

# MEDICAL ELECTRONICS

## ASSIGNMENT 7 - ANSWER KEY

1. \_\_\_\_\_ membrane allows only oxygen molecules to pass through it.

1 / 1 pt  
*Auto-graded*

Glass

Polypropylene ✓

Teflon

Rubber

2. Violet color has a \_\_\_\_\_ wavelength

1 / 1 pt  
*Auto-graded*

404.7 nm ✓

589 nm

670.8 nm

550 nm

3. PO<sub>2</sub> electrode is also known as \_\_\_\_\_ electrode

1 / 1 pt  
*Auto-graded*

Severinghaus

Polrographic ✓

Glass

Reference

4. PCO<sub>2</sub> electrode is also known as \_\_\_\_\_ electrode

1 / 1 pt  
*Auto-graded*

Severinghaus ✓

Polrographic

Glass

Reference

5. pH value is controlled by \_\_\_\_\_

1 / 1 pt  
Auto-graded

lungs

kidneys

Both lungs & kidneys ✓

None of the above

6. If the pCO<sub>2</sub> value decreases, the body is said to be \_\_\_\_\_  
and if the pCO<sub>2</sub> increases, the body is said to be \_\_\_\_\_

1 / 1 pt  
Auto-graded

acidosis, alkalosis

alkalosis, acidosis ✓

alkalosis, basic

acidosis, acidity

7. If the pH value exceeds 7.45, the body is considered to be in a state of \_\_\_\_\_ and if the pH value decreases below 7.35, the body is considered to be in a state of \_\_\_\_\_

1 / 1 pt  
Auto-graded

acidosis, alkalosis

alkalosis, acidosis ✓

alkalosis, basic

acidosis, acidity

8. Both acidosis and alkalosis can be overcome by

1 / 1 pt  
Auto-graded

Buffering by chemical means

Respiration

Excretion into urine by kidneys

All of the above ✓

9. The normal pH value in an adult is

1 / 1 pt  
Auto-graded

7.15 to 7.25

7.25 to 7.35

7.35 to 7.45 ✓

7.45 to 7.55

10. Colorimeter is used to find the concentration of \_\_\_\_\_

1 / 1 pt  
Auto-graded

plasma

CSF

Blood & Urine

All of the above ✓

11. Diffraction grating is used in which instrument?

1 / 1 pt  
Auto-graded

filter photometer

flame photometer

spectrophotometer ✓

sphygmomanometer

12. The relation between transmittance and absorbance is given by,

1 / 1 pt  
Auto-graded

$A = \log(1/T)$

$A = -\log(I/I_0)$

$A = -\log(T)$

All of the above ✓

13. The transmittance of a distilled water is

1 / 1 pt  
Auto-graded

0.5

1 ✓

1.5

2.0

14. The absorbance of a distilled water is

1 / 1 pt  
Auto-graded

0 ✓

1

2

3

15. Which location gives the most accurate temperature

1 / 1 pt  
Auto-graded

rectum ✓

under tongue

under armpit

inside ear

16. Which location gives the least accurate temperature

1 / 1 pt  
Auto-graded

rectum

under tongue

under armpit ✓

inside ear

17. Body temperature can be measured at

1 / 1 pt  
Auto-graded

under tongue

under armpit

inside ear

all the above ✓

18. A temperature greater than \_\_\_\_ degree Celsius is considered as fever in both adults and children

1 / 1 pt  
Auto-graded

36

37

38 ✓

39

19. The average body temperature of an adult is \_\_\_ degree Fahrenheit

1 / 1 pt  
Auto-graded

98.6 ✓

96.8

97

99

20. pick out the non-electrical parameter

1 / 1 pt  
Auto-graded

Respiration rate ✓

ECG

EEG

EMG

21. Is there a difference in the pO<sub>2</sub> of venous Vs arterial blood?

1 / 1 pt  
Auto-graded

pO<sub>2</sub> will be lower in venous blood ✓

pO<sub>2</sub> will be higher in venous blood

pO<sub>2</sub> will be same as venous blood

None of the above

22. The principle of colorimeter is

1 / 1 pt  
Auto-graded

- Beer's Law
- Lambert's Law
- Beer's and Lambert's Law ✓
- Intensity of transmitted light

23. The instrument used to measure the intensity of transmitted light through the color solution is \_\_\_\_\_

1 / 1 pt  
Auto-graded

- colorimeter ✓
- colorimetry
- sphygmomanometer
- kymomanometer

24. Beer's Law state

1 / 1 pt  
Auto-graded

- $A = KC$  ✓
- $A = KL$
- $A = KCL$
- $A = CL$

25. Beer's and Lambert's Law states

1 / 1 pt  
Auto-graded

- $A = KC$
- $A = KL$
- $A = KCL$  ✓
- $A = CL$