



AIKTC/KRRC/SoP/ACKN/QUES/2021-22/

Date: 12/08/2022School: SoP-PCIBranch: SoPSEM: II

To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following ^{Reg} Semester/Periodic question papers from your exam cell:

Sr. No.	Subject Name	Subject Code	Format		No. of Copies
			SC	HC	
1	APP - H	BP201T		✓	
2	Pharmaceutical Organic Chemistry I	BP202T		✓	
3	Biochemistry	BP203T		✓	
4	Pathophysiology	BP204T		✓	
5	Computer Applications in Pharmacy	BP205T		✓	
6	Environmental sciences	BP206T		✓	

Note: SC – Softcopy, HC - Hardcopy

(Shaheen Ansari)
Librarian, AIKTC

21.07.2022

Subject: Human Anatomy and Physiology II

Duration: 3 Hours

N.B: 1. All questions are compulsory

2. Figures to right indicate full marks

F.Y.B.Pharm, Sem II

Total marks: 80M

Q1. Choose appropriate option for following multiple choice based questions, 20

1. Neurons secreting dopamine are present in _____.
 - a. Substantia nigra
 - b. Arbor vitae
 - c. Cerebellar peduncles
 - d. Pontine nucleus

2. _____ cells of stomach secrete pepsinogen and gastric lipase:
 - a. G Cells
 - b. Chief cells
 - c. Parietal cells
 - d. Mucous neck cells

3. Each bronchopulmonary segment of the lung has many small compartments called as _____.
 - a. Lobules
 - b. Alveoli
 - c. Respiratory bronchioles
 - d. Terminal bronchioles

4. _____ is the middle and the thickest layer of tissue surrounding each kidney.
 - a. Renal Capsule
 - b. Renal Fascia
 - c. Adipose Capsule
 - d. Renal Medulla

5. If you drank a litre of water, what effect would this have on the osmotic pressure of your blood?
 - a. Increase in osmotic pressure
 - b. Decrease in osmotic pressure
 - c. No change in osmotic pressure
 - d. Slight increase in osmotic pressure

6. _____ is a large, fluid filled follicle that is ready to rupture and expel its secondary oocyte.
 - a. Corpus luteum
 - b. Graafian follicle
 - c. Corpus albicans
 - d. Ovarian follicles

7. _____ of hypothalamus serves as relay centre for reflexes related to sense of smell.
 - a. Supraoptic region
 - b. Tuberal region
 - c. Mammillary region
 - d. Preoptic region

8. _____ is the organ that stores, concentrates, and delivers bile into duodenum via common bile duct.

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- a. Liver
- b. Gall bladder
- c. Pancreas
- d. Large intestine

9. _____ functions in warming, moistening, and filtering air; receives olfactory stimuli; is a resonating chamber for sound.

- a. Nose
- b. Pharynx
- c. Larynx
- d. Epiglottis

10. Which of the following is the correct sequence in which urine flows through the kidney toward the urinary bladder?

- a. Renal pelvis, major calyx, minor calyx, papillary duct, ureter
- b. Papillary duct, minor calyx, major calyx, renal pelvis, ureter
- c. Minor calyx, major calyx, papillary duct, renal pelvis, ureter
- d. Papillary duct, major calyx, minor calyx, ureter, renal pelvis

11. _____ are involved in formation of blood testis barrier.

- a. Spermatogenic cells
- b. Sertoli cells
- c. Primordial cells
- d. Germinal epithelial cells

12. Which cells produce parathyroid hormone (PTH).

- a. Chief cells
- b. Oxyphil cells
- c. Follicular cells
- d. Para-follicular cells

13. During the _____ phase, the negative membrane potential becomes less negative, reaches zero, and then becomes positive.

- a. Repolarizing
- b. Depolarizing
- c. Threshold
- d. Hyperpolarizing

14. _____ contribute to sperm motility and viability and may stimulate smooth muscle contractions in the female reproductive tract.

- a. Fructose
- b. Prostaglandins
- c. Clotting proteins
- d. Prostate-specific antigen

15. How much is Inspiratory reserve volume in an average adult male?

- a. 3100 mL
- b. 2100 mL
- c. 1100 mL
- d. 1500 mL

16. _____ are the largest and most numerous neuroglia in the CNS.

- Oligodendrocytes
- Astrocytes
- Ependymal cells
- Microglia

17. The anterior pituitary (anterior lobe), is also called as _____.

- Adenohypophysis
- Neurohypophysis
- Pars nervosa
- Pars intermedia

18. Secretion of Human growth hormone is inhibited by _____.

- FSH
- TRH
- GHRH
- Somatostatin

19. _____ is the small molecule inhibitory neurotransmitter in the CNS.

