

**OLD****Part-II 3-Tier****2016****CHEMISTRY****(General)****PAPER—III****(PRACTICAL)***Full Marks : 100**Time : 6 Hours**The figures in the right-hand margin indicate full marks.***Group—A**

1. Make a systematic qualitative analysis of the organic compound supplied in the container marked "O".

- (i) Give the name and procedure of the experiment and detect the presence or absence of the special elements namely — nitrogen (N), sulphur (S) and halogens (Cl, Br, I) in the supplied compound. 10

*(Turn Over)*

- (ii) Detect the presence or absence of the following functional groups :
- COOH, Phenolic — OH, Ketonic  $>C = O$ ,  
 — CHO (Aldehyde), — NH<sub>2</sub> (Aromatic) and  
 — NO<sub>2</sub> (Aromatic), 18
- (iii) Give the confirmative test of any one of the functional groups present in the supplied compound. 3
- (iv) Naming of the functional group(s) detected. 2

### Group—B

2. Carry out any one of the following two experiments —  
 (Experiment should be selected by lottery) :

- (a) Prepare 250 ml. approx.  $\left(\frac{N}{10}\right)$  standard solution of

potassium dichromate by accurate weighing in an analytical balance. Mention the type of balance used for weighing.

Find out the amount of Fe<sup>++</sup> in gms / litre in Mohr's salt solution supplied in the bottle marked "V" :

- (i) Weighing in chemical balance. 8
- (ii) Volumetric results upto four decimal places. 25

- (b) Detect any *three* radicals (acid/base/interfering acid) in the supplied inorganic sample marked "1".

(Ignore  $\text{CO}_3^{2-}$  radical present in the sample.)

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| (i) Physical properties.   | 3  |
| (ii) Dry tests for acid and basic radicals ( <i>only positive tests</i> ). | 6  |
| (iii) Dry tests for interfering acid radicals.                             | 6  |
| (iv) Wet tests for acid and basic radicals ( <i>only positive tests</i> ). | 12 |
| (v) Confirmative tests for three radicals.                                 | 3  |
| (vi) Correct naming of three radicals in ionic form.                       | 3  |

### Group—C

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| 3. Laboratory Note Book.              | 12 |
| 4. Internal performance / Attendance. | 10 |
| 5. Viva-Voce.                         | 12 |

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