

Pramukh Swami Science & H.D. Patel Arts College, Kadi

Bachelor of Vocation Pharmaceutical Chemistry Semester- I

Mid Sem Examination, November- 2016,

(PC-111) Pharmaceutical Calculations

Time: 2 hours

8/11/2016

Total Marks: 60

Que-1. Answer any 12 questions. Each question carries 1 mark [12]

- 10 mm = _____ cm.
- Unit of ppb is _____
- (a) gm/mole (b) cm/inch (c) kg/lit (d) none of these.
- Define: - Molarity.
- Match the following

	parts per trillion
ppm	parts per million
	parts per mole

- Volume can be measured by specific gravity.-(True/False).
- 10 lac can also be written as _____ X 10⁻³.
- Define :- Alcohol solution.
- Match the following

SO ₄ ⁻²	Sulphite
	Sulphate
	Sulphide

- Normality is symbolized by _____
(a) M (b) d (c) m (d) N
- Define: - Density.
- 1 ltr = _____ ml.
- To make normal solution does not need molecular weight.
(True/False) with reason.
- Graphical representation gives approximate information (True/False).

Que.2. Answer any five questions. Each question carries 4marks [20]

- 0.7 M K₂CrO₄ in 750 ml is there, if it will poured in 1 ltr bottle with some water to reach to one litre exactly then what will be the molarity of the newly formed solution, also find out it's normality.
- What is buffer solution discussing it through isotonicity.

- Define percentage dilution. How to make 5.16 % NaCl solution 400 ml solvent.
- What is SI unit? 1-kilometer, 1-hectometre, 1-dekameter & 1-nanometer is equal to how many meters?
- How to make 2.2 N H₂SO₄? And convert it into molar, ppm and ppb also.
- Define molecular weight & calculate the molecular weight of ammonium hydroxide.
- State the importance of logarithms & find out the answer of 14.98 X 21.72 through logarithm.

Que.3 Answer any 4 questions. Each question carries 7 marks [28]

- What are IV solutions? Discuss it through appropriate example.
- State the difference between density and specific gravity. A container weighs 545.18 gm, filled with water it weighs 375.26 gm when filled with another liquid it weighs 262.35 gm. Calculate specific gravity of the liquid.
- What is ppm concentration? If 111 mg of succinic acid dissolve in 25 ml water then how many ppm it will become and convert it into ppb also.
- Discuss atomic and molecular weight & find out the molecular weight of KMnO₄.
- Give the importance of graphical presentation. A pharmaceutical company has a production of sulphonamide drug in following manner, present given value through histogram.

Year	2010	2011	2012	2013	2014	2015	2016
Production (in tons)	5.1	4.5	3.1	2.8	2.1	1.7	4.9

H=1, O=16, S=32, K=39, Cr=52

Mn=55