- Glutamate
- Aspartate
- GABA
- Substance P

20. A portal triad is composed of _____.

- bile canaliculi, branch of the hepatic artery and branch of the hepatic vein
- bile duct, branch of the hepatic artery and branch of the hepatic vein
- bile duct, hepatic sinusoid and branch of the hepatic vein
- central vein, branch of the hepatic artery and branch of the hepatic vein

Q2 A. Answer any ONE question.

12

- Explain the formation, composition, and functions of Cerebrospinal fluid, add a note on spinal meninges.
- Define Pulmonary ventilation, explain in detail inhalation and exhalation and factors affecting pulmonary ventilation

Q2 B. Answer any FOUR questions.

48

- Explain generation of action potential, and describe circulation of Cerebrospinal fluid.
- With the help of neat labelled diagram explain the anatomy and histology of small intestine.
- Write a note on regulation of respiratory centres.
 - Explain in detail the blood supply to the kidney and write a short note on ureters.
- Draw a neat labelled diagram of pituitary gland. Write a note on anterior pituitary cells and their hormones.
- Draw a neat labelled diagram of histology of ovary. Explain the process of oogenesis.

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SET II

Subject: Pharmaceutical Organic Chemistry I Year and Sem: First Year SEM-II

Duration: 3 Hours

Total marks: 80


Syllabus: CBCS R-2019

N.B. : 1. All questions are compulsory

2. Figures to right indicate full marks

Q. 1	Choose appropriate option for following multiple choice-based questions.	20
1	Which compound is a positional isomer of 1-chloropentane?	
a	CH ₃ CH ₂ CHCH ₂ CH ₂ Cl	
b	CH ₃ CHCH ₃ CH ₂ CH ₂ Cl	
c	CH ₂ Cl C(CH ₃) ₃ Cl	
d	CH(CH ₃) ₂ CHClCH ₃	
2	Choose the incorrect option regarding isomerism	
a	They differ in both physical and chemical properties	
b	They have different molecular formula	
c	There are two types of isomerism- structural and stereoisomerism	
d	Geometric and optical isomerism are two types of stereoisomerism.	
3	What is the IUPAC Name for the following compound?	
a	1-Methyl-2-oxobutanal	
b	2-Methyl-3-oxopentanal	
c	3-Methyl-2-oxobutanal	
d	2-Methyl-3-oxobutanal	
4	The reactivity order of alkyl halides in SN ₂ mechanisms is	
a	1° > 2° > 3°	
b	2° > 1° > 3°	
c	3° > 1° > 2°	
d	3° > 2° > 1°	
5	Low concentration of nucleophile favours	
a	SN ₂ reaction	
b	SN ₁ reaction	
c	Both SN ₁ and SN ₂ reaction	
d	SNE reactions	

6	SN2 mechanism proceeds through the intervention of
a	Free radicals
b	Carbonium ion
c	Transition state
d	Carbanion
7	The most reactive alkyl halide is
a	C2H5F
b	C2H5Br
c	C2H5I
d	C2H5Cl
8	An ideal solvent for SN1 reaction -
a	Polar protic solvent
b	Polar aprotic solvent
c	Non polar solvent
d	Levelling solvent
9	Chlorination of methane to give CCl4 is an example of
a	electrophilic addition
b	free radical substitution
c	nucleophilic addition
d	electrophilic substitution
10	Paraffin waxes are graded by its
a	melting point
b	specific gravity
c	ductility
d	viscosity
11	In the addition of HX to a double bond the hydrogen goes to the carbon that already has more hydrogen is a statement of
a	Hund's rule
b	Markovnikoff's rule
c	Saytzeffs rule
d	Anti Markovnikov's rule
12	Which of the following reacts with HBr in presence of a peroxide to give anti Markovnikoff's product
a	1-butene
b	2,3 dimethyl 2 butene
c	2- butene
d	3 hexene
13	Why tertiary carbonium ion is more stable than primary and secondary carbonium ion
a	due to presence of +I effect

