysis. True or False
12. Marijuana overdose can present
 - a. as a hyperadrenergic delirium
 - b. with hepatic toxicity
 - c. with very slow heart rates
 - d. with pulmonary toxicity

Dyleski-Najjar-Marijuana Legal Issues

13. Over half of the states have approved medical marijuana for certain medical conditions? True or False
14. Medical Marijuana is listed as an illegal Schedule I drug by the federal government? True or False
15. Impairment in the workplace can be reliably tested by a drug test? True or False

Panel (Leikin, Dyleski-Najjar, Okurowski, Thompson)

16. Which of the following statements are true regarding work fitness decision making involving workers who use marijuana?
- Policies and procedures should be developed and explained to employees regarding urine drug testing and fitness for duty assessments for potential impairment.
 - Guidelines for fitness for duty need to include decision making in states with medical and recreational marijuana.
 - Occupational health providers should work with employers to assess risk based on the safety-sensitive nature of the job.
 - If the employer has a zero tolerance policy, under federal law, the employer is not required to consider the underlying medical condition if terminating the employee for a positive drug test
 - All are correct
17. Which of the following laws and regulations must be among those considered when making decisions on work fitness for workers who use marijuana?
- The Americans with Disabilities Act
 - Federal Drug-Free Workplace Act
 - Federal and state marijuana laws
 - U.S. Department of Transportation drug testing programs
 - All are correct

Storey – What Can Sentinel Events Tell Us?

18. An occupational sentinel health event may signal that which intervention(s) may be required?
- Materials substitution
 - Engineering Control
 - Personal Protection
 - Medical Care
 - All of the above.
 - A and B.
 - A, B, and C.
19. An occupational sentinel health event may represent
- The occurrence of a known condition in the setting of a known relevant exposure.
 - The occurrence of a previously unknown condition related to an emerging hazard.
 - The occurrence of a known condition unrelated to a workplace exposure.
 - A and C.
 - A and B.
 - All of the above.
20. Response to an occupational sentinel health event should always involve
- Management of the individual affected to minimize harm.
 - Evaluation of risks to coworkers.
 - Removal of the affected worker.
 - Mitigation of identified relevant exposures.
 - All of the above.
 - A and B.
 - A, B, and D.

Kimball – Evaluation and Treatment of Hand Injuries

21. Hand, wrist and finger injuries account for _____ percent of all workplace injuries?
- 10
 - 25
 - 40
 - 50
22. Workers on an assembly line are more likely to get carpal tunnel syndrome than those who are data entry workers. True or False
23. Workers with symptoms of wrist tendinitis as best managed with?
- Rest & activity modification
 - Anti-inflammatory medications
 - Splint
 - All of the above

Sayed- Ultrasound as a Diagnostic Tool for Musculoskeletal Disorders

24. How much has Musculoskeletal Ultrasound been proposed to save in health care costs as a substitution to MRI in the period from 2006 to 2020

- A.) The substitution of MSK US for MSK MRI, when appropriate, would lead to savings of more than \$6.9 billion
 - B.) The substitution of MSK US for MSK MRI, when appropriate, would lead to savings of more than \$1 million
 - C.) The substitution of MSK US for MSK MRI, when appropriate, would lead to savings of more than \$100 million
 - D.) The substitution of MSK US for MSK MRI, when appropriate, would lead to savings of more than \$500 million
25. Is Musculoskeletal Ultrasound more sensitive and specific than MRI for Rotator cuff tears
- A.) Ultrasound is both AS sensitive and MORE specific than MRI
 - B.) Ultrasound is both MORE sensitivity and specific than MRI
 - C.) Ultrasound is NEITHER MORE sensitive or specific than MRI
 - D.) Ultrasound is LESS Sensitive but MORE specific than MRI
26. What is the best way to learn clinical musculoskeletal ultrasound
- A.) Reading medical journals and Books that illustrate the use of musculoskeletal Ultrasound
 - B.) Taking a course to learn musculoskeletal Ultrasound
 - C.) Using an Ultrasound machine during clinical encounters
 - D.) All of the above

