Physical Quantities and Scientific Methods of Measurement

Part Two

I. Answer the following questions

1. Which of the following is not a physical quantity ?

   a) Time b) Taste c) color d) b and c

2. How many base/fundamental physical quantities are there?

   a) 5 b) 7 c) 9 d) 6

3. Which of the following is not true about fundamental physical quantities?

   a) Cannot be expressed in terms of any other quantity.

   b) They are the bases for other quantities.

   c) They can be derived from other quantities

   d) They are unique

4. A physical quantity is:

   a) A number without a unit

   b) A property that can be measured or calculated

   c) A unit only

   d) A feeling that cannot be measured

5. Which of the following is **NOT** a physical quantity?

   a) Force b) Intelligence

   c) Temperature d) Mass

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6. Fundamental quantities are:

a) Quantities that depend on other quantities

b) Quantities that cannot be expressed in terms of other quantities

c) Quantities that have no unit

d) Always derived

7. Which of the following is a **fundamental quantity**?

a) Speed b) Force c) Mass d) Area

8. Which of the following is a **derived quantity**?

a) Length b) Time c) Volume d) Temperature

9. The SI unit of length is:

a) Kilogram b) Second

c) Metre d) Newton

10. The SI unit of temperature is:

a) Celsius (°C) b) Kelvin (K)

c) Fahrenheit (°F) d) Joule (J)

11. Which of the following units is **derived**?

a) Kilogram (kg) b) Metre (m)

c) Newton (N) d) Second (s)

12. The unit of **density** is:

a) m/s b) kg/m^3 c) N d) J

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13. A measurement result always consists of:

a) A number only

b) A unit only

c) Both a number and a unit

d) None of the above

14. Which of the following correctly pairs **quantity and unit**?

a) Mass – Newton

b) Length – Metre

c) Time – Kelvin

d) Temperature – Joule

15. The scientific method of measurement involves:

a) Guessing the value

b) Comparing with a standard unit

c) Looking at the size of the object

d) Using any instrument randomly

16. The SI system of units originated from:

a) English system

b) French system

c) German system

d) Greek system

17. Which statement is **TRUE** about derived quantities?

a) They are independent of fundamental quantities

b) They are expressed using only one fundamental unit

c) They are obtained by combining fundamental units mathematically

d) They have no SI unit

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18. Which of the following are not a fundamental physical quantity? Select all possible answers

Time	weight	Gravity
Mass	temperature,	electric current,
luminous intensity	amount of a substance.	Resistance
Velocity	Area	Volume
Density	Speed	

19. Select the correct SI Unit for the following fundamental quantities

Length…….

Time……

Temperature…….

Mass……

20. Which of the following are derived physical quantities?

a) Weight

b) Velocity

c) electric current

d) a and b

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