

Faculty of Science
B.Sc. I Semester (Practical) Examination
Subject: Chemistry; Paper I
QUESTION BANK
With Effect from 2019

Time: 3 hrs

Max. marks: 50

- I. Write the systematic procedure for the analysis of the following anion and cation (with reactions). (5 + 5 = 10)

Q.No.	Cation ; Anion
1	Pb^{2+} ; Cl^-
2	NH_4^+ ; NO_3^-
3	Al^{3+} ; CHCOO^-
4	NH_4^+ ; PO_3^{4-}
5	Bi^{3+} ; NO_3^-
6	Mg^{2+} ; SO_4^{2-}
7	Ca^{2+} ; CO_3^{2-}
8	Sr^{2+} ; CHCOO^-
9	Ba^{2+} ; BO_3^{3-}
10	Cd^{2+} ; I^-
11	Zn^{2+} ; CO_3^{2-}
12	Mn^{2+} ; Br^-
13	Fe^{3+} ; CO_3^{2-}
14	Sb^{2+} ; S^{2-}
15	Pb^{2+} ; NO_3^-

P.T.O.

- II. Analyze the given mixture using Semi-micro qualitative technique systematically and report **two anions and two cations** present in it. (8+12=20)

Q.No.	Salt mixture		
1	$(\text{NH}_4)_3\text{PO}_4$	+	CdAc_2
2	AlCl_3	+	$\text{Ba}(\text{NO}_3)_2$
3	$\text{Sr}(\text{NO}_3)_2$	+	MgCO_3
4	CaSO_4	+	NH_4I
5	CdCl_2	+	$(\text{NH}_4)_3\text{PO}_4$
6	PbAc_2	+	NH_4Cl
7	$\text{Fe}_2(\text{SO}_4)_3$	+	NH_4Cl
8	$\text{Bi}(\text{NO}_3)_3$	+	$\text{Al}_2(\text{SO}_4)_3$
9	NH_4Br	+	CaCO_3
10	$\text{Al}_2(\text{SO}_4)_3$	+	ZnCl_2
11	MgSO_4	+	$(\text{NH}_4)_2\text{CO}_3$
12	$\text{Ba}(\text{NO}_3)_2$	+	MgI_2
13	ZnCl_2	+	BaAc_2
14	CaCO_3	+	$\text{Mg}(\text{NO}_3)_2$
15	ZnCl_2	+	NH_4Ac

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SCHEME OF VALUATION
 (Max. marks 50)

I.	Procedures (5+5)	---	10 marks
II.	Solubility of anions	---	2 marks
	Solubility of cations	---	2 marks
	Flame test	---	2 marks
	2 anions (2 x 4)	---	8 marks
	2 cations (2 x 6)	---	12 marks
	Group separation table	---	2 marks
	Report	---	2 marks
III.	Record and Viva voce	---	10 marks

K. S. S. S.
 11/11/19