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QUIZ

socrative

H. MD. SAMEERA
T1591
June 4, 2021

EC8511-CONTROL AND INSTRUMENTATION LAB

93.33% (14/15)

✓ **1.** Wheatstone bridge is used to measure resistance in the range of _____

1/1 POINT

A 1Ω to a few megaohms

B 10kΩ to a few megaohms

C 100MΩ to a few gegaohms

D 100Ω to a few teraohms

✓ **2.** The relation between ratio of resistance arms and ratio of resistance arms of second bridge is _____

1/1 POINT

A unequal

B equal

C twice

D one forth

✓ **3.** Electrical strain gauge works on the principle of _____

1/1 POINT

A variation of resistance

B variation of capacitance

C variation of inductance

D variation of area

4. Thermistors have _____

0/1 POINT

A positive temperature coefficient

B negative temperature coefficient

C zero temperature coefficient

D infinite temperature coefficient

5. Relation between temperature and resistance of a conductor is _____

1/1 POINT

A $R_t = R_{ref}[1+t]$

B $R_t = R_{ref}[1+\alpha\Delta t]$

C $R_t = R_{ref}[1-\alpha t]$

D $R_t = R_{ref}[1-t]$

6. Maxwell inductance capacitance bridge can be used for _____

1/1 POINT

A measurement of inductance

B measurement of capacitance and inductance

C measurement of resistance

D measurement of voltage and current

7. Energy meter creeps _____

1/1 POINT

A due to change in supply

B due to reversal in polarity of voltage

C due to asymmetry in magnetic circuit

D due to turns ratio of transformer

8. In a 3-phase power measurement by two wattmeter method the reading of one of the wattmeter was zero. The power factor of the load must be

1/1 POINT

A Unity

B 0.5

C 0.3

D Zero

9. The input of a controller is

1/1 POINT

A Sensed signal

B Error signal

C Desired variable value

D Signal of fixed amplitude not dependent on desired variable value

10. Laplace transform of unit impulse signal is :

1/1 POINT

A A/s

B A

C 1

D 1/s

11. The steady state error for a unit step input is _____

1/1 POINT

A 1/kp

B 1/(1-kp)

C 1/2kp

D 1/(1+kp)

12. What instrument is used to amplify output signal of transducer

1/1 POINT

A Peaking amplifier

B Instrumentation amplifier

C Differential amplifier

D Bridge amplifier

13. Strain guage,LVDT and thermocouple are examples of

1/1 POINT

- A Active transducers
- B Passive transducers
- C Analog transducers
- D Primary transducers

14. Find the resolution of a 10-bit AD converter for an input range of 10v?

1/1 POINT

- A 97.7mv
- B 0.977mv
- C 977mv
- D 9.77mv

15. Which of the following techniques is utilized to determine at the actual point at which the root locus crosses the imaginary axis?

1/1 POINT

- A Nyquist technique
- B Nichol's technique
- C Routh-Hurwitz technique
- D Bode technique

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Shiva sankar V
T1591
June 4, 2021

EC8511-CONTROL AND INSTRUMENTATION LAB

80% (12/15)

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unit -2 & 3

22 Questions

1. Supersonic jets cause pollution by thinning of

1 POINT

1/22 **A** Sulphur dioxide layer

4/22 **B** Carbon dioxide layer

16/22 **C** Ozone layer

1/22 **D** None of these

2. Clouds are present in

1 POINT

12/23 **A** troposphere

8/23 **B** b) stratosphere

1/23 **C** (c) mesosphere

2/23 **D** (d) thermosphere

3. Coning plume occurs under which conditions?

1 POINT

3/23 **A** a) Super adiabatic

7/23 **B** b) Sub adiabatic

5/23 **C** c) Neutral

8/23 **D** d) Inversion

4. In which of the following plumes, stable condition prevails?

1 POINT

4/23 A a) Lofting

6/23 B b) Fanning

10/23 C c) Neutral

3/23 D d) Fumigating

5. . The upward vertical rise prevails in which of the following plume?

