

Registration no:

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Total Number of Pages: (02)					Course: B.Pharm				
SUBJECT: HUMAN ANATOMY & PHYSIOLOGY- II					Sub_Code: BP201T				
2 nd Semester Regular/Back Examination: 2024-25									
BRANCH(S): B.Pharm					Q.Code: A589				
Time: 3 Hours			Max Marks: 75			Time : 10.00AM-1.00PM			
Answer Question No.1 (Part-I) which is compulsory, any seven from Part-II, and any two from Part-III.									
The figures in the right hand margin indicate marks.									
Part-I									
QI		Answer the following questions mentioning the answer with correct option (MCQs)							(20 x 1)
	1)	Functional residual capacity is equal to:							
		a	TV+IRV+ERV	b	TV+ Respiratory volume	c	TV+IRV+ER V+RV	d	ERV+RV
	2)	Cephalic phase of gastric secretion is mediated by _____.							
		a	neurohormone	b	parasympathetic	c	sympathetic	d	gastrin
	3)	Which of the following enzyme involved in the carbohydrate digestion?							
		a	Elastase	b	Trypsin	c	Amylase	d	Lipase
	4)	All preganglionic nerve secretes:							
		a	Acetylcholine	b	Adrenaline	c	Noradrenalin e	d	Dopamine
	5)	GnRH stimulates the secretion of _____.							
		a	LH	b	FSH	c	Both a & b	d	None of these
	6)	Spermatogenesis is promoted by _____							
		a	Estrogen	b	Progesterone	c	Testosterone	d	Oxytocin
	7)	The rhythmic contractions of the alimentary canal that moves food forward is							
		a	mastication	b	segmentation	c	dilation.	d	peristalsis
	8)	Insulin _____gluconeogenesis							
		a	inhibits	b	promotes	c	Both of these	d	None of these
	9)	The pyloric sphincter is between the:							
		a	oesophagus and stomach	b	pharynx and oesophagus	c	small intestine and large intestine	d	stomach and duodenum
	10)	Where does implantation of the blastocyst occur?							
		a	Fallopian tube	b	Endometrium	c	Ovary	d	Cervix
	11)	_____ is the volume air still remaining in lungs after a forceful expiration.							
		a	Tidal volume	b	Residual volume	c	Vital capacity	d	Inspiratory capacity
	12)	Blood Brain Barrier is made up of							
		a	Astrocytes	b	Oligodendrocytes	c	Ependymal cells	d	Microglia
	13)	Vasopressin is also called anti-diuretic hormone synthesized by:							
		a	Adrenal cortex	b	Adrenal medulla	c	Anterior pituitary	d	Posterior pituitary
	14)	What is the function of bile?							
		a	neutralize chyme	b	emulsify fats	c	absorb	d	regulate cholesterol

						amino acids		levels	
15)	Fibrous connective tissue that surrounds each kidney is the:								
	a	Cortex	b	Hilum	c	Medulla	d	Renal capsule	
16)	Which of the following is NOT a step of urine formation?								
	a	Tubular Reabsorption	b	Tubular secretion	c	Glomerular diffusion	d	Glomerular filtration	
17)	Prolactin is a hormone synthesized by								
	a	Anterior pituitary	b	Posterior pituitary	c	Hypothalamus	d	None of these	
18)	Non-myelinated nerve axons different from myelinated in that they:								
	a	are not capable of regeneration	b	are not most excitable	c	lack of node of Ranvier	d	are not associated with Schwann cell	
19)	Action of parathormone in the human body								
	a	decreases blood sodium level	b	increases blood sodium level	c	decreases blood calcium level	d	increases blood calcium level	
20)	Which brain area acts to regulate body temperature?								
	a	thalamus	b	cerebrum	c	Hypothalamus	d	cerebellum	
	Part-II								
QII	Focused-Short Answer Type Questions- (Answer Any Seven)								(7 x 5)
1)	Discuss synthesis, secretion and regulation of acid secretion in stomach.								
2)	Briefly explain about the Renin Angiotensin Aldosterone System.								
3)	Write about the compositions and function of Cerebrospinal fluid.								
4)	Mention the hormones of thyroid gland and write their functions								
5)	Write about the different parts of liver and its functions.								
6)	Write a note on oogenesis								
7)	Explain the synthesis, release and function of thyroid hormones.								
8)	Explain the various parts of a neuron.								
9)	What you mean by artificial respiration and briefly explain about it.								
	Part-III								
QIII	Long Answer Type Questions (Answer Any Two)								(2 x 10)
1)	Explain about the structure of nephron with a neat diagram. Add a note on physiology of urine formation.								
2)	Explain briefly about the mechanism of respiration and regulation of respiration								
3)	Describe in detail about the structure of stomach with a neat labelled diagram and its function.								

