

**ODISHA STATE BOARD OF PHARMACY**  
**D. PHARM-EXAMINATION 2021(i)**

Do not write anything on your question paper except your Roll No.  
Question paper containing anything would be treated as a case of Mal-Practice.

**SUBJECT – PHARMACEUTICS- I (THEORY)**

Full Marks – 80

Time : 3hrs

(Answer any five questions including question No.-1)

1. A) Fill in the blanks: (1x10)
- i) The inert soluble material remains after extraction is called \_\_\_\_\_.
  - ii) The latest edition of Indian Pharmacopoeia has been published in the year \_\_\_\_\_.
  - iii) The commonly used base in the preparation of a throat paint is \_\_\_\_\_.
  - iv) The rate of filtration is \_\_\_\_\_ proportional to the viscosity of fluid.
  - v) The enteric coated tablets are meant to be disintegrated in \_\_\_\_\_.
  - vi) Sintered glass filter is made from \_\_\_\_\_.
  - vii) Communication helps to increase the \_\_\_\_\_ of drugs.
  - viii) Steam distillation is used for separation of two \_\_\_\_\_ liquids.
  - ix) A solution containing 0.9% sodium chloride is \_\_\_\_\_ with blood plasma.
  - x) In the sieving method, the powder is pass through a set of sieves which are arranged in \_\_\_\_\_ order.
- B) Difference between the followings: (2X4)
- i) Exotoxin & Endotoxin
  - ii) Size reduction & Size separation
  - iii) Emulsion & Suspension
  - iv) Infusion & Decoction
- C) Find the volume of 80% alcohol required to prepare 400ml of 50% alcohol. (02)
2. Define Capsules. types of Capsules. Discuss construction, working of hand operated capsule filling machine. (2+1+12)
3. Define Extraction? What are different processes of extraction? Describe the process of simple percolation used in the preparation of tincture. (3+2+10)
4. Define Sterilization. Give a detail account on hot air oven with its advantages & disadvantages. (2+13)
5. Define & classify immunity. Write notes on manufacturing of Toxoids & BCG vaccine. (2+3+5+5)
6. What is drying? Explain detail about Fluidized Bed dryer with its merits & demerits? (2+13)
7. Write short notes on any two of the followings. (7½ x 2)
- i) Wetting Agent
  - ii) Sublimation
  - iii) Aerosol Packaging

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D. PHARM-LI EXAMINATION 2021(ii)

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SUBJECT: HEALTH EDUCATION AND COMMUNITY PHARMACY (THEORY)

FULL MARKS-80

TIME- 3 hrs.

(Answer any five questions including Question No. 1)

1. (A) Define the following: (2x5)  
i) Chlorine demand ii) Hypertension iii) Immunization Schedule iv) Balanced Diet  
v) Sewage
- (B) Expand the following abbreviations: (1x10)  
i) ESR ii) CSF iii) PEM iv) LUCD v) BBT vi) BCG vii) MTP  
viii) DDT ix) ECG x) ORS
2. (A) Briefly discuss the various staining technique for bacteria; mentioning merits and demerits of each. (9)
- (B) Draw a neat diagram of a typical bacterial cell. (6)
3. What are vitamins? Classify them and write the source, deficiency and daily requirements of fat soluble vitamins. (3+12)
4. Define demography. Discuss the stages in demographic cycle and mention the method of family planning. (2+3+10)
5. Write the objective and principle of first aid. Discuss in detail the first aid for snake bite, burn and poisoning. (3+4+4+4)
6. Write short notes on: (5x3)  
a) Marasmus  
b) Epidemiology  
c) Sanitary well
7. What is disinfection and what are its types? Give disinfection procedure for  
a) Faeces b) Sputum c) Room d) Dead bodies (2+5+8)

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D. PHARM-I EXAMINATION 2021(i)

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SUBJECT: PHARMACEUTICAL CHEMISTRY-I (THEORY)

FULL MARKS-80

TIME- 3 hrs.

(Answer any five questions including Question No. 1)

1. (A) Write the chemical formula of the following: (1x10)  
 (i) Spirit of salt      (ii) Borax      (iii) Epsom salt      (iv) Soap stone      (v) Quick silver  
 (vi) Butter of zinc      (vii) Green vitriol      (viii) Rochelle Salt      (ix) Alum      (x) Slaked lime  
 (B) Define the following terms: (2 x 5)  
 (i) Expectorants & Bronchodilators      (ii) Antiseptics & Disinfectants      (iii) Electrolytes & ORS  
 (iv) pH & Ka      (v) Hygroscopic & Deliquescent
2. Explain Lewis-Acid Base theory and Bronsted-Lowry acid base theory with examples. Write the application of buffer. Write the physical, chemical properties, storage condition and uses of Boric Acid and Sodium Hydroxide. (5+2+4+4)
3. Write short notes on (any Three) (5 x 3)  
 (i) Dental Products      (ii) Official preparations of Iodine      (iii) Test for purity  
 (iv) Saline cathartics      (v) Combination of Antacids
4. (a) What are antioxidants? Classify with suitable examples. Write physical and chemical properties, uses, storage and incompatibility of sodium thiosulphate? (2+2+4)  
 (b) Define & classify antidotes basing on their mechanism of action and explain the action of Sodium Nitrite as an antidote in cyanide poisoning. (3+4)
5. (a) What do you mean by Limit Test? Write the principles and procedures, reactions of Limit Test of Arsenic with neat labeled diagram. (10)  
 (b) Write a brief note on respiratory stimulants. (5)
6. (a) Define Radiopharmaceutical. Explain about the detection & measurement of radioactivity by G.M. counter. (1+8)  
 (b) Briefly describe about Radio opaque contrast media. (6)
7. What do you mean by Topical agent? Classify them with suitable examples.  
 Write the chemical formula, synonyms, physical, chemical properties and uses of any three important antimicrobial agents.

