

07-12-17

B.Pharm / Sem - ~~III~~ I - CBCS -  
Sub - General Chemistry

Regular.

Q. P. Code: 22580

(3 Hours)

Total Marks: 80

- N.B.:** 1) All questions are compulsory  
2) Answer all sub questions together  
3) Figures to right indicate full marks

**Q.1 (a) Explain the terms (Any 5) 5**

- Node
- Absorption dose
- Systemic antacid
- Astringents
- Complexing agents
- Cathartics

**b) Answer the following ( Any 5) 10**

- What is meant by an Inductive effect? In which of the following examples inductive effect observed: Acetone, Hydrogen, Ethane, Fluorobutane
- Draw an energy profile diagram showing Activated complex, intermediate, activation energy and reaction endotherm in it
- Explain the term catalysts and classify them
- What is mEqv scale? What is its significance
- State and explain significance of emetics as an inorganic pharmaceutical agent
- Discuss the role of Iron as essential and trace elements.

**c) Match the following 5**

	Column A	Column B
i)	Selenium	Extracellular ion
ii)	Hypophosphorous acid	Antioxidant
iii)	Chloride	Essential & trace element
iv)	Potassium	Acidifying agents
v)	Dil. Hydrochloric acid	Intracellular ion

**Q.2 a) Write a detail note on Kinetic Isotope Effect 4**

**b) Answer the following (Any 2) 4**

- Write the use and mechanism of action for Hydrogen Peroxide and precipitated sulfur
- What are antioxidants and state any two examples for the same

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- iii) Give the role of iodine as essential ion and enlist products for the same.
- c) Enlist various units of radioactivity. Give the properties of gamma particles. 2
- d) Write down role and conditions related to changes in the concentration of sodium and calcium as major physiological ions 2
- Q.3 a) Explain nucleophilic catalysis and phase transfer catalysis with suitable examples 4
- b) What are the ideal properties of antacids and how you can overcome the side effects of antacids. 4
- c) Add a note on Quantum Numbers 2
- d) Calculate the formal charge on underlined atom (Any 2) 2  
 $\text{PCl}_5$   $\underline{\text{Si}}\text{F}_4$ ,  $\text{H}_2\text{SO}_4$ ,  $(\text{H}_2\underline{\text{P}}\text{O}_4)^{-1}$
- Q.4 a) Fill in the blanks with reference to  $\text{BCl}_3$  4
- i) In  $\text{BCl}_3$  the central atom is ---- and shows ---- type of hybridization.
- ii) Its ground state electronic configuration is ----- and excited state configuration is ----
- iii) Its geometry is ---- with bond angle of ----
- iv) Its structure can be represented as ----
- b) What are protective topical agents and write details of any two agents 4
- c) i) Explain reactivity vs selectivity principle 2
- ii) '1,3-Butadiene on addition of HBr at lower temperature gives 1,2 addition product and at higher temperature 1,4 addition product'. Explain the underlying principle and mention names of two categories of products formed in it 2
- Q.5 a) State true or false 4
- i) Group electronegativity of  $\text{CF}_3$  is higher than  $\text{CH}_3$
- ii) The more chlorine atom attached to methane to  $\text{CCl}_4$  lower is the dipole moment
- iii) Bond lengths for  $\text{sp}^3$  hybridized bond is lower than that of  $\text{sp}$  hybridized bond
- iv) As we move down in the column polarizability increases
- b) Write a note on Bronsted Acid Base catalysis. Explain correlation of reaction rates with acidity functions through relevant examples. 4
- c) Write a note on cyanide poisoning and its treatment 2
- d) Add a note on importance of calcium and phosphate ions 2

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Q.6 Answer the following (Any 6)

12

- i) Complete the following:  
20 millicurie =----- Bq  
 $6.8 \times 10^{12}$  dps = --- Curie
- ii)  $\text{Pd}^{100}$  has a half life of 3.6 days. If its initial amount has  $6.02 \times 10^{23}$  atoms, how many atoms would be present after 23 days.
- iii) Enlist electrolytes used in replacement of sodium, potassium and calcium and mention their use
- iv) How many mEq of Magnesium ions are present in 1%  $\text{MgCl}_2$  solution
- v) Explain the terms reaction order and rate law
- vi) State and explain Hammond's Postulate
- vii) Classify the following agents: silver nitrate, magnesium trisilicate, EDTA, sodium hypochlorite



Q.P. Code :05093

[Time: - 3 Hours]

[ Marks: 80]

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.

