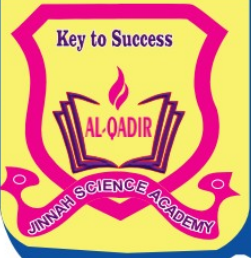


Guess paper Annual 2022



پنجاب کے تمام بورڈ کے لیے

کامیابی کا تعویذ

تالیف

محمد قدیر رفیق

صرف پندرہ دن کے اندر بورڈ امتحان کی مکمل تیاری کریں

BIOLOGY

For Inter Part -I

اب فیل ہونا بھول جائیں

امتحان میں
A⁺ گریڈ کی
100% گارنٹی

☆ سپر Setter کے ذہن کو مد نظر رکھ کر تیار کیے گئے سوالات

☆ یاد رکھیں! اب وقت انتہائی کم رہ گیا ہے۔

☆ صرف پندرہ دن کے اندر بورڈ امتحان کی مکمل تیاری کریں

اب جس کے جی میں آئے وہی پائے روشنی
ہم نے تو چراغ جلا کر سہرا رکھ دیا



القدير جناح سائنس اکیڈمی 03024741124

Objective Type

1	The basic unit of classification is			
	a) Genus	b) Phylum	✓c) Species	d) Class
2	Orders include related			
	a) Species	✓b) Genera	c) Classes	d) Family
3	The thick walled reproductive cells of cyanobacteria are called			
	a) Heterocysts	✓b) Akinete	c) Hormogonia	d) All of these
4	Which of the one in the following is a prokaryote			
	a) Amoeba	b) Algae	c) Fungi	✓d) Blue green algae
5	Reserve food material in Cyanobacteria is			
	a) Starch	✓b) Glycogen	c) Fats	d) All of these
6	An example of aerobic bacterium is			
	a) Campylobacter	b) E.Coli	✓c) Pseudomonas	d) Spirochete
7	Which one of the following is anaerobic bacteria			
	a) E.Coli	b) Spirochete	✓c) Pseudomonas	d) Campylobacter
8	Bacteria without any flagella are called			
	a) Peritrichous	✓b) Atrichous	c) Monotrichous	d) None of these
9	Reserve food material in cyanobacteria is			
	✓a) Glycogen	b) Cellulose	c) Glucose	d) Starch
10	Which is the anaerobic bacterium			
	✓a) Spirochete	b) Pseudomonas	c) Campylobacter	d) E.Coli
11	Spirochete is a bacterium			
	a) Aerobic	✓b) Anaerobic	c) Facultative	d) None of these
12	The pore by which the water leaves the body of sponges is called			
	a) Ostia	b) Mouth	c) Anus	✓d) Osculum
13	The inner layer of most sponges is called			
	a) Pinacoderm	✓b) Choanoderm	c) Endoderm	d) Epiderm
14	An example of beautiful and delicate sponge called Venus flower basket is			
	a) Sycon	b) Leucosolenia	c) Euplectella	✓d) Spongilla
15	In sponges asexual reproduction takes place by budding. The internal buds are called			
	a) Globules	✓b) Gemmules	c) Endosperm	d) Cyst
16	Excess gastric secretion is an important factor of			
	a) Obesity	b) Piles	c) Food poisoning	✓d) Peptic ulcer
17	Fresh saliva has pH			
	a) 4	✓b) 6	c) 8	d) 7.3
18	Taste buds of tongue play important role in food			
	a) Digestion	✓b) Selection	c) Lubrication	d) Mastication
19	Which of the following is a parasitic plant ?			
	a) Drosera	b) Dionaea	✓c) Cuscuta	d) Sarracenia
20	pH of fresh saliva is nearly			
	✓a) 6	b) 7	c) 8	d) 9
21	Excess gastric secretions is an important factor of			