	b	due to presence of-I effect	
	C	due to steric hindrance	
	d	Both a) and c)	
14		Which of the following alkenes will give a mixture of acetone and acetaldehyde on ozonolysis?	
	a	1 butene	
	b	2 methyl 2 butene	
	C	2 butene	
	d	2 methyl propene	
15		Which of the following compound is more stable?	
	a	1,3 butadiene	
	b	1,4 pentadiene	
	C	1,5 hexadiene	
	d	1,2 propadiene	
16		1,3 butadiene reacts with bromine to mainly give	
	a	3,4 dibromo 1 butene	
	b	4 bromo 1 butene	
	C	1,4 dibromo 2 butene	
	d	1 bromo 2 butene	
17		Which of the following statements is in accordance with Saytzeff's rule?	
	a	2-Butene is less stable than 1-Butene	
	b	2,3-Dimethyl-2-butene is more stable than 1-Butene	
	C	2-Butene is more stable than 2,3-Dimethyl-2-butene	
	d	2-Methyl-1-butene is more stable than 2,3-Dimethyl-2-butene	
18		Select the appropriate product for the following reaction.	
			
	a	butan-2-ol	
	b	Isobutyric acid	
	C	Propionic acid	
	d	butan-3-ol	
19		Identify the product when benzaldehyde reacted with concentrated potassium hydroxide	
	a	Benzyl alcohol	
	b	Benzyl alcohol and potassium salt of benzoic acid	
	C	Potassium salt of benzoic acid	
	d	Benzoic acid	
20		What is the name of final addition product when alcohols are added to ketones?	

a	Hemiacetal	
b	Acetal	
C	Hemiketals	
d	Ketals	
Q. 2	Answer any one question.	12
A		
a	<p>I) Explain in details Electrophilic addition of HBr to 1-propene. Write complete reaction, Give the detailed mechanism for addition as per Markovnikoff's rule and the addition in presence of peroxide. Comment on the stabilities of intermediates and products.</p> <p>II) Give the products obtained on reaction of 2-chlorobutane and alcoholic KOH. Describe the mechanism for formation of both the products. Comment on major and minor product formation. Justify your answer.</p>	6 6
b	<p>I) Give Reasons:</p> <p>1) Why hydrolysis of ethyl chloride is SN2 while hydrolysis of tert-butyl chloride is SN1 reaction?</p> <p>2) Why alkyl chlorides react easily with -OH ions while vinyl halide does with difficulty?</p> <p>II) Arrange the following in the order of their increasing reactivity towards nucleophilic substitution reaction. CH₃F, CH₃Cl, CH₃I, CH₃Br. Justify your answer. Give detailed mechanism for SN1 Reaction.</p>	6 6
Q. 2	Answer any four questions	48
B		
a	<p>I) Write the IUPAC names for the following</p> <p>II) Give structures for the following IUPAC names</p> <ol style="list-style-type: none"> 2,3-Dichloro-1,5-dipentanamide 3-Bromo-1-propene 1-Butene 3-Butenoic acid 	6 4

	III) Draw the tautomeric forms of acetone and identify the tautomeric system.	2
b	<p>I) Compound (A) having molecular formula C_3H_7NO, on acid hydrolysis gives an acid (B) and ammonia. When (A) treated with bromine and alkali, a compound (C) is obtained which on treatment with nitrous acid yield an alcohol (D) and nitrogen. Compound (C) on reaction with chloroform and alkali produce evil smell due to formation of compound (E). Write structures for all the compounds mentioned by giving appropriate reactions</p> <p>II) Depict the detailed mechanism for any two:</p> <ol style="list-style-type: none"> 1) Benzoin condensation 2) Formation of acetal from acetaldehyde 3) Perkin condensation 	6
c	<p>I) Arrange the following bases in increasing order of basicity, in both solution phase and gaseous phase. Justify the order: N-Methylethanamine, Ethanamine and Trimethylamine.</p> <p>II) With the help of reactions Give Qualitative tests for carboxylic acids. Write the structure and use of tartaric acid and acetyl salicylic acid.</p>	6
d	<p>I) How will you distinguish primary, secondary and tertiary alcohols by Lucas test? State chemical reactions. Write the mechanism of acidic dehydration of alcohols.</p> <p>II) Discuss in detail halogenation of alkanes with example. Give use of paraffin.</p>	6
e	<p>I) Discuss in detail the general reaction mechanism of nucleophilic addition reaction for acetal formation. Give the products for the following:</p> <ol style="list-style-type: none"> 1) Acetone + Phenylhydrazine 2) Acetaldehyde + semicarbazide 3) Benzaldehyde + 2,4 dinitrophenyl hydrazine <p>II) Elaborate on structural Isomerism in organic compounds with examples each</p> <p>III) Attempt the following conversions.</p> <ol style="list-style-type: none"> 1) 2-Bromo-2-methyl propane to 2,2-dimethylpropanamide 2) Propionitrile to Methyl propionate 3) Acetone to Isopropylmethylamine 	6

