EASETRN UNIVERSITY, SRI LANKA

FACULTY OF SCIENCE

SECOND YEAR SECOND SEMESTER EXAMINATION IN SCIENCE 2021/2022

GROUP - III

CH2081 ORGANIC CHEMISTRY LABORATORY I

Time: **Three hours**

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1. Place 3.0g of mixture, **P** and 12.0 ml of **Q** into a 100 ml conical flask. Shake well for 15 minutes (check whether the solution is alkaline with a litmus paper). Collect the product by filtration, using a Buchner funnel. Add 6 ml of **R** to the filtrate (check whether the solution is acidic with a litmus paper) and filter the product using a Buchner funnel. Wash the product thoroughly with cold water. Recrystallise the crude using suitable solvent.

   a. Submit the dried crystal **S** in labelled boiling tube.

   b. Determine the melting point of the obtained crystal, **S**.

2. Using the following spectral data, deduce the structures of the compound **A** and **B**

   Compound **A** ($C_9H_{10}O_3$)

   IR frequencies (cm^{-1}): 3600, 3050, 2900, 1720, 1650, 1320, 1200, and 850.

   ^{1}HNMR Signals (δ/ ppm): 10.80 (s, 1H), 3.20 (q, 2H), 2.85 (t, 3H) 7.0 (dd, 2H) and 6.8 (dd, 2H).

   Compound **B** ($C_9H_{12}O_2$)

   IR frequencies (cm^{-1}): 3585, 3030, 2920, 1220 and 740.

   ^{1}HNMR Signals (δ/ ppm): 5.0(1H, s), 7.9(4H, m), 0.92(3H, t), 3.8(2H, q), 4.2(2H, s).

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