

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2022

Course: Industrial Pharmacy I

Program: B. Pharm

Course Code: BP502T

Semester: V

Duration: 03 Hours

Max. Marks: 75

Instructions: No additional material like graph paper, log table, etc is allowed for this examination.

SECTION A

(20 Q x 1 M = 20 Marks)

S. No.	Attempt all questions from section A.	Marks	COs																				
Q 1	What is the correct relation between angle of repose, type of flow, and type of powder: <table border="1" data-bbox="349 693 1149 972"><thead><tr><th></th><th>Angle of repose</th><th>Type of flow</th><th>Type of powder</th></tr></thead><tbody><tr><td>i</td><td>> 25</td><td>Excellent</td><td>Non cohesive</td></tr><tr><td>ii</td><td>25-30</td><td>Good</td><td>Non cohesive</td></tr><tr><td>iii</td><td>30-40</td><td>Passable</td><td>Cohesive</td></tr><tr><td>iv</td><td><40</td><td>Very poor</td><td>Very Cohesive</td></tr></tbody></table> <p>a) i b) both ii and iii c) iv d) all of the above</p>		Angle of repose	Type of flow	Type of powder	i	> 25	Excellent	Non cohesive	ii	25-30	Good	Non cohesive	iii	30-40	Passable	Cohesive	iv	<40	Very poor	Very Cohesive	1	CO1
	Angle of repose	Type of flow	Type of powder																				
i	> 25	Excellent	Non cohesive																				
ii	25-30	Good	Non cohesive																				
iii	30-40	Passable	Cohesive																				
iv	<40	Very poor	Very Cohesive																				
Q 2	Select the correct option for X-ray diffraction pattern indicating a) Solubility b) Crystallinity c) Functional groups d) Permeability	1	CO1																				
Q 3	Flow property of powders is not affected by one of the following: a) density and porosity b) particle shape and surface roughness c) particle size and particle size distribution d) pH of the material	1	CO1																				
Q 4	The correct properties of BCS class II drugs are: a) Low solubility, High permeability b) High solubility, High permeability c) Low solubility, Low permeability d) High solubility, High permeability	1	CO1																				
Q 5	Identify the correct option for simple syrup as per IP: a) It is solution of sucrose in water having sucrose concentration of 66.7% w/w saturated b) It is solution of sucrose in water having sucrose concentration of 67.6% w/w saturated c) It is solution of sucrose in water having sucrose concentration of 65.7% w/w, unsaturated d) None of above	1	CO2																				

Q 6	Elixirs are described as a) viscous liquid preparations that are used for the treatment of cough. b) clear, sweetened, aromatic, hydro-alcoholic preparations meant for oral use c) liquid or semi- liquid preparations meant for external application to the skin. d) aqueous solutions used for treating throat infection (pharynx and nasopharynx part).	1	CO2
Q 7	Carr's Index is related to a) flow property b) solubility c) partition coefficient d) all of the above	1	CO1
Q 8	Type A gelatin is derived from _____ precursor that exhibits an iso-electric point at pH _____ a) alkali treated & 4.7 b) acid treated & 9 c) alcohol treated & 3 d) none of the above	1	CO4
Q 9	TiO ₂ (0.2-1.2%) is used in capsule shell as a) opacifying agent b) plasticizer c) preservative d) thickening agent	1	CO4
Q 10	Granulation process is used in tablet formulation to: a) improve flow and compression characteristics b) improve content uniformity c) improves the Compressibility d) all of the above	1	CO3
Q 11	Separation of top of tablet material from the main tablet body is known as a) capping b) chipping c) mottling d) lamination	1	CO4
Q 12	Why lubricants are not added along with the other ingredients during granulation?	1	CO3
Q 13	Write the importance of plasticizers in film coating of tablets.	1	CO3
Q 14	Enlist steps of sugar coating in tablets.	1	CO2
Q 15	Identify the correct use of Zein/ Shellac in sugar coating: a) to round the tablet edges build up the tablet size b) to seal tablet core c) to cover and filling imperfections d) to obtain desired lusters	1	CO2
Q 16	Concentration of solids used in ophthalmic suspensions should be a) less than 5%	1	CO3

	b) less than 10% c) less than 15% d) less than 30%		
Q 17	Write the importance of granulation in tablet formulation.	1	CO3
Q 18	As per IP, the amount of active ingredient should be within the range of 85% to 115% of the label amount for 9 of 10 capsules, with no unit outside the range of 70% to 125% of label amount. a) True b) False	1	CO4
Q 19	Which of the polymorphic form of drug has maximum solubility? a) Stable b) Metastable c) Unstable d) Amorphous	1	CO3
Q 20	Cold cream is _____ type of emulsion.	1	CO3
SECTION B (20 Marks) (2 Q x 10 M = 20 Marks)			
	Attempt any two questions from section B.	Marks	
Q 1	What are pre-formulation considerations in the pharmaceutical product development? State the impact of pre-formulation studies on stability of dosage forms.	5 + 5	CO1
Q 2	Discuss quality control tests for parenteral formulations.	10	CO4
Q 3	Describe method of gelatin preparation. Explain various steps involved in making empty hard gelatin capsule shells.	5+5	CO2
SECTION-C (35 Marks) (7 Q x 5 M = 30 Marks)			
	Attempt any seven questions from section C.	Marks	
Q 1	Differentiate between flocculating and deflocculating suspensions.	5	CO4
Q 2	Define primary packaging materials. Describe various factors affecting container selection for packaging of pharmaceutical products.	1+4	CO5
Q 3	Explain various evaluation parameters of aerosol systems.	5	CO5
Q 4	Explain the mechanism that support formation and growth of pellets.	5	CO2
Q 5	Write a note on various tablet compression defects with their remedies.	5	CO3
Q 6	Write a note on various formulation factors to be considered in the preparation of ophthalmic dosage forms.	5	CO3
Q 7	Define cosmetic preparations. What are qualities of good lipsticks.	1+4	CO5
Q 8	State which physicochemical properties of the drugs are determined during preformulation studies? Mention their importance.	3+2	CO1
Q 9	How glass containers are evaluated? Explain.	5	CO5