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DH—2—2018

FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2018

HUMAN ANATOMY AND PHYSIOLOGY

Paper II (BP-201T)

(Saturday, 21-4-2018)

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

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Answer All the questions.

(ii) Answer to the point only.

(iii) Draw neat labelled diagram wherever necessary.

1. Answer all the questions :

10×2=20

(a) What are neurotransmitter ? Give its two examples.

(b) Give functions of creatinine phosphate.

(c) Mention various ventricles of brain.

(d) Give composition and function of saliva.

(e) Define lung volumes and lung capacities.

(f) Draw neat labelled diagram of Nephron.

(g) What are Goitre and Grave's disease.

(h) Enlist hormones secreted by adrenal gland.

(i) Define menarch and menopause.

(j) Give the various changes that occur at puberty in male.

2. Answer the following (any two) :

2×10=20

(a) Draw a neat labelled diagram of brain. Describe in detail anatomy and physiology of cerebrum and brain stem.

(b) Describe in detail digestion and absorption of carbohydrates, proteins and fats occurs in gastro-intestinal tract.

(c) Distinguish between male and female reproductive system. Describe in detail anatomy and physiology of female reproductive system.

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

7×5=35

- (a) Discuss in detail the mechanism of conduction of nerve impulses across the nerve fibres.
- (b) Write a brief note on electro-encephalograph.
- (c) Draw neat labelled diagram of liver. Discuss on its structure and function.
- (d) Discuss in detail anatomy and physiology of stomach.
- (e) Discuss in detail about mechanism of respiration.
- (f) Draw neat labelled diagram of respiratory system. Describe in detail structure and functions of lung.
- (g) Write a note on renin-angiotensin system.
- (h) Discuss on anatomy and physiology of thyroid gland.
- (i) Write in brief about menstrual cycle.



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FACULTY OF PHARMACEUTICAL SCIENCE

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

MARCH/APRIL, 2018

PHARMACEUTICAL ORGANIC CHEMISTRY—I

(Tuesday, 24-4-2018)

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

Time—3 Hours

Maximum Marks—75

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

(ii) Write reaction, mechanism and stereochemistry wherever necessary.

(iii) Figures to the right indicate full marks.

1. Answer the following :

10×2=20

(a) Enlist different derivatives of carboxylic acids.

(b) Discuss the electromeric effect.

(c) Write the structure of the following :

(i) Ethylenediamine

(ii) Benzaldehyde.

(d) Discuss Lucas test.

(e) Discuss the stability of alkene.

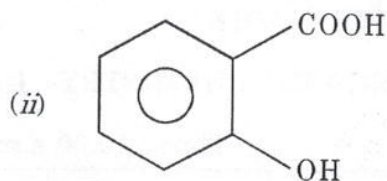
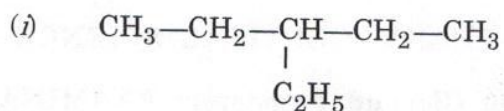
(f) What is Diel-Alder ?

(g) Explain "Basicity of amines".

(h) Define alkyl halide. Classify with suitable example.

P.T.O.

(i) Give the IUPAC names of the following :



(j) Discuss Saytzeff's orientation with an example.

2. Answer any *two* of the following :

2×10=20

(a) Give the reaction, mechanism, stereochemistry and evidence of E_1 and E_2 reactions.

(b) Write the reaction and mechanism of benzoin condensation and Perkin reaction.

(c) Classify organic compounds on the basis of structural and functional group.

3. Answer any *seven* of the following :

7×5=35

(a) What are dienes ? Classify with suitable example. Discuss stability of conjugated dienes.

(b) Enlist the various qualitative tests for alcohols. Explain any *two* tests.

(c) Define hybridization. Explain sp^3 and sp^2 hybridization of alkane and alkene respectively.

(d) Write methods of preparations of alkyl halides.

(e) Write short notes on :

(i) Inductive effect

(ii) Markownikoff's and Anti-Markownikoff's rule.