27.07.2022

Subject: Biochemistry

Year and Sem: F. Y. B. Pharm Sem II

Duration: 3 Hrs

Total marks: 80 M

N.B.: 1. All questions are compulsory

2. Figures to right indicate full marks

Q. 1	Choose appropriate option for following multiple choice-based questions.	20
1	Which of the following is an aliphatic amino acid with R group containing sulfhydryl group?	
a	Phenyl alanine	
b	lysine	
c	Threonine	
d	cysteine	
2	The process of change in the specific optical rotation representing the interconversion of α and β forms of D-glucose to an equilibrium mixture is called as	
a	Mutarotation	
b	Epimerization	
c	Racemization	
d	Inversion	
3	Glucose and mannose are examples of	
a	C4 epimers	
b	C2 epimers	
c	C6 epimers	
d	C1 epimers	
4	The conversion of phosphoenol pyruvate to pyruvate catalysed by enzyme pyruvate kinase resulting in the synthesis of ATP is an example of	
a	Oxidative Phosphorylation	
b	Oxidative dephosphorylation	
c	Substrate level Phosphorylation	
d	Photophosphorylation	
5	_____ is useful in generating pentoses and NADPH, required for the biosynthetic reactions.	
a	HMP shunt	
b	Glycolysis	
c	TCA cycle	
d	Gluconeogenesis	
6	The total ATP yield from oxidation of one mole of acetyl CoA by TCA cycle is	
a	8	
b	12	
c	24	
d	16	

Page 1 of 04

7	Which of the following enzyme is common for gluconeogenesis and glycolysis?
a	Glyceraldehyde-3-phosphate dehydrogenase
b	Hexokinase
c	Pyruvate kinase
d	Pyruvate carboxylase
8	The reducing equivalents are supplied by _____ in fatty acid biosynthesis.
a	NADPH
b	NADH
c	NAD
d	FADH ₂
9	The regulatory step in the synthesis of AMP from IMP is catalyzed by
a	Glutamine-phosphoribosyl pyrophosphate amido transferase
b	Adenylosuccinate synthetase
c	Adenylosuccinate lyase
d	IMP dehydrogenase
10	_____ separates the two strands of DNA during replication.
a	Gyrase
b	Topoisomerase
c	Helicase
d	DNA polymerase
11	Which of the following work is done by the sigma factor in transcription?
a	Helicase action
b	Transcription initiation
c	Transcription elongation
d	Transcription termination
12	Fluorouracil inhibits the activity of _____
a	Dihydrofolate reductase
b	Thymidylate synthase
c	CTP synthase
d	Ribonucleotide reductase
13	_____ is involved in salvage pathway of purines.
a	Adenine phosphoribosyl transferase
b	Glutamine- PRPP amidotransferase
c	IMP dehydrogenase
d	Uridine-cytidine kinase

14	The number of ATP molecules formed by β -oxidation of one mole of palmitic acid are _____.	
a	126	
b	106	
c	135	
d	108	
15	_____ of the following is the regulatory step of cholesterol biosynthesis.	
a	Formation 3-hydroxy-3-methylglutaryl CoA	
b	Formation of Mevalonate	
c	Formation of Isoprenoid Unit	
d	Formation of acetoacetyl CoA	
16	The accumulation of acetyl CoA in the mitochondria of the liver results in generation of	
a	ATP	
b	Ketone bodies	
c	Free fatty acids	
d	Oxaloacetate	
17	_____ is involved in biosynthesis of dopamine.	
a	Tyrosine hydroxylase	
b	Tyrosinase	
c	Phenylethanolamine N-methyltransferase	
d	Dopamine β -hydroxylase	
18	_____ is the link between urea cycle and TCA cycle.	
a	Fumarate	
b	Succinate	
c	α -ketoglutarate	
d	Citrate	
19	_____ catalyses the rearrangement reactions involving atomic grouping without altering molecular weight or number of atoms.	
a	Ligase	
b	Isomerase	
c	Oxidoreductase	
d	Hydrolase	
20	The functional unit of the enzyme is known as	
a	Chiroenzyme	
b	Holoenzyme	
c	Prosthetic group	
d	Monomeric enzyme	

