

Printing Pages :2

Paper Code: BP-201T	B (SVSU:2023-24/R)
Enrollment No.	

B.PHARM**1st YEAR, IInd SEMESTER EXAMINATION****Subject : HAP II (CODE-BP 201T)****[Time : 3:00 Hours |****|Max. Marks : 75]****Q1. Long Question : Answer Any Two | 10×2=20 |**

- Describe Physiology of Urine formation with diagram.
- Explain synthesis of Thyroid hormone with its disorders.
- Elucidate Physiology of nerve impulse transmission.

Q2.. Short Question: Answer any Seven | 5×7=35 |

- Explain RAAS.
- Discuss Reflex action with its components.
- Explain menstruation cycle.
- Write a note on the spermatogenesis.
- Write about the acid-base production mechanism of Digestive system.
- Explain flow of fluid in nephron and kidney.
- Draw a well labeled diagram of Neuron.
- Write a note on protective covering of Brain.
- Write the physiology of respiration with diagram.

Q3. Multiple choice question.(Answer all) | 1×20=20 |

- Which of the following is synthesized and stored in liver?
 - Arabinose
 - Galactose
 - Glycogen
 - Both b & c
- The largest salivary glands are?
 - Parotid
 - Submandibular
 - Sublingual
 - Both B & C
- Pancreatic juice is stimulated by the release of?
 - Secretine
 - Cholecystokinase
 - Enterokinase
 - Both A & B
- ___ is divided at T5 level.
 - Bronchi
 - Trachea
 - carina
 - Lungs
- Purine and Pyrimidine are _____ base/
 - Phosphate
 - Nitrogenous
 - Sulphur
 - None of these
- The point at which trachea is divided in to two primary bronchi is called?
 - Carina
 - Hilum
 - cardiac notch
 - None of these

- vii. _____ is the largest Cranial Nerve
a. Optic
b. Vagus
c. trochlear
d. Trigeminal
- viii. Alveoli is the functional unit of _____.
a. Brain
b. Kidney
c. Lungs
d. Liver
- ix. Which of the following hormone is responsible for male characteristics?
a. Testosterone
b. Estrogen
c. Progesterone
d. Both A & B
- x. Which cells synthesize and secrete testicular hormones in males?
a. Leyding cells
b. Spermatogonia
c. Sertoli cell
d. Both B & C
- xi. The Maximum volume of air in the lung by full forced inhalation is called?
a. Vital Capacity
b. Total lung capacity
c. Reserve volume
d. Tidal Volume
- xii. How does human sperm locomote?
a. Cilia
b. Flagella
c. both a & b
d. None
- xiii. Which part of brain controls body temperature and eating urge?
a. Thalamus
b. cerebellum
c. Hypothalamus
d. Pons
- xiv. Which of the following is the largest endocrine gland?
a. Pitutary
b. Thyroid
c. Pineal
d. Adrenal
- xv. Left lung has _____ fissure.
a. 1
b. 2
c. 3
d. 4
- xvi. Muscle (s) contracted during inhalation?
a. Diaphragm
b. External intercostal muscles
c. Internal intercostal muscles
d. Both A & B
- xvii. Which of the following is the part of Hind Brain?
a. Hypothalamus
b. Pons
c. Cerebellum
d. Corpus Collosum
- xviii. Which of the following organ receive only oxygenated blood?
a. Lungs
b. Spleen
c. Liver
d. Gills
- xix. In DNA, the enzyme which breaks the H₂ bond is?
a. Helicase
b. Ligase
c. Topoisomerase
d. Polymerase
- xx. The gaseous exchange in alveoli is a type of?
a. Simple diffusion
b. Osmosis
c. Active transport
d. Passive transport

Printing Pages :2

Paper Code: BP-202T	B (SVSU:2023-24/R)												
Enrollment No.													

