

- Q5a Give in tabular form the relation between electromagnetic spectrum, types of spectroscopy and corresponding energy changes. **6**
- b Explain trans-esterification method for synthesis of bio- diesel. Mention advantages of Bio-diesel. **5**
- c What are metallic coatings? Distinguish between galvanizing and tinning. **4**
- Q6a What are reference electrodes? Give construction and working of any one secondary reference electrode. **6**
- b (i) What is unleaded petrol? Give the advantages of oxygenates. **5**
(ii) Define Octane and Cetane number, also give its significance.
- c What are selection rules? Explain any two selection rules. **4**
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