1 POINT

3/23 A a) Trapping

2/23 B b) Fanning

2/23 C c) Looping

16/23 D d) Neutral

6. Which of the following plume is worst for the dispersion of pollutants?

1 POINT

7/23 A a) Trapping

1/23 B b) Fanning

4/23 C c) Neutral

11/23 D d) Fumigating

7. In which of the following plumes, unstable condition prevails?

1 POINT

3/23 A a) Trapping

5/23 B b) Fanning

14/23 C c) Looping

1/23 D d) Neutral

8. Which of the following are contradictory plume?

1 POINT

11/23 **A** a) Lofting and fumigating

4/23 **B** b) Looping and coning

5/23 **C** c) Neutral and lofting

3/23 **D** d) Fumigating and trapping

9. The minimum particle size removes by the gravitational chamber is _____

1 POINT

8/23 **A** a) >50μm

6/23 **B** b) >10μm

2/23 **C** c) >25μm

7/23 **D** d) >0.5μm

10. What does the word 'meteorology' define?

1 POINT

2/25 **A** a) Study of meteors and asteroids

3/25 **B** b) Study of measurements and instruments

2/25 **C** c) Study of chemical properties of metals

18/25 **D** d) Study of the weather and atmospheric changes

11. What is a "tetroon" in the field of meteorology?

1 POINT

20/24 **A** a) A tool used to study wind patterns

2/24 **B** b) A tool used to study pressure variations

1/24 **C** c) A tool used to study temperature deviations

1/24 **D** d) A tool used to study humidity

12. What does the Richardson number indicate in wind analysis?

1 POINT

3/25 A a) Mechanical turbulence

4/25 B b) Convective heat production

15/25 C c) Mechanical turbulence & Convective heat production

3/25 D d) None of the mentioned

13. What does the term “turbidity” indicate in atmospheric quality?

1 POINT

4/23 A a) Indicates density of clouds

15/23 B b) Reduction of light due to dust particles

3/23 C c) Indicates the humidity

1/23 D d) Turbulence of winds

14. How does atmospheric pressure vary with increase in altitude?

1 POINT

7/23 A a) It decreases linearly

6/23 B b) It decreases exponentially

3/23 C c) It increases linearly

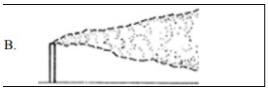
7/23 D d) It increases till stratosphere and then starts decreasing exponentially

15. Which one of the plume behaviour is the most undesirable for the ground level receptors

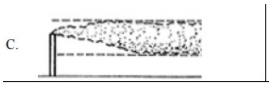
1 POINT

1/22 A

2/22 B



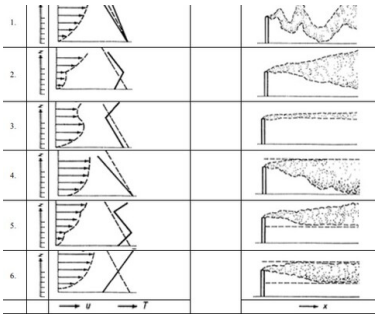
4/22 C



15/22 D

16. Match the Column of Wind and Temperature Profile with the Plume Behaviour.

6 POINTS



9/21 **A** A.1 A.2 A.3 A.4 A.5 A.6/B.3 B.2 B.6 B.1 B.5 B.4

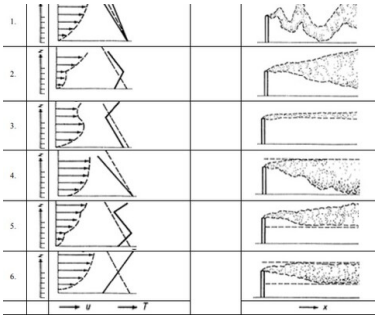
3/21 **B** A.1 A.2 A.3 A.4 A.5 A.6/B.3 B.6 B.2 B.1 B.5 B.4

3/21 **C** A.1 A.2 A.3 A.4 A.5 A.6/B.3 B.1 B.6 B.2 B.5 B.4

6/21 **D** A.1 A.2 A.3 A.4 A.5 A.6/B.4 B.2 B.6 B.1 B.5 B.3

17. Write the identification term (Looping/Coning/Fanning/Fumigation/Lofting/Trapping) defining the plume behaviour
shown in the column B of the table given

6 POINTS



9/21 **A** B.1 B.2 B.3 B.4 B.5 B.6/Looping Lofting Coning Fanning Trapping Fumigation

9/21 **B** B.1 B.2 B.3 B.4 B.5 B.6/Looping Coning Fanning Trapping Fumigation Lofting

3/21 **C** B.1 B.2 B.3 B.4 B.5 B.6/Fumigation Lofting Coning Fanning Trapping Looping

18. When environmental Lapse Rate (ELR) is less is than Adiabatic Lapse Rate (ALR), then which of the following occurs?

1 POINT

9/23 **A** sub adiabatic lapse rate

5/23 **B** adiabatic lapse rate

2/23 **C** super adiabatic lapse rate

7/23 **D** negative lapse rate

19. Which of the following is used in ceramic industries?

1 POINT

5/23 **A** ESP

7/23 **B** Gravitational settling

11/23 **C** Dynamic precipitator

0/23 **D** cyclones

20. **Ringelmann chart is used for the evaluation of _____ pollution.**

1 POINT

19/23 A) Air

0/23 B (B) Water

1/23 C (C) Noise

3/23 D (D) Radioactive

21. What does CPCB stand for?

1 POINT

1/23 A a) Central Particulate Control Board

0/23 B b) Central Panama Channel Board

22/23 C c) Central Pollution Control Board

0/23 D d) Central Pollution Channel Board

22. The wet adiabatic lapse rate is grater than dry adiabatic lapse rate

1 POINT

14/23 T True

9/23 F False