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DP—31—2022

FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2023

HUMAN ANATOMY AND PHYSIOLOGY-II

Paper-BP-201-T

(Friday, 17-03-2023)

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

Time— Three Hours

Maximum Marks—75

- N.B. :—**
- Answer to the point only.
 - Draw a neat labelled diagram wherever necessary.
 - All questions are compulsory.

1. Answer all the questions **10×2=20**

- Draw a neat labelled diagram of neuron.
- Define Neurotransmitters and enlist any *two* neurotransmitters.
- Write the functions of liver.
- Define the term BMR.
- Write the functions of calcitonin and PTH.
- Give the composition of normal urine.
- Define the terms chromosomes and genes.
- Give composition of gastric juice.
- Define the term Tidal volume and vital capacity.
- Define puberty and menopause.

2. Answer the following (any two) **2×10=20**

- Draw a neat labelled diagram of pituitary gland and write the physiological role of pituitary gland.
- Discuss in detail digestion and absorption of carbohydrates, proteins and fats in GIT.
- Describe in detail the anatomy and physiology of Male Reproductive System.

P.T.O.

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3. Answer the following (any seven) :

7×5=35

- (a) Draw a neat labelled diagram of spinal cord and write in short about reflex activity.
- (b) Write the physiology of urine formation.
- (c) Write the mechanism of respiration.
- (d) Write a note on menstrual cycle.
- (e) Draw a neat labelled diagram of pancreas and write its functions.
- (f) Write in brief on protein synthesis.
- (g) Write the mechanism of RAAS in fluid balance.
- (h) Write a short note on fertilization and spermatogenesis.
- (i) Draw a neat labelled diagram of stomach and write its anatomy and physiology.

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SUBJECT CODE NO:- DP-35
FACULTY OF SCIENCE & TECHNOLOGY
B.Pharm (Sem-II)
Examination March 2023
Pharmaceutical Organic chemistry –I

[Time: 3:00 Hours]

(BP202T)

[Max. Marks:75]

Please check whether you have got the right question paper.

N.B

- 1) All questions are compulsory
- 2) Write reactions examples & draw structures wherever necessary

Q.1 Answer the following question in short 2X10=20

- i) Draw structure of organic compounds containing carbon & nitrogen as structural backbone (or) skeletons.
- ii) Write IUPAC name & draw structure of salicylaldehyde
- iii) Draw structure of 2,3 dimethyl benzamide
- iv) Write a note on stability of dienes with example
- v) Write crossed Aldol condensation reaction
- vi) Draw structure & uses of vanillin & glycerol
- vii) Write reaction for conversion of
 - a) Alkanes to alkenes
 - b) Alkenes to alkanes
- viii) Write a note on hybridization & its types with example
- ix) Write a reaction for conversion of acids to amines
- x) Draw sp^3 hybridisation of alkanes

Q.2 Write answers of the following questions in detail (any 02) 20

- 1) Write reactions for conversion of
 - a) Alkanes to alcohol
 - b) Alkanes to carboxylic acid
 - c) Alcohol to aldehydes
 - d) Acids to amines
 - e) Alkenes to aldehyde & ketones
- 2) Write nucleophilic substitution reaction for tertiary alkyl halides in terms of its mechanism, stereochemistry & stability
- 3) Compare unimolecular & bimolecular elimination reactions in terms of kinetics mechanism & evidence, Saytzeff's rule

Q.3 Write answers of the following (any 7) 5X7=35

- 1) Write reaction & mechanism of halogenation of alkanes
- 2) Write in detail about reaction to differentiate different alcohols
- 3) Write a note on acidity of carboxylic acids
- 4) Write reactions to differentiate types of amines

- 5) Write a note on basicity of amines
- 6) Define & classify isomers with example
- 7) Write reactions for preparation of alkanes from aldehyde or ketone
- 8) Write reaction & mechanism for markovnikov's reaction & peroxide effects
- 9) Write any 05 reactions of alkenes

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FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Second Semester) EXAMINATION

MARCH/APRIL, 2023

BIOCHEMISTRY

Paper-BP-203-T

(Thursday, 23-03-2023)

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

Time— Three Hours

Maximum Marks—75

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

(ii) Figures to the right indicate full marks.

(iii) Draw diagram/structure wherever necessary.

1. Answer all the following questions :

10×2=20

- (a) What is reducing sugar and non-reducing sugar ?**
- (b) Draw structure of cholesterol.**
- (c) Define (a) Anabolism and (b) Catabolism**
- (d) Give biological significance of protein.**
- (e) What do you mean by exergonic and endergonic reaction ?**
- (f) What is Ketoacidosis ?**
- (g) Enlist factors affecting enzyme activity.**
- (h) Define enzyme and co-enzyme.**
- (i) Differentiate between Fats and Oils.**
- (j) What is Bioenergetics ?**

2. Answer any two of the following :

2×10=20

- (a) Explain in detail about DNA replication by semiconservative model.**
- (b) Discuss urea cycle and its disorders.**
- (c) What is Biomolecules ? Classify with suitable examples.**

P.T.O.

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(2)

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7×5=35

3. Attempt any *seven* of the following :

- (a) Discuss De-NOVO synthesis of palmitic acid.
- (b) Define lipids. Classify them with suitable examples.
- (c) Explain ETC.
- (d) Discuss about energy rich compound and its types.
- (e) Discuss TCA Cycle.
- (f) Explain factors affecting enzyme activity.
- (g) Discuss steps involved in protein synthesis.
- (h) How β -oxidation of fatty acid works ? Explain with its energetics.
- (i) Differentiate between glycogenesis and gluconeogenesis.

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FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Second Semester) EXAMINATION

MARCH/APRIL, 2023

PATHOPHYSIOLOGY

Paper BP204T

(Saturday, 25-3-2023)

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.

1. Answer the following :

10×2=20

- (a) Define the term cell injury.
- (b) Enlist cardinal signs of inflammation.
- (c) What is Hypoxia ?
- (d) Enlist various infectious diseases.
- (e) Write down clinical manifestations of typhoid.
- (f) Explain Hypertrophy and Hyperplasia.
- (g) Write a note on Gonorrhoea.
- (h) Enlist various causes of COPD.
- (i) What is Megaloblastic Anemia ?
- (j) Enlist sign and symptoms of Epilepsy.

P.T.O.

2. Answer any *two* of the following :

2×10=20

- (a) What is Cancer ? Enlist various types of cancer. Give its clinical sign and symptoms and pathogenesis.
- (b) Describe in detail about etiopathogenesis, causes and treatment of Hypertension.
- (c) Explain in detail etiopathogenesis, clinical manifestations of Asthma and Tuberculosis.

3. Answer any *seven* of the following :

7×5=35

- (a) Explain etiopathogenesis of peptic ulcer.
- (b) Write down sign and symptoms and treatment of Alzheimer's Disease.
- (c) Explain positive and negative feedback mechanism.
- (d) Define diabetes mellitus. Write its etiopathogenesis.
- (e) Explain in detail about wound Healing.
- (f) Write in detail about pathogenesis of atherosclerosis.
- (g) Give causes of Jaundice, Hepatitis, Liver Cirrhosis.
- (h) Explain in detail about Parkinson's disease.
- (i) Explain pathophysiology of Gout.