1. a) Classify dosage forms. 2
- b) Define i) Compounding and ii) Dispensing 2
- c) Write in brief about dispensing of proprietary medicines. 2
- d) Calculate the dose for a 8 year old patient if the adult dose of the same drug is 250 mg. 2
- e) Define emulsion. Classify emulsifying agents. 2
- f) Enlist the advantages and disadvantages of powders as a dosage form. 2
- g) Enumerate the advantages and disadvantages of pills. 2
- h) Give anyone example of chemical incompatibility. How would you overcome the same? 2
- i) Enlist the principles of pharmaceutical care. 2
- j) Give any 4 examples of OTC products. 2
2. a) Enlist the various routes of administration. Explain the oral route in detail. 4
- b) Highlight the container-closure and labelling directions for (any TWO). 4
  - i. Emulsion
  - ii. Suppository
  - iii. Lozenge
- c) Comment on the following prescription. 4
 

Rx  
Calciferol solution - 0.15 ml  
Glycerin - 0.3 ml  
Water (q.s.) to - 5 ml  
Label: 5 ml to be taken daily
3. a) Define a prescription and explain its various parts. 4
- b) Classify ointment bases. Describe any ONE base in detail. 4
 

**OR**

Describe in detail the disadvantages of cocoa butter as a suppository base.
- c) Discuss compounding and dispensing of effervescent granules in detail. 4
4. a) How would you formulate a suspension containing an indiffusible solid? 4
 

**OR**

Classify solutions. Describe in brief any TWO solutions meant for oral use
- b) Discuss the compounding and dispensing of cocoa butter suppositories. 4
- c) Discuss the responsibilities of a community pharmacist. 4
5. a) Define "health" as per WHO. Discuss the areas in which a pharmacist can get involved to promote health of a community. 4

TURN OVER

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2

- b) What is patient counselling? Give its significance. Describe in brief the steps involved in patient counselling. 4
- c) Paraphrase the code of ethics for a pharmacist in relation to his trade as laid down by the Pharmacy Council of India. 4
6. a) How many ml of 1: 5000 w/v solution of preservative benzalkonium chloride can be made from 125 ml of 0.2 % solution. 4

OR

- In what proportions should ointments containing 25% w/w sulphur, 15% w/w sulphur and 5% w/w sulphur be mixed to produce an ointment containing 20% w/w sulphur 4
- (b) Comment on the following prescription. 4

Rx

Hyoscine hydrobromide 200 µg

Lactose qs

Send 4 packets of divided powders.

Label: One powder to be taken 30 mins prior to journey

- c) i. What is a balanced diet? Give its significance 2
- Give the causative agents for the following diseases: 2
- Diphtheria
  - Typhoid
  - Scabies
  - Tetanus



TURN OVER

Q.P. Code :07532

[Time: Three Hours]

[ Marks:80]

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, labeled diagrams wherever necessary.

- Q.1 a) Answer the following. 16
- i. Justify –blood as a connective tissue
  - ii. Justify – Pseudostratified epithelium as epithelial tissue
  - iii. Justify – Bloodgroup AB is universal system.
  - iv. Justify – Skin as a part of immune system.
  - v. State the difference between primary and secondary lymphatic organs.
  - vi. Define –negative feedback mechanism.
  - vii. Enlist the components of Blood plasma.
  - viii. Enlist types of muscular tissue. 04
- b) Answer the following :
- i. A healthy adult has about -----million red blood cells per microliter of blood.
  - ii. Leukemia is represented by abnormal production of -----
  - iii. A -----Is a region where communication occurs between two neurons, or between a neuron and a target cell.
  - iv. Name two types of adaptive immunity.
- Q.2 a) Answer **any two** of the following. 08
- i. Write a note on composition of blood and its functions.
  - ii. Describe the process blood coagulation.
  - iii. Discuss erythroblastosis fetalis.
- b) Write a short note on **any one** of the following 04
- i. Leucopenia and Leukocytosis
  - ii. Anemia and its types
- Q.3 a) Answer **any two** of the following 08
- i. Give detailed account of skeletal muscle contraction
  - ii. Write a note on energy metabolism in skeletal muscle.
  - iii. Describe sliding filament mechanism of skeletal muscle contraction
- b) Answer **any one** of the following 04
- i. Write a note on neuromuscular transmission
  - ii. Draw a neat, labeled diagram showing organization of skeletal muscle