B. PHARM**IInd SEMESTER EXAMINATION****PHARMACEUTICAL ORGANIC CHEMISTRY-I (BP202T)****[Time : 3:00 Hours]****[Max. Marks : 75]****I. Objectives Question: Answer All Question****[20×1=20]**

- The disappearance of the purple colour of KMnO_4 in its reaction with alkene is known as
 a. Markovnikov test b. grignard test c. baeyer test d. Wurtz test
- Hybridization of carbon atoms of a carbonyl group is
 a. sp hybridized b. sp^2 hybridized
 c. sp^3 hybridized d. None of these
- Both of the Compounds $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ and $\text{CH}_3\text{OCH}_2\text{CH}_2\text{CH}_3$ are called as
 a. Enantiomers b. conformational isomers
 c. Metamers d. optical isomers
- How many isomers are possible for pentane
 a. 2 b. 3 c. 4 d. 5
- Which of the following alkanes has highest boiling point
 a. N-Octane b. Isopentane
 c. nButane d. Neopentane
- The Hydrocarbons are mainly
 a. Insoluble in water b. composed of carbon and hydrogen
 c. Both a and b d. None of these
- A tertiary carbon is bonded directly to
 a. 2 hydrogens b. 3 Carbons
 c. 4 Carbons d. 2 Carbons
- 2-Methylpentane is indicated by
 a. C_5H_{12} b. C_6H_{14} c. C_3H_{10} d. C_6H_{12}
- Reduction of Acetic acid with LiAlH_4 gives
 a. ethanol b. Ethane c. Ethanal d. Ethyne
- Acid hydrolysis of Propanenitrile leads to
 a. formic acid b. Propionic acid c. Acetic acid d. Butyric acid
- The hybridization of nitrogen in an amine is
 a. Sp^2 b. Sp^3 c. Sp d. Sp^4
- The most stable alkyl free radical is
 a. Methyl b. primary c. Secondary d. Tertiary
- Which of the following is not an electrophile
 a. NH_3 b. Br^+ c. AlCl_3 d. NO_2^+

14. Carbon-Carbon bonds homolytic fission of leads to the formation of
a. Free radicals b. carbonium ions c. carbanionsd.none of these
15. Acetic acid reacts with methyl alcohol in the presence of an acid catalyst to give
a. Methyl formatch Ethylformate c Methyl acetate d Ethyl acetate
16. The bond angle between the hybrid orbitals in methane.
a. 180° b. 120° c. 109.5° d. 115°
17. Isomers necessary requirement is
a. Same chemical properties b same molecular formula
c same structural formula d same functional groups
18. Geometrical isomerim is shown by Alkenes show because of
a. Asymmetry b Rotation around a single bond
c. Resonance d Restricted rotation around a double bond
19. Reaction of Acetone with HCN to form cyanohydrins it is a example of
a. Electrophilic addition b electrophilic substitution
c. Nucleophilic addition d Nucleophilic substitution
20. Oxidation of aldehyde with KMnO_4/H^+ gives
a Alcohols b Acetals cKetones d Acids

II. Attempt any two of the following: (2 x 10=20)

1. Write in detail about isomerism along with classssification and examples.
2. Discuss in detail nucleophilic substitution reactions with examples
3. Give the structure and uses of formaldehyde Vanilin and glycerol
- 4.

III. Attempt any seven of the following: (7x 5=35)

1. Structure and uses of acetic acid and lactic acid.
2. Classification of organic compounds.
3. Give the uses of propylene glycol
4. Classification of organic reactions
5. Method of preparation and properties of alkenes.
6. Discuss substitution and Addition reaction.
7. Give the method of preparation and Properties of aldehydes.
8. Discuss heterolytic and homolytic fission and reaction intermediates.
9. Write the test for alcohols.

Printing Pages :2

Paper Code: BP-203T	C (SVSU:2023-24/R)
Enrollment No.	

B. PHARM

1st YEAR IInd SEM EXAMINATION

BIOCHEMISTRY, BP-203T

[Time : 3:00 Hours]

[Max. Marks : 75]

I Long Question : Answer Any Two [10×2=20]

1. Give the introduction, classification and properties of enzymes.
2. Write in detail Biomolecules.
3. Explain Citric acid pathway.

II. Short Question: Answer any seven [7×5=35]

1. What is oxidative phosphorylation?
2. Write chemical nature and biological role of proteins.
3. Define beta oxidation of saturated fatty acid.
4. Give the structure and functions of DNA & RNA.
5. Give the synthesis and significance of melatonin.
6. Explain Transamination, deamination and decarboxylation.
7. What is phenylketonuria and albinism.
8. What are the enzyme inhibitors?
9. Give the biological significance of ATP and cyclic AMP.

