II B. Pharmacy I Semester Regular/Supplementary Examinations, March – 2021 PHARMACEUTICAL ENGINEERING

PHARMACEUTICAL ENGINEERING			
Time: 3 hours Max. Marks: 7			ks: 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-III 4. Answer any SEVEN Questions from Part-III	
		<u>PART –I</u>	
1.	(i)	The size reduction equipment that is suitable for both dry and wet grinding processes a) Roller mill b) Hammer mill c) Ball mill d) Rotatory cutter mill	(1M)
	(ii)	Example for filter aid a) Wool b) Keisel guhr c) Sand d) Wood	(1M)
	(iii)	Lyophilisation means a) Solvent hating b) Solvent loving c) Solute loving d) Solute hating	(1M)
	(iv)	Centrifugal force is involved in the separation by following separator a) Cyclone b) Shaking screen c) Rotex d) Bag filter	(1M)
	(v)	Freeze dryer is used for drying of a) Blood samples b) Antibiotics c) Vitamins and Enzymes d) All	(1M)
	(vi)	The principle of high shear and kneading actions is involved in mixer a) Double cone b) Sigma blade c) Planetary d) V-cone	(1M)
	(vii)	Mixing devices are technically called as a) Blades b) Impellers c) Blenders d) None	(1M)
	(viii)	Agitator blades present in which type of blenders a) Double cone b) Ribbon c) Tumbling d) V-cone	(1M)
	(ix)	When sulphur combines with polymeric chains of rubber and cross-links between them, that process is a) Vulcanisation b) Sulfurization c) Polymerization d) Thionization	(1M)
	(x)	The formation of an oxide layer over the surface is observed incorrosion a) Wet b) Dry c) a and b d) None	(1M)
	(xi)	The following which dryer is used for drying the solutions, slurries and suspensions. a) Spray dryer b) Drum dryer c) Tray dryer d) Vacuum dryer	(1M)
	(xii)	is a physical factor influencing selection of materials in plant construction. a) Strength b) Mass c) Thermal conductivity d) All	(1M)
	(xiii)	Rotar and stator is present in which size reduction equipment a) Roller mill b) Hammer mill c) Ball mill d) Colloidal mill	(1M)
	(xiv)	Steam distillation is the most common example ofdistillation a) Separational b) Differential c) Evaporative d) All	(1M)
	(xv)	When solids are present in less than 1 % w/v concentration, the process of its separation is called as	(1M)

SET - 1 PCI Code No: BP304T (xvi) Molecular distillation is also called as distillation (1M)a) Evaporative c) a and b b) Shortpath d) None (xvii) Impingement corrosion is also called as_ corrosion (1M)a) Erosion b) Velocity accelerated c) a and b d) None (xviii) Twin shell blender is also known as_ blender (1M)d) V-cone a) Double cone b) Tumbling c) Ribbon (xix) Impact and attrition principle is involved in the working of ___ (1M)b) Hammer mill a) Ball mill c) Roller mill d) Rotatory cutter mill Volatile oils are separated by which distillation (1M)a) Fractional b) Steam c) Both a and b d) None PART -II Describe the factors affecting materials selected for pharmaceutical plant (5M)construction. b) Explain the principle, working and uses of perforated basket centrifuge. (5M)Discuss about Bernoulli's theorem and its applications. (5M)b) Write about the theories and types of corrosion. (5M)Explain the mechanism of solid mixing and semisolids mixing. 4. a) (5M)b) Discuss about the mechanisms and laws governing size reduction. (5M)**PART-III** 5. Explain about Membrane filters. (5M)Describe the principle and working of Fluidized bed dryer. 6. (5M)7. Explain the principle, construction, working and uses of Sieve shaker. (5M)8. State the mechanism of heat transfer. Write a note on Fourier's law. (5M)9. Describe the principle, working, uses, merits and demerits of Tray bed dryer. (5M)10. Describe in detail about Double cone blender. (5M)11. Explain the principle, construction and working of climbing film evaporator. (5M)12. State the measurement and applications of Equilibrium Moisture content. (5M)13. Explain the methodology of fractional distillation. (5M)