Physics - FSC Part 1 Physics Chapter 1 Short Questions Preparation

Q1. Explain " Rounding off numbers ?

Ans 1: The quantities in a measurement are always rounded off to certain level of accuracy. The following rules must be observed while rounding off a number.

1. If the dropping digits is less than "5" then the last retained digit is kept as it is For example 863.73 is rounded to 863.7
2. If the dropping digits is greater than '5' then the last retained digits is increased by '1' for example 9.66 is rounded to 9.7
3. If the dropping digits is '5' and the last retained digit is even then it will be remain uneffected. For example 66.45 is rounded to 66.4
4. If the dropping is '5' and the last retained digit is add, then it will be increases by '1' for example 76.35 is rounded to 76.4

Q2. Define prefixes and write two examples.

Ans 1: Prefixes: Prefixes are the words or letters added before a unit and stand for the multiples or sub-multiples of that unit

Ans 2: Examples: Kilo (k) mega (m), micro (m), milli (m) etc.

Q3. Define physical quantities and derived quantities.

Ans 1: Physical quantites: All measurable quantities are called physical quantities.

Ans 2: Example: Length mass, time and temperature etc.

Ans 3: Derived quantites: The quantities that are expressed in terms of base quantities are called derived quantities.

Ans 4: Examples: Area, volume, speed, force, work etc are derived quantities.

Q4. Write the main type of error.

Ans 1: There are two types of errors possible I n physical measurements.

1. Random error
2. Systematic error

Q5. How can you define term wave?

Ans 1: A wave is disturbance in the medium which causes the particles of medium to undergovibratory motion

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Q6. What rules are of rounded off the significant figure?

Ans 1:

1. If the first digit dropped is less than 5, the last digit retained should remain unchanged.
2. If the first digit dropped is more than 5, the digit to be retained is increased by one.
3. If the first digit to be dropped is 5 the previous digit which is to be retained is increased by one if it is odd and retained as such if it is even.

Q7. What are two principal characteristics of an ideal standard?

Ans 1: An ideal standard has two principal characteristics.

1. It is accessible.
2. It is invariable.

Q8. Define base quantities and units.

Ans 1: Base quantities: Base quantities are quantities on the basic of which other quantities are expressed.

Ans 2: Examples: Length mass, time, electric current, temperature, intensity of light, amount of substance.

Ans 3: Base Units: The units that decribe base quantities are called base units.

Ans 4: Examples: Second ampere, kelvin, kilogram metre.

Q9. Are radius and steradian the basic units of SI? Justify your answer?

Ans 1: Radian and steradians are not the basic units of SI. These are the units of purely geometrical quantities i,e plane angle and solid angle respectively. The general conference on weight and measures has not yet classified there units under either base unit or derived units these are called supplementary units.

Q10. Define Born-Haber cycle and lattice energy?

Ans 1: Born-Haber Cycle: The sum of energy changes for a closed cyclic process is zero, If the initial and final states are same. Lattice Energy: The amount of energy released when gaseous ions of opposite charges combine to give one mole of a crystalline ionic compound.