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- Q.4 a) Answer **any two** of the following. 04
- Draw a neat, labeled diagram of spleen. Discuss functions of spleen.
  - Discuss anatomy and functions of lymph node.
- b) Write a short note on **any one** of the following 04
- Myasthenia Gravis
  - AIDS
- c) Answer **any one** of the following 04
- Describe bone as a connective tissue, its classification and function.
  - Draw a neat labeled diagram of a neuron.
- Q.5 a) Answer **any one** of the following 04
- Discuss fluid mosaic model of plasma membrane
  - Explain active transport mechanism
- b) Answer **any one** of the following 04
- What are different types of muscle contraction? Explain with the help of examples
  - Write a note on functions and properties of muscles.
- c) Answer **any one** of the following. 04
- Describe the mechanisms involved in migration of WBC
  - Write a note on process of chronic inflammation.
- Q.6 a) Answer **any two** of the following 08
- Write a short note on synthesis of hemoglobin
  - Explain the process erythropoiesis in detail.
  - Explain different types of hypersensitivity reactions.
- b) Answer **any one** of the following 04
- Describe the process of chemotaxis and its importance.
  - Discuss different cells involve in immune response.

Correction: T9831 / T2511 - Anatomy,Physiology &Pathophysiology -I QP Code: 07532

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Correction: T9831 / T2511 - Anatomy,Physiology &Pathophysiology -I QP Code: 07532 Correction in :

Q.1. a) iii. Justify - Bloodgroup AB is universal system  
Read it as Justify - Bloodgroup AB is universa acceptor

Q.4. a) Answer any two pf the following  
Read it as Answer any one pf the following

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52an9...af0f-1632-851R-7781f97-837a9an-627-3inAeta-c690a107an-160721E502f00ba-issaw renetafocor-en-inoproducts superaw det-start





Q.P. Code : 24793

[Time: 3 Hours]

[ Marks: 80]

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.

- |    |    |  |   |
|----|----|--|---|
| 1. | a) | Draw the structure of $\alpha$ - D mannose by using Haworth projection formula | 1 |
|    | b) | Draw the structure of D-xylose by using Fischer projection formula             | 1 |
|    | c) | Name proteolytic enzyme required for digestion of protein                      | 1 |
|    | d) | Explain metabolism with example  | 1 |
|    | e) | Enlist fat soluble vitamins  | 1 |
|    | f) | Define mutarotation  | 1 |
|    | g) | Give the structure of coenzyme of Vitamin B <sub>2</sub>                       | 1 |
|    | h) | Name the pyrimidine nitrogenous bases  | 1 |
|    | i) | Write the structure of C <sub>4</sub> epimer of glucose                        | 1 |
|    | j) | Draw the structure of 18:2( $\Delta^{9,12}$ )                                  | 1 |
|    | k) | Draw the structure of ATP  | 1 |
|    | l) | Deficiency of Vitamin-A leads to .....   | 1 |
|    | m) | Give the name and draw the structure of basic amino acids                      | 2 |
|    | n) | Differentiate sucrose and maltose  | 2 |
|    | o) | Explain the $\alpha$ -helix structure of proteins                              | 2 |
|    | p) | Enlist essential amino acids   | 2 |
| 2. | a) | Explain the primary and tertiary structure of proteins                         | 3 |
|    | b) | Explain ATP as energy carrier  | 3 |
|    | c) | Write a note on Vitamin-B <sub>6</sub> or Vitamin-B <sub>7</sub>               | 3 |
|    | d) | Explain nucleotides  | 2 |
|    | e) | Enumerate silent features of digestion of proteins                             | 1 |