Audette – Acupuncture’s Role in Managing Work Injury Pain

27. In a classic study, did pre-injection of naloxone block the effect of acupuncture performed on mice for acute pain?
- 1. Yes
 - 2. No
 - 3. Not conclusive
28. Which of the following statements best describes the effect of acupuncture on chemical releases in animal models?
- 1. Endogenous opioids are the only chemical important for acupuncture analgesia.
 - 2. Various chemicals are released with acupuncture that contribute to analgesia including endorphins, serotonin, and norepinephrine.
 - 3. Acupuncture mainly influences chemical releases at the level of the Dorsal Horn and not at the level of the midbrain or pituitary gland.
29. Acupuncture should mainly be applied
- 1. As a monotherapy, without the incorporation of western methods and understanding.
 - 2. When western style treatment fails to relieve pain.
 - 3. As an integrative modality than can work in concert with western methods.

Theodore – Evaluation and Treatment of Ankle Injuries

30. The most common mechanism for an ankle sprain is an inversion injury. True or False
31. Most cases of plantar fasciitis should be treated with surgery. True or False
32. Treatments for Achilles tendonitis include the following except:
- A. Heel lift
 - B. Immobilization in a boot
 - C. NSAID’s
 - D. Cortisone injection of the tendon

Blum, Poliner – DOT Update

33. After January 1, 2018, commercial drivers no longer need to be given a paper copy of the "Medical Examiner's Certificate" at the conclusion of their examination. True or False
34. Regulatory requirements for acceptable blood pressure measurements can be found on the reverse of the current FMCSA Medical Examination Report form. True or False
35. A Medical Examiner cannot qualify a commercial driver for less than one year after a prior qualification period of three months. True or False

Saito – Vision Assessment

36. Which of the following is true in regard to color vision:
- A. Ophthalmologic responses to acute hypoxia include color vision deterioration as a direct effect of decreased oxygen delivery to the retinal rods and cones that are responsible for color vision processing.
 - B. Foveal cone cells require more illumination to function than the mixed rod and cone cells found in the peripheral retina.
 - C. Light levels approximating full moonlight are not able to stimulate the fovea cells and its color vision.
 - D. The fovea, like the rest of the retina, depends on a continuous supply of oxygenated blood to function, and is exquisitely sensitive to the effects of hypoxia, even at relatively low altitudes (5,000 ft).

- E. Mild hypoxia at altitudes as low as 5,000 ft. (1524 m) begins to affect the ability of rods and cones to process color and light sensitivity of the dark-adapted eye. This may restrict central and peripheral visual fields.
- F. All of the above

37. Most color vision defects are congenital. True or False

38. Acquired color vision defects include:

- A. Disorders of the cone cells
- B. Disorders of the optic nerve
- C. Central nervous system diseases or injuries.
- D. All of the above

39. Causes of color vision defects include:

- A. Central serous retinopathy
- B. Poisoning by agents such as lead, tobacco, or alcohol
- C. Multiple sclerosis (MS), as well as direct brain injury

McKeon – Emerging Technologies in Musculoskeletal Injuries

40. True or false. Mesenchymal stem cells regenerate tendon/cartilage/ligament.

41. True or false. Autologous iliac crest bone marrow aspirate has more stem cells than amniotic sources.

42. True or false. Platelet rich plasma treatment requires sedation.

Raukar, Teeple -Traumatic Brain Injury

43. Severity of a concussion can be characterized by a number of clinical tools including the Glasgow Coma Scale. True or false

44. Which of the following are required for the diagnosis of concussion?

- a. An event that causes acute trauma to the head or neck, or transmission of impulsive forces to the head.
- b. Loss of consciousness
- c. Acute cognitive symptoms such as confusion and amnesia
- d. a and c
- e. All

45. Which factors influence recovery after concussion?

- a. Psychological comorbidities
- b. Litigation
- c. Workers' compensation
- d. Lower GCS
- e. All

Kales – Sleep and the Workplace

46. Asking someone how sleepy they are is an accurate and reliable measure of alertness among persons with sleep deprivation.

- A. True
- B. False

47. Which of the following are determinants of wakefulness/alertness/fatigue?

- A. The number of hours awake
- B. Sleep inertia
- C. Jetlag and other circadian factors
- D. Diabetes Mellitus
- E. All of the above

48. Obstructive sleep apnea (OSA) may have all of the following effects on health and driving except:

- A. excessive daytime sleepiness.
- B. impaired vigilance.
- C. improved tolerance for night driving.
- D. increased risk of hypertension, heart disease and stroke.
- E. increased risk of accidents.

