

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

B.PHARM

Ist 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]

- Explain synthesis of Thyroid hormone with its disorders.
- Elucidate Physiology of nerve impulse (Action Potential).
- Describe Physiology of Urine formation with diagram.

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

- Discuss Reflex action with its components.
- Explain menstruation cycle.
- Diagrammatically explain Structure of Lung.
- Explain RAAS.
- Write note on the acid – base production mechanism in Digestive system.
- Write a note on spermatogenesis.
- Write a note on protective covering of Brain.
- Explain steps involved in respiration.
- Draw a well labeled diagram of Neuron.

3. Multiple choice question. (Answer all) [1×20=20]

i. The largest salivary glands are?

- Parotid
- Submandibular
- Sublingual
- Both B & C

ii. Which of the following is synthesized and stored in liver?

- Arabinose
- Galactose
- Glycogen
- Both b & c

iii. Pancreatic juice is stimulated by the release of?

- Secretine
- Cholecystokinin
- Enterokinase
- Both A & B

iv. ___ is divided at T5 level.

- Bronchi
- Trachea
- carina
- Lungs

v. Left lung has ___ fissure.

- 1
- 2
- 3
- 4

vi. The point at which trachea is divided into two primary bronchi is called?

- Carina
- Hilum
- cardiac notch
- None of these

- vii. ____ is the largest Cranial Nerve
 a. Optic b. Vagus c. trochl 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. The gaseous exchange in alveoli is a type of?
 a. Simple diffusion b. Osmosis
 c. Active transport d. Passive transport
- xi. Which of the following is the largest endocrine gland?
 a. Pituitary b. Thyroid
 c. Pineal d. Adrenal
- 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. 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
- xv. Purine and Pyrimidine are ____ base/
 a. Phosphate b. Nitrogenous
 c. Sulphur d. None of these
- 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. Which cells synthesize and secrete testicular hormones in males?
 a. Leyding cells b. Spermatogonia
 c. Sertoli cell d. Both B & C

Paper Code: BP-202T	C (SVSU:2023-24/R)
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B. PHARM

 IInd SEMESTER EXAMINATION

PHARMACEUTICAL ORGANIC CHEMISTRY (BP202T)

[Time : 3:00 Hours]

[Max. Marks : 70]

I. Objectives Question: Answer All Question

[20×1=20]

- The alkene mostly soluble in
 - Water
 - Ethyl alcohol
 - Ammonia
 - CCl₄
- The composition of Baeyer's reagent is
 - dilute KMnO₄
 - HCl+ZnCl₂
 - Br₂ in CCl₄
 - NH₂NH₂
- Hybridization of nitrogen in an amine is
 - sp²
 - sp³
 - sp
 - sp⁴
- Mainly the Carbylamine test is given by
 - Primary amines
 - Secondary amines
 - Tertiary amines
 - None of these
- Acetone undergoes reduction with zinc amalgam in HCl to form propane. This reaction is known as
 - Clemmensen reduction
 - Wolff-Kishner reduction
 - Rosenmund reduction
 - Reformatsky reaction
- Ketones and Aldehydes can be distinguished by using
 - Ammoniacal AgNO₃ solution
 - Phenylhydrazine
 - Saturated NaHSO₃ solution
 - Thionyl chloride
- Reagents which react readily both with aldehydes and ketones.
 - Grignard reagents
 - Fehling reagents
 - Tollens reagent
 - Schiff's reagent
- Propanenitrile on acid hydrolysis gives
 - formic acid
 - Propionic acid
 - Acetic acid
 - Butyric acid
- Pentane consists of isomers.
 - 2
 - 3
 - 4
 - 5
- Highest boiling point is found in
 - n-Octane
 - Isopentane
 - n-Butane
 - Neopentane
- The Hydrocarbons are
 - Insoluble in water
 - composed of carbon and hydrogen
 - Both a and b
 - None of these
- Organic compounds which are stable carbon will always form
 - 2 bonds
 - 4 bonds
 - 3 bonds
 - 5 bonds
- A secondary carbon is bonded directly to
 - 2 hydrogens
 - 3 Carbons
 - 4 Carbons
 - 2 Carbons

