

5 SEM TDC CHM M 4 PR A

2014

(November)

CHEMISTRY

(Major)

Course : 504

(Inorganic Lab)

(Practical)

Full Marks : 32

Pass Marks : 13

Time : 6 hours

PART—A

Instructions to Examiners

1. Inorganic quantitative analysis : 28

Prepare two stock solutions by dissolving—

- (i) 12g of AR copper sulphate, $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ in a 250 ml volumetric flask with distilled water;
- (ii) 25 g of AR ammonium ferrous sulphate $(\text{NH}_4)_2\text{SO}_4$, $\text{FeSO}_4 \cdot 6\text{H}_2\text{O}$ in a 250 ml volumetric flask with distilled water. Add 5 ml conc. H_2SO_4 to prevent hydrolysis.

Give between 20-30 ml of (i) and (ii) to each student (taking different volumes for each student). Both copper and iron should be estimated volumetrically. The procedure for estimation may be supplied.

Distribution of Marks :

- | | | |
|-----|--|---|
| (a) | Completion of experiments including calculation : | 5 |
| (b) | Preparation of $K_2Cr_2O_7$ solution and standardization of thiosulphate : | 5 |
| (c) | For each copper and iron : | |
| | Error up to $\pm 1\%$ | 9 |
| | Error up to $\pm 2\%$ | 7 |
| | Error up to $\pm 3\%$ | 5 |
| | Error up to $\pm 4\%$ | 3 |
| | Error up to $\pm 5\%$ | 1 |

Above 5% error, no marks are to be allotted. Range of 0.5% carries 1 mark.

Weights and burette readings are to be noted during practical work.

2. Viva voce : 4

Question on inorganic estimation