Lang – OH in a Research Environment

49. Medical information obtained via the health inventory questionnaire and interview should be shared with Environmental Health and Safety? True or False
50. Treatment of a human exposure to an SIV positive non-human primate is different than treatment of a human exposure to a HIV positive human. True or False
51. Individuals currently receiving chemotherapy for cancer should be excluded from BSL-3 research areas. True or False

Barbeau – Targeting Delivery: Viral Vectors and Antibody Conjugates

52. What are the major risks to be considered for research with lentiviral vectors?
- Reversion to wild-type HIV-2 infection.
 - Potential for the generation of replication-competent lentivirus and insertional mutagenesis
 - Potential for the development of acquired immunodeficiency
 - There are no risks associated with lentiviral vectors
53. Vectors derived from which of the following viruses may be handled at Biosafety Level 1 (BSL1) under certain conditions?
- Retroviruses
 - Adeno-associated viruses
 - Herpes simplex viruses
 - None of the above
54. Which of the following statements about Antibody Drug Conjugates (ADC) is true?
- Antibody drug conjugates are composed of three main structural units – the antibody, the drug, and the linker.
 - The linker has no effect on the pharmacokinetics, toxicity, or efficacy of the ADC.
 - A single drug molecule is attached to a single antibody molecule to improve efficacy.
 - All of these statements are true.

Lefkowitz – Workers at Sea

55. Which of the following IS TRUE regarding international seafarers?
- There are 1.5 million seafarers worldwide, providing 90% of global commerce.
 - Common seafarer occupational injuries include injuries to the back and upper/lower extremities.
 - Seafarers are an isolated working population.
 - All of the above.
 - None of the above.
56. Which of the following is NOT true regarding American mariners on tugs, tows, and barges? (select all that apply)
- Formal training is required for all, from deckhands to captains.
 - The Merchant Marine Act of 1920 (Jones Act) protects the rights of our nation's mariners with work-related injury.
 - Mariners may come from rural communities with significant health disparities.
 - Exposures vary by type of boat, job, location of operations, and cargo.
57. A medical professional makes the final decision for medical repatriation of seafarers. True or False

Levy – Climate Change and Public Health

58. Which of the following are direct health consequences of climate change?
- Heat-related disorders
 - Respiratory and allergic disorders
 - Specific types of infectious diseases
 - Injuries from extreme weather events
 - All of the above
59. Indirect health consequences of climate change include which of the following?
- Malnutrition as a result of decreased crop yields
 - Decreased health status of populations forced to migrate
 - Increased risk of injuries, illnesses, and deaths due to collective violence
 - Anxiety and depression
 - All of the above
60. Which of the following can help mitigate climate change?
- Switching from reliance on fossil fuels to renewable energy sources
 - Increasing the efficiency of gasoline-powered automobiles

- c. Promoting active transport
- d. Switching from a meat-based diet to a diet based on fruits and vegetables
- e. All of the above

Lewiton – How Workers Become Patients

- 61. Height-adjustable tables can be used to reduce the potential for musculoskeletal injuries during loading and unloading pallets. True or False
- 62. Water is generally the most effective control measure for reducing the concentration of respirable crystalline silica during cutting or grinding operations. True or False

Ferreira – Tips and Tools for the OH Nurse

- 63. What does “VPP” stand for according to OSHA?
 - A) Volunteer Professional Program
 - B) Voluntary Protection Program
 - C) Various Plans Provided
- 64. A nurse may suspect a bruise is older vs new when:
 - A) The skin is scaly
 - B) The color is red and bluish
 - C) The color is brown and green
- 65. “POP” is an acronym for best practices. It means be:
 - A) Professional, Objective, and Polite
 - B) Prepared, On Time, and Patient
 - C) Passionate, On Target, and Pleasant

Bennett-Rizzo – Evaluation of a Suspected Impaired Employee

- 66. Any employee with an acute and major change in their usual behavior and/or function should be referred by the supervisor for a fitness for duty assessment. True or False
- 67. The supervisor documents the performance, behavioral, and/or functional changes and the impact on the employee’s ability to perform his/her work. True or False