Turn Over

Q.P. Code : 24793

2

- |    |  |   |
|----|--|---|
| 3. | a) Write a note on starch  | 3 |
|    | b) Differentiate DNA and RNA   | 3 |
|    | c) Write a note on Vitamin-C   | 3 |
|    | d) Explain the relationship between standard free energy change and equilibrium constant | 2 |
|    | e) Comment on conversion of glucose to energy in RBCs                                    | 1 |
| 4. | a) Classify amino acids based on functional group with examples (No structures required) | 3 |
|    | b) Write a note on glycolipids or phospholipids  | 3 |
|    | c) Discuss the biochemical role of thiamine or nicotinamide                              | 2 |
|    | d) Explain melting and annealing of DNA  | 2 |
|    | e) Give example of high energy phosphate bond and explain their role                     | 2 |
| 5. | a) Write a note on folic acid or pantothenic acid  | 3 |
|    | b) Discuss monosaccharides in detail   | 3 |
|    | c) Write a note on Vitamin-A or Vitamin-D  | 3 |
|    | d) Draw the structure of arachidonic acid  | 2 |
|    | e) Write salient features of lipid digestion   | 1 |
| 6. | a) Write a short note on Vitamin-K or Vitamin-E  | 3 |
|    | b) Differentiate between oils and fats   | 3 |
|    | c) Write a note on Double Helix structure of DNA   | 3 |
|    | d) Explain laws of thermodynamics  | 2 |
|    | e) Define Iodine value   | 1 |



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## SCHOOL OF PHARMACY SEMESTER I EXAM 2017

First Year B.Pharm [CBCS]  
Total Marks: 80

Sub: Communication Skills & Ethics  
Duration: 3 Hours

Q.1] Do as Directed:

[10M]

1. We are going to watch a movie tonight. (Change the voice)
2. He had won five matches until that day. (Identify the tense)
3. I never \_\_\_\_\_ (seen/ see) Tim anymore while \_\_\_\_\_ (doing/do) a lot of volunteer work. (Rewrite using correct verb)
4. The two best things about the party was the food and the music. (correct the sentence)
5. sally lets Have food in The restaurant? (Punctuate)
6. You've been told about the meeting today at 9 a.m. (Add Question Tag)
7. Car is blocking the entrance to the store. (Frame a Wh- type question to get the underlined part as an answer)
8. I forgot taking my Vitamins tablet today. (Change into Infinitive)
9. Give Synonym: Astonish
10. Give Antonym: Famous

Q.2] Fill in the blanks:

[5M]

1. Almost all politicians were involved \_\_\_\_\_ the scandal. (Add Preposition)
2. I am looking forward \_\_\_\_\_ having a meeting with you next week. (Add Preposition)
3. It doesn't matter whether they get the job \_\_\_\_\_ not. (Add Preposition)
4. We played very well \_\_\_\_\_ we still lost the game. (Add Conjunction)
5. The squirrel is \_\_\_\_\_ the tree. (Add Article)

Block 2

Preposition

Block 1

Q.3] Confused Pairs of Words:

[10M]

1. Affect- Effect
2. Complement- Compliment
3. Principal- Principle
4. Sight - Site
5. Accept - Except

Q.4] Define the following: { Any Five }

[10M]

1. Communication along with its complete cycle
2. Gesture
3. Cell Phone Etiquette
4. Resume
5. Feedback
6. Stress Management

Q.5] Write Short Notes on: { Any Three }

[15M]

1. Barriers of Communication
2. Describe the Methods Of Communication
3. Types of Letters
4. Importance of Technical Communication and its different types
5. Flow of Communication in Organization
6. Impact of Media & Technology
7. Family Responsibilities

Q.6] Write an ESSAY on any one of the following topics:

[10M]

1. "Pharmacy Day", Celebration in the campus
2. "Field Project" that you did for Communication Skills Subject
3. "Health is Wealth" Discuss
4. Discuss how you will Communicate with Cancer Patient & Mentally Challenged

Q.7] Draft a Cover Letter and Resume for the post of an Assistant Pharmacist in Cipla Company

[10M]

Q.8] Attempt any One:

[10M]

(a) You want to go abroad for your Higher studies in Pharmacy. Write an Inquiry Letter to Citibank inquiring about an educational loan.

OR

(b) You are dissatisfied with the garments consignment you have received from a supplier. Write down a Complaint Letter for the same and mention the details regarding the problem.