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**Max Time : 1 hr** **Class = 9th Science Test Max Marks : 30**

**Atoms and Molecules ; Work , Energy and Power ; Improvement in Food Resources**

1. Multiple choice questions : [ 1 X 7 = 7 ]
2. The same proportion of carbon and oxygen in CO2 obtained from different sources proves that law of :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Reciprocal proportion | b) Multiple proportion | c) Constant proportion | d) Conservation of mass |

1. 1 mole of CO2 ­molecule contains:

|  |  |
| --- | --- |
| a) 6.022 x 10 – 23 atoms of carbon | b) 6.022 x 10 – 23 atoms of oxygen |
| c) 6.022 x 10 23 molecules of carbon | d) 3 g atom of CO2 |

1. One atomic mass unit of carbon-12 is :

|  |  |
| --- | --- |
| a) 1/12 of the mass of one 12C atom | b) 6.022 x 1023 g |
| c) 12 g | d) 1 g |

1. The sum of the kinetic energy and potential energy of an object is known as :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Electrical energy | b) Chemical energy | c) Light energy | d) Mechanical energy |

1. Newton-meter is a unit of

|  |  |  |  |
| --- | --- | --- | --- |
| a) Power | b) Work | c) Momentum | d) Gravitational intensity |

1. Water stored in a dam possesses:

|  |  |  |  |
| --- | --- | --- | --- |
| a) no energy | b) electrical energy | c) Kinetic energy | d) Potential energy |

1. Which one is an oil yielding plant among the following :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Lentil | b) Sunflower | c) Cauliflower | d) Hibiscus |

1. What is green manure. [ 1 ]
2. What is kinetic energy of an object? [ 1 ]
3. Which postulates of Dalton’s atomic theory is a result of the law of conservation of mass? [ 1 ]
4. A pair of bullocks exerts a force of 140 N on a plough. The field being ploughed is 15 m long. How much work is done in ploughing the length of the field? [ 1 ]
5. What are polyatomic ions. Give one example. [ 1 ]
6. What do you understand by Organic farming? [ 1 ]
7. Define power. [ 1 ]
8. Write the formula of Sodium Sulphite. [ 1 ]
9. Differentiate between Fertilizers and manure. [ 2 ]
10. A machine raises a load of 750 N through a height of 16 m in 5 seconds. Calculate the power at which the machine works. [ 2 ]
11. Find the velocity of a body of mass 100 g having a kinetic energy of 20 J. [ 2 ]
12. Why is crop variety improvement important in cultivation. Describe important factors for which variety improvement is done. [ 3 ]
13. Calculate the molar mass of the following substances: [ 3 ]

(a) C2H2 (b) NaHCO3 (c) K2SO4

1. Calculate the number of atoms in each of the followings: [ 3 ]

(a) 46 g of Na atom (b) 8 g of O2 molecules (c) 0.1 moles of carbon atoms