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SUBJECT: PHARMACOGNOSY (THEORY)

FULL MARKS-80

TIME- 3 hrs.

(Answer any five questions including Question No. 1)

1. Write the biological source and uses of the following drugs: (2x10)  
(i) Rakta Chandan (ii) Loban (iii) Haridra (iv) Periwinkle (v) Adhtoda  
(vi) Chhotachand (vii) Bishop's weed (viii) Crow fig (ix) Marijuana (x) Cera flava
2. Define crude drugs. Classify them. Discuss about chemical and pharmacological classification of crude drugs. (2+3+4+6)
3. Define fiber. Classify them with suitable example. Write biological source, chemical constituent and uses along with preparation of a plant fiber. (15)
4. Write notes on any Five. (3x5)  
a) Modified Borntrager's test b) Keller-kiliani test c) Goldbeater's skin test  
d) Shinoda test e) Livermann burchard test f) Mayer's test and Dragendorff's test
5. Write notes on any two. (7½ x 2)  
a) Secondary metabolites b) Adulteration c) Pharmaceutical Aids
6. Define diuretics. Classify them with suitable examples. Write down detail about two diuretics of plantorigin. (1+8+3+3)
7. Answer any two:- (7½ x 2)  
a) Classification of enzymes with example  
b) Write a note on life cycle of Ergot  
c) Gross anatomical studies of Clove  
d) Shark liver oil

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SUBJECT: BIOCHEMISTRY & CLINICAL PATHOLOGY (THEORY)

FULL MARKS-80

TIME- 3 hrs.

(Answer any five questions including Question No. 1)

1. (A) Define the following terms: (2x5)  
(i) Oligopeptide (ii) Gluconeogenesis & Glycogenolysis (iii) Pernicious Anaemia  
(iv) Tests of unsaturation in lipids (v) Agranulocytosis  
(B) Fill in the blanks: (1 x 10)  
(i) Chemical name of vitamin H is \_\_\_\_\_  
(ii) The co-enzymes of Niacin are \_\_\_\_\_ & \_\_\_\_\_  
(iii) Other name of Co-enzyme Q is \_\_\_\_\_  
(iv) The holoenzyme consists of \_\_\_\_\_ & \_\_\_\_\_  
(v) Maltose on hydrolysis yields Glucose & \_\_\_\_\_  
(vi) Presence of blood in Urine is called \_\_\_\_\_  
(vii) \_\_\_\_\_ is a contractile protein.  
(viii) \_\_\_\_\_ is a non-reducing sugar.  
(ix) Barfoed's test is done for \_\_\_\_\_  
(x) Galactose excretion in urine is called \_\_\_\_\_
2. Define proteins & Amino acids? Classify Amino acids with examples. Explain the Urea formation cycle. (15)
3. Define Enzymes. Classify Enzymes. Write a note on factors affecting enzyme action. (2+3+10)
4. What is Glycolysis? Write different steps of Glycolysis and abnormalities of Carbonhydrate metabolism. (2+9+4)
5. Describe the role of minerals (any five) in our life process. (15)
6. What is lymphocyte? Describe the difference between T & B Lymphocytes. What is the role of Blood platelets in health & diseases? (3+6)
- (b) Briefly describe about Radio opaque contrast media. (6)
7. A. Discuss about abnormal constituents of urine and their significance in diseases. (7.5 +7.5)  
B. Write a note on diseases which occur due to disorder of fat metabolism.

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D. PHARM-EXAMINATION 2021(ii)

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SUBJECT: HUMAN ANATOMY & PHYSIOLOGY (THEORY)

FULL MARKS-80

TIME- 3 hrs.

(Answer any five questions including Question No. 1)

1. (A) Fill in the blanks: (1x10)

- (i) \_\_\_\_\_ is called chemical messenger in the body.
- (ii) \_\_\_\_\_ acts as pacemaker of the heart.
- (iii) Pulmonary veins carry \_\_\_\_\_ blood.
- (iv) The normal value of hemoglobin in male is \_\_\_\_\_.
- (v) \_\_\_\_\_ blood group is universal recipient.
- (vi) pH of blood is \_\_\_\_\_.
- (vii) \_\_\_\_\_ is the largest abdominal organ.
- (viii) \_\_\_\_\_ is the first cervical vertebra.
- (ix) A period of relaxation in cardiac cycle is known as \_\_\_\_\_.
- (x) The muscle that is under the control of our will is called \_\_\_\_\_ muscle.

(B) Define the following: (2 x 5)

- â) ESR      b) Liver      c) Nucleus      d) Anemia      e) Lymph

2. Define tissue. Classify them. Briefly discuss about epithelial and nervous tissues. (2+3+10)

3. Define blood. Discuss briefly about Blood grouping. Discuss the significance of Rh factor. (2+7+6)

4. What do you mean by neuromuscular junction? Describe the structure of skeletal muscle. Discuss briefly about physiology of muscle contraction. (2+6+7)

5. Describe different parts of eye with diagram. Discuss the physiology of vision. (10+5)

6. What do you mean by endocrine glands? Classify them. Briefly discuss about the formation, function and disorders of thyroid hormones. (2+4+9)

7. a) Define digestion. Describe different parts of digestive system with diagram. (2+8)

b) Menstrual cycle (5)

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