
**B. Pharmacy 2nd
Semester
Question Paper
2018-2019**

BP-201T

Even Semester Examination 2018-19

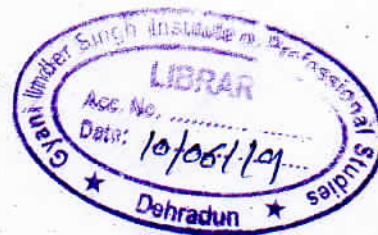
B.PHARMA (SEMESTER-II)

HUMAN ANATOMY AND PHYSIOLOGY-II

Max Marks : 20

Section A

NOTE: All given multiple-choice questions are compulsory.
[20×1]



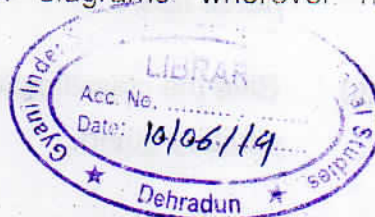
1. The normal value of diastolic blood pressure is.....
2. The red blood cells is also known as
3. The normal haemoglobin value in human is
4. Which of the following statements about RBC is correct
 - a. RBCs contain haemoglobin
 - b. Mature RBCs lack nuclei.
 - c. The lifespan of RBCs is about 30 days.
 - d. The mature RBCs lack ribosomes.
5. Which dietang component is needed for the synthesis of DNA and influences production of RBCs.
 - a. Calcium
 - b. Iron
 - c. Vitamin A
 - d. Folic acid
6. The person who has greater than normal number of eosinophils is most likely suffering from
7. Which of the following is the best description of Homeostasis?
 - a. Maintenance of body function
 - b. Maintenance of body function at optimum level at all times
 - c. Multiple system working cooperatively to maintain body function within normal limit
 - d. Keeping the body in balance.
8. Hemolysis may occur when a body cell is placed in a solution.
9. The function of connective tissue is
10. Perichondrium consist of a regular connective tissues around cartilage and bone (True / False).
11. Tidal volume is approx. ml perspiration.
12. The normal PH of urine is
13. Acetylcholine is a neurotransmitter.
14. Space between two neurons is called
15. Upper part of stomach is called
16. GABA is a type of receptor.
17. Full form of ATP is
18. The main excretory organ is
19. Intercostal muscles are responsible forin respiration process.
20. Vital capacity is.....

HUMAN ANATOMY AND PHYSIOLOGY-II

Time: 03:00 Hours

Max Marks : 75

NOTE: All questions are compulsory. Draw diagrams wherever necessary.

Section B

1. Attempt any seven parts of the following :

[5 × 4]

- (a) Write the composition and function of blood and explain the significance of blood grouping.
- (b) Define Anatomy, Physiology and Homeostasis.
- (c) Write short note on Transport of gases in lungs.
- (d) Explain Protein synthesis.
- (e) Draw and explain the Structure of DNA.
- (f) Explain Lymphatic organs and tissues.
- (g) Explain principles of cell communication
- (h) Cardiac cycle.
- (i) Explain conduction system of heart and heart Beat.
- (j) Write short note on Spermatogenesis.

- (k) Explain Parasympathetic nervous system.
- (l) Discuss the electrocardiogram and disorders of heart.

Section C

2. Attempt any **two** parts of the following : [10×2]

- (a) What is Oogenesis. Explain the physiology of Menstruation.
- (b) What is Action potential? Describe in detail the classification and properties of nerve fibers.
- (c) Give the classification of hormones. Describe the structure and functions of pituitary gland.
- (d) Explain role of Chromosome in Genetics with structure and functions.
- (e) Give the internal structure of kidney. How urine formation takes place explain.
- (f) What is fertilization? Give internal structure of female reproductive system.
- (g) What is Electrocardiogram? Give its significance in cardiac diagnosis.
- (h) What is Digestive system? Give the anatomy and functions of Pancreas..
- (i) Give the internal structure of kidney. How is urine formation takes place explain.

Section A

BP-202T

Even Semester Examination 2018-19

B.PHARMA (SEMESTER-II)

PHARMACEUTICAL ORGANIC CHEMISTRY -II



Time: 03:00 Hours

Max Marks: 75

Section A

NOTE: All given multiple-choice questions are compulsory.

[20×1]

1. Organic compounds are broadly classified as
 - (a) Open chain compounds and acyclic compounds
 - (b) Open chain compounds and linear chain compounds
 - (c) Cyclic compounds and alicyclic compounds
 - (d) Alicyclic compounds and acyclic compounds
2. Aliphatic compound is the other name for
 - (a) Acyclic compounds
 - (b) Alicyclic compounds
 - (c) Ring compounds
 - (d) Closed chain compounds
3. Which among the following is not an example of Acyclic compound
 - (a) Acetaldehyde
 - (b) Ethane
 - (c) Cyclopropane
 - (d) Isobutane
4. Acetic acid is a and hence it is not an example of ring compound.
5. Azulene is a compound. non- benzenoid
6. Alkadienes are classified types.

