**I.P.S.Sr.Sec.School**

**Max Time : 1 hr** **Class : 11th Chemistry Max Marks : 30**

**Marks Obtained : ………… Unit Test-2 Name : …………………….**

1. **Multiple Choice Type Question(s) : [ 1 x 6 = 6 ]**
2. How many and bonds are present in CH2 CH – CH CH – CH3 ?

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| a) 9 , 4 | b) 12 , 2 | c) 12 , 6 | d) 10 , 3 |

1. The hybridisation of carbons of C – C single bond of HC C – CH CH2 is

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| --- | --- | --- | --- |
| a) sp3 – sp3 | b) sp – sp2 | c) sp3 – sp | d) sp2 – sp3 |

1. Absolute zero can be defined as the temperature at which

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| --- | --- |
| a) pressure becomes zero | b) volume becomes zero |
| c) mass becomes zero | d) density becomes zero |

1. Which of the following represents : 3-methylpenta-1, 3-diene ?

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| a) CH2 CH (CH2)2 CH3 | b) CH2 CH CH (CH3) CH2 CH3 |
| c) CH3 CH C (CH3) CH CH2 | d) CH3 CH C (CH3)2 |

1. The correct IUPAC name of the compound is



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| --- | --- |
| a) 3-heptyl-5-methylhept-3-ene | b) 5, 6-diethyl-3-methyldec-4-ene |
| c) 5-butyl-3-methyloct-4-ene | d) 8-methyl-3-propylhex-3-ene |

1. The IUPAC name of the compound is



|  |  |
| --- | --- |
| a) 1-chloro-1-oxo-2,3-dimethylpentane | b) 2-ethyl-3-methylbutanoyl chloride |
| c) 2, 3-dimethylpentanoyl chloride | d) 3, 4--dimethylpentanoyl chloride |

1. **Two Marks Question : [ 2 x 3 = 6 ]**
2. Explain Boyle’s Law ?
3. Equal volume of two gases A and B diffuse through a porous pot in 20 and 10 second respectively. If the molar mass of A is 80, calculate the molar mass of B.
4. At what temperature centigrade will the volume of a gas at 0 ˚C double itself , pressure remaining constant?
5. **Three Marks Question : [ 3 x 4 = 12 ]**
6. A balloon filled with a ideal gas is taken from the surface of sea deep to a depth of 100m. What will be its volume in terms of its original volume?
7. A bulb ‘X’ of unknown volume containing a gas at one atmospheric pressure is connected to an evacuated bulb of 0.5 litre capacity through a stopcock. On opening the stopcock, the pressure in the whole system after some time was found to have a constant value of 570mm at the same temperature. What is the volume of the bulb X ?
8. What will be the pressure of the gas mixture when 0.5 L of H2 at 0.8 bar and 2 L of oxygen at 0.7bar are introduced in a 1 L vessel at 27˚C ?
9. Density of a gas is found to be 5.46 g/dm3 at 27˚C and at 2 bar pressure. What will be its density at STP ?
10. Draw the structures of the following compounds : **[ 1 x 6 = 6 ]**

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| 1. Methyl Benzoate | 2. 4-Iodo-2-methylphenol | 3. Pent-3-yn-1-al |
| 4. O-cresol | 5. 3-methylbut-1-ene | 6. But-3-en-2-ol |