

**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO.
QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

BIO-CHEMISTRY & CLINICAL PATHOLGOY

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. **A) Define the following terms:** [2x5=10]
 - i) Enzyme inhibitors
 - ii) Hodgkin's & Non-Hodgkin's Lymphoma
 - iii) Glucose Tolerance Test
 - iv) Osteomalacia
 - v) Lymphocytosis

- B) Fill in the blanks** [1x10=10]
 - i) _____ is an invert sugar
 - ii) Deficiency of Niacin causes _____.
 - iii) Vitamin B7 is also known as _____.
 - iv) Deficiency of _____ causes rickets in children.
 - v) _____ plays an important role in night vision.
 - vi) _____ and _____ are ketone bodies.
 - vii) Millon's test is done for _____.
 - viii) Deficiency of Vitamin C causes _____.
 - ix) Night Blindness is due to deficiency of _____ Vitamin.
 - x) The Co-enzyme of Riboflavin is _____.

2. Define Glycolysis & describe the steps involved in Embden Meyerhof Pathway with its energy calculation [1+9+5]

3. What are the normal & abnormal constituents of urine. Enumerate the abnormal constituents of urine with their clinical significance. [5+10]

4. A) Define and classify Enzymes and briefly mention the different diagnostic application of Enzymes. [2+4+4]

- B) Write a short note on factors affecting enzyme action. [5]

5. A) Define Lipids & classify with example. [3+6]

- B) Explain about β oxidation of fatty acid. [6]

6. A) What are proteins? Classify them. [6]

- B) What are the biological functions of proteins? [5]

- C) Describe any qualitative test for proteins. [4]

7. **Write short notes on any three of the following:** [5x3]
 - i) Ring structure of Glucose
 - ii) Polycythaemia
 - iii) Disorder of fat metabolism
 - iv) Urea cycle
 - v) Sickle Cell Anaemia

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HEALTH EDUCATION AND COMMUNITY PHARMACY

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. A) Define the followings: [2x5]
- i) First Aid
 - ii) Immunity
 - iii) Safe Period
 - iv) Vitamins
 - v) Demography
- B) Expand the following abbreviations: [1x10]
- i) BCG ii) MDT iii) IUCD iv) PEM v) TSH
 - vi) CSF vii) EEG viii) ECG ix) ICDS x) IHD
2. What do you mean by determinants of Health? Explain various determinants. [3+12]
3. a) Define family planning? Classify different methods of family planning. [2+5]
b) Briefly discuss the population problem in INDIA [8]
4. Define immunity and classify and explain various immunological preparations. [2+6+7]
5. a) Define Shock. Describe the first aid treatment for shock. [2+8]
b) Write the indications and the procedure of Cardio-pulmonary Resuscitation (CPR). [5]
6. a) Differentiate between communicable and non-communicable diseases. [6]
b) Write down the causative agent, mode of transmission and prevention of typhoid, malaria and AIDS. [9]
7. a) Briefly describe the process of disposing of solid waste. [6]
b) Explain in detail the sources, requirements, functions and deficiency diseases of calcium, iodine and Iron [9]

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HUMAN ANATOMY & PHYSIOLOGY – I (Theory)**Full Mark -80****Time -3 hrs***(Answer any five questions including question No. 1)*

1. **A) Fill in the Blanks:** [2x5=10]
- i) Appendicular skeleton contains _____ no. of bones & Axial Skeleton contains _____ no. of bones.
 - ii) _____ is suicidal bag & _____ is called power house of the cell.
 - iii) In nervous system there are _____ pairs of spinal nerve & _____ pairs of cranial nerve.
 - iv) _____ is the smallest bone & _____ is the largest bone in human body.
 - v) Absorption, Secretion and filtration is the function of _____ tissue & _____ tissue is responsible for supporting the organ.
- B) Write short notes on:** [2x5]
- (i) Erythroblastosis fetalis (ii) Mitochondria (iii) Tidal Volume (iv) Neuron (v) Nephron
2. Describe the different chambers of Heart. How circulation takes place within it. Define Cardiac output [5+8+2]
3. Enumerate the different parts of female genital organ with neat labelled diagram. Write in details about the menstrual cycle [5+5+5]
4. Define Excretion. Draw a neat diagram of urinary tract. Write the mechanism of urine function. [2+5+8]
5. Briefly describe the functions of different parts of brain. [15]
6. Define Blood. Write the composition & Function of Blood. Discuss in detail about the clotting Factors. [2+5+8]
7. **Write short notes on any three of the following:** [5x3]
- i) Mechanism of respiration
 - ii) Spleen
 - iii) Hypothalamus
 - iv) Pituitary gland

