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IP—31—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

JULY/AUGUST, 2023

HUMAN ANATOMY AND PHYSIOLOGY-II

Paper BP-201T

(Tuesday, 11-07-2023)

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

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Answer to point only.

(ii) Draw a neat labelled diagram wherever necessary.

(iii) All questions are compulsory.

1. Answer the following :

10×2=20

(a) Enlist Meninges in Brain in order from inside to outside.

(b) Explain Action Poteintial.

(c) Draw well labelled diagram of Stomach.

(d) Explain the importance of Mitochondria.

(e) Define vital capacity and tidal volume.

(f) Draw well labelled diagram of urinary system.

(g) Define hormone. Enlist Hormones of Pancreas.

(h) Enlist the hormones of adrenal glands.

(i) Define pregnancy and parturation.

(j) Give the Central Dogma of protein synthesis.

P.T.O.

2. Long answer (any two) :

2×10=20

(a) Explain in detail about :

(i) Oogenesis

(ii) Spermatogenesis.

(b) Explain the anatomy of Respiratory System and explain the mechanism of respiration.

(c) Discuss in detail about :

(i) Cerebrum

(ii) Neurotransmitters

3. Short answer (any seven) :

7×5=35

(a) Explain the structure of DNA.

(b) Write a note on Fertilization.

(c) Explain the hormones and disorders of thymus glands.

(d) Explain the role of RAS in urinary system.

(e) Explain the transport of Respiration gases.

(f) Explain the digestion in small intestine.

(g) Explain the formation and role of ATP.

(h) Explain the ventricles of Brain.

(i) Explain the formation of Spinal Nerve.

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IP—35—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharma (Second Semester) EXAMINATION

JULY/AUGUST, 2023

PHARMACEUTICAL ORGANIC CHEMISTRY-I

Paper BP 202T

(Thursday, 13-07-2023)

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

Time—3 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 in brief about sp^3 hybridisation.

(b) Write any two qualitative tests for aldehydes.

(c) How would you differentiate alcohols ? Discuss any two qualitative tests.

(d) What is Satyzeff rule ?

(e) Classify alcohols.

(f) Arranging the following compounds in order of increasing acidity :

(i) Acetic acid

(ii) Trichloroacetic acid

(iii) Dichloroacetic acid

(iv) Monochloroacetic acid

P.T.O.

- (g) Give structure and uses of :
- Ethylenediamine
 - Chlorbutanol
- (h) Draw structure of :
- 2-bromobutanoic acid
 - Benzyl alcohol
- (i) Define isomerism. Draw the structures of various isomers of compounds containing molecular formula C_3H_8O .
- (j) Discuss Crossed Aldol condensation and crossed cannizzaro's reaction.

2. Answer any *two* of the following : 20

- Classify dienes. What do you mean by conjugated dienes. Discuss in detail about Diel-Alder reaction with suitable example.
- Classify alkyl halides. Differentiate between SN_1 and SN_2 . Give reaction, mechanism and stereochemistry of SN_1 reaction.
- Write notes on :
 - Effect of substituent on acidity of carboxylic acid.
 - Effect of substituent on Basicity of amines.

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

- Discuss in detail with suitable example about Markonikov's and anti-Markonikov's rule.
- Enlist various tests for distinguishing of 1° , 2° and 3° amines. Describe any *two* tests.

- (c) Discuss Halogenation of alkanes and ozonolysis of alkenes.
- (d) Classify organic compounds with suitable examples.
- (e) Explain Aldol condensation and Cannizzaro's reaction with suitable examples.
- (f) Give structure and uses of :
- (i) Vanillin
 - (ii) Benzaldehyde
 - (iii) Glycerol
 - (iv) Paraffins
 - (v) Chloroform
- (g) Discuss methods of preparation of alkanes.
- (h) Draw structures of :
- (i) Amphetamine
 - (ii) Lactic acid
 - (iii) Ethyl alcohol
 - (iv) Dichloromethane
 - (v) Cinnamaldehyde
- (i) Give qualitative tests and Benzoin Condensation of Carbonyl compounds.

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IP—39—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm (Second Semester) EXAMINATION

JULY/AUGUST, 2023

BIOCHEMISTRY

Paper BP-203T

(Saturday, 15-7-2023)

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

Time—3 Hours

Maximum Marks—75

N.B. :- (i) Draw neat labelled diagram wherever required.

(ii) Sketch flow chart wherever necessary.

1. Answer *all* the following questions :

10×2=20

- (a) What is ketoacidosis ?
- (b) Define deamination.
- (c) Enlist factors affecting enzyme activity.
- (d) Why is sucrose known as invert sugar ?
- (e) Differentiate between fats and oils.
- (f) What is diabetes mellitus ?
- (g) Draw the structure of ATP.
- (h) What do you mean by translation ?
- (i) Define enzyme and coenzyme.
- (j) What is reducing sugar and non-reducing sugar ?

P.T.O.

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

- (a) Discuss TCA cycle with stepwise pathway and give its energetics and significance.
- (b) Explain in detail about DNA replication by semi-conservative model.
- (c) Define biomolecules with its characters and explain various types of biomolecules with their functions.

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

- (a) Differentiate between glycolysis and HMP shunt.
- (b) Discuss about energy rich compound and its types.
- (c) Explain ETC with its mechanism.
- (d) What are lipids ? Explain various disorders of lipids.
- (e) Analyze relationship between Energy, Enthalpy and Entropy.
- (f) Explain protein synthesis.
- (g) Prepare a note on Enzyme inhibition.
- (h) Discuss β -oxidation of fatty acid with its energetics.
- (i) Write a note on isoenzyme, NAD and NADP.

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IP—43—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Second Semester) EXAMINATION

JULY/AUGUST, 2023

PATHOPHYSIOLOGY

(BP-204T)

(Tuesday, 18-07-2023)

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

Time—3 Hours

Maximum Marks—75

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

(ii) Figures to the right indicate full marks.

(iii) Answer to the point only.

1. Answer of the following :

10×2=20

(a) Define pathophysiology.

(b) What is haemophilia ?

(c) Define Homeostasis.

(d) Describe causes of angina pectoris.

(e) Enlist various infectious diseases

(f) Give treatment for Gout.

(g) Define Asthma.

(h) Give causes of Anemia.

P.T.O.

(i) What is arteriosclerosis ?

(j) Explain Hypoxia.

2. Answer any *two* of the following :

2×10=20

(a) What is cancer ? Give etiology and pathogenesis of cancer and give its treatment.

(b) Define hypertension. Give its causes, treatment and pathogenesis.

(c) Explain pathogenesis of tuberculosis and Malaria.

3. Answer any *seven* of the following :

7×5=35

(a) Write a short note on Gonorrhoea.

(b) Explain cut injury in detail.

(c) Explain chronic obstructive pulmonary diseases.

(d) Explain pathogenesis of peptic ulcer.

(e) Write down signs and symptoms of Angina pectoris and Asthma.

- (f) Write down treatment for Acute renal failure and Diabetes mellitus.
- (g) Explain in detail about Gout.
- (h) Outline about Epilepsy and its types.
- (i) What is inflammation ? Give accounts of wound healing.