



**Knowledge Resource & Relay Centre (KRRC)**

AIKTC/KRRC/SoP/ACKN/QUES/2018-19/

Date: \_\_\_\_\_

School: SoP-CBSGS

Branch: SoP

SEM: II

To,  
Exam Controller,  
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following <sup>(A.T.K.T)</sup> ~~Semester/Periodic~~ question papers from your exam cell:

Sr. No.	Subject Name	Subject Code	Format		No. of Copies
			SC	HC	
1	Pharm. Chem. - I			✓	02
2	Biochemistry - I				
3	Pharmaceutics - I			✓	02
4	Physical Pharmacy - II				
5	APP - II				

Note: SC - Softcopy, HC - Hardcopy

(Shaheen Ansari)  
Librarian, AIKTC

Duration: 3 hours

Total marks:70

N.B (1) Figures on the right indicate total marks.

(2) All questions are compulsory

(3) Draw the diagrams wherever necessary.

Q.1. (a) Explain the following terms (Any five) [5]  
 i) Laxative ii) Humectant iii) Homeostasis iv) Rem units v) Achlorhydria vi) Adsorbent

Q.1. (b) Match the following [5]

A	B
i. ORS	a. Essential trace ion
ii. Calamine	b. Diagnostic agent for measuring GFR
iii. Iodine	c. Antidote for Copper poisoning
iv. Cr <sup>51</sup> EDTA	d. Topical Agent
v. Penicillamine	e. Electrolyte replacement therapy

Q.1. (c) Give pharmaceutical role of the following agents (Any five) [5]  
 i) Silver nitrate, ii) Hydrogen peroxide, iii) Potassium iodide, iv) Sodium Fluoride, v) Sodium nitrite, vi) Cyanocobalamin Co<sup>57</sup>

Q.2. (a) Define buffers? Explain concept of buffer capacity and action and give one suitable example of pharmaceutical buffer. [4]

(b) Define and classify various types of anaemic conditions. Explain how oxygen can be used in certain forms of it? [4]

(c) What are topical agents? Discuss topical protectives with suitable examples. [3]

Q.3. (a) Compare and contrast different types of radiation. Also comment on their applicability in diagnosis and therapies of diseases and disorders. [4]

(b) Depict the role of following agents in dental products and give examples [4]  
 i) Anti-caries agents, ii) Abrasive

(c) Discuss in brief different therapies involving Electrolytes with suitable examples. [3]

OR (c) Discuss the role of iron in the body and elaborate the mechanism of iron absorption and transport in the body.

Q.4. (a) What is hardness of water? Explain its different types. Elaborate any one method to remove permanent hardness of water. [4]

(b) Write a note on any two of following [4]  
 i) Sclerosing agents, ii) Diluent, iii) Suspending agent, iv) Pharmaceutical water

(c) Write a note on ideal characteristics of Radiopharmaceuticals. [3]

Q.5. (a) Write a note on Aluminium hydroxide gel and Magnesium trisilicate used as antacids. [4]

(b) What are the physiological functions of potassium and phosphate? Enumerate the conditions related to their imbalances. [4]

(c) What is heavy metal poisoning? Give two examples of agents applied in such cases. [3]

Q.6. (a) Discuss various types of acid-base imbalance in human. [3]

(b) Give the mechanism of action povidone iodine and zinc oxide as antimicrobial agents. [2]

(c) Write short notes on (Any three): [6]  
 i) Combination Antacid therapy, ii) Emetics iii) Diagnostic uses of Tc<sup>99</sup>, iv) Cyanide poisoning

M/05/2019

SEM-IT CBSGS

(3 Hours)

Marks : 70

Please check whether you have got the right question paper.

- N.B:**
1. All questions are **compulsory**.
  2. **Figures** to the **right** indicate **full marks**
  3. **Draw neat labelled diagrams wherever necessary.**

1. (a) Give scope of Pharmaceutics. 2
  - (b) Define Drug release & Absorption. 2
  - (c) Calculate the quantity of sodium chloride required to prepare 1000 ml of a 5% solution. 1
  - (d) State Newton's Law of flow. 1
  - (e) Explain any two methods for preparation of Aromatic water. Justify, 'concentrated Dill water is prepared by alternate solution method.' 4
- OR**
- (e) What is Syrup NF? Explain any two methods to prepare syrup. 4
  - (f) Write in brief about dry syrups. 2
  - (g) Give classifications of complexation. 2
  - (h) Define sink condition. 1
2. (a) Give physiological consideration for topical route of administration. 3
  - (b) Comment on Homeopathic system of medicines. 2
  - (c) Give the importance of partition coefficient in preformulation studies of monophasic liquid dosage form. 2
  - (d) Elaborate on different types of Containers. 3
  - (e) Enlist methods used for analysis of complexes. 1
3. (a) Explain role of Quality Assurance in pharma manufacturing. 2
  - (b) Write a note on Shear thinning system. 2
  - (c) Discuss liquid mixing by impeller. 2
  - (d) Enlist methods to measure the particle size & explain any one method in detail. 4
  - (e) State Fick's First law of diffusion. 1

4. (a) Define any three. Sprays, Throat paints, Liniments, Lozenges. 3
- (b) From the following formula calculate quantity of each ingredient required to make 1000 g of
- |         |               |        |   |
|---------|---------------|--------|---|
| Powder: | i) Boric acid | 5.0 g  | 2 |
|         | ii) Starch    | 20.0 g |   |
|         | iii) Talc     | 50.0 g |   |
- (c) Give an account of organoleptic additives used in monophasic liquid dosage forms. 2
- (d) Describe size separation by sedimentation method. 2
- (e) State & explain Noyes-Whitney equation. 2
5. (a) Give overview of status of pharmaceutical industry in India. 2
- (b) Elaborate on any one method to determine non-Newtonian fluid. 2
- (c) Discuss construction and working of Filter press. 3
- (d) Explain in brief principle & working of Fluid energy mill **OR** Ball mill. 4
6. (a) Write in brief about NFI. 3
- (b) What is drug efficiency and dose response. 2
- (c) Elaborate on various quality control tests performed on monophasic liquid dosage forms. 4
- (d) Discuss packaging of ORS powders. 2