Total No. of Questions : 3]

SEAT No. :

P3396

[Total No. of Pages : 2

[5552] - 2001
First Year B.Pharmacy (Semester - I)
HUMAN ANATOMY AND PHYSIOLOGY - I
THEORY
(2018 Pattern)

Time : 3 Hours] *[Max. Marks : 75*

Instructions to the candidates:

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

Q1) Answer all the questions (Objectives) (Two mark each) **[2 × 10 = 20]**

a) Draw a neat labeled diagram of Human Eye.

b) Explain the functions of Blood.

c) Define Homeostasis. Enlist the components of Feedback mechanism.

d) Define cell, tissue, organ and system.

e) Enlist the different types of WBC's.

f) Draw a neat labeled diagram of ECG.

g) Explain the functions of Lymphatic system.

h) Give the functions of skeletal system.

i) Explain Osmosis.

j) Enlist the clotting factors.

Q2) Long Answers (Any 2 out of 3) **[2 × 10 = 20]**

a) Define Blood pressure. Discuss the factors affecting blood pressure. Explain in detail hormonal regulation of blood pressure.

b) Define Joint. Give structural and functional classification of joints. Write a detailed note on Synovial joint.

c) Enlist the basic types of tissues with their characteristics. Describe the structure, location and function of various types of connective tissue.

P.T.O.

Q3) Short Answers (Any 7 out of 9) **[7 × 5 = 35]**

a) Explain the origin and functions of the cranial nerves.

b) Explain with example Positive feedback mechanism.

c) Distinguish between Sympathetic and Parasympathetic nervous system.

d) Explain the Structure and functions of Lymph node.

e) Explain the ABO system of Blood..

f) Describe in detail about Connective tissue.

g) Explain the forms of intracellular signaling.

h) Explain the structure and working of Neuromuscular junction.

i) Explain the anatomy and physiology of the Eye.

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Total No. of Questions : 3]

SEAT No. : ____

P3397

[Total No. of Pages : 4

[5552] - 2002
First Year B.Pharmacy (Semester - I)
102 : PHARMACEUTICAL ANALYSIS - I
(2018 Pattern)

Time : 3 Hours] ***[Max. Marks : 75***

Instructions to the candidates :

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

Q1) Multiple choice question **[20 × 1 = 20]**

i) In limit test of arsenic yellow stain is obtained due to

a) Arsenic b) Arsenious acid

c) Arsine d) None of above

ii) As per pharmacopoeia the term "soluble means"

a) Less than 1 part b) From 1 to 10 part

c) From 10 to 30 part d) From 30 to 100 part

iii) Meaning of the term titrant means

a) Solution in burette b) Solution in conical flask

c) Solution in volumetric flask d) None of above

iv) Atomic weight of sodium is

a) 20 b) 23

c) 25 d) 26

v) Potassium hydrogen phthalate is used as ____ solution

a) Primary standard b) Secondary standard

c) Both of above d) None of above

vi) Normality of concentrated Hydrochloric acid is ____

a) 8 b) 11

c) 18 d) None of above

P.T.O.

vii) Crystal violet indicator used in

a) Acid base titration b) Redox titration

c) Precipitation titration d) Non aqueous titration

viii) Meaning of LOD is

a) Loss on drying b) Limit of detection

c) Both of above d) None of above

ix) Silver nitrate solution is used in the assay of

a) Boric acid b) Citric acid

c) Magnesium nitrate d) Sodium chloride

x) Assay of potassium Iodide is performed by

a) lodimetry b) lodometry

c) Cerometry d) None of above

xi) Complexometric titrations are useful for the determination of ____

a) Non-metal ions b) Acidic drugs

c) Metal ions d) All of the above

xii) Colloids scatter the light due to _____

a) Brownian motion b) Tyndall effect

c) X-ray diffraction d) fluorescence

xiii) Which of the following is the strongest oxidizing agent?

a) BrO^-_3 b) $S_2O_8^{2-}$

c) $C1O^-_4$ d) $Cr_2O_7^{2-}$

xiv) Which ion is having highest molar conductivity?

