

**U.G. 3rd Semester Examination - 2020**

**CHEMISTRY**

**[HONOURS]**

**Course Code : CHEM-H-CC-P-07**

**(Organic)**

**[PRACTICAL]**

Full Marks : 20

Time : 2 Hours

*The figures in the right-hand margin indicate marks.*

Answer any **five** from the following questions.

4×5=20

1. Write the test and reactions for detection of Nitrogen in Lassaigne's test. Can you explain from the formula of the compound whether Prussian blue is a color or precipitate? (1+2)+1
2. If your sample contains an amide group, it is sometimes found that while testing the solubility in dilute NaOH, the sample dissolves. Why does that happen? Write the reaction to explain. Do you suggest that amide is an acidic functional group? Can you test a secondary amide by the standard amide test? Explain. 1+1+1+1

3. Predict the observation with suitable chemical reactions that would be observed upon performing Lassaigne's test on a Sulphur containing sample and treating the sodium fusion extract with HCl, phenylene diamine and one drop of FeCl<sub>3</sub>. Give relevant reactions. 4
4. If you are given picric acid as a sample, which functional groups will you detect in it? Write the formula for that functional group which is not actually present but appears as a positive test. Explain why this happens? 1+1+2
5. Explain with reactions why the following compounds give positive Baeyer's test –  
i) Cinnamic acid and ii) Ethanol 2+2
6. Give examples of a polar, a neutral, a weakly acidic and a basic functional group. 1+1+1+1

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*[Turn over]*