III. Objectives Question: Answer All Question [20×1=20]

1. HDL is synthesized and secreted from
(A) Pancreas (B) Liver (C) Muscle (D) Kidney
2. The glycolysis is regulated by
(A) Hexokinase (B) Phosphofructokinase
(C) Pyruvate kinase (D) All of these
3. The cholesterol molecule is
(A) Benzene derivative (B) Quinoline derivative
(C) Steroid (D) Straight chain acid
4. Milk sugar is:
(A) Mannose (B) Galactose (C) Sucrose (D) Lactose
5. The purple ring of Molisch reaction is due to
(A) Furfural & Naphthol (B) Sulphuric acid
(C) Nitric acid (D) None of the above
6. A Holoenzyme is
(A) Functional unit (B) Apo enzyme
(C) Coenzyme (D) All of these

7. Table sugar which is used in making tea is:
 (A) Glucose (B) Lactose (C) Sucrose (D) Fructose
8. Which bond is present in the primary structure of protein?
 (A) Ester bond (B) Disulfide bond
 (C) Hydrogen bond (D) Ionic bond
9. Which of the following statements regarding TCA cycle is true?
 (A) It is an anaerobic process (B) It contains no intermediates
 (C) It generates 08 molecules of ATP per cycle (D) It is amphibolic in nature
10. The general test for detection of carbohydrates is
 (A) Osazone formation (B) Molisch test
 (C) Barfoed test (D) Ninhydrine test
11. Hypocalcaemia affects
 (A) Skeletal muscles (B) Smooth muscles
 (C) Cardiac muscles (D) All of these
12. Synthesis of Glucose from amino acids is termed as
 (A) Glycolysis (B) Gluconeogenesis
 (C) Glycogenesis (D) Lipogenesis
13. During each cycle of β -oxidation of FA, all the following compounds are generated, except:
 (A) NADH (B) H_2O
 (C) Acetyl CoA (D) Acyl CoA
14. In competitive enzyme activity inhibition
 (A) The structure of inhibitor generally resembles that of the substrate
 (B) Inhibitor decreases apparent K_m
 (C) K_m remains unaffactive
 (D) Inhibitor decreases V_{max} without affecting K_m
15. Which of the following is located in the mitochondria?
 (A) Cytochrome oxidase (B) Succinate dehydrogenase
 (C) Dihydrolipoyl dehydrogenase (D) All of these
16. Iodine is required in human body for
 (A) Formation of thyroxine (B) Formation of Glutathione
 (C) Formation of potassium iodide (D) Adrenalin
17. The degradative Processes are categorized under the heading of
 (A) Anabolism (B) Catabolism (C) Metabolism (D) None of these
18. A sugar alcohol is
 (A) Mannitol (B) Trehalose (C) Xylulose (D) Arabinose
19. A significant source of starch among vegetables is
 (A) Radish (B) Spinach (C) Potato (D) Cauliflower
20. The sugar found in RNA is
 (A) Xylose (B) Deoxyribose (C) Ribose (D) Ribulose

Printing Pages :2

Paper Code: BP-204T	B (SVSU:2023-24/R)									
Enrollment No.										

B.PHARM

1st YEAR, II SEMESTER EXAMINATION
Pathophysiology (CODE-BP204 T)

[Time: 3:00 Hrs]

[Max. Marks : 75]

Q1. Long Question: Answer Any two [10×2=20]

- Define anemia and give their types. Explain the pathophysiology of Megaloblastic anemia.
- Discuss the pathophysiology of congestive heart failure in details.
- Give classification, etiology and pathogenesis of cancer.

Q2. Short Question: Answer any Seven [5×7=35]

- Give the pathogenesis of irreversible cell injury.
- Differentiate between hyperplasia and hypertrophy.
- Give the pathophysiology of peptic ulcer.
- Define Inflammation. Give the clinical signs of inflammation.
- Describes the various intracellular accumulations.
- Give a detailed note on Iron deficiency anemia.
- Discuss the pathophysiology of Hepatitis B.
- Discuss causes and pathogenesis of Gout.
- Discuss the pathophysiology of Tuberculosis.

