II B. Pharmacy I Semester Supplementary Examinations, May - 2019
PHARMACEUTICAL ENGINEERING

Time: 3 hours   Max. Marks: 75

Note: 1. Question paper consists of three parts (**Part-I**, **Part-II & Part-III**)
2. Answer ALL (Multiple Choice) Questions from **Part-I**
3. Answer any **TWO** Questions from **Part-II**
4. Answer any **SEVEN** Questions from **Part-III**
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PART –I

1. (i) Example for filter aid   (1M)

(a) Wool   (b) Keisel guhr (c) Sand (d) Wood

(ii) The following which dryer is used for drying the solutions, slurries and suspensions.   (1M)

(a) Spray dryer   (b) Drum dryer   (c) Tray dryer   (d) Vacuum dryer

(iii) Lyophilisation means_____   (1M)

(a) Solvent hating   (b) Solvent loving   (c) Solute loving (d) Solute hating

(iv) Freeze dryer is used for drying of _____   (1M)

(a) Blood samples   (b) Antibiotics   (c) Vitamins and Enzymes   (d) All

(v) Increasing the moisture in air is_____   (1M)

(a) Humidification   (b) Dehumidification (c) Moisturization (d) None

(vi) Impact and attrition principle is involved in the working of ____   (1M)

(a) Ball mill   (b) Hammer mill   (c) Roller mill   (d) Rotatory cutter mill

(vii) The size reduction equipment that is suitable for both dry and wet grinding processes.   (1M)

(a) Roller mill   (b) Hammer mill   (c) Ball mill (d) Rotatory cutter mill

(viii) Rotar and stator is present in which size reduction equipment   (1M)

(a) Roller mill   (b) Hammer mill   (c) Ball mill   (d) Colloidal mill

(xi) Centrifugal force is involved in the separation by following separator   (1M)

(a) Cyclone   (b) Shaking screen   (c) Rotex (d) Bag filter

(x) Twin shell blender is also known as____ blender   (1M)

(a) Double cone   (b) Tumbling   (c) Ribbon   (d) V-cone

(xi)   Agitator blades present in which type of blenders   (1M)

(a) Double cone   (b) Ribbon   (c) Tumbling   (d) V-cone

(xii)   The principle of high shear and kneading actions is involved in ___ mixer   (1M)

(a) Double cone   (b) Sigma blade   (c) Planetary   (d) V-cone

(xiii)   Mixing devices are technically called as____   (1M)

(a) Blades   (b) Impellers   (c) Blenders   (d) None

(xiv)   When solids are present in less than 1 % w/v concentration, the process of its separation is called as____   (1M)

(a) Filtration   (b) Clarification   (c) Removal   (d) Elimination

(xv)   Molecular distillation is also called as_____distillation   (1M)

(a) Evoporative   (b) Shortpath   (c) a and b   (d) None

(xvi)   Steam distillation is the most common example of____distillation   (1M)

(a) Separational   (b) Differential   (c) Evoporative   (d) All

(xvii)   When sulphur combines with polymeric chains of rubber and cross-links between them, that process is _____   (1M)

(a) Vulcanisation   (b) Sulfurization   (c) Polymerization   (d) Thionization

(xviii)   _____is a physical factor influencing selection of materials in ploant construction.   (1M)

(a) Strength   (b) Mass   (c) Thermal conductivity   (d) All

(xix)   Impingement corrosion is also called as_____corrosion   (1M)

(a) Erosion   (b) Velocity accelerated   (c) a and b   (d) None

(xx)   The formation of an oxide layer over the surface is observed in _____corrosion   (1M)

(a) Wet   (b) Dry   (c) a and b   (d) None

PART –II

2. a) Write about Bernoulli's theorem and its applications. (5M)

   b) Explain the methodology of fractional distillation. (5M)

3. a) Describe the principle and working of Fluidized bed dryer. (5M)

   b) Explain about Membrane filters. (5M)

4. a) Write about the theories and types of corrosion. (5M)

   b) Explain the principle, working and uses of perforated basket centrifuge. (5M)

PART –III

5. Discuss about the mechanisms and laws governing size reduction. (5M)

6. Explain the principle, construction and working of climbing film evaporator. (5M)

7. Describe in detail about Double cone blender. (5M)

8. Explain the measurement and applications of Equilibrium Moisture content. (5M)

9. Describe the factors affecting materials selected for pharmaceutical plant construction. (5M)

10. Explain the principle, construction, working and uses of Sieve shaker. (5M)

11. Explain the mechanism of heat transfer. Write a note on Fourier's law. (5M)

12. Describe the principle, working, uses, merits and demerits of Tray bed dryer. (5M)

13. Explain the mechanism of solid mixing and semisolids mixing. (5M)