7. Identify the one which is the perfect example for Isolated double bond:
- (a) 1,4 pentadiene
 - (b) 1,2 pentadiene
 - (c) 1,3 pentadiene
 - (d) 1,5 butadiene
8. In Alkenes the Carbon atoms are connected to each other by a.....
9. Which among the following is not colourless:
- (a) Methene
 - (b) Ethene
 - (c) Propene
 - (d) Butene
10. Isolated dienes are similar in property to
- (a) Monoolefins
 - (b) Diolefins
 - (c) Triolefins
 - (d) Tetraolefins
11. Which C-X bond has the highest bond energy per mole?
- (a) C-Br
 - (b) C-Cl
 - (c) C-F
 - (d) C-I
12. Which of the following is not the method of preparation of alkyl halide?
- (a) Darzen's method
 - (b) Halogenation of alkene
 - (c) Addition of HX on alkenes
 - (d) Hydration of alkene
13. In primary alkyl halides, carbon attached to the halogen atom is further attached to how many carbon atoms?
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

(2)
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14. Which alkyl halide has the highest reactivity for a particular alkyl group?
- (a) R-F
 - (b) R-Cl
 - (c) R-I
 - (d) R-Br
15. Carbonyl compounds when oxidized easily to form carboxylic group involves
- (a) Aldehydes
 - (b) Ketones
 - (c) Haloalkanes
 - (d) esters
16. If ketones are not oxidized, then upon heating Fehling's solution remains
- (a) White
 - (b) Blue
 - (c) Unchanged
 - (d) both B and C
17. Acetic acid is manufactured by the fermentation of.....
18. Which of the following gives benzoic acid on oxidation?
- (a) Chlorophenol
 - (b) Chlorotoluene
 - (c) Chlorobenzene
 - (d) Benzyl chloride
19. o-xylene when oxidised in presence of V_2O_5 the product is which carboxylic acid?
20. By aerial oxidation, which one of the following gives phthalic acid?
- (a) Naphthalene
 - (b) Benzene
 - (c) Mesitylene
 - (d) Toluene

Section B

2. Attempt any **seven** parts of the following:
- (a) Classify organic compounds with IUPAC system of nomenclature.
 - (b) Explain the mechanism of Addition reaction of alkanes.
 - (c) Write the uses of paraffin's with suitable examples.

[5 × 7]

- (d) Explain why aldehyde is more reactive than ketones for nucleophilic addition reaction.
- (e) Write qualitative test for carbonyl compounds. How will you distinguish between aldehyde and ketones?
- (f) Write structure and uses of Iodoform, Chloroform and Tetrachloroethylene.
- (g) Write short notes on Ozonolysis and Allylic rearrangements.
- (h) Define Markownikoff's and Anti Markownikoff's rule with example.
- (i) Explain the Aldole and Cannizzaro reaction mechanism.
- (j) What is Dienes. Write any two Addition reactions of conjugated Dienes.
- (k) What is Hybridization in Alkanes. Explain.
- (l) Explain sp^3 and sp^2 Hybridization in Halogenation of alkanes

Section C

3. Attempt any two parts of the following:

[10×2]

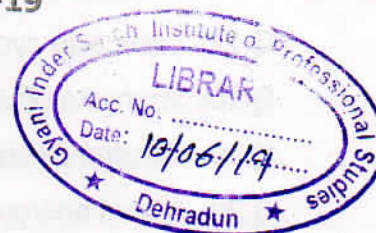
- (a) What is SN_1 and SN_2 reaction? Explain the mechanism.
- (b) Write Qualitative test for Carboxylic acid and Ester?
- (c) What is Electrophilic Addition Reaction to Alkene? Explain the mechanism with suitable example.
- (d) Write structure and uses of Acetic acid, Methylsalicylate, Acetylsalicylic acid and Citric acid.
- (e) Write structure and uses of Ethyl alcohol, Glycerol and Benzaldehyde.
- (f) What are factors affecting E_1 and E_2 reaction of Alkanes.
- (g) Write the general method of preparation and properties of Amines and Carboxylic acid.
- (h) Discuss the basicity of Amines. Describe any two methods to differentiate primary, secondary and tertiary amines.
- (i) Explain the Mechanism of Halogenation of alkanes. Write the uses of Chloroform and Iodoform.