Q3. Multiple choice questions.(Answer all) [1×20=20]

- Alzheimer's is the most common form of which of these?
 - Malnutrition
 - Dementia
 - Fatigue
 - Psychosis
- The role of collagen in wound healing is-
 - Cell adhesion
 - Locomotion
 - Expansion and contraction
 - Strength and support
- Hypertrophy of a muscle is due to.....
 - Increase in number of cells
 - Increase in size of cells
 - Decrease in number of cells
 - Decrease in size of cells
- What is the most common site of a gout attack?
 - Big toe
 - Foot
 - Knee
 - Ankle
- Metaplasia is a
 - Reversible change
 - Irreversible changes
 - Inflammatory reaction
 - Post-infection state
- Vitamin B₁₂ and Folic acid deficiency causes-
 - Pancytopenia
 - Thalassemia
 - Megaloblastic anemia
 - Sickle cell anemia

- vii. The small uric acid crystals deposited in the soft tissues in patients with gout are called:
- Tophi
 - Nodules
 - Neurofibromas
 - None of the above
- viii. Bradykinesia of Parkinson's disease is-
- Hurried walking
 - Slowness of movement
 - Soft speech
 - None
- ix. Which of the following blood levels is increased in gout?
- Cholesterol
 - Urea
 - Uric acid
 - Bilirubin
- x. Type-I diabetes mellitus (DM) was previously called-
- Diabetes insipidus
 - Non-insulin dependent DM
 - Juvenile onset DM
 - Adult onset diabetes mellitus
- xi. What is the most common cause of COPD?
- Air pollution
 - Cigarette smoking
 - Lung infection
 - Lung allergy
- xii. What is the major risk factor for stroke?
- Obesity
 - Diabetes
 - High blood pressure
 - All of the above
- xiii. Components of feedback system are-
- Receptor
 - Control Centre
 - Effector
 - All of the above
- xiv. The use of drugs to treat cancer is called-
- Radiotherapy
 - Chemotherapy
 - Physiotherapy
 - All of the above
- xv. The spreading of cancer across the body is called-
- Homeostasis
 - Metastasis
 - Osmosis
 - All of the above
- xvi. Schizophrenia is a mental disorder that affects-
- Thought
 - Mood
 - Judgement
 - All of the above
- xvii. What is the final stage of wound healing-
- Hemostasis
 - Maturation
 - Inflammation
 - Proliferation
- xviii. Which is a common UTI risk factor in adults?
- Enlarged prostate
 - Catheter usage
 - Diabetes
 - All of the above
- xix. What is hemophilia?
- A digestive disorder
 - A type of cancer
 - A blood clotting disorder
 - None of the above
- xx. Which one is cell derived mediator of inflammation?
- Histamine
 - Serotonin
 - Prostaglandins
 - All of the above

Printing Pages : 1

Paper Code : BP-205T

C (SVSU:2022-23/R)

Enrollment No.

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B.Pharm**Ist Year Annual Examination****Subject: Computer Application in Pharmacy****Subject Code- BP-205T****[Time : 2 Hours]****[Max. Marks : 50]****I Long Question: Answer Any Two:****[10*2=20]**

1. Explain Binary, Octal, Decimal and Hexadecimal number system in detail?
2. What do you mean by Data flow diagram? Explain the types of data flow diagram.
3. What do you mean by database? Explain the database management system in detail with their characteristics?

II Short Question: Answer Any Six:**[6*5=30]**

1. What do you mean by computer? Explain hardware and software in computer system.
2. Explain Process life cycle in detail.
3. What do you mean by programming language? Explain the types of programming language.
4. What do you mean by Bioinformatics? Explain the objective of Bioinformatics.
5. What do you mean by data and information?
6. Explain these terms:
 - (i) CDS
 - (ii) TIMS
7. What do you mean by Input/ Output design? Explain in detail.
8. Write the brief note on Planning and managing the project.

Printing Pages :1

Paper Code: BP-206T	8	(SVSU:2023-24/R)
Enrollment No.		

B. Pharm

1st Year, 2nd Semester

Regular Examination(2023-2024)

Subject Name: Environmental Sciences Code: BP206T

[Time : 2:00 Hours]

[Max. Marks : 50]

I Long Question : Answer Any Two [2×10=20]

1. Explain the types of pollution. Write the precautions to minimize the pollutions (air, water, noise).
2. Explain the concept of an ecosystem with their structure and function.
3. Describe the main causes that are responsible for over consumption of forest.

II. Short Question: Answer any Six [6×5=30]

1. What are the chief effects of Deforestation? 5
2. Write a short note on Water resources. 5
3. Write a short note on solar resources. 5
4. Explain the Aquatic ecosystem 5
5. Define environments. 5
6. Write a note on physical environment. 5
7. Write a note on the importance of environment studies. 5
8. Explain Renewable and Non-renewable Natural resources. 5