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Total No. of Questions : 3]

SEAT No. :

**P-3678**

[Total No. of Pages : 2

**[6019]-2011**

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**F.Y. B. Pharmacy**

**BP201T: HUMAN ANATOMY AND PHYSIOLOGY - II**

**(2019 Pattern) (Semester - II)**

*Time : 3 Hours]*

*[Max. Marks : 75*

*Instructions to the candidates:*

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- 1) *All questions are compulsory.*
- 2) *Neat labeled diagrams must be drawn wherever necessary.*
- 3) *Black figures to the right indicate full marks.*

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**Q1) Answer the following (Any 5) :**

**[15]**

- a) Give composition of bile and explain its functions in digestive system.
- b) What are meninges in the brain and spinal cord.
- c) What is ATP? explain its role in muscle metabolism.
- d) Define and explain vital capacity.
- e) Write the role of renin-angiotensin-aldosterone system in the kidney.
- f) Enlist the disorders of adrenal gland. Discuss Cushing's syndrome.
- g) Enlist organs of male reproductive system. Add a note on prostate gland.

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**Q2) Answer the following (Any 2) :**

**[20]**

- a) Define internal and external respiration. Explain the gaseous exchange at lung and tissue level.
- b) Enumerate parts of brain and write a note on cerebrum.
- c) Explain the structure of thyroid gland. Discuss in detail thyroid hormones.
- d) Describe the structure of nephron. Explain the physiology of urine formation.

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**Q3) Answer the following (Any 8) : [40]**

- a) Enlist organs involved in digestive system and give functions of each organ.  
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- b) Write a short note on menstrual cycle.
- c) Explain the process of neurotransmission in the CNS.  
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- d) Explain the process of digestion in small intestine.
- e) Give composition of gastric juice and explain phases of secretion of gastric juice.  
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- f) Discuss in detail calcium homeostasis.
- g) Explain Oogenesis.  
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- h) Write an account on physiology of micturition.  
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- i) Define genetics. Write in detail about chromosomes.
- j) Describe the surface anatomy of lungs with suitable diagram.



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[6019]-2012

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First Year B. Pharmacy

**BP202T : PHARMACEUTICAL ORGANIC CHEMISTRY - I  
(2019 Pattern) (Semester - II)**

Time : 3 Hours]

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[Max. Marks : 75

Instructions to the candidates:

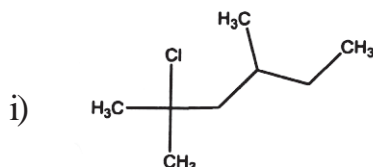
- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.

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Q1) Solve any five of the following :

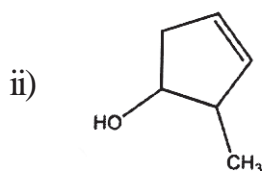
[5 × 3 = 15]

- a) Explain the different types of bonds and compare sigma and pi bond.
- b) Draw structures of compounds from following IUPAC names.
  - i) 3,5-Dimethylhexane 1,3-,5-triol
  - ii) Cyclohex-3-en-1-ol
  - iii) 4-Chloro-3-ethylbutan-1-ol
- c) Write IUPAC names for following structures.

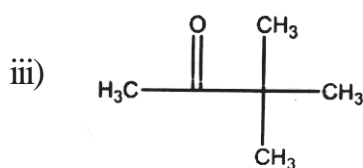


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- d) Give structure and uses of ethanolamine and ethylene diamine.
- e) Explain hyperconjugation with examples.
- f) Describe in brief about Structural isomerism in organic compounds.
- g) Give structure and uses of chloral hydrate and vanillin.

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**Q2) Solve any two of the following :** **[2 × 10 = 20]**

- a) Define Elimination Reactions. Add an elaborate note on the mechanism, Stereochemistry, kinetics and orientation involved in Elimination reaction.
- b) Classify carbonyl compounds and explain any three methods of preparation and any three nucleophilic addition reactions of aldehydes.
- c) What is Substitution nucleophilic Bimolecular reaction? Illustrate with help of examples the mechanism, kinetics and stereochemistry of SN<sub>2</sub> reactions.
- d) Classify organic compounds on the basis of elemental constituents with suitable examples. Give the preparation methods for alcohols, aldehydes and carboxylic acids.

