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| **ANSWER KEY – UNIT TEST – 22.05.2022** | | |
| 1 |  | any 2  1  1 |
| 2 |  | 1  1 |
| 3  4 | 1. insectide; antiseptic 2. 1-Bromopentane; 1-Bromo-2-methylbutane   OR     1. Phenol – neutral Ferric chloride – violet colouration   Benzoic acid – does not answer   1. But-2-en-1-ol   OR | ½ + ½  1+1  (reasons)  1  1  1  ½  ½  1  1  1  1  1 |
| 5 |  | 6x1/2 =3 |
| 6 | 1. due to the repulsive interaction between the two bulky (–R) groups. 2. acetone as a byproduct which is also a commercial product 3. Intermolecular H-bonding Vs van der Waals forces | 1  1  1 |
| 7 | 1. Chloroethane b. 4-Ethylphenol c. | 1 +1=+1 |
| 8  9. | 1. The objects which are non-superimposable on their mirror image (like a pair of hands) are said to be chiral and this property is known as chirality + Example 2. Groups like cyanides and nitrites possess two nucleophilic centres and are called ambident nucleophiles + example 3. A mixture containing two enantiomers in equal proportions will have zero optical rotation, racemic mixture or racemic modification+example 4. **(A) < (B) <(C) – Alcohols with halogen acids** 5. **(a) < (c) < (d) < (b) - densities** 6. **(c) < (a) < (b) – boiling point**   **OR**   1. **(a) < (c) < (b) – reactivity towards nucleophilic substitution.** 2. B<A<C – melting point 3. C6H5C(CH3 )(C6H5 )Br > C6H5CH(C6H5 )Br > C6H5CH(CH3 )Br > C6H5CH2Br (SN1) | ½ + ½  ½ + ½  ½ + ½  1+1+1  1+1+1 |
| 10.A  10B | |  |  | | --- | --- | |  |  | |  |  | |  | **OR**  Resonance of Anisole + Explanation | |  |  | | 1+1+1  1  1  OR  1+1 |