

<b>Shri B. M. Shah College of Pharmaceutical Education &amp; Research, Modasa</b>		
<b>B. Pharm. Semester-II ( Mid semester Exam)</b>		
<b>Sub: Applied Mathematics (Biostatistics)</b>		
<b>Marks: 20</b>	<b>Date: 24/04/09</b>	<b>Time: 12:00 to 1:30 pm</b>

**Q-1 Write any Two** [06]

- Describe in detail various sampling techniques with examples.
- Write in detail about basic principles of Experimental Design and Research.
- Write a note on Sample Characteristics.

**Q-2**

**A) Attempt any One** [02]

- Enumerate the restrictions in the application of chi square test
- Write a note on Wilcoxon sign rank test
- write a note on regression coefficient

**B) Attempt any Four** [12]

- A random sample is selected from each of the three rope manufacturers and their breaking strengths (in Kg) are measured with the following results.

1	35, 36, 38, 40, 42
2	50, 55, 54, 56, 57, 60, 54
3	30, 33, 29, 42, 44, 37

Test whether the breaking strengths of the ropes differ significantly at 5 % level of significance.

- In cross breeding experiment with plants of certain species 20 offsprings were classified into four classes with respect to the structure of their leaves as follows

Class	I	II	III	IV	Total
Frequency	21	127	40	52	240

According to the theory, the probabilities of the offsprings in the four classes should be in the ratio of 1: 9: 3: 3. Are these data consistent with the theory?

- An agency conducting weight reduction programme claims that participants in their programme achieve weight reduction of at least 5 kg after two weeks of the programme. In evidence, they have given the following data, on 10 participants who have undergone this programme. On the basis of this sample evidence, can the claim of the agency on weight reduction be said to be valid?

Before (kg)	86	92	100	93	88	80	88	92	95	106
After (kg)	77	84	82	87	80	74	80	85	95	96

- Two random samples are drawn from two normal populations and the following results are obtained. Test whether the two populations have the same variance

Sample I	16	17	18	19	20	21	22	24	26	27	--	--
Sample II	19	22	23	25	26	28	29	30	31	32	35	36

X-X-X-X-X-X

<b>Shri B. M. Shah College of Pharmaceutical Education &amp; Research, Modasa</b>		
<b>B. Pharm Semester – II</b>		
<b>Sub: Pharmaceutics (Unit Operation) – II</b>		
<b>Marks: 20</b>	<b>Date: 25/04/09</b>	<b>Time: 9:00 pm to 10:30 pm</b>

**Q.1 A) Attempt any four** **[4\*2= 8]**

1. Explain the construction, working and uses of a cyclone separator with neat sketch.
2. Write note on fire and dust hazards.
3. Discuss the construction, working and uses of a micronizer with neat sketch.
4. Enlist the standard for sieves and explain it.
5. Write short note on Ball mill.

**Q.2. A) Attempt any five** **[5\*2=10]**

1. Describe Heckel equation. What are the limitations of Heckel analysis?
2. Describe the construction, working of Silversion mixer-emulsifier with neat sketch.
3. Explain mixing index and its importance in mixing.
4. What is LVDT and explain it.
5. Enlist the measurement device for temperature and pressure & explain any two.
6. Explain mill used for mixing and size reduction of pharmaceutical suspension.

**B) Answer the following (Any two)** **[2\*1=2]**

1. Triple roller mill works on principle of attrition – comment.
2. What is vortex? Give its significance.
3. Give the pharmaceutical importance of direct compression study.
4. Give the pharmaceutical importance of direct compression study.

Shri B. M. Shah College of Pharmaceutical Education and Research, Modasa.