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**Q3) Solve any Eight of the following :** **[8 × 5 = 40]**

- a) Define atomic hybridization and describe it in detail with respect to carbon.
- b) Explain the order of basicity of aliphatic amines elaborating the effect of substituent with examples and its impact on their reactivity.
- c) Illustrate the electrophilic addition reactions of alkenes with examples explaining the rules governing it.
- d) Explain in detail Cannizzaro and cross Cannizzaro reaction of aldehydes.
- e) Describe the qualitative tests for alcohols and state the structure and uses of glycerol and chlorobutanol.
- f) Explain electrometric & steric effect.
- g) What are conjugated dienes? Explain Stability of conjugated dienes.
- h) Explain Aldol condensation.
- i) Discuss in detail Diels-Alder reaction and its mechanism.

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[6019]-2012

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**[6019]-2013**  
**First Year B.Pharmacy**  
**BP 203T: BIOCHEMISTRY**  
**(Semester-II) (2019 Pattern)**

*Time : 3 Hours]*

*[Max. Marks : 75*

*Instructions to the candidates :*

- 1) *All questions are compulsory.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Draw well labelled diagrams wherever necessary.*

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**Q1) Answer the following (Any 5 out of 7) :**

**[5 × 3 = 15]**

- 1) Define and classify protein  
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- 2) Give energetic involved in glycolysis
- 3) Explain structure and function of RNA
- 4) Describe biosynthesis dopamine  
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- 5) Explain properties of enzymes.  
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- 6) Define carbohydrate. Classify and give biological role of carbohydrates.
- 7) Write a short note on Gout.

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**Q2) Long Answer (Any 2 out of 4) :** **[2 × 10 = 20]**

- 1) Explain Krebs cycle in detail. Add a note on its energetic and amphibolic nature.  
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- 2) Discuss different factors affecting enzyme activity? Explain Michaelis Menton's equation in detail.
- 3) Explain transcription in detail. Add a note on its inhibitors
- 4) Explain metabolism of amino acid, Explain urea cycle in detail.

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**Q3) Short answers (Any 8 out of 10) :** **[8 × 5 = 40]**

- 1) Explain enzyme inhibition <https://pharmacyindia.co.in/>
- 2) Define and classify lipids. Explain beta oxidation of palmitic acid
- 3) Write a note on Ketogenesis and Ketoacidosis
- 4) Add a note on ETC  
<https://pharmacyindia.co.in/>
- 5) Describe semi conservative model of DNA replication
- 6) Explain HMP shunts. <https://pharmacyindia.co.in/>
- 7) Give biological significance of ATP and cyclic AMP
- 8) Explain catabolism of Tyrosine.  
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- 9) Describe structure of DNA. Write a note on genetic code.
- 10) Write a note on purine metabolism.

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**[6019]-2013**

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**[6019]-2014**

**First Year B.Pharmacy**

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**BP - 204T : PATHOPHYSIOLOGY**

**(2019 Pattern) (Semester - II) (Theory)**

*Time : 3 Hours]*

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*[Max. Marks : 75*

*Instructions to the candidates:*

- 1) *All questions are compulsory.*
- 2) *Neat labeled diagram must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*

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**Q1) Answer the following. (Any 5 out of 7) :**

**[ 5 × 3 = 15]**

- a) Discuss Etiology and symptoms of hemophilia.
- b) Describe the mediators of inflammation.
- c) Define and enlist the types of epilepsy.
- d) Describe the outline of jaundice.
- e) Enlist and explain the types of hypertension.
- f) Compare reversible and irreversible cell injury.
- g) Explain signs and symptoms of hypothyroidism.

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**Q2) Long Answers (Any 2 out of 4) :**

**[2 × 10 = 20]**

- a) Describe chronic obstructive airway diseases in detail.
- b) Define cancer. Explain the pathophysiology of cancer.
- c) Define diabetes mellitus and explain pathophysiology of diabetes mellitus.
- d) Define and classify hepatitis, discuss in detail pathophysiology of hepatitis.

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**Q3) Short Answers (Any 8 out of 10) :**

**[8 × 5 = 40]**

- a) Describe etiology and pathogenesis of goitre. <https://pharmacyindia.co.in/>
- b) Explain the basic principles of skin wound healing.
- c) Describe the pathophysiology of chronic renal failure.
- d) Describe pathogenesis of malaria. <https://pharmacyindia.co.in/>
- e) Explain polycystic ovarian syndrome in detail. <https://pharmacyindia.co.in/>
- f) Discuss the signs, symptoms and pathogenesis of depression.
- g) Write a short note on urinary tract infections. <https://pharmacyindia.co.in/>
- h) Explain etiology and clinical symptoms of stroke. <https://pharmacyindia.co.in/>
- i) Discuss pathophysiology of gout. <https://pharmacyindia.co.in/>
- j) Describe causes and enlist the types of angina.

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