BP-203T

EVEN SEMESTER EXAMINATION, 2018-19

B. PHARMA (SEM-II)

Biochemistry



Time: 3.00 Hours

Max. Marks: 75

Note: Attempt all questions.

SECTION-A

Note: Attempt every question.

(20×1=20)

- Q.1 Apoenzymes are.....
- Q.2 ATP produced in glycolysis are.....
- Q.3 The key enzyme in the regulation of fatty acid synthesis is.....
- Q.4 Cholesterol is the precursor of steroid hormones and bile salts. (True/False)
- Q.5 TCA is also known as.....cycle.
- Q.6 Oxidative deamination is the conversion of an amino acid into.....and.....
- Q.7 The accepted hypothesis for DNA replication is semi-conservative theory. (True/False)
- Q.8 α -amino group is removed from the amino acid in the transamination process. (True/False)
- Q.9 In DNA double helix, the two DNA chains are held together by.....bonds between the pair of bases.
- Q.10 In electron transport, electrons ultimately pass to oxygen. (True/False)
- Q.11 An allosteric activator increases the binding affinity. (True/False)
- Q.12 The genetic material of retroviruses such as HIV is RNA. (True/False)
- Q.13 The 5' and 3' numbers are related to the carbon number in sugar in nucleic acids. (True/False).
- Q.14 Gluconeogenesis is the formation of
- Q.15 Adenine is abase.

- Q.16 8 molecules of acetyl-CoA are produced in oxidation of palmitic acid (C_{16}), which involves seven rounds of oxidation. (True/False)
- Q.17 Citric acid cycle occurs in mitochondria. (True/False)
- Q.18 Phenylketonuria is a disorder of phenylalanine metabolism. (True/False)
- Q.19 Hypercholesterolemia is a disorder ofmetabolism.
- Q.20 ATP is energy rich compound. (True/False)

SECTION B

Note: Attempt any seven questions.

(7×5=35)

- Q.1 Discuss in detail about TCA cycle and its energetic.
- Q.2 Explain De novo synthesis of fatty acids in detail.
- Q.3 Define enzymes. Give the Michaelis- Menton plot of enzyme kinetics.
- Q.4 Explain biosynthesis of purine nucleotides in detail.
- Q.5 Give the oxidative and non-oxidative phase of HMP shunt pathway.
- Q.6 Give the factors affecting enzyme activity.
- Q.7 Discuss the process of DNA replication.
- Q.8 What is Transamination? Give the metabolic disorder of phenylalanine.
- Q.9 Classify biomolecules. Explain the biological role of amino acids and lipids.

SECTION C

Note: Attempt any two questions.

(2×10=20)

- Q.1 Write a note on β -oxidation of saturated fatty acid. Give the pathway for the formation of ketone bodies.
- Q.2 Discuss the following
- Pathway of Glycogenesis
 - Catabolism of tyrosine into melanin
- Q.3 Explain gluconeogenesis in detail.

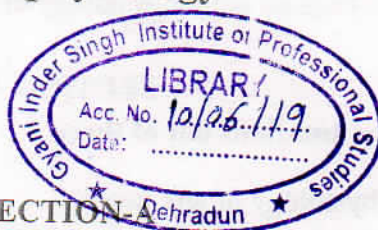
EVEN SEMESTER EXAMINATION, 2018-19

B. PHARMA (SEM-II)

Pathophysiology

Time: 3.00 Hours

Note: Attempt all questions.



Max. Marks: 75

Note: Attempt every question.

(20×1=20)

- i. Tachycardia is _____ the heart rate.
- ii. Hypertension is the _____ the blood pressure.
- iii. Anaemia is the condition when the level of _____ cell decrease.
- iv. Leucopenia is a decrease in the number of _____ cells.
- v. The deficiency of cortisol cause Addison's disease. (True/False)
- vi. Excess thyroid hormone production cause Grave's disease. (True/False)
- vii. Insulin is a hormone made by _____.
- viii. Artherosclerosis is a condition when HDL level rise than the normal. (True/False)
- ix. A pain in your chest or discomfort is a symptom of Angina. (True/False)
- x. Digoxin is used in the case of cardiac arrest treatment. (True/False)
- xi. Sickle cell disease is an abnormality in oxygen carrying protein haemoglobin in RBC. (True/False)
- xii. Myelofibrosis is a cancer of _____.
- xiii. The full form of HIV is _____.
- xiv. The HIV destroy _____ cells.
- xv. Lymphoma is a cancer of _____ cells.
- xvi. Dopamine level increase in Parkinson's disease. (True/False)
- xvii. COMT inhibitors are used in treatment of Parkinson's disease. (True/False)
- xviii. Alzheimer's disease is a neurological disorder. (True/False)
- xix. The symptom, delusions, hallucinations and disorganisation of thoughts, is of _____.
- xx. Olanzapine is a drug of choice for Schizophrenia. (True/False)

SECTION B

Note: Attempt any seven questions out of nine.