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Total Number of Pages: (02)					Course: B. Pharm				
SUBJECT: PHARMACEUTICAL ORGANIC CHEMISTRY-I					Sub Code: BP202T				
2 nd Semester Regular/Back Examination: 2024-25									
BRANCH(S): B. Pharm					Q. Code: A590				
Time: 3 Hours			Max Marks: 75			Time: 10.00AM-1.00PM			
Answer Question No.1 (Part-I) which is compulsory, any seven from Part-II, and any two from Part-III.									
The figures in the right-hand margin indicate marks.									
Part-I									
Q1	Answer the following questions mentioning the answer with correct option (MCQs)								(20 x 1)
1)	The nitrogen atom in amino group is								
	a	sp	b	sp ²	c	sp ³	d	sp ³ d	
2)	How many structural isomers of amines are possible for the molecular formula C ₃ H ₉ N?								
	a	2	b	3	c	4	d	5	
3)	The IUPAC name of CH ₃ -CH(CH ₃)-CH ₃ is								
	a	2-methylbutane	b	Butane	c	Propane	d	2-methylpropane	
4)	Metamerism is shown by:								
	a	Alkanes	b	Alkenes	c	Ethers	d	Alcohols	
5)	Which of the following statements is characteristic of the E2 elimination mechanism?								
	a	Inversion occurs	b	Racemization	c	Carbocation intermediate	d	C-H and C-X bonds must be anti	
6)	The addition of HX to an unsymmetrical alkene follows which rule, where hydrogen attaches to the carbon already bearing more hydrogen atoms?								
	a	Hund's rule	b	Markovnikov's rule	c	Huckel's rule	d	Saytzeff's rule	
7)	Halogenation of alkanes occurs via								
	a	Electrophilic substitution	b	Nucleophilic substitution	c	Elimination	d	Free radical substitution	
8)	At low temperature, electrophilic addition to a conjugated diene predominantly gives:								
	a	1,4-addition	b	1,2-addition	c	1,3-addition	d	Elimination	
9)	What is the molecular formula of dichloromethane?								
	a	CH ₂ Cl ₂	b	CHCl ₃	c	CCl ₄	d	CH ₃ Cl	
10)	Propylene glycol is used as:								
	a	Acid	b	Base	c	Catalyst	d	Solvent	
11)	Tertiary alkyl halides generally favor								
	a	SN2 reaction	b	SN1 reaction	c	Oxidation reaction	d	Addition reaction	

	12)	Victor Meyer test is used to distinguish between								
		a	Aldehydes and ketones	b	Alcohols and acids	c	Amines	d	Primary, secondary and tertiary alcohols	
	13)	Perkin reaction is used for the preparation of:								
		a	Amines	b	Ketones	c	Alcohols	d	α,β -Unsaturated aromatic acids	
	14)	The temporary complete transfer of π -electrons under the influence of an attacking reagent is called:								
		a	Inductive effect	b	Hyperconjugation	c	Resonance	d	Electromeric effect	
	15)	Catalyst used in benzoin condensation is:								
		a	KCN	b	HCl	c	NaOH	d	KMnO ₄	
	16)	Yellow precipitate in iodoform test is								
		a	CHCl ₃	b	CHI ₃	c	CH ₂ I ₂	d	CH ₃ I	
	17)	Which of the following compounds is used in the preparation of antihistaminic and bronchodilators?								
		a	Ethanolamine	b	Ethylenediamine	c	Benzoic acid	d	Amphetamine	
	18)	Carboxylic acids react with NaHCO ₃ to liberate:								
		a	H ₂	b	O ₂	c	CO ₂	d	NH ₃	
	19)	Aspirin is chemically known as								
		a	Salicylic acid	b	Acetylsalicylic acid	c	Benzoic acid	d	Citric acid	
	20)	Which of the following is the strongest acid?								
		a	CH ₃ COOH	b	ClCH ₂ COOH	c	CH ₃ CH ₂ COOH	d	(CH ₃) ₂ CHCOOH	
		Part-II								
QII		Focused-Short Answer Type Questions- (Answer Any Seven)				(7 x 5)				
	1)	Discuss structural isomerism with suitable examples.								
	2)	Explain Diels–Alder reaction with mechanism and applications								
	3)	Explain ozonolysis of alkenes with suitable example and discuss its significance.								
	4)	Give chemical tests to differentiate between primary, secondary and tertiary alcohols.								
	5)	Classify alkyl halides with examples. Write any two methods of preparation of alkyl halides.								
	6)	Explain the mechanism involved in Aldol condensation reaction with examples.								
	7)	Write the structure and uses of the following: hexamine, vanillin, cinnamaldehyde.								
	8)	Explain the inductive effect with suitable examples.								
	9)	Explain the basicity of amines and discuss the effect of substituents on their basicity.								
		Part-III								
QIII		Long Answer Type Questions (Answer Any Two)				(2 x 10)				
	1)	Explain E1 and E2 reactions. Compare their mechanisms and factors affecting them.								
	2)	Discuss the chemical reaction and mechanism of: a. Cannizzaro's reaction b. Benzoin condensation.								
	3)	Write any three methods of preparation of aliphatic carboxylic acids. Explain the acidity of carboxylic acids with emphasis on effect of substituent on their acidity.								