a) Ag^+ b) H^+

c) OH^{--} d) Na^+

xv) Gas sensing probes are used to detect ____ in potentiometric titrations.

a) Inert gas b) Target gas

c) Only oxygen d) Only nitrogen

xvi) Ions responsible for hardness of water are ____.

a) Ca^{2+} and Mn^{2+} b) Mg^{2+} and Mn^{2+}

c) Mg^{2+} and Ca^{2+} d) Ca^{2+} and K^{+}

xvii) Which is not an example of colloid?

a) Milk b) Butter

c) Pearl d) All are colloids

xviii) EDTA is a _____ ligand.

a) Tetradentate b) Octadentate

c) Hexadentate d) Pentadentate.

xix) Which of the following is capable of acting both as an oxidizing agent and a reducing agent?

a) H^{+} b) Na^{+}

c) Sn^{2+} d) MnO_4^{-}

xx) The process of gravimetric analysis using precipitation relies on the fact that ____

a) Some ionic compounds are soluble in water while others are virtually insoluble

b) Equal moles of two different chemicals are mixed together to form a precipitate

c) The solubility of ionic compounds depends on temperature of the solution

d) A complete balanced equation can be written for the precipitation reaction

OR

Q1) Answer the following **[10 × 2 = 20]**

a) How will you calculate equivalent weight of acid and base? Explain with example.

b) Starch indicator give blue color with iodine, justify it.

c) Define the term normality and molality.

d) Explain accuracy and precision.

e) Give the preparation of 0. 1N potassium permanganate with reaction.

f) Give applications of polarography.

g) Define oxidation and reduction with examples.

h) How will you standardize 0.05 M disodium EDTA solution?

i) What is half wave potential?

j) How will you prepare and standardize 0.1 N Silver nitrate solution?

Q2) Answer of the following (any two) **[2 × 10 = 20]**

a) What is volumetric analysis. Classify them with example. Write principle, reaction of assay for Boric acid and Aspirin.

b) Explain methods to determine end point of potentiometric titrations and its application.

c) What is complex metric titration? Classify them with example. Write detailed about types of complexometric titrations.

Q3) Answer the following (any seven) : **[7 × 5 = 35]**

a) Explain assay sodium benzoate by non aqueous titration.

b) Write a note on accuracy and precision.

c) Give an account on solvents used in non aqueous titration.

d) Write about limit test of lead.

e) Write principle and application of Diazotization titrations.

f) Explain construction and working of dropping mercury electrode.

g) Write a note on K Fajan's method?

h) Explain principle, reaction of calcium gluconate injection.

i) Explain mechanism of co precipitation?

Total No. of Questions : 3]

SEAT No. :

P3398

[Total No. of Pages : 2

[5552] - 2003
First Year B.Pharmacy (Semester - I)
PHARMACEUTICS - I
(2018 Pattern)

Time : 3 Hours] *[Max. Marks : 75*

Instruction : Answer all the questions.

Q1) Answer the following : **[10 × 2 = 20]**

a) Differentiate between ointment and paste.

b) Differentiate flocculated. & deflocculated suspension.

c) Classify the powder by various ways.

d) Give solubility enhancemnet techique of lig

e) Give the labelling conditions of mouthwash and gargle.

f) Give test for identification of emulsion.

g) What is Eutectic mixture.

h) Give the organisation of pharmacy.

i) Define porology. Enlist factors which affect dose.

j) Give the development of Indian Pharmacopoeia.

Q2) Answer any two. **[2 × 10 = 20]**

a) Explain the obsorption of semilids. Give its evalution.

b) Define and classify the Incompatibility. Explain chemical Incompatibility.

c) Classify the bases of suppository. Explain how the displacement value of substance is calculated.

P.T.O.

Q3) Solve any Seven **[7 × 5 = 35]**

a) How will you convert 80 u/p & 30 o/p in % strength. similary 80% & 30% alcohol in proof strength / spirits.

b) Discuss various formulation aspects of suspensions.

c) Explain Therapeutic Incompatibility.

d) Classify emulsion by various ways. Give its stability parameters.

e) Classify the powders. Explain with example divided powders.

f) Explain importance of stock's law in stability of dispense system.

g) Give the evaluation of suppository.

h) Justify the role of pharmacist by his organisational structure.

i) How much water is to be added to 400ml 30%, 500ml 20 % & 600 ml 80% alcohol to make 10% alcohol.