14. Which molecular formula indicates 2-Methylpentane
a. C_5H_{12} b. C_6H_{14} c. C_3H_{10} d. C_6H_{12}
15. Lucas reagent is
a. $HCl/NaNO_2$ b. H_2/Pd c. $HCl/ZnCl_2$ d. $H_2/Pd/BaSO_4$
16. Oxidation of primary alcohol with $KMnO_4/OH^-$ produces
a. Carboxylic acid b. ether c. ketone d. ester
17. The isomers of a substance must have
a. Same chemical properties b. same molecular formula
c. same structural formula d. same functional groups
18. Ketones react with grignard reagents to form an addition product which on hydrolysis give
a. Primary alcohol b. Tertiary alcohol
c. secondary alcohol d. ketal
19. Ethylmagnesium iodide reacts with formaldehyde to give a product which on acid hydrolysis forms
a. an aldehyde b. a primary alcohol
c. a ketone d. a secondary alcohol
20. Methanol is also called as
a. Rubbing alcohol b. grain alcohol
c. wood alcohol d. Denatured alcohol

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

1. Give the structure and uses of oxalic acid, salicylic acid and acetic acid.
2. Write in detail about the method of preparation, properties, qualitative tests, of aldehydes
3. Give the properties and method of preparation of alkanes.

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

1. Give the reactions and method of preparation of alcohol.
2. Discuss elimination, addition and substitution reaction
3. Give the structure, properties and uses of paraldehyde and benzyl alcohol.
4. Write about nucleophilic substitution reaction.
5. Give the structure and uses of chloroform and ethylene chloride
6. Discuss the properties and qualitative tests for alcohols.
7. Discuss the properties, method of preparation and qualitative tests for carboxylic acids.
8. Discuss addition reaction of alkene.
9. Give the structure, properties and uses of vanillin and cinnamaldehyde

Enrollment No.

B. PHARMACY

Ist YEAR/IInd SEMESTER EXAMINATION

SUBJECT: BIOCHEMISTRY

SUBJECT CODE: BP-203T

[Time : 3:00 Hours]

[Max. Marks : 75]

- I Long Questions : Answer Any Two [10×2=20]**
1. Explain HMP Shunt pathway and its significance.
 2. Classify enzymes with explanation and their properties.
 3. Discuss oxidative phosphorylation and their uncouplers.
- II. Short Questions : Answer Any Seven [7×5=35]**
1. Define concept of free energy and ETC.
 2. Explain hormonal regulation of blood glucose level.
 3. Define beta oxidation of saturated fatty acid.
 4. Write therapeutic and diagnostic application of enzymes.
 5. Illustrate hypercholesterolemia, atherosclerosis, fatty liver and obesity.
 6. Distinguish endergonic and exergonic reaction.
 7. Explain translation in detail.
 8. Describe biosynthesis of purine nucleotides
 9. Draw the structure and biological function of coenzymes.
- III. Objective Questions: Answer All Questions [20×1=20]**
1. Select general formula of monosaccharide
(a) $C_nH_{2n}O_n$ (b) $C_2nH_2O_n$
(c) $C_nH_2O_2n$ (d) $C_nH_2nO_2n$
 2. Identify the sugar present in milk.
(a) Mannose (b) Galactose
(c) Sucrose (d) Lactose
 3. The glycolysis is regulated by
(a) Hexokinase (b) Phosphofructokinase
(c) Pyruvate kinase (d) All of these
 4. The purple ring of Molisch reaction is due to
(a) Furfural & Naphthol (b) Sulphuric acid
(c) Nitric acid (d) None of the above
 5. HDL is synthesized and secreted from
(a) Pancreas (b) Muscle
(c) Liver (d) Tissue

6. The degradative processes are categorized under the heading of

- (a) Anabolism
- (b) Catabolism
- (c) Metabolism
- (d) None of these

7. The cholesterol molecule is

- (a) Benzene derivative
- (b) Quinoline derivative
- (c) Steroid
- (d) Straight chain acid

8. A Holoenzyme is

- (a) Functional unit
- (b) Apo enzyme
- (c) Coenzyme
- (d) All of these

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. Iodine is required in human body for