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Total Number of Pages: 02					Course: B.Pharm				
SUBJECT: BIOCHEMISTRY					Sub_Code: BPT203T				
2 nd Semester Regular/Back Examination: 2024-25									
BRANCH(S): B.Pharm					Q.Code:A591				
Time: 3 Hours			Max Marks: 75			Time : 10.00AM-1.00PM			
Answer Question No.1 (Part-I) which is compulsory, any seven from Part-II, and any two from Part-III.									
The figures in the right hand margin indicate marks.									
Part-I									
QI		Answer the following questions mentioning the answer with correct option (MCQs)							(20 x 1)
	1)	Urea is produced by the enzyme _____ .							
		a	Urease	b	Arginase	c	Glutaminase	d	Fumarase
	2)	Ketone bodies are made from _____ .							
		a	Acetone	b	Hydrochloric acid	c	Acetyl CoA	d	Acetoacetic acid
	3)	Two major products of HMP pathway are _____ .							
		a	NADPH & Ribose-5-phosphate	b	FAD & glucose-5-phosphate	c	NADPH & Coenzyme A	d	FAD & Coenzyme A
	4)	During vigorous exercise pyruvate produced by glycolysis is converted to _____ .							
		a	Acetate	b	Pyruvate	c	Lactate	d	Adenosine triphoshate
	5)	Carnitine carrier shuttle operates to transport acetyl CoA from _____ .							
		a	Cytosol to nucleus	b	Cytosol to mitochondria	c	Nucleus to mitochondria	d	Mitochondria to cytosol
	6)	Which of the following compound is synthesized from cholesterol?							
		a	Vitamin D	b	Steroid Hormones	c	Bile acid	d	All of these
	7)	The net yield of ATP via oxidation of one molecule of Palmitic acid is _____ .							
		a	121	b	131	c	129	d	146
	8)	Which of the following compound is formed from the intermediate of Krebs Cycle?							
		a	Heme	b	Aspartate and Glutamate	c	Porphyrin	d	All of these
	9)	The process in which glucose is produced from noncarbohydrate source is _____ .							
		a	glycolysis	b	glycogenesis	c	glycogenolys is	d	gluconeogenesis
	10)	Sucrose is consists of _____ .							
		a	Glucose and fructose	b	Glucose and maltose	c	Glucose and galactose	d	Glucose and Glucose
	11)	At half-maximum velocity Michaelis-Menten constant is equal with concentration of _____ .							
		a	Enzyme	b	Substrate	c	Product	d	Inhibitor

	12)	The enzyme inhibition in which K_m remain constant but V_{max} is lowered is _____ .								
		a	Competitive inhibition	b	Uncompetitive inhibition	c	Noncompetitive inhibition	d	Allosteric Inhibition	
	13)	In the process of glycolysis one molecule of glucose forms how many molecules of pyruvate?								
		a	2	b	8	c	36	d	4	
	14)	In proteins the amino acids are joined by _____ .								
		a	Glycosidic bond	b	Peptide bond	c	Phosphodiester bond	d	None	
	15)	Which of the following carbohydrate can be hydrolysed further?								
		a	Glucose	b	Sucrose	c	Galactose	d	Fructose	
	16)	For synthesis of one molecule of Cholesterol, _____ moles of Acetyl CoA is required.								
		a	15	b	27	c	18	d	20	
	17)	Nucleotides contain _____ .								
		a	Nitrogen base	b	sugar	c	phosphate	d	All of these	
	18)	Enzymes which are specialized in addition and removal of water are _____ .								
		a	Hydrolases	b	Ligases	c	Lyases	d	Transferases	
	19)	Which of the following is considered as start codon?								
		a	AGG	b	UAG	c	AUG	d	UGA	
	20)	Conversion of messages carries by mRNA into amino acid sequence is called _____ .								
		a	Replication	b	DNA repair	c	Translation	d	Transcription	
		Part-II								
QII		Write notes on:- (Any Seven)								(7 x 5)
	1)	Classification of carbohydrates								
	2)	Enzyme inhibition								
	3)	Transcription process								
	4)	Transamination and deamination with suitable examples								
	5)	Gluconeogenesis								
	6)	Catabolism of Phenyl alanine								
	7)	Metabolism of ketone bodies								
	8)	Structure and functions of ATP								
	9)	Diabetes mellitus								
		Part-III								
QIII		Long Answer Type Questions (Answer Any Two)								(2 x 10)
	1)	Define lipids. Briefly discuss the pathway of β -oxidation of palmitic acid and its energetic.								
	2)	Write the process of urea cycle with it's disorder.								
	3)	Describe the citric acid pathway with its energetic. Add a note on its significance.								

