GRADE 11TH PHYSICS WORKSHEET FROM UNIT 5.IN 2016 E.C

FROM THE GIVEN ALTERNATIVES CHOOSE THE BEST ANSWER

1. Which one of the following is incorrect about heat?

A. It is energy **B.** It is the measure of change

C. It is the average kinetic energy of particles of the substance

D. It can be turned into work

2. A metal bar of mass 100g is warmed from 20°C to 80°C. How much heat is absorbed by the metal bar if the specific heat capacity of this metal is 450J/kg K?

A. 2.7kJ **B**. 900J **C.** 3.6kJ **D.** 2.7MJ

3. The amount of energy released or absorbed by a substances during a change of state that occurs without change in temperature is:-

A. Specific heat capacity. **B.** Latent heat **C.** Heat capacity. **D.** Change of state.

4. Which of the following is the best definition of thermal expansion?

A. Molecules moving faster **B.** An object increasing in size due to increased temperature.

C. An object decreasing in size due to increased temperature

D. An object remaining the same in size no matter the temperature

5. Thermal expansion of material has units as **A**. J/kg.k **B**. J/mol.k **C.** W/m.k **D** 1/k

6. When two bodies are in thermal equilibrium, they will have equal:

A. Thermal conductivity **B**. Specific heat **C**. Temperature **D.** Heat energy

7. What is the ratio of the coefficient of linear expansion to coefficient of area expansion?

A. 1: 2 **B.** 1: 3 **C.** 1: 4 **D.** 1 : 5

8. If a 10m copper wire is heated and its temperature rises from 20℃ to 120℃ if ($\alpha = 1.8x10^{-4}\ ^0C^{-1}$) then what is the change in the length of the wire?

A. 5.18m **B.** 0.18m **C.** 15.18m **D.** 20.18m

9. Which of the following term correctly describes the mechanism of heat transfer by which you get heat holding a piece of metal?

A. Radiation **B**. Convection **C.** Conduction **D**. Thermal equilibrium.

10. A physics student derived the formula for the volume expansion, V, of a cubic box in terms of its linear expansion coefficient, **α.** Which of the following formulas it possibly

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derived by the student? (assume T is the change in temperature of the box and Vo is its initial volume)

A. $\Delta V = 3V_o\alpha\Delta T$ **B.** $\Delta V = 2V_o\ \alpha\Delta T$ **C.** $\Delta V = 3/2V_o\alpha\Delta T$ **D.** $\Delta V = V_o\alpha\Delta T$

11. If the coefficient of linear expansion of solid is $5x10^{-4}\ ^0c^{-1}$ what is coefficient of surface and coefficient volume expansion will be:

A. 0.0001 And 0.00015 **B**. 0.002 And 0.005 **C.** 0.001 and 0.0015 **D**. 0.01 and 0.015

12. What is the heat energy required to melt 4kg of copper at its melting point? ($L_f=2.09x10^5 J/kg$) **A.** 418000J **B.** 836000J **C.** 234000J **D**. 812000J

13. Which physical quantity remain a constant during a change of state?

A. Volume **B**. Heat energy **C**. Temperature **D.** Density

14. Coefficient of volume expansion of solid is

A. greater than liquids and gases **B.** equals to gases

C. less than liquids and gases **D.** equal to liquids

15. Specific capacity is

A. measured in J/kg **B**.The heat energy required to raise the temperature of a body by 1°C

C. Determine the rate at which heat flows between two bodies in contact

D. Different for different substances.

16. A hot allow with specific heat capacity of 200J/kg. ^0c cooled to 50^0c when added in to water. What amount of energy is given off by the allow if its mass is 0.3kg?

A. 3000J **B**. 1000J **C**. 1500J **D**. 5000J

17. When a substance changes state from gas to liquids state , which one of the following occurs, **A**. Heat is absorbed by the substance **B**. Heat is given off by the substance

C. The temperature of the substance increases. **D**. The temperature of the substance decreases

18. The most suitable material for cooking is the one having

A. High specific heat and low conductivity **B.** Low specific heat and low conductivity

C. Low specific heat and high conductivity **D**. High specific heat and low conductivity

19. A sheet of silver with dimension of 40cmx50cm that is at room temperature of 25°C is heated to a temperature of 125°C. What will the new of the sheet be? ($\alpha = 1.9x10^{-5} 1/°C$)

A. $7.6cm^2$ **B**. $76cm^2$ **C**. $3.8cm^2$ **D**. $38cm^2$

20. Which one of the following method of transfer of heat is effectively used for liquid and gases? **A**. Conduction **B**. Convection **C**. Radiation **D**. Expansion

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ANSWERS

1.C
2.A
3.B
4.B
5.D
6.C
7. A
8.B
9.C
10.A

11.C
12.B
13.C
14.C
15.D
16.A
17.B
18.C
19.A
20.B

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