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- (f) Explain S_N1 reaction with mechanism and gives the factors affecting on S_N1 and S_N2 reaction.
- (g) Write the structure and give the uses of the following compounds :
- (i) Chloroform
 - (ii) Vanilin
 - (iii) Ethanolamine
 - (iv) Propylene glycol
 - (v) Acetyl salicylic acid.
- (h) Write the methods of preparations of carbonyl compounds.
- (i) Write short notes on :
- (i) Allylic rearrangement
 - (ii) Acidity of carboxylic acid.

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FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2018

BIOCHEMISTRY

(Thursday, 26-4-2018)

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.

(iv) Draw neat labelled diagram wherever necessary.

1. Solve all the questions :

10×2=20

- (a) Differentiate between Purines and Pyrimidines.
- (b) Enlist factors affecting Enzyme activity.
- (c) Define Iodine Number and Saponification value.
- (d) Give the confirmatory test for polysaccharides.
- (e) What are essential and non-essential amino acids ?
- (f) Write a short note on Electron Transport Chain (ETC).
- (g) What are biomolecules ?
- (h) Give the biological significance of protein.
- (i) What are fatty acids ? Write its function.
- (j) What is biological oxidation ?

2. Answer any two of the following :

2×10=20

- (a) Name the various pathways of Glucose metabolism. Give in detail about TCA cycle.
- (b) Describe the process of replication in detail.
- (c) Give classification of biomolecules along with its biological significance.

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3. Solve any *seven* of the following :

7×5=35

- (a) Discuss about inhibitors of ETC (Electron Transport Chain) and Oxidative Phosphorylation.
- (b) Give an account of factors affecting enzymatic activity.
- (c) Write short notes on :
 - (i) Transamination
 - (ii) Deamination
 - (iii) Decarboxylation with examples.
- (d) Write short note on Energy Rich Compounds.
- (e) Give the significance of ATP and Cyclic AMP.
- (f) Write short notes on :
 - (i) Atherosclerosis
 - (ii) Gout.
- (g) Explain in detail classification of enzymes and give its properties.
- (h) Explain in brief structure of DNA and its biological significance.
- (i) Give the flow chart of β -oxidation of fatty acid.

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DH—08—2018

FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2018

PATHOPHYSIOLOGY

Paper (204T)

(Saturday, 28-4-2018)

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

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Answer *All* questions.

(ii) Answer to the point only.

(iii) Draw neat labelled diagram wherever necessary.

1. Answer all the questions :

10×2=20

(i) Differentiate between Necrosis and Apoptosis.

(ii) What is reversible cell injury ?

(iii) What are Hypertrophy and Hyperplasia ?

(iv) Write the cardinal signs and inflammation ?

(v) What are primary and secondary Hypertension ?

(vi) Define the terms Hypoxemia and Hypercapnia.

(vii) What is megaloblastic anemia ?

(viii) What is Amenorrhea ? Enlist its type.

(ix) What is Alzheimer's disease ?

(x) What is Gout ? Enlist its symptoms.

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

2×10=20

(a) Write in detail pathophysiology of cell injury.

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- (b) Write etiopathogenesis, clinical manifestations and treatment of Asthma and Tuberculosis.
- (c) Describe in detail basic mechanism involved in acute inflammation.
3. Answer the following (any *seven*) : 7×5=35
- (i) What is Adaptation ? Write in detail about positive and negative feedback mechanism with *one* example.
- (ii) Write the pathogenesis of Atherosclerosis.
- (iii) Write etiology, pathophysiology, clinical manifestations at AIDS.
- (iv) Write the etiopathogenesis and epilepsy.
- (v) Write the etiopathogenesis and cancer.
- (vi) Write etiology, pathophysiology, clinical manifestation of erectile dysfunction.
- (vii) Write etiology, pathophysiology, clinical manifestation of peptic ulcer.
- (viii) Define Diabetes mellitus ? Write its types, clinical manifestation and treatment.
- (ix) Write etiology, pathophysiology, clinical manifestation of congestive heart failure.