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Total No. of Questions : 3]

SEAT No. : ____

P3399

[Total No. of Pages : 5

[5552]-2004
First Year B.Pharmacy (Semester - I)
PHARMACEUTICAL INORGANIC CHEMISTRY
(2018 Pattern)

Time : 3 Hours] ***[Max. Marks : 75***

Instructions to the candidate:

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

Q1) Multiple choice questions. **[20 × 1 = 20]**

i. Identify the correct use of lead acetate cotton plug in limit test of arsenic.

A) To trap the lead impurity

B) To trap the moisture

C) To trap the sulfides

D) To trap the acetate impurity

ii. The edition Indian Pharmacopoeia published in 2018 is-

A) 6^{th} B) 7^{th}

C) 8^{th} D) 9^{th}

iii. In which of the following limit test hydrogen sulphide solution is required?

A) Limit test for Chloride

B) Limit test for Arsenic

C) Limit test for Heavy metals

D) Limit test for Lead

iv. Identify in which type of following measurement Henderson-Hasselbalch equation is NOT useful.

A) Measurement of pH

B) Measurement of pKa

C) Measurement of isotonicity

D) Measurement of pH of buffer solution

P.T.O.

v. Normal saline solution is -

A) 0.9% NaCl solution

B) 0.45 % NaC1 solution

C) 0.5% NaC1 solution

D) 5% NaC1 solution

vi. Identify the substance the assay of which is based on complexometric titration.

A) Sodium Bicarbonate

B) Ferrous sulfate

C) Calcium gluconate

D) Sodium chloride

vii. Which one of the following electrolyte is NOT the constituent of Ringer's injection.

A) Sodium Chloride

B) Sodium lactate

C) Calcium chloride

D) Potassium chloride

viii. Identify the correct constituent of dental cement.

A) Calcium carbonate

B) Zinc oxide

C) Dicalcium phosphate

D) Sodium fluoride

ix. Which of the following compound swells in water and used as cathartic?

A) Calcium carbonate

B) Aluminium hydroxide

C) Bentonite

D) Sodium bicarbonate

x. Which concentration of hydrogen peroxide is suitable for cleaning of wounds?

A) 100%

B) 99 %

C) 50 %

D) 6%

xi. Which of the following agent is commonly called as “bleaching powder”?

A) Hydrogen peroxide

D) Sulfur dioxide

C) Chlorinated lime

D) Citric acid

xii. Which one of the following agent is used as antidote in cyanide poisoning?

A) Activated charcoal

B) Penicillamine

C) Disodium EDTA

D) Sodium thiosulfate

xiii. Identify the substance which is also known as Epsom salt.

A) $CuSO_4$

B) $MgSO_4$

C) $FeSO_4$

D) Na_2SO_4

xiv. Ferrous sulfate ($FeSO_4.7H_2O$) occurs as -

A) White crystalline powder

B) Greenish crystalline powder

C) Amorphous powder

D) Colorless crystals

xv. Which of following is not saline cathartic?

A) $Mg(OH)_2$

B) Na_2HPO_4

C) Sodium Potassium Tartarate

D) $CaSO_4$

xvi. Which of the following radiations have highest penetration power?

A) Alfa B) Beta

C) Gamma D) All of the above

xvii. Isotopes have –

A) Same number of protons but different number of neutrons

B) Same number of neutrons but different number of protons

C) Same number of protons and neutrons

D) None of the above

xviii. Identify the correct use of Zinc chloride.

