Hemchandracharya North Gujarat University, Patan

Bachelor of Vocation

Pharmaceutical Chemistry Semester - I

End Term Examination, December, 2016

(PC-111) (Pharmaceutical Calculations)

Time: 2 hrs **Date: 19/12/2016** **Maximum marks: 50**

Q.1 Answer all questions. Each question carries 1 mark . **(9)**

1. 159000 can also be written as_____X 10^{-2}.
2. Match the following

	Molecular weight
Normal solution depends on	Equivalent weight
	Nitrogen atom
	Normal flora

3. Volume can be measured by density. (True/False) with reason.
4. 1 cm = _____inch.
5. Define :- Alcohol solution.
6. To make % solution does not need molecular weight. (True/False) with reason.
7. Define: - Density.
8. 10 mm = _____cm.
9. Match the following

	Sulphite
SO_4^{-2}	Sulphate
	Sulphide

10. Graphical representation gives approximate information (True/False).

Q. 2 Answer any 5 questions. Each question carries 4 marks. **(20)**

1. What is buffer solution discussing it through isotonicity.
2. State the importance of logarithms & find out the answer of 3.562 ÷ 1.172 through logarithm.
3. 0.3 N Na_2CrO_4 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 molarity.
4. What is SI unit? 1-kilometer, 1-hectometre, 1-dekameter & 1-nanometer is equal to how many meters?
5. Define percentage dilution Calculate how to prepare 3.82 % $K_2Cr_2O_7$ in 450 ml methanol? And convert it into molar concentration also.
6. Define molecular weight & calculate the molecular weight of ammonium nitrate.

Q.3 Answer any 3 question. Each question carries 7 marks. **(21)**

1. 1500 ml IV Saline is ordered over 14 hours. Using a drop factor of 21 drops/ml, how many drops per minute need to be delivered?
2. What are IV solutions? Discuss it through appropriate example.
3. State the difference between density and specific gravity. A pycnometer weighs 62.00 g, filled with water it weighs 83.14 g when filled with another liquid it weighs 72.14 g. Calculate specific gravity of the liquid. If 2.5 g liquid cost 6814 Rs. then what will be the cost of liquid?

4. What is ppm concentration? If 565 mg of oxalic acid dissolve in 250 ml water then how many ppm it will become and convert it into ppb also.
5. Give the importance of graphical presentation. A automobile company has production of a car in following manner, present given value through histogram.

Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Production (in thosands)	29.3	21.4	18.24	20.91	31.45	22.78

Atomic Weights:

H-1, N-14, O-16, Na-23, S-32, Cl-35.5, K-39, Cr-52.