Q. 2 A	Answer any one question.	12
a	<ul style="list-style-type: none"> i) Write a note on Carnitine shuttle. ii) Explain the biosynthesis of noradrenaline with its significance. iii) Give the reactions catalysed by FAS complex in the biosynthesis of fatty acid. 	
b	<ul style="list-style-type: none"> i) Outline TCA cycle with its significance. ii) Give the names and structures of substrate and product for the following enzymes: <ul style="list-style-type: none"> a) Pyruvate dehydrogenase b) Phosphoglycerate kinase c) Lactate dehydrogenase d) Enolase 	
Q. 2 B	Answer any four questions	48
a	<ul style="list-style-type: none"> i) Explain gluconeogenesis with respect to the names of the intermediates and the enzymes involved in reversal of glycolysis. ii) Describe the various complexes involved in ETC. iii) Discuss deamination and decarboxylation reactions involved in amino acid metabolism. 	
b	<ul style="list-style-type: none"> i) Give the four steps involved in the β-oxidation of saturated fatty acid. ii) Explain the formation of ketone bodies. iii) Outline the oxidative phase of HMP shunt and give its significance. 	
c	<ul style="list-style-type: none"> i) Classify carbohydrates and give two examples of disaccharides. ii) Draw the structures of any two acidic amino acids, and explain α-helix structure of protein. iii) Discuss in brief the steps involved in translation. 	
d	<ul style="list-style-type: none"> i) Outline the steps involved in the following <ul style="list-style-type: none"> a) Synthesis of AMP from IMP b) Salvage pathway for purines ii) Explain in brief about initiation and elongation steps in prokaryotic replication. iii) Define enthalpy and entropy. Discuss the biological role of phospholipids. 	
e	<ul style="list-style-type: none"> i) Draw the structure of ATP and explain enzyme induction and repression. ii) Classify enzymes as per IUB system with suitable examples. iii) Discuss Michaelis Menten plot with respect to reversible enzyme inhibitors. 	

29.07.22

Subject: Pathophysiology

First Year B. Pharmacy (SEM-II)(Choice Based) (R-2019)

Duration 3 hours

Total Marks: 80

N.B. 1. All questions are compulsory

2. Figures to the right indicate full marks

Q.1.	Choose appropriate option for following multiple choice based questions	20
1	Clearance of injurious stimuli with replacement of injured cells by normal cells and resuming of normal function is called as _____	
a	Resolution of Injury	
b	Fibrosis	
c	Necrosis	
d	Apoptosis	
2	A purulent exudate, is an inflammatory exudate rich in leukocytes, cell debris and, in many cases, microbes is called as _____	
a	lymph	
b	Transudate	
c	Plural Fluid	
d	Pus	
3	_____ if not scavenged by antioxidant system are harmful to the cell and can lead to cell death.	
a	Adenosine Tri Phosphate	
b	Reactive Oxygen Species	
c	Saturated Lipids	
d	Macromolecular Proteins	
4	Formation of new blood vessels during repair phase is called as _____	
a	Neovascularization	
b	Necrosis	
c	Apoptosis	
d	Resolution of the injury	
5	_____ is irreversible necrosis of heart muscle secondary to prolonged ischemia.	
a	Acute Myocardial Infarction	
b	Hypertension	
c	Hypotension	

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d	Atherosclerosis	
6	According to the degree of thickness of ventricular wall involved in myocardial infarction, the infarcts are classified as:	
a	Septal and Lateral	
b	Transmural and Laminar	
c	Anteroseptal and anterolateral	
d	Anterior and Posterior	
7	Which of the following does not cause airway narrowing in an asthma attack	
a	Destruction of airways	
b	Mucus hypersecretion	
c	Airway edema	
d	Bronchospasm	
8	A syndrome in which glomerular filtration declines suddenly and is usually reversible is called as	
a	Renal Calculi	
b	Chronic Renal Failure	
c	Transient Renal Failure	
d	Acute Renal Failure	
9	Polydipsia, polyuria, glucosuria and polyphagia are the clinical signs and symptoms of	
a	Asthma	
b	Angina pectoris	
c	Urinary tract infection	
d	Diabetes Mellitus	
10	In _____ there is damage to substantia nigra and globus pallidus.	
a	Parkinson's disease	
b	Epilepsy	
c	Gout	
d	Peptic Ulcer	
11	Select the appropriate cause of peptic ulcer from the following	
a	Helicobacter pylori	
b	Bicarbonate	
c	Prostaglandin	
d	Mucosal blood flow	
12	Acute cerebral ischemic stroke is characterized by the	

