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Girijananda Chowdhury University  
Hatkhowapara, Azara, Ghy-17

D.Pharm 1<sup>st</sup> Year Examinations, May, 2024

**PHARMACEUTICS-THEORY**

Course Code: ER20-11T

Full Marks – 80

Time – Three hours

*The figure in the margin indicates full marks for the questions.*

I. Objective type (Answer all 20)

20 x 1=20

- i. The enteric coated tablets are disintegrated in the \_\_\_\_\_.  
 a. Stomach  
 b. Intestine  
 c. Kidney  
 d. Liver
- ii. First edition of pharmacopoeia of India was published in  
 a. 1975  
 b. 1960  
 c. 1955  
 d. 1980
- iii. \_\_\_\_\_ is known as the father of Pharmacy education in India.  
 a. Mahadeva Lal Schroff  
 b. Acharya P.C. Ray  
 c. Bishnupada Mukerjee  
 d. None of the above
- iv. Air tight containers are also called \_\_\_\_\_ containers.  
 a. Light resistance  
 b. Hermetic  
 c. Both a and b  
 d. None of the above
- v. Very fine powder should be passed through a \_\_\_\_\_ Sieve.  
 a. 20  
 b. 85  
 c. 120  
 d. 100
- vi. Ball mill works on the principle of \_\_\_\_\_.  
 a) Impact  
 b) Attrition  
 c) Both a and b

25/7/21  
d) None of these

vii. The rate of filtration is \_\_\_\_\_ proportional to the viscosity of the liquid.

- a. Directly
- b. Inversely
- c. Both (a) & (b)
- d. None of above

viii. 450 mg of drug can be accumulated in \_\_\_\_\_ capsule number.

- a) 1
- b) 0
- c) 00
- d) 000

IX. \_\_\_\_\_ force is used to separate solids from fluids in cyclone separator.

- a) Centrifugal
- b) Centripetal
- c) Gravitational
- d) None of the above

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X. Turbine mixer consists of circular disc \_\_\_\_\_.

- a. Propeller
- b. Impeller
- c. Both a and b
- d. None of these

XI. Factors affecting the rate of filtration can be explained by

- a. Darcy's Law
- b. Fick's law
- c. Henry's Law
- d. Boltzmann Constant

XII. Concentration of benzalkonium chloride in eye drop formulation is

- a. 0.1%
- b. 0.01%
- c. 0.002%
- d. None of the above.

XIII. The efficiency of a ball mill is maximum at

- a. Low speed
- b.  $2/3^{\text{rd}}$  of speed
- c. High speed
- d. Very high speed



\_\_\_\_\_ is a process of extraction where drug is kept in contact with menstrum for 15 minutes.

- a. Infusion
- b. Maceration
- c. Decoction
- d. Percolation

xv. Fluidised bed dryer method is ..... times faster than that of a tray dryer.

- a.10
- b.5
- c.15
- d.20

XVI. The disintegration time of uncoated compressed tablet is \_\_\_\_\_

- a.5 minutes
- b.15 minutes
- c.30 minutes
- d.1 hour

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XVII. Press coating is done in ..... machine

- a. Pan coating
- b. Fluidised bed coating
- c. Drycota rotary
- d. None of these

XVIII. The implants are useful in \_\_\_\_\_ therapy.

- a. Hormone
- b. Gene
- c. Chemo
- d. None of the above

XIX. The majority of bacterial vaccines are stored at a temperature between \_\_\_\_ to \_\_\_\_.

- a. 2°C, 8 °C
- b. 4°C, 20 °C
- c. -2°C, -10 °C
- d. -10°C, -80 °C

xx. Which test is performed to detect the immunity or susceptibility to tuberculosis?

- a. Mantoux test
- b. Tine test
- c. Both (a) & (b)
- d. None of above

2. Short Answer (Answer 10 out of 11) (Within 300 words)

10 x3 =30

- i. Write down the advantages and disadvantages of plastic as packaging material.

- ii. Discuss classification of powder as per IP.
- iii. Write about the various quality control tests of tablets.
- iv. Write about the identification tests of emulsion.
- v. Differentiate between quality control and quality assurance.
- vi. Define Percolation. Write the limitation of continuous hot percolation process.
- vii. Discuss in details about the applications of liposomal drug delivery system.
- viii. Write down the differences between flocculated and deflocculated suspension.
- ix. Write a note on sintered filter.
- x. Mention the importance of preservatives in pharmaceutical preparation.
- xi. Define 'size separation'. Write the principle and advantages of ball mill.

3. Long Answer Questions (Answer 6 out of 7) (Within 500 words)

6 x 5 = 30

- i. Write the salient features of first edition of Indian pharmacopoeia.
- ii. Discuss the principle, construction and working of cyclone separator with a neat diagram.
- iii. Write down the theory, construction and working of double cone blender.
- iv. Discuss about the types of suppository bases with suitable example.
- v. Define microencapsulation. Write the advantages of coating of tablets.
- vi. Explain the method of preparation of Polio vaccine.
- vii. Write short note on: (Any two) (2.5+2.5=5)
  - i) Effervescent granules
  - ii) Microencapsulation
  - iii) Current good manufacturing practice (cGMP)