Semester II (Second internal test examination-'08-'09)

Pharmacognosy-I

Time: 3:00 – 4:30 pm

Date- 26-04-09

Marks-20

---

- Q.1 A) Write Pharmacognosy of **Indian gum** (3)
- B) Define carbohydrates & classify them, give chemical test for the same (5)
- Q.2 A) What is an adulteration? Write different types of crude drug adulterants with example (3)
- B) Define fixed oil and write classification of lipid (2)
- C) Enumerate different methods for evaluation of crude drug and explain any one in detail (2)
- D) Write Pharmacognosy of **shark-liver oil** (3)
- E) Define **Polenski value** and **Reichert Meissle value** (2)

**Shri B.M. Shah College of Pharmaceutical Education & Research, Modasa-383 315**

First B.Pharm

First internal Examination

Total Marks-20

Date: 27-04-09

Time-12:00 to 1:30

Pharma. Chemistry-II

---

**Q-1. Answer the following**

1. Define Molality and Molarity (1)
2. 7 gm of NaCl is dissolved in 1000 gm of water. If the density of the resulting solution is 0.887 gm/ml, calculate the Molality, Molarity, Normality and mole fraction of the solute, assuming volume of the solution is equal to that of solvent. (3)
3. Define Henry's Law and its limitation (2)

**Q-2 Answer the following question**

1. For a certain first order reaction  $t_{1/2}$  is 100 sec. How long will it take for the reaction to be completed 75%. (2)
2. Discuss collision theory of reaction rates. (2)
3. Role of catalyst in chemical reaction (2)

**Q.3: Answer the following question.**

1. Write detail note on Langmuir adsorption Isotherm (3)
2. Differentiate between physical and chemical adsorption (2)

OR

2. Write short note on Freundlich isotherm

**Q.4: Discuss instruments for measurement of radioactivity. (3)**

**Shri B. M. Shah College of Pharm. Education & Research, Modasa**

**Second Internal Exam-2009**

**First Sem. II**

**Sub: Anatomy Physiology & Health Education-II**

**Date: 28-04-2009      Time: 12.00 PM-1.30PM      Marks: 20**

**Q.1**

**(A) Answer any three**

**(3\*2=6)**

1. Differentiate between Sympathetic and Parasympathetic.
2. Describe formation, Storage and Release of Thyroid hormone.
3. Describe the mechanism of action of water soluble hormone.
4. Write a note on Glucagon and Insulin secretion.

**(B) Define the following**

**(4\*0.5=2)**

1. Schizophrenia
2. Hydrocephalus
3. Diabetes insipidus
4. Cushing's syndrome

**Q.2**

**(A) Write a note on following. (Any two)**

**(6)**

1. Electrocardiogram
2. Physiology of urine formation
3. Regulation of respiration

**(B) Draw and label: Internal structure of heart.**

**(2)**

**(C) Answer the following. (Any Four)**

**(4)**

1. Cheyne stoke's breathing
2. Ductus arteriosus
3. Residual volume and Total lung capacity
4. Pneumonia
5. Respiratory alkalosis
6. Nephroptosis

SHRI B.M.SHAH COLLEGE OF PHARMACETICAL EDUCATION & RESEARCH, MODASA

B.PHARM SEMESTER-II

MIDSEMESTER EXAMINATION (2008-09)

PHYSICAL PHARMACY

Time: 12:00 to 1:30 pm

Date :- 29/04/09

Total marks: 20

---

**Q.1 Answer Any Three of followings**

**(06)**

1. Explain 'Buffer capacity'. Discuss the equation for calculation of buffer capacity.
2. Derive the buffer equation for weak acids and their salts.
3. Give application of Buffers in Pharmaceutical formulations.
4. Explain the term 'Isotonicity'. Discuss various methods for adjustment of isotonicity.

**Q.2 (A) Answer Any Three of followings**

**(12)**

1. Classify colloidal dispersion system. Discuss Associate types of colloids.
2. Discuss the interfacial properties of suspended particles.
3. Give the properties of colloids. Discuss electrical double layer properties.
4. Discuss the physical stability of pharmaceutical emulsions.

**(B) Explain followings (Any Two)**

**(02)**

- A) Kraft point   B) Degree of flocculation   C) Gold Number  
D) Faraday Tyndall effect
-