

SP05PC - Pre-Instructional Survey

Name _____ Date _____

1. EPA's Clean Air Market Division (CAMD) deals with
 - a. CEM enforcement policy
 - b. MACT programs
 - c. NSPS programs
 - d. Emissions trading programs

2. Excess emission reporting requirements are found in
 - a. 40 CFR 60.7
 - b. 40 CFR 75 Subpart G
 - c. 40 CFR 51
 - d. 40 CFR 75

3. Cool-dry source level extractive systems:
 - a. condition the sample gas before analysis
 - b. dilute the flue gas
 - c. analyze the flue gas as it exists in the stack
 - d. scrub out the analytes of interest

4. The dilution probe is popular for Part 75 CEM installations because:
 - a. dilution probe system have proven to be the best system for all applications.
 - b. dilution probe systems measure on a wet basis.
 - c. they can operate without any maintenance.
 - d. they are pressure and temperature insensitive.

5. The absorption of infrared radiation by a CO₂ molecule
 - a. occurs at all wavelengths in the IR
 - b. causes the CO₂ to chemiluminesce.
 - c. causes vibrational-rotational transitions to occur in the molecule.
 - d. generates a wormhole that can be used for time travel

6. Which one of the following applies to analyzers used most commonly for obtaining data on total hydrocarbon emissions?
 - a. TDL
 - b. NDUV
 - c. FID
 - d. GCMS

7. Which one of the following techniques is not used to measure oxygen in CEM systems?
 - a. paramagnetism
 - b. Fourier transform infrared spectroscopy
 - c. electrocatalysis with ZrO₂
 - d. polarography

8. NO_x measurements obtained using the chemiluminescence technique are affected by which one of the following?
 - a. absorption of infra-red radiation by interfering compounds.
 - b. the presence of SO₂
 - c. flue gas velocity
 - d. NO₂ to NO converter efficiency

9. Measuring NO_x at levels < 2 ppm
 - a. can be done with relative accuracies better than 7.5%
 - b. is not required anywhere in the U.S.
 - c. is routine
 - d. is an issue of ongoing development

10. In an FTIR analyzer, the moving mirror
 - a. scans the library spectra
 - b. generates an interferogram
 - c. is used to measure flue gas velocity
 - d. reflects the light to give a reference reading for measuring flue gas opacity

11. What type of in-situ monitor is best suited for a daily calibration error test?
 - a. path, single pass
 - b. point, in-stack
 - c. path, double pass
 - d. in-situ monitors cannot undergo a daily calibration error test

12. CEM system data used in Performance Specification Test calculations is taken from
 - a. the data acquisition/reporting system output.
 - b. the instrument meters.
 - c. strip chart recorders.
 - d. the agency computer, when the data is transmitted by modem or telemetry.

13. Path in-situ gas monitors
 - a. require air conditioned shelters
 - b. correct gas concentrations to the stack exit diameter
 - c. measure conditioned gas
 - d. measure across the stack

14. Mercury monitors
 - a. will become mandatory for hazardous waste incinerators in 2003
 - b. are proven technology for application in the U.S.
 - c. are undergoing development
 - d. are unaffected by HCl

15. Opacity monitors installed after Feb. 6, 2001, must meet the design specifications given in
 - a. ISO 10155
 - b. ASTM 6216-98
 - c. ISA DTR77.81.02
 - d. VDI 2066

16. Flue gas velocity measured by a pitot tube is dependent upon:
 - a. SO₂ concentration
 - b. stack height
 - c. yaw angle
 - d. the particulate loading

17. For 40 CFR 60 Appendix F SO₂ monitors, a Relative Accuracy Test Audit (RATA) is conducted
 - a. daily.
 - b. weekly.
 - c. quarterly.
 - d. annually.

18. What is the relative accuracy specification for Part 60 NO_x monitors?
- a. 7.5%
 - b. 10%
 - c. 15%
 - d. 20%
19. It is best when a CEM QA manual is prepared by
- a. a consultant
 - b. EPA
 - c. the CEM system vendor
 - d. the CEM operator
20. A PEMS is a
- a. parameter enforcement monitoring system
 - b. predictive emission monitoring system
 - c. periodic elevating mood suppressant
 - d. performance enhancement method

SP05PC - Pre-Instructional Survey Answer Sheet

1. d
2. a
3. a
4. b
5. c
6. c
7. b
8. d
9. d
10. b
11. b
12. a
13. d
14. c
15. b
16. c
17. d
18. d
19. d
20. b