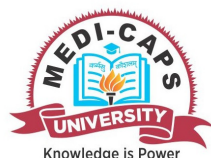


Enrollment No.....



Faculty of Pharmacy
End Sem (Odd) Examination Dec-2022
PY3CO12 Pharmaceutical Engineering

Programme: B. Pharm.

Branch/Specialisation: Pharmacy

Duration: 3 Hrs.**Maximum Marks: 75**

Note: All questions are compulsory. Internal choices, if any, are indicated.

- Q.1
- i. Describe Reynold's number with its applications. **2**
 - ii. Write any two applications of cyclone separator. **2**
 - iii. Write the statement of Fourier's law of heat conduction through a metal wall. **2**
 - iv. Explain the term black body and grey body. **2**
 - v. Give the mechanism of drying process. **2**
 - vi. Explain the mechanism of solid - solid mixing. **2**
 - vii. Write the mechanism of filtration process. **2**
 - viii. Enlist the applications of centrifugation. **2**
 - ix. Define corrosion and give the types of corrosion. **2**
 - x. Explain the effect of pH on corrosion. **2**

- Q.2
- Attempt any two:
- i. Give a neat diagram of two fluid manometers and explain its working principle. **10**
 - ii. Explain the principle and working of steam distillation with its Diagram and applications. **10**
 - iii. (a) Explain the construction and working of hammer mill with its diagram. **5**
 (b) Explain the construction and working of forced circulation evaporator with its diagram. **5**

- Q.3
- Attempt any seven: Two questions from each section is compulsory.

Section - A

- i. Describe the principle with the help of a labelled diagram of fluidised bed dryer. **5**

- ii. Explain the principle and applications of freeze dryer with a labelled diagram. **5**
- iii. Explain the working and principle of silverson emulsifier with a labelled diagram. **5**

Section - B

- iv. Explain the factors affecting rate of filtration. **5**
- v. Explain applications and theory of centrifugation. **5**
- vi. Write the working of super centrifuge with its diagram. **5**

Section - C

- vii. Describe factors influencing selection of materials. **5**
- viii. Explain materials used in pharmaceutical plant construction. **5**
- ix. Explain the prevention and control of corrosion. **5**

P.T.O.

Marking Scheme
PY3CO12 Pharmaceutical Engineering

Q.1	i)	Reynold's number – 1 mark Application – 1 mark	2
	ii)	1 mark for each application (1 mark * 2)	2
	iii)	statement of fourier's law with equation – 2 marks	2
	iv)	Black body – 1 mark Grey body – 1 Mark	2
	v)	Mechanism – 2 marks	2
	vi)	Mechanism – 2 Marks	
	vii)	Mechanism – 2 marks	2
	viii)	4 Applications – 2 marks	2
	ix)	Definition – 1 mark 4 Types -1 mark	2
	x)	2 Points – 2 marks	2
Q.2		Attempt any two:	
	i.	diagram of two fluid manometers – 2 Marks working of two manometers – 4 Marks principle of two manometers – 4 Marks	10
	ii.	Labelled Diagram – 2 Principle – 3 Working – 3 Application - 2	10
	iii. (A)	Diagram – 2 Marks Construction – 1.5 Marks Working. - 1.5 Marks	5
	B)	Construction – 1.5 Marks Working – 1.5 Marks Diagram – 2 Marks	5
Q.3		Attempt any seven: Two questions from each section is compulsory.	
		Section - A	
	i.	Diagram – 2 Marks Principle – 3 Marks	5
	ii.	principle – 1.5 Marks applications - 1.5 Marks labelled diagram – 2 Marks	5
	iii.	working – 1.5 Marks	5

		principle - 1.5 Marks labelled diagram – 2 Marks	
		Section - B	
	iv.	1 mark for each points (1 Mark * 5)	5
	v.	Applications – (5 Points) – 3 Marks theory - 2 Marks	5
	vi.	working – 3 Marks diagram – 2 Marks	5
		Section - C	
	vii.	2 Chemical factors -2 Marks 3 Physical factors -3 Marks	5
	viii.	theory – 1 Mark Materials types – 3 marks Application – 1 mark	5
	ix.	1 mark for each points (1 Mark * 5)	5