- (a) Formation of thyroxine
- (b) Formation of Glutathione
- (c) Formation of potassium iodide
- (d) Adrenaline release

11. The sugar found in RNA is

- (a) Xylose
- (b) Deoxyribose
- (c) Ribose
- (d) Ribulose

12. Hypocalcaemia affects

- (a) Skeletal muscles
- (b) Smooth muscles
- (c) Cardiac muscles
- (d) All of these

13. Sulphur containing amino acid is

- (a) Methionine
- (b) Leucine
- (c) Valine
- (d) Asparagine

14. An example of a saturated fatty acid is

- (a) Palmitic acid
- (b) Oleic acid
- (c) Linoleic acid
- (d) Erucic acid

15. Cyanide is poisonous as it stops respiration because of its:

- (a) Inhibition of TCA cycle
- (b) Combination with RB cell membrane
- (c) Formation of complex with Hb.
- (d) Inhibition of cytochrome oxidase

16. Which one of the following is coenzyme?

- (a) ATP
- (b) Vitamin B & C
- (c) CoQ & CoA
- (d) All of these

17. Oxidation of which substance in the body yields the most calories

- (a) Glucose
- (b) Glycogen
- (c) Proteins
- (d) Lipids

18. Milk is a good source of all of the following except

- (a) Essential amino acids
- (b) Vitamin C
- (c) Galactose
- (d) Calcium and phosphorous

19. Nucleus contains _____ the repository of genetic information.

- (a) Ribosomes
- (b) DNA
- (c) RNA
- (d) Cytosol

20. Molecular formula of cholesterol is

- (a) $C_{27}H_{45}OH$
- (b) $C_{29}H_{47}OH$
- (c) $C_{29}H_{47}OH$
- (d) $C_{23}H_{41}OH$

B.PHARM

Ist YEAR(IInd SEMESTER) EXAMINATION

PATHOPHYSIOLOGY (BP- 204T)

[Time : 3:00 Hours]

[Max. Marks: 75]

Q1. Objectives Question: Answer All Question [20×1=20]

- i) What happens when a person has anemia?
 - (a) The body produces too much iron
 - (b) The blood becomes thick
 - (c) The blood does not have enough RBCs
 - (d) Too many WBCs are produced
- ii) Which one is cell derived mediator of inflammation?
 - (a) Histamine
 - (b) Serotonin
 - (c) Prostaglandins
 - (d) All of the above
- iii) Which of the following cancers is not routinely screened in the UK?
 - (a) Breast cancer
 - (b) cervical cancer
 - (c) Prostatic cancer
 - (d) Bowel cancer
- iv) Apoptosis can be defined as.....
 - (a) Programmed cell death
 - (b) Programmed cell growth
 - (c) Programmed cell maturity
 - (d) Programmed cell division
- v) Sickle cell anemia is caused by replacement of glutamic acid in β globin chain of Hb by....
 - (a) Arginine
 - (b) Valine
 - (c) Histidine
 - (d) Leucine
- vi) Histamine is ____
 - (a) A Hormone
 - (b) A Protein
 - (c) A Carbohydrate
 - (d) A type of analgesia
- vii) The human immunodeficiency virus is a:
 - (a) Provirus
 - (b) Retrovirus
 - (c) Bi-virus
 - (d) Pseudo-virus
- viii) Vitamin B12 and Folic acid deficiency causes.
 - (a) Pancytopenia
 - (b) Thalassemia
 - (c) Megaloblastic anemia
 - (d) Sickle cell anemia
- ix) The primary symptom of angina is:
 - (a) chest pain
 - (b) Pain in calf
 - (c) Abdominal cavity
 - (d) Headache
- x) Dysplasia refers to
 - (a) Change in morphology
 - (b) Change in number
 - (c) Change in cell type
 - (d) Change in cell size
- xi) Asthmatic patients find it difficult to
 - (a) Breath out
 - (b) Breath in
 - (c) Cough
 - (d) None of above
- xii) Bradykinesia of Parkinson's disease is-
 - (a) Hurried walking
 - (b) Slowness of movement
 - (c) Soft speech
 - (d) None
- xiii) The following symptoms may indicate a seizure disorder.
 - (a) Confused memory
 - (b) paroxysmal cerebral dysrhythmia
 - (c) Loss or disturbance of consciousness
 - (d) All of the above

