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PP—31—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (First Year) (Second Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

HUMAN ANATOMY AND PHYSIOLOGY-II

Paper BP201T

(Wednesday, 27-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Draw a neat labelled diagram wherever necessary.

1. Answer to all the questions :

10×2=20

- (a) Give composition and functions of CSF.
- (b) Enlist different ventricles of brain.
- (c) Give composition of saliva.
- (d) Enlist the functions of creatine phosphate.
- (e) Define lung volumes and lung capacities.
- (f) Draw a neat labelled diagram of nephron.
- (g) Classify endocrine hormones with suitable examples.
- (h) Enlist the functions of pineal gland.
- (i) Define the term pregnancy and parturition.
- (j) Enlist the role of sex hormones.

P.T.O.

2. Answer the following (any *two*) :

2×10=20

- (a) Draw a neat labelled diagram of brain. Discuss in detail various sensory area and motor areas of cerebral cortex.
- (b) Describe in detail anatomy and physiology of stomach and liver.
- (c) Describe in detail anatomy and physiology of Female Reproductive System.

3. Answer the following (any *seven*) :

7×5=35

- (a) Write a note on anatomy and physiology of Brain Stem.
- (b) Write a note on electrophysiology of brain.
- (c) Discuss in short about digestion of protein in GIT.
- (d) Give a note on anatomy and physiology of Pancrease.
- (e) Write about transport of respiratory gases.
- (f) Write a note on physiology of urine formation.
- (g) Discuss about anatomy and physiology of Thyroid gland.
- (h) Discuss in detail various phases of menstrual cycle.
- (i) Write a short note on physiology of respiration.

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PP—35—2023

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharm. (Second Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

PHARMACEUTICAL ORGANIC CHEMISTRY-I

Paper BP202T

(Friday, 29-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Draw structure(s) and write reaction(s) wherever necessary.

(iii) Figures to the right indicate full marks.

1. Answer all the questions :

10×2=20

(a) Write the structure and uses of acetic acid and lactic acid.

(b) How do you differentiate aldehydes and ketones by chemical test ?

(c) Define metamerism with example.

(d) Give the reason why Trimethyl amine is less basic than dimethylamine.

(e) Write the structure of :

(i) 1, 3 butadiene

(ii) 2, 4, 6 Tribromo aniline.

P.T.O.

- (f) Give an example of Diels Alder reaction.
- (g) Explain the stability of alkenes with an example.
- (h) Give the structure and uses of Iodoform and Chloroform.
- (i) Write a method for conversion of carboxylic acid to acid halide.
- (j) Define electromeric effect with an example.

2. Answer any *two* of the following :

2×10=20

- (a) Define elimination reaction. Discuss the kinetics and mechanism of E_1 and E_2 reaction with suitable example.
- (b) Explain the reaction and mechanism of Perkin condensation and aldol condensation.
- (c) (i) Define and classify carbocation. Add a note on stability of carbocation.
(ii) Differentiate between SN_1 and SN_2 reactions.

3. Solve any seven of the following :

7×5=35

- (a) Why carboxylic acid are acidic in nature ? Write the effect of electron withdrawing group on acidity.
- (b) What is hybridization ? Write a note on sp_3 hybridization in alkanes.
- (c) What are aliphatic amines ? Explain any *three* chemical reactions of aliphatic amine.
- (d) Give any *four* chemical reactions of alkyl halides.

- (e) What are carbonyl compounds ? Give any *three* general reactions of ketones.
- (f) How do you distinguish primary, secondary and tertiary alcohols by chemical tests ?
- (g) Write the general rules for IUPAC nomenclature of alkanes.
- (h) Explain the reaction and mechanism of Cannizzaro reaction.
- (i) Write structure of :
- (i) Salicylic acid
 - (ii) Ethanolamine
 - (iii) Benzaldehyde
 - (iv) Methyl alcohol
 - (v) Dichloromethane.

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PP—39—2023

FACULTY OF SCIENCE AND TECHNOLOGY (PHARMACEUTICAL SCIENCE)

B.Pharm. (Second Semester) EXAMINATION

JANUARY, 2024

BIOCHEMISTRY

Paper—(BP-203T)

(Monday, 01-01-2024)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Draw diagram/structure wherever required.

(ii) Figures to the right indicate full marks.

I. Attempt all of the following :

10×2=20

- (a) Define Carbohydrate.**
- (b) Why is sucrose known as invert sugar ?**
- (c) Write a note on tertiary structure of protein.**
- (d) Define Saponification number.**
- (e) What is diabetes ?**
- (f) Draw the structure ATP.**
- (g) What is meant by ketone bodies ?**
- (h) Define transamination.**
- (i) Draw the structure of purine.**
- (j) Define transcription.**

P.T.O.

2. Attempt any *two* of the following : 2×10=20

- (a) Define biomolecules. Give their characters. Explain different biomolecules with their functions.
- (b) Discuss glycolysis. Explain stepwise pathway of glycolysis. Give its energetic and significance.
- (c) Explain factors affecting enzyme activity and write a note on reversible enzyme inhibitor with example.

3. Attempt any *seven* of the following : 7×5=35

- (a) Write a note on isoenzyme, NAD and NADP.
- (b) Explain DNA replication.
- (c) Discuss the functions of different Biomolecules.
- (d) Explain ETC with its mechanism.
- (e) Differentiate between Glycolysis and HMP shunt.
- (f) What are lipids ? Explain various disorders of lipids.
- (g) Analyze the relationship between energy, enthalpy and entropy.
- (h) Prepare a note on mechanism of enzyme action.
- (i) Write a note on polymerase chain reaction.



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PP—43—2023

**FACULTY OF SCIENCE AND TECHNOLOGY
(PHARMACEUTICAL SCIENCES)**

B.Pharm. (Second Semester) EXAMINATION

JANUARY, 2024

PATHOPHYSIOLOGY

(BP-204T)

(Wednesday, 03-01-2024)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Answer to the point only.

1. Answer *all* of the following :

10×2=20

- (a) Define Homeostasis.
- (b) Write down sign and symptoms of Hypertension.
- (c) Enlist various neurological diseases.
- (d) What is haemophilia ?
- (e) Explain arteriosclerosis
- (f) Give causes of anemia.
- (g) Enlist chemical mediators of inflammation.
- (h) Give sign and symptoms of Epilepsy.
- (i) Enlist drugs used in treatment of gout.

P.T.O.

2. Answer any *two* of the following : 2×10=20

- (a) What is cancer ? Give etiology and pathogenesis of cancer.
- (b) Write etiology and pathogenesis of asthma and chronic obstructive pulmonary disease.
- (c) Write down pathogenesis of Hypertension and Angina pectoris.

3. Answer any *seven* of the following : 7×5=35

- (a) Write a short note on goitre.
- (b) Explain in brief pathophysiology of Atherosclerosis.
- (c) Explain in detail about Atrophy and Hypertrophy.
- (d) What is cell alkalosis and cell acidosis ?
- (e) Differentiate between acute and chronic renal failure.
- (f) Outline about Parkinsonism disease.
- (g) Explain in detail about peptic ulcer.
- (h) Outline treatment of tuberculosis.
- (i) What are sexually transmitted diseases ? write a note on AIDS.