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Total Number of Pages: 02					Course: B.Pharm					
SUBJECT: PATHOPHYSIOLOGY					Sub_Code: BPT204T					
2 nd Semester Regular/Back Examination: 2024-25										
BRANCH(S): B.Pharm					Q.Code: A592					
Time: 3 Hours		Max Marks: 75			Time : 10.00AM-1.00PM					
Answer Question No.1 (Part-I) which is compulsory, any seven from Part-II, and any two from Part-III.										
The figures in the right hand margin indicate marks.										
Part-I										
QI		Answer the following questions mentioning the answer with correct option (MCQs)							(20 x 1)	
	1)	Emphysema is related to								
		a	Liver	b	Lung	c	Heart	d	Kidney	
	2)	Hepatitis is related to								
		a	Lung	b	Liver	c	Heart	d	Kidney	
	3)	Metaplasia is								
		a	Increase in cell size	b	Decrease in cell size	c	Replacement of cell	d	None	
	4)	Hypertrophy is								
		a	Increase in cell size	b	Decrease in cell size	c	Abnormal cell growth	d	None	
	5)	What is diabetes								
		a	Increase in blood sugar	b	Decrease in Blood sugar	c	None	d	Normal sugar	
	6)	Asthma is related to								
		a	Liver	b	Lung	c	Heart	d	Kidney	
	7)	GFR is related to								
		a	Liver	b	Lung	c	Heart	d	Kidney	
	8)	How many types of valves present in the Heart								
		a	two	b	three	c	four	d	five	
	9)	Angina pectoris is related to								
		a	liver	b	lung	c	Heart	d	kidney	
	10)	What is Hypertension								
		a	Increase in Blood pressure	b	Decrease in blood Pressure	c	Normal Pressure	d	None	
	11)	Typhoid is								
		a	Infectious disease	b	Non Infectious Disease	c	both	d	None	

	12)	Leprosy is								
			Infectious disease		Non Infectious disease		both		None	
	13)	Malaria is spread by								
		a	Animal	b	Bird	c	Mosquito	d	Bat	
	14)	Peptic ulcer is related to								
		a	Liver	b	lungs	c	Intestine	d	kidney	
	15)	Tuberculosis is spread by								
		a	Bacteria	b	Virus	c	fungus	d	Protozoa	
	16)	Jaundice is related to								
		a	Lung	b	Liver	c	heart	d	kidney	
	17)	How many types of anemia								
		a	two	b	three	c	four	d	five	
	18)	How many types of feedback system								
		a	Positive	b	Negative	c	both	d	none	
	19)	Apoptosis is								
		a	Cell lysis	b	Natural cell death	c	Artificial cell death	d	none	
	20)	COPD is related to								
		a	Liver	b	lung	c	heart	d	kidney	
		Part-II								
QII		Focused-Short Answer Type Questions- (Answer Any Seven)								(7 x 5)
	1)	What is necrosis and explain six different types of necrosis								
	2)	Explain aetiology, clinical symptoms & pathogenesis of Angina Pectoris								
	3)	Describe types of feedback system and explain these with suitable examples?								
	4)	Explain aetiology, types and pathogenesis of Heart failure								
	5)	Differentiate between arteriosclerosis and atherosclerosis								
	6)	Illustrate aetiology, Clinical syndrome & pathogenesis of COPD								
	7)	Explain aetiology, types and pathogenesis of chronic renal failure								
	8)	Explain aetiology, types and pathogenesis of Diabetes								
	9)	Explain aetiology, types and pathogenesis of Leprosy								
		Part-III								
QIII		Long Answer Type Questions (Answer Any Two)								(2 x 10)
	1)	Explain different events involved in the Inflammatory Process?								
	2)	Classify blood pressure and Explain factors regulating blood pressure and types of Hypertensions								
	3)	Illustrate the mechanism of Apoptosis process of cell by two pathways								