Gulati – Hypersensitivity Pneumonitis

- 68. All forms of hypersensitivity pneumonitis will reverse after removal of suspected antigen. True or False
- 69. All patients with acute hypersensitivity pneumonitis will need eventual treatment with corticosteroids. True or False

Korre – Cardiac Enlargement in US Firefighters

- 70. Which clinical scenario would put a U.S. firefighter at highest risk (greatest susceptibility) for line of duty, sudden cardiac death?
 - a. Well-controlled hypertension
 - b. Obesity, LVH and subclinical obstructive coronary artery disease
 - c. Moderate obstructive coronary artery disease
 - d. LVH alone
- 71. Targeted screening using ECHO in obese firefighters and those with obstructive sleep apnea, uncontrolled or longstanding hypertension should be considered. True or False

Rainey – Volunteer Firefighters and Mediterranean Diet

- 72. The high prevalence of obesity among volunteer firefighters is partially explained by the misclassification of muscular firefighters as obese by using BMI as a measure for obesity rather than body fat percentage. True or False
- 73. Which of the following nutritional interventions have been shown to reduce the risk of cardiovascular disease, cancer, dementia and all-cause mortality:
 - a. Atkins Diet
 - b. Western Diet
 - c. Mediterranean diet
 - d. Gluten-free diet

NECOEM Annual Conference 2017 ABPM Maintenance of Certification -ANSWERS

Larson, Huyck, Cohen, Bentley:

1. False
2. True
3. d
4. History of dissociative episodes or disorder
5. c
6. a
7. d
8. True
9. True

Leikin:

10. a
11. False
12. A

Dyleski-Najjar

13. True
14. True
15. False

Panel (Leikin, Dyleski-Najjar, Okurowski, Thompson)

16. e
17. e

Storey

18. E
19. E
20. G

Kimball

21. B. 25
22. B. False
23. D. All of the above

Sayeed

24. A
25. A
26. D

Audette

27. 1;
28. 2;
29. 3

Theodore

- 30 True
31. False
32. **D. Cortisone injection of the tendon**

Blum, Poliner

33. FALSE - the implementation date is June 1, 2018
34. FALSE - this information is no longer printed on the reverse side of the form. Medical Examiners can refer to 49 CFR 391.432(f) and 49 CFR 391.41(b)(6) for recommendations concerning qualification criteria and duration related to hypertension.
35. FALSE - The Medical Examiner can qualify a driver for whatever period (two years or less) the examiner believes to be appropriate

Saito

36. F
37. True
38. D
39. C

McKeon

40. False
41. False
42. False

Raukar, Teeple

43. T
44. d
45. e

Kales

46. B. False
47. E. all of the above
48. C. improved tolerance for night driving

Lang

49. False. The policy has been if the medical information does not interfere with their current employment that information is NOT shared with Environmental Health and Safety. The employee is encouraged to share that information with their supervisor but they are not required to reveal any medical information to non medical personal. An example would be a diabetic who might find it beneficial if fellow employees were aware of the medical condition to offer medical assistance if needed.
50. False. SIV is the Non-human equivalent of HIV in Humans. SIV is NOT deadly to the Non-human

population thus making them an excellent research model for HIV research. SIV is treated with Trivada and Ratiogavir

51. True. Organisms within BSL-3 environments do not have treatment, vaccine or cure but the potential for an exposure always exist so a person with limited ability to combat any disease should not be placed in an environment that is unsafe for them.

Barbeau

52. b) Potential for the generation of replication-competent lentivirus and insertional mutagenesis

53. b) Adeno-associated viruses

54. a) Antibody drug conjugates are composed of three main structural units – the antibody, the drug, and the linker.

Lefkowitz – Workers at Sea

55. D
56. A
57. False

Levy

58. E
59. E
60. E

Lewiton

61. True
62. True

Ferreira

63. B
64. C
65. A

Bennett-Rizzo

66. True
67. True

Gulati

68. False
69. False

Korre

70. b. Obesity, LVH and subclinical obstructive coronary artery disease

71. True

Rainey

72. False
73. Mediterranean Diet