- xiv) Which of these life style factors plays the biggest role in increasing the risk of stroke in younger adults?
 - (a) Overweight
 - (b) Little or no exercise
 - (c) High BP
 - (d) Smoking
- xv) Which neurotransmitter plays an important role in cognitive functions?
 - (a) Norepinephrine
 - (b) Adrenaline
 - (c) Serotonin
 - (d) Acetylcholine
- xvi) Type-I diabetes mellitus was previously called-
 - (a) Diabetes insipidus
 - (b) Non-insulin dependent diabetes mellitus
 - (c) Juvenile onset diabetes mellitus
 - (d) Adult onset diabetes mellitus
- xvii) Chemical that can induce cancer are called:
 - (a) Hazardous substance
 - (b) Carcinogens
 - (c) Mutagenic
 - (d) Non-carcinogens
- xviii) Metaplasia is a
 - (a) Reversible change
 - (b) Irreversible changes
 - (c) Inflammatory reaction
 - (d) Post-infection state
- xix) Malaria can be lethal
 - (a) True
 - (b) False
 - (c) None
 - (d) Both
- xx) Heart attack occurs when there is blood clotting in-
 - (a) Renal arteries
 - (b) Mesenteric arteries
 - (c) Hepatic arteries
 - (d) Coronary arteries

Q2. LongQuestion: Answer any two

[2×10=20]

- a) What are intracellular accumulations? Describes the various intracellular accumulations.
- b) Give the detailed note on chemical mediators of inflammation.
- c) Classify Diabetes Mellitus. Discuss pathogenesis and treatment of type II Diabetes Mellitus

Q3. Short Questions: Answer any seven[7X5=35]

- a) Give the pathogenesis of reversible cell injury.
- b) Discuss the pathophysiology of Hypertension.
- c) Give the pathophysiology of IBD.
- d) Discuss acute renal failure and its treatment.
- e) Differentiate between acute and chronic renal failure.
- f) Give cause, symptoms of Typhoid and Syphilis.
- g) Give classification, etiology and pathogenesis of cancer.
- h) Write the short note on COPD.
- i) Describe the pathogenesis of AIDS.

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B.PHARM

1st Year 2nd SEM. Examination

Computer Applications in Pharmacy

[Time : 2:00 Hours]

[Max. Marks : 50]

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

- a) What is the role of Bio informatics in drug and Vaccine Development ?
- b) What is SDLC ? Explain the phases of SDLC.
- c) Add the following:
- | | | | |
|-----|----------|------|----------|
| i.) | 011110 | ii.) | 110110 |
| | + 111001 | | + 111110 |
-

Q2.. Short Question: Answer Any Six [5×6=30]

- a) What is XML ? Write a program to print address , contact number, e-mail id.
- b) What is Decimal Number System? Explain with example.
- c) What is Information System ?What are the types of Information System?
- d) What is the Usage of computers in retail pharmacy?
- e) What are the Applications of computer in Pharmacy ?
- f) (1). What is Pharmacokinetics ?
(2). What is CADD?
- g) What are the Data and Analysis method using Computers in Healthcare?
- h) What is Database and write its types ?

10/01/2025

Printing Pages :1

Paper Code:BP-206T

B (SVSU:2024-25/R)

Enrollment No.														
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B. Pharm 1st Year, 2nd Semester
Subject Name: Environmental Sciences

Code: BP206T

[Time : 2:00 Hours]

[Max. Marks : 50]

I Long Question : Answer Any Two [10X2=20]

1. What are Natural Resources? Explain Renewable and Non-renewable Natural resources.
2. Explain the concept of an ecosystem with their structure and function.
3. Explain the types of pollution. Write the precautions to minimize the pollutions (Air, Water, and Soil).

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

1. Explain the Aquatic ecosystem 5
2. What are the causes of air pollution? 5
3. Explain the different aquatic ecosystems. 5
4. What are the different energy resources? Explain any two in detail. 5
5. Define environments. 5
6. What are the chief effects of Deforestation? 5
7. Write various pollutants responsible for soil pollution. 5
8. Write a note on the importance of environment studies 5