(7×5=35)

- Q.1 What are the various clinical sign of inflammation and explain the different types of inflammations and there characteristics?
- Q.2 Write a note on Alzheimer's Disease.

- Q.3 Explain the etiology and pathogenesis of Hypertension.
- Q.4 Write a descriptive note on pathophysiology of peptic ulcer.
- Q.5 Give the etiology and pathophysiology of Diabetes.
- Q.6 Write pathogenesis and mode of transmission of AIDS.
- Q.7 Discuss the pathophysiology of Asthma or Congestive Heart Failure (CHF).
- Q.8 What are the various types of hepatitis? Explain in detail.
- Q.9 What is epilepsy? Explain pathophysiology of epilepsy in detail.

SECTION C

Note: Attempt any two questions out of three.

(2×10=20)

- Q.1 Write the pathophysiology of any two:
- a) Angina pectoris b) Rheumatoid arthritis c) Osteoporosis
- b) Write exhaustive note on any two:
- a) Thyroid disorders
 - b) Parkinson's Disease
 - c) Meningitis
- c) What are the causes of cellular injury? Explain cellular adaptations.

Paper id and roll no. to be filled in your answer Book

Roll No.

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B. Pharm.

(Sem. II) EXAMINATION, 2018-2019

COMPUTER APPLICATIONS IN PHARMACY**Time: 1:30 Hours****Total Marks: 35****Note: 1) Attempt all questions. 2) Each question carries equal marks:****1. Attempt all parts:****5*2=10**

- a) Convert binary to decimal $(1101010)_2$
- b) Convert hexadecimal to decimal $(20B3)_{16}$
- c) Find 2^{rs} complement of $(1101001101110111)_2$
- d) Binary subtraction $(1001)-(0111)$
- e) Binary addition $(0011010) + (0001100)$

2. Differentiate between any three of the following:**3*3=9**

- a) Input and output devices.
- b) LAN and WAN.
- c) Assembly and machine language
- d) Application software and system software.

3. Attempt any three parts:**3*2=6**

- a) Describe basic operations of computers.
- b) Describe DFD with example.
- c) What is database?
- d) Explain the term MYSQL in detail.

4. Attempt any two parts:**2*5=10**

- a) Describe the role of computers in clinical studies.
- b) Explain HTML with various tags.
- c) Write the history of computer.



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Gyani Inder Singh Institute of Professional Studies Dehradun
Final Theory Exam-2019
Environmental Sciences, 2nd semester (BP 206T)

Time: 2 hrs.

MM: 50

Q.1: Multiple choice questions. Attempt all questions.

(1×10=10)

1. Another name for the water cycle is the.....
(a) Hydraulic cycle (b) Tectonic Cycle (c) Happy fun time Cycle (d) None of these
2. The Environment (Protection) act is on
(a) 1948 (b) 1986 (c) 1896 (d) 1968
3. Most of the Earth's water is in the form of.....
(a) Salt water (b) Ice (c) Fresh water (d) None of these
4. The region of earth, where life exists is.....
(a) Atmosphere (b) Biosphere (c) Lithosphere (d) Hydrosphere
5. Ecosystem is smallest unit of
(a) Lonosphere (b) Lithosphere (c) Mesosphere (d) Biosphere
6. The set of ecosystem is called a.....
(a) Biome (b) Climate (c) Subsystem (d) Structure
7. Which is NOT a greenhouse gas.....
(a) Methane (b) Carbon Dioxide (c) Water vapor (d) Gasoline
8. The layer of water at or near the surface of the earth is called.....
(a) Atmosphere (b) Hydrosphere (c) Lithosphere (d) Biosphere
9. What makes desert region to become highly unproductive.....
(a) Salinity (b) Sunlight (c) Temperature (d) Increase in the rain
10. What kind of climate we can find in the Thar Desert
(a) Cold (b) Dry (c) Cool (d) Moist

Q.2: Attempt any 2 question.

(2×10=20)

- (a) Write a brief note on Ecosystem.
- (b) Write a note on Water Availability.
- (c) Give brief introduction of Environment.

Q.3: Attempt any 5 questions.

(5×4=20)

- (a). Give a detailed account of Indian Forest and their types.
- (b). Write a note on Multidisciplinary nature of Environmental studies.
- (c) Discuss role of forest.
- (d). Discuss green house effect.
- (e) What is Deforestation?
- (f). Write a note on water resources.