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**ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL**

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- SCHOOL OF ENGINEERING & TECHNOLOGY
 SCHOOL OF PHARMACY
 SCHOOL OF ARCHITECTURE

QUESTION PAPER SEMSETER II

CLASS:- First Year B. Pharmacy		SEM:- II	
SCHEME:- R-CBCS			
SUBJECT:- Computer Application (Theory)		DATE:- 02/08/2022	
DURATION:- 120mins (Time: 10.00 AM - 12.00 PM)		MARKS:- 50 Marks	
Q.01 Long answer (2 out of 3)		Marks	CO
A)	Write a short note on binary number system. Show conversion steps for converting 1001 from binary to decimal	10	
B)	Explain any one Computer application in pharmacy in detail.	10	
C)	Write a short note on decimal number system Show conversion steps for converting 26 from decimal to binary	10	
Q.02 Short answer (6 out of 8)		Marks	CO
A)	Write a short note on sdlc along with one sdlc model	5	
B)	Write a short note on database with small example	5	
C)	Describe : 1 - Information 2 - Data 3 - Database 4 - Software 5 - Website	5	
D)	List 3 Operating system List 3 Software List the 3 building blocks of a website List types of number system	5	
E)	Write abbreviation of : Html, css, js, sdlc, Write a short description on website.	5	
F)	What is the starting tag of an HTML document? SDLC -Software Development Life Cycle is followed to develop? Which number system has base of 8? How many numbers does the Decimal number system have? Name 4 types of number system.	5	
G)	Explain Bioinformatics in pharmacy	5	
F)	Explain Information system in pharmacy	5	

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1 - 8 - 22



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Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.

- SCHOOL OF ENGINEERING & TECHNOLOGY
 SCHOOL OF PHARMACY
 SCHOOL OF ARCHITECTURE

Semester Theory Examination (NUES), SEM II CBCS R-2019

SUBJECT: EVS

DATE: 01.08.2022

Maximum Marks- 50

TIME: 10am to 12pm

1. MCQ is Compulsory.
2. Long Answers (Answer 02 out of 3).
3. Short Answers (Answer 04 out of 05).

Q.1 MCQ

10 Marks

1. Which of these layers of the atmosphere consists of the ozone layer that is responsible for absorbing the Ultra-Violet (UV) light?

- A. Troposphere
- B. Mesosphere
- C. Stratosphere
- D. None of these

2. What is the estimated percentage of forest land that India should ideally have?

- A. 15%
- B. 50%
- C. 44%
- D. 33%

3. An extensive number of chains interlinked in an ecosystem forms a _____ together.

- A. Food chain
- B. Food web
- C. Carbon cycle
- D. Nitrogen cycle

4. Which of these elements is considered to be the largest source of commercial energy consumption in the world?

- A. Nuclear
- B. Natural gas
- C. Oil
- D. Coal

5. Deforestation may reduce the chances of

- A. frequent landslides
- B. erosion of surface soil
- C. rainfall
- D. frequent cyclones

6. Soil conservation is the process where

- A. soil is aerated
- B. soil is protected against loss
- C. sterile soil is converted to fertile soil
- D. soil erosion is allowed

7. In an ecosystem, the energy flow is always

- A. Always unidirectional
- B. Always bidirectional
- C. In any direction
- D. Always down directional

8. The upper part of an aquatic ecosystem contains

- A. Nekton
- B. Plankton
- C. Benthos
- D. both (1) and (2)

9. The over nourished lake with "algal blooms" are called

- A. Eutrophic
- B. Oligotrophic
- C. Dystrophic
- D. Meromictic

10. Which of the following gas is produced from landfill wastes?

- (a) Biogas
- (b) Natural gas
- (c) Liquefied petroleum gas
- (d) All of the above

Long Answers (ANY TWO)

Q.2 Define Air Pollution, give its types, sources of air pollution and explain concept of pollutants in detail. 10 Marks

Q.3 Explain Conservation of natural resources in detail. 10 Marks

Q.4 Explain in brief about structure and function of an ecosystem. 10 Marks

Short Answers (ANY FOUR)

Q.5 Explain Photochemical Smog and Ozone Depletion in detail. 05 Marks

Q.6 What is Soil Pollution and give sources of Soil Pollution. 05 Marks

Q.7 Write a short note on Desert Ecosystems. 05 Marks

Q.8 Write a short note on Producers, Consumers and Decomposers. 05 Marks

Q.9 Write a short note on Mineral Resources. 05 Marks