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PHARMACEUTICAL CHEMISTRY – I (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. (A) **Write the synonym of the following compounds:** [1x10]
a) Magnesium Sulphate b) Hydrochloric acid c) Calcium Hydroxide d) Titanium Dioxide e) Mercury
f) Iodine Solution g) Sodium Thiosulphate h) Kaolin i) Ferrous Sulphate j) Zinc Chloride
- (B) **Define the following terms:** [1x10]
a) Astringent b) Bactericidal Agent c) Anticaries agent d) Achlorhydria e) Emollient
f) Antacid g) Electrolyte h) Antidote i) Expectorant j) Lugol's solution
2. **Write short notes on any three:** [3x5]
a) ORS b) Topical agent c) Saline Cathartics d) Cyanide poisoning
3. a) Define Radioactivity and Radio isotopes? What is half-life of a radioactive compound? [4+3+3]
What are the biological effects of radiation?
- b) What are the applications of radioisotopes in Medicines. [5]
4. a) What are anti-infective agents? Distinguish between an antiseptic & disinfectant. Classify the antimicrobial agents. [2+2+5]
- b) Briefly discuss the various mechanism of antimicrobial agents. [6]
5. a) What do you mean Physiological buffer? Write down the mechanism of buffer action. [1+6]
- b) Write the Chemical formula, physical & chemical properties & use of: [4+4]
(I) Boric Acid (II) Sodium Hydroxide
6. Write short note on:(All three) [5x3]
i) Antioxidants
ii) Ideal antacid
iii) Test of Purity
7. Differentiate between:(All Five) [3x5]
(i) Isotope & Isobar
(ii) Milk of Magnesia & Milk of Lime
(iii) Weak Iodine Solution & Strong Iodine Solution.
(iv) Acidosis & Alkalosis.
(v) Hypertonic Solution & Hypotonic Solution

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PHARMACEUTICS

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. (A) Fill in the blanks:

[1x5]

- i) A liquid oral preparation taken as a single dose is called as _____.
- ii) Milk is sterilised by _____ method.
- iii) The tablet which are placed below the tongue is known as _____ tablet.
- iv) Cork is obtained from the bark of _____ tree.
- v) The dried BCG vaccine retains its potency for one year when stored at a temperature of _____.

(B) Differentiate between the following:

[2x5]

- i) Lotion & Liniment.
- ii) Purified Water & water for Injection.
- iii) Aristas & Asavas
- iv) Emulsion & Suspension.
- v) Vaccine & Toxoids

(C) Define the followings;

[1X5]

- i) Slug ii) Lozenges iii) Pessaries iv) Enemas v) Aerosol

2. Define sterilization. Describe the various method of sterilization. Explain about dry heat & moist heat sterilisation with neat & labelled diagram [2+3+10]
3. Write Short Notes (Any three) [3X5]
 - i. Factors affecting Evaporation
 - ii. Glass Container with its advantages, disadvantages, composition & types.
 - iii. Indian Pharmacopoeia
 - iv. Factors affecting rate of Filtration
4. Define tablet. Discuss different tests which are performed to assure the quality control of tablets. [2+13]
5. Define drying and write down the applications. Enumerate the theory, construction, working, advantages, disadvantages and uses of freeze-drying process. [2+3+10]
6. Explain the following (Any Three) [3X5]

(With labelled diagram+ Principle+ Advantages+ Disadvantages+ Uses)

 - i) Fluid energy mill
 - ii) Cyclone separator
 - iii) Soxhlet apparatus
 - iv) Fluidised bed Dryer
7. Define & Classify Immunity. Differentiate between Active Immunity & Passive Immunity. Describe the preparation of Small Pox Vaccine. [2+3+10]

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PHARMACOGNOSY – I (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. (A) **Write the biological source of the following crude drugs:** [1x10]
 - i) Senna ii) Vinca iii) Guggul iv) Castor oil v) Chaulmoogra oil
 - vi) Rauwolfia vii) Tulsi viii) Opium ix) Myrrh x) Cinchona
- (B) **Write the important uses of following crude drugs:** [1x10]
 - i) Arjuna ii) Aconite iii) Aloe iv) Asafoetida v) Beeswax
 - vi) Black pepper vii) Catechu viii) Digitalis ix) Neem x) Nux-vomica
2. **Write the synonyms, biological source, chemical constituents and uses of following drugs:** [5x3]
 - i) Ipecacuanha ii) Ashwagandha iii) Liquorice
3. Define glycosides. Name the five glycoside containing drugs. Write the official sources, chemical constituents and microscopical features of Senna. [2+5+8]
4. i) Define fibre. Classify them with suitable examples. Write the biological source and preparation of cotton? [1+3+2+4]
 - ii) Write a note on Regenerate Fibre [5]
5. Answer any three: [5x3]
 - i) Adulteration of crude drug ii) Collection & Preparation of Ergot
 - iii) Isolation of Volatile oils iv) Identification tests of Alkaloids
6. Write notes on (any three): [5x3]
 - i) Physical evaluation of drugs ii) Umbelliferous fruits
 - iii) Borntrager test iv) Lycopodium Spore Method
7. A) Define crude drugs. [2]
 - B) Write down the morphological & pharmacological classification of crude drugs with example. [8]
 - C) Write down the different methods of evaluation of crude drugs. [5]