	✓a) Peptic ulcer	b) Obesity	c) Piles	d) Food poisoning
22	Length of the duodenum is			
	a) 20 - 25 cm	✓b) 20 - 25 meters	c) 20 - 25 mm	d) 20 - 25 Km
23	Which one of the following is not a ciliate ?			
	a) Stentor	b) Paramecium	✓c) Trypanosoma	d) Vorticella
24	One or small diploid micronuclei of ciliates function in .			
	a) Sexual process	✓b) Sheath	c) Pellicle	d) Cuticle
25	Test of foraminifera is made of .			
	a) Silica	b) Calcium	✓c) Calcium phosphate	d) Chitin
26	Mosquito injects			
	a) Merozoites	b) Oocytes	c) Gametocytes	✓d) Sporozoites
27	Apicomplexans move by			
	a) Tube feet	b) Cilia	✓c) Flexing	d) Pseudopodia
28	Mosquito injects plasmodium to human in the form of .			
	✓a) Sporozoites	b) Gametocytes	c) Merozoites	d) Cysts
29	The sexual process is exhibited by most ciliates by .			
	a) Binary fission	✓b) Conjugation	c) Budding	d) Fertilization
30	Sleeping sickness is spread by .			
	✓a) Tsetse fly	b) Mosquito	c) Trypanosoma	d) Plasmodium
31	Study of tissue is called .			
	a) Microbiology	b) Morphology	✓c) Histology	d) Anatomy
32	The branch of Biology which deals with the study of environment relations of organisms is called .			
	a) Morphology	✓b) Ecology	c) Evolution	d) Zoogeography
33	The study of parasite is called .			
	a) Paleontology	b) Histology	c) Microbiology	d) Parasitology
34	Internal morphology is also called .			
	a) Physiology	✓b) Anatomy	c) Histology	d) Paleontology
35	The branch of biology which deals with study of ancestral history is .			
	a) Genetics	b) Zoogeography	c) Evolution	✓d) Paleontology
36	Biology is short of laws because of .			
	✓a) Exclusive nature of life	b) Large population of human	c) Less falsification	d) Less tentation
37	The tentative explanation of observation .			
	a) Hypothesis	b) Deduction	c) Law	d) Theory
38	In deductive reasoning we move from .			
	✓a) General to specific	b) General to general	c) Specific to general	d) Specific to specific
39	If a theory survives and continues to be supported by experimental evidence becomes a .			
	a) Hypothesis	b) Universal formula	✓c) Scientific law	d) Deduction
40	Transgenic plants can be propagated by .			
	a) Gene manipulation	✓b) Cloning	c) Genetic engineering	d) Tissue culture technique
41	Which of the following are being used as bio - pesticides ?			
	✓a) Bacteria	b) Fungi	c) Viruses	d) Algae
42	Pasteurization is a technique developed by .			

	a) Edward Jenner	b) Robert Koch	c) Chamberlandt	✓d) Louis Pasteur
43	The percentage by weight of RNA in a bacterial cell is .			
	a) 0.25 %	b) 2 %	c) 3 %	✓d) 6 %
44	Which of the following is a group of organic compounds ?			
	a) Lipids , nucleic acids and nitric acid	✓b) Carbohydrates , lipids , nucleic acids	c) Proteins , acids , lipids	d) Carbon dioxide , acids , bases
45	Of the total weight of a bacterial cell , carbohydrates constitute only .			
	a) 2 %	b) 1 %	✓c) 3 %	d) 4 %
46	18 % of the total weight of a mammalian cell is the .			
	a) Water	✓b) Proteins	c) Carbohydrates	d) Lipids
47	The total weight of a mammalian cell , DNA forms .			
	a) 1 %	b) 1.1 %	c) 6 %	✓d) 0.25 %
48	In bacterial cells the water percentage is .			
	✓a) 70 %	b) 40 %	c) 60 %	d) 50 %
49	Percentage of carbohydrates in mammalian cell is .			
	a) 1 %	b) 2 %	c) 3 %	✓d) 4 %
50	In free state , glucose is present in .			
	✓a) Dates	b) Amylose	c) Glycogen	d) Cellulose
51	Most abundant carbohydrate in nature is .			
	a) Starch	b) Glycogen	✓c) Cellulose	d) Agar
52	Cotton is a pure .			
	✓a) Cellulose	b) Polysaccharide	c) Cellulose	d) Both a & b
53	Animals obtain carbohydrates mainly from .			
	a) Glucose	✓b) Starch	c) Sucrose	d) Glycogen