A) Antacid

B) Antidote

C) Expectorant

D) Dental desensitizing agent

xix. Chemically Kaolin is –

A) Aluminium silicate

B) Aluminium sulfate

C) Magnesium trisilicate

D) Silicon dioxide

xx. Calcium gluconate is used to treat -

A) Hypokalemia

B) Hypercalcemia

C) Hyponatremia

D) Hypocalcemia

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

a) Explain the role of major physiological ions in homeostasis.

b) What are cathartics? Give their classification & add a note on Magnesium Sulfate.

c) What are radiopharmaceuticals? Explain properties of radiations emitted by radioisotopes & add note on various applications of radioisotopes

Q3) Solve any Seven of the following. **[7 × 5 = 35]**

a) Write comparison of alpha, beta & gamma radiations

b) Write a note on properties reactions & uses of potassium permanganate IP.

c) What are dentifrices? Explain any one compound in detail.

d) What are haematinics? Explain properties & preparations of any one haematinic compound.

e) Write principle & reaction involved in limit test of Lead.

f) Describe different sources of impurities in detail.

g) Write a note on treatment of cyanide poisoning.

h) Write a note on expectorants.

i) Write note on limit test for sulfate and the modifications in limit test for sulfate.

Total No. of Questions : 3]

SEAT No. : ____

P3400

[Total No. of Pages : 4

[5552]-2005
F.Y.B. Pharmacy (Semester - II)
HUMAN ANATOMY AND PHYSIOLOGY - II
(2018 Pattern)

Time : 3 Hours] ***[Max. Marks : 75***

Instructions to the candidates:

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

Q1) Answer all the questions (MCQs) (one mark each) **[20 × 1 = 20]**

i) Steroid hormones include _

a) Sex hormones b) Insulin

c) Thyroxin d) Oxytocin

ii) Which of the following is reabsorbed back into the blood via passive transport?

a) Amino acid b) Water

c) Hydrogen ion d) Calcium

iii) Superior portion of Pharynx is called as _

a) Oropharynx b) Nasopharynx

c) Laryngo d) Soft palate

iv) Due to the influence of _____ vocal folds are usually thicker and longer in male than female.

a) Estrogen b) Testosterone

c) Androgen d) Progesterone

v) Secretion of progesterone by corpus leuteum is initiated by _

a) Testosterone b) Thyroxin

c) MSH d) Luteinizing Hormone

vi) Melatonin is secreted by.

a) Pineal body b) Skin

c) Pituitary gland d) Thyroid

P.T.O.

vii) In how many steps protein biosynthesis takes place?

a) 2 b) 3

c) 4 d) 5

viii) Which is the last stop of the urinary tract?

a) Bladder b) Ureter

c) Urethra d) Kidney

ix) Neuroglial cells support and provide nutrition for the _____.

a) Muscle cells b) Glands

c) Neurons d) Nephrons

x) _____is a fluid present between middle and inner meninges.

a) Bile b) Serum

c) Plasma d) Spinal Fluid

xi) What important nutrient is made in the large intestine?

a) Protein b) Calcium

c) Vitamin A d) Vitamin K

xii) _____is the hardest substance in the human body.

a) Bone b) Dentin

c) Enamel d) Fibro cartilage

xiii) _____is the stomach cell that secretes hydrochloric acid.

a) Chrondocyte b) Chief cell

c) Parietal cell d) Glial cell

xiv) Which of the following enzymes digests protein?

a) Pepsin b) Pepsin and Trypsin

c) Lipase d) Trypsin

xv) Each of the following is a waste product normally secreted by the kidneys except.

a) Urea b) Glucose

c) Bilirubin d) Ammonia

xvi) The main function of the cerebellum is _____.

a) Consciousness b) Homeostasis

c) Muscle coordination d) Sense reception

xvii) The _____ contains centers for heartbeat, breadthing, and blood pressure.

a) Cerebellum b) Cerebrum

c) Medulla oblongata d) Spinal cord

xviii) Schwann cells are one of several types of _____ cells in the nervous system.

a) Sensory b) Association

c) Motor d) Neuroglia

xix) Gaps in the myelin sheath are called _____.

a) Nodes of Ranvier b) The synapses

c) Axonal interstices d) Myelinoids

xx) Which of the following are the *parts* of neurons?

a) Brain, spinal cord and vertebral column

b) Dendrite, axon and cell body

c) Sensory and motor

d) Cortex, medulla and sheat

Q2) Long Answer (solve any 2) **[2 × 10 = 20]**

a) Draw a neat labelled diagram of digestive system. Write the structure and function of each organ.

b) Enlist the endocrine glands with their hormone. Discuss the physiological action of pituitary gland.

c) Draw a neat labelled diagram of female reproductive system. Discuss the physiology of menstruation.

