QP Code: **Reg. No.:……**

First Year Pharm. D Degree Examinations

(Model Question Paper)

Human Anatomy & Physiology

Time: 3 hrs **Max. Marks: 70**

- ***Answer all questions***
- ***Draw diagram wherever necessary***

Essays: **(3x10=30)**

1. Explain the anatomy of spinal cord with a neat diagram along with its cross section showing nerve tracts and its functions. Describe functional areas of cerebrum (5+5=10)

2. Explain the anatomy of the stomach and small intestine. Add a note on digestive enzymes secreted by the organs of GIT. Explain the different phases involved in acid secretion (7+3=10)

3. Draw a neat labelled diagram of nephron and explain its parts. Explain in detail about the mechanism of urine formation (4+6=10)

Short notes **(8x5=40)**

4. Autonomic nervous system

5. Heart sounds.

6. Mechanism of respiration

7. Functions of adrenal hormones

8. Steps involved in erythropoiesis and its regulation.

9. Explain in detail about the menstrual cycle along with oogenesis

10. Define joint. Add a note on synovial joints with diagram.

11. Drugs and athletics.

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QP Code: **Reg. No.:……**

First Year Pharm. D Degree Examinations

(Model Question Paper)

Pharmaceutics

Time: 3 hrs **Max. Marks: 70**

- ***Answer all questions***
- ***Draw diagram wherever necessary***

Essays: **(3x10=30)**

1. Define prescription. Describe the various parts of prescription.
2. Briefly explain the types of incompatibilities.
3. Classify dosage forms. Explain in detail about monophasic liquid dosage forms.

Short notes **(8x5=40)**

4. What are the different methods of preparation of emulsions?
5. Describe the method of preparation and sterilization of surgical catgut.
6. Define lotions? Mention the formula, use and preparation of calamine lotion.
7. What is the significance of displacement value in the preparation of suppositories?
8. Prepare 500 ml of 50% alcohol from 90%, 60% and 30% alcohol. An adult dose of Paracetamol is 650 mg. How much of the drug should be given to a boy weighing 12 kg?
9. What is percolation? Explain the steps involved in percolation process.
10. Explain the historical development of Indian pharmacopoeia.
11. Factors affecting dose of a drug.

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QP Code: **Reg. No.:……**

First Year Pharm. D Degree Examinations

(Model Question Paper)

Medicinal Biochemistry

Time: 3 hrs **Max. Marks: 70**

- ***Answer all questions***
- ***Draw diagram wherever necessary***

Essays: **(3x10=30)**

1. Define and classify enzymes with suitable examples. Outline the various factors affecting enzyme activity.
2. Explain the biosynthesis of fatty acid. Add a note on beta oxidation.
3. List out various biochemical roles carried out by liver. Outline a method to assess hepatic dysfunction.

Short notes **(8x5=40)**

4. Application of RIA.
5. Hormonal regulation of carbohydrate metabolism.
6. Describe the metabolism of purine.
7. Urea cycle.
8. What are electrolytes and mention their biological importance.
9. What is the diagnostic importance of creatinine clearance test?
10. Mutation and repair mechanism.
11. HMP shunt pathway.

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QP Code: **Reg. No.:……**

First Year Pharm. D Degree Examinations

(Model Question Paper)

Pharmaceutical Organic Chemistry

Time: 3 hrs **Max. Marks: 70**

- ***Answer all questions***
- ***Draw diagram wherever necessary***

Essays: **(3x10=30)**

1. Compare and contrast SN1 versus SN2 with respect to mechanism kinetics, stereochemistry and reaction conditions.
2. Write the mechanism involved in aldol condensation and Reformatsky reaction.
3. Explain the mechanism, orientation, effect of substituents on reactivity in electrophilic aromatic substitution.

Short notes **(8x5=40)**

4. Define Markownikov's rule. Briefly discuss peroxide effect with an example.
5. Propose a mechanism for the reaction of acid chlorides with benzene in the presence of aluminium chloride catalyst.
6. E1 and E2 reaction.
7. What is diazonium salt? Mention its preparation, coupling reactions and uses.
8. What are carbocations? Discuss its stability and show how it is useful in explaining the mechanism of electrophilic addition.
9. Explain briefly about hyper-conjugation. Discuss the resonance stabilization of benzyl radical.
10. Hoffmann's degradation and discuss basicity of amines.
11. Explain the preparation, assay and use of vanillin and saccharin sodium.

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QP Code: **Reg. No.:……**

First Year Pharm. D Degree Examinations

(Model Question Paper)

Pharmaceutical Inorganic Chemistry

Time: 3 hrs **Max. Marks: 70**

- ***Answer all questions***
- ***Draw diagram wherever necessary***

Essays: **(3x10=30)**

1. Explain theories of indicators and choice of indicators for acid-base titration. What is mixed indicators and mention its uses.

2. Discuss the principle and procedure involved in the limit test for arsenic. Add a note on Gutzeit apparatus.

3. What are antacids? Classify them with example. Mention the importance of combination antacids. Explain the preparation and assay method for sodium bicarbonate.

Short notes **(8x5=40)**

4. What are the sources of errors in quantitative analysis of pharmaceuticals? How can they be minimized?

5. Describe the preparation, properties and assay of hydrogen peroxide IP.

6. Role of fluorides as anti-caries agents. Explain the preparation of sodium fluoride

7. Physiological role of potassium and calcium ion.

8. Explain the preparation and assay method for medicinal grade oxygen.

9. Explain precipitation titration and add a note on modified Volhard's method.

10. Assay of ferrous sulphate by cerimetry and permanganametry.

11. ORS and its components.

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