Q3) Short Answer (Solve any 7) **[7 × 5 = 35]**

a) Explain the mechanism of respiration.

b) Discuss the various function of liver.

c) Explain spermatogensis.

d) Describe the structure and function of thyroid gland.

e) Write a note on basal metabolic rate (BMR).

f) Write the physiology of urine formation.

g) Write the structure and functions of cerebellum.

h) Classify neurons and discuss the properties of neurons.

i) Explain the steps involved in protein synthesis.

Total No. of Questions : 3]

SEAT No. : ____

P3401

[Total No. of Pages : 4

[5552]-2006
First Year B. Pharmacy, (Semester - II)
PHARMACEUTICAL ORGANIC CHEMISTRY - I
(2018 Pattern)

Time : 3 Hours] ***[Max. Marks : 75***

Instructions to the candidates:

1) ***All questions are compuslory.***
2) ***Figure to the right indicate full marks.***

Q1) Multiple Choice questions. **[20 × 1 = 20]**

i) Select the correct name of organic compound containing the carbon, hydrogen and nitrogen atoms in their molecular structure.

a) Amines and imines b) Nitriles

c) Esters d) Both a and b

ii) Select the correct statement from the following options.

a) SN_2 reaction follows second order kinetics

b) No intermediate is involved in SN_2 mechanism

c) SN_2 reactions are one-step reaction

d) All of the mentioned

iii) The reactivity order of alkyl halides in SN_2 is

a) CH_3-X > l° > 2° > 3° b) CH_3- X > 2° > 1° > 3°

c) CH_3- X > 3° > l° > 2° d) CH_3- X > 3° > 2° > 1°

iv) The percentage of p-character in SP^3 hybridisation is

a) 25% b) 50%

c) 75% d) 66.67%

v) Which of the following act as a catalysis in the nitration of benzene?

a) Conc. HCl b) Dil. HCl

c) Conc. H_2SO_4 d) Dil. H_2SO_4

vi) Identify the smallest alkane which can form a ring structure (cycloalkane)

a) Cyclomethane b) Methane

c) Cyclopropane d) Propane

P.T.O.

vii) In E_2 reaction, rate of reaction increases as decrease of solvent

a) Polarity b) Nonpolarity

c) Acidity d) Basicity

viii) Which of the following is the strongest bond?

a) Covalent bond b) Ionic bond

c) Co-ordinate bond d) None

ix) Which class of compounds shows H-bonding even more than in alcohols?

a) Phenols b) Carboxylic acids

c) Ethers d) Aldehydes

x) Which C-X bond has the highest bond energy per mole?

a) C-Br b) C-Cl

c) C-F d) C-I

xi) Which alkyl halide has the highest reactivity for a particular alkyl group?

a) R-F b) R-Cl

c) R-I d) R-Br

xii) Which of the following order is incorrect for the rate of E_2 reaction?

a) 5-Bromocycloheptene > 4-Bromocycloheptene

b) 2-Bromo- I -phenylbutane > 3-Bromo-I-phenylbutane

c) 3-Bromocyclohexene > Bromocyclohexane

d) 3-Bromo-2 -methylpentane > 2-Bromo-4-methylpentane

xiii) Identify the correct statement which is related to aromatic hydrocarbon.

a) It has only sigma bonds

b) It has only pi bonds

c) It has a sigma and two pi bonds

d) It has a sigma and delocalized pi bond

xiv) Identify the simplest alkane

a) Methane b) Methene

c) Ethane d) Ethene

xv) Select the minimum number of carbon atoms, a molecule must possess so as to be

a) 15 b) 16

c) 17 d) 18

xvi) Which among the following is not an alkane isomer with 6 carbon atoms

a) Hexane b) 2,3-dimethylbutane

c) 2,2-dimethylbutane d) Neopentane

xvii) Which of the following is the strongest bond?

a) Covalent bond b) Ionic bond

c) Co-ordinate bond d) None of above

xviii) The dehydration of alcohols is an example of_____

a) E_2 reaction b) SN_2 reaction

c) SN_1 reaction d) E_1 reaction

xix) Which of the following alcohols would be most miscible with water?

a) Propanol b) Hexanol

c) Pentanol d) Butanol

xx) In E_2 reaction, rate of reaction is directly proportional to concentration of

a) Substrate b) Base

c) Substrate & base d) None of above

Q2) Answer the following (any two) **[2 × 10 = 20]**

a) What are elimination reactions? Discuss E_1, E_2 elimination reaction mechanism

b) What is nucleophilic substitution reaction? Give reaction mechanism, stereochemistry and factors affecting SN_2 reaction.

c) Explain in detail aldol condensation and crossed aldol condensation

Q3) Answer the following (any seven) **[7 × 5 = 35]**

a) Explain in detail SP^2 hybridization in alkenes

b) Explain in brief kinetics and order of reactivity of alkyl halides in SN_1

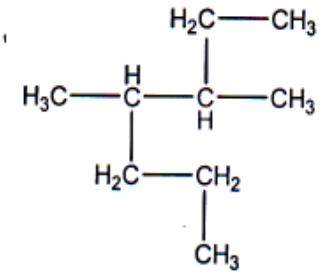
c) Define carboxylic acid? Explain the effect of substituent on acidity?

d) Write classification of organic compounds with examples

e) Write difference between SN_1 and SN_2 reaction

f) Give IUPAC nomenclature for following.

1)



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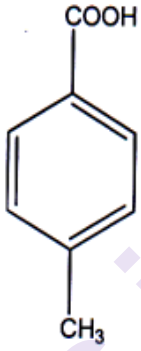

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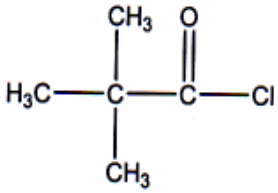

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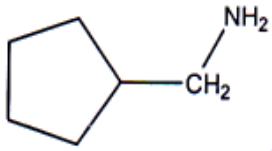

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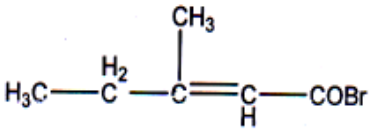

g) Draw structures for following:

i) 3-hydroxy-2-methylpropanal

ii) 2,4-dimethyl-2-heptene

iii) 2-chloropropanoic acid

iv) Ethyl-2-methylbutanoate

v) 2-thiophenecarboxaldehyde

h) Give structure and uses of following.

i) Ethyl alcohol ii) Chlorobutanol

iii) Benzaldehyde iv) Lactic acid

v) Acetone

i) Write a note on qualitative tests of

i) Alcohols ii) Aliphatic amines

Total No. of Questions : 3]

SEAT No. :

P3402

[Total No. of Pages : 4

[5552]-2007
First Year B. Pharmacy (Semester - II)
BIOCHEMISTRY
(2018 Pattern)

Time : 3 Hours] *[Max. Marks : 75*

Instructions to the candidate:

1) ***All questions are compulsory.***
2) ***Answers to the two sections should be written in separate books.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***

Q1) Answer all the questions (MCQ's) (one mark each) **[20 × 1 = 20]**

i) The minimum number of carbon in a monosaccharide is

a) 1 b) 2

c) 3 d) 4

ii) Osazones are not formed with the

a) glucose b) fructose

c) sucrose d) lactose

iii) Glucose-6-phosphatase is not present in

a) liver and kidneys b) kidneys and muscles

c) kidneys and adipose tissue d) muscles and adipose tissue

iv) Cori's cycle transfers

a) glucose from muscles to liver

b) lactate from muscles to liver

c) lactate from liver to muscles

d) pyruvate from liver to muscles

v) Before pyruvic acid enters the TCA cycle it must be converted to

a) acetyl Co-A b) lactate

c) α-ketoglutarate d) citrate

vi) All the following are sulphur containing amino acids found in proteins except

a) cysteine b) cystine

c) methionine d) threonine

P.T.O.

vii) In proteins the α-helix and β-pleated sheetare examples of

a) Primary structure b) Secondary structure

c) Tertiary structure d) Quaternary structure

viii) The number of ATP required for ureasynthesis is

a) 0 b) 1

c) 2 d) 3

ix) The following enzyme of urea cycle is present in cytosol:

a) Argininosuccinic acid synthetase

b) Argininosuccinase

c) Arginase

d) All of these

x) All the following statements about albinism are correct except

a) Tyrosine hydroxylase (tyrosinase) is absent ordeficient in melanocytes

b) Skin is hypopigmented

c) It results in mental retardation

d) Eyes are hypopigmented

xi) De novo synthesis of fatty acids occurs in

a) Cytosol b) Mitochondria

c) Microsomes d) All of these

xii) Fatty liver may be caused by

a) Deficiency of methionine b) Puromycin

c) Chronic alcoholism d) All of these

xiii) Lipid stores are mainly present in

a) Liver b) Brain

c) Muscles d) Adipose tissue

xiv) β-Oxidation of odd-carbon fatty acidchain produces

a) Succinyl CoA b) Propionyl CoA

c) Acetyl CoA d) Malonyl CoA

xv) All the following statements about obstructive jaundice are true except

a) Prothrombin time may be prolonged due to impaired absorption of vitamin K

b) Serum alkaline phosphatase is raised due to increased release of enzyme from liver

c) Bile salts may enter systemic circulation due to biliary obstruction

d) There is no defect in conjugation of bilirubin

xvi) The first enzyme found to have isoenzymes was

a) Alkaline Phosphatase b) Lactate dehydrogenase

c) Acid Phosphatase d) Creatine kinase

xvii) In non-competitive enzyme action

a) Vmax is increased

b) Apparent km is increased

c) Apparent km is decreased

d) Concentration of active enzyme molecule is reduced

xviii) Gout is a metabolic disorder of catabolism of

a) Pyrimidine b) Purine

c) Alanine d) Phenylalanine

xix) Translation results in a product known as

a) Protein b) tRNA

c) mRNA d) rRNA

xx) Okazaki fragment is related to

a) DNA synthesis b) Protein synthesis

c) mRNA formation d) tRNA formation

Q2) Long Answers (Any 2 out of 3) **[2 × 10 = 20]**

a) Explain glycogen metabolism. Add a note on Glycogen Storage Diseases.

b) Explain Conversion of Cholesterol to bile acids, steroid hormones and Vitamin D.

c) Explain Translation or Protein Synthesis.

Q3) Short Answers (Any 7 out of 9) **[7 × 5 = 35]**

a) Classify enzymes. Add a note on its application.

b) Explain inhibitors of ETC and Oxidative Phosphorylation.

c) Explain Redox Potential.

d) Explain HMP shunt. Add a note on its importance.

e) Define and classify Amino acids based on metabolic fate. Add a note on Zwitter ion.

f) Explain Ketoacidosis / Diabetes Mellitus.

g) Write a note on Structure of DNA.

h) Explain Ketogenesis.

i) Explain significance of Dopamine and Melatonin.

Total No. of Questions : 3]

SEAT No. : ____

P3403

[Total No. of Pages : 4

[5552]-2008
First Year B.Pharmacy (Semester - II)
PATHOPHYSIOLOGY
(2018 Pattern)

Time : 3 Hours] ***[Max. Marks : 75***

Instructions to the candidate:

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

Q1) Answer all the questions (MCQ's) (one mark each) **[20 × 1 = 20]**

i) Parkinsonism includes combination of the following:

a) Tremor, bradykinesia & muscles rigidity

b) Paresis, anesthesia & muscles spasticity

c) Chorea & muscles hypotonia

d) Tremor, ataxia & muscles hypotonia

ii) Dysphasia suggests the impairment of:

a) Speech b) Gait

c) Swallowing d) Movement

iii) Meningeal sign is the following:

a) Babinsky b) Kernig

c) Lasseg d) Romberg

iv) Which of the following heart muscle disease is unrelated to other cardiovascular disease?

a) Cardiomyopathy b) Coronary artery disease

c) Myocardial infarction d) Pericardial Effusion

v) Septal involvement occurs in which type of cardiomyopathy?

a) Congestive b) Dilated

c) Hypertrophic d) Restrictive

P.T.O.

vi) Which of the following is an important mechanism of prostaglandin mucosal protection?

a) Stimulation of both mucus and phospholipid production

b) Promotion of bicarbonate secretion

c) Increased mucosal cell turnover

d) All of the above

vii) Which of the following does not cause airway narrowing in an asthma attack:

a) Destruction of airways b) Mucus hyper secretion

c) Airway edema d) Bronchospasm

viii) Transmission of tuberculosis occurs:

a) ONLY in household contacts of a person with active tuberculosis disease (source case)

b) By sharing household utensils, contact with secretions or blood products of a patient with tuberculosis disease.

c) By sharing an airspace with an adult who has smear positive pulmonary tuberculosis.

d) Prolonged contact with an individual with LTB.

ix) In which anemia the count of reticulocytes is reduced?

a) Acute post hemorrhagic anemia

b) Hemolytic anemia

c) Aplastic anemia

d) Megalobalstic anemia

x) Which of the below anemia is called as Megaloblastic anemia?

a) Chronic post hemorrhagic anemia

b) Folic acid & Vit B_{12} deficiency anemia

c) Aplastic anemia

d) Hemolytic anemia

xi) What factors may cause iron deficiency anemia.

a) Deficiency of intrinsic Castl's factor

b) An increased iron demands

c) Decreased production of HCL by gastric mucosa

d) Deficiency of vitamin B_{12}

xii) Most common site of metastasis in breast cancer is

a) Lung b) Liver

c) Bone d) Brain

xiii) _____ is a genetically determined, internal, self destructive mechanism of cell death, which is activated under a variety of circumstances.

a) Cytosis b) Endocytosis

c) Apoptosis d) Exocytosis

xiv) _____ is an increase in the amount of organic tissue which results from cell proliferation leads to gross enlargement of an organ.

a) Hyperplasia b) Neoplasia

c) Metastasis d) Tumour

xv) Following is not a cardinal sign of inflammation.

a) Calor b) Dolar

c) Tumor d) Solar

xvi) Ulcerative bowel disease affects which of the following organ?

a) Deodenum b) Colon

c) Stomach d) Rectum

xvii) Deposition of lipids on the wall lining of lumen of large and medium sized arteries is called as _____

a) Multiple Sclerosis b) Stokes Adams Syndrome

c) Atherosclerosis d) Hemophilia

xviii) What is the end product of purine metabolism in human?

a) Urea b) Uric acid

c) Purine oxide d) Xanthine

xix) _____ an autoimmune disorder and is characterized by goiter, hyperthyroidism and exophthalmos.

a) Gauchers disease b) Graves disease

c) Raynauds disease d) Crohns disease

xx) Which of the following UV rays causes cancer?

a) UV-A b) UV-B

c) UV-C d) UV-D

Q2) Long Answers (Any 2 out of 3) **[2 × 10 = 20]**

a) Explain in detail pathophysiology of congestive heart failure.

b) Define homeostasis and explain in detail various components and types of feedback system.

c) Explain different types of inflammation and explain various mechanisms of inflammation.

Q3) Short Answers (Any 7 out of 9) **[7 × 5 = 35]**

a) What is leprosy and give information about pathophysiology of leprosy.

b) Explain in detail about pathophysiology of tuberculosis.

c) Write a note on Angina pectoris.

d) Explain Myocardial infarction in detail.

e) What is COAD? Explain its pathophysiology.

f) Define neoplasia. Classify and explain pathogenesis of cancer.

g) Write pathophysiology of chronic renal failure.

h) Write a note on Myocardial infarction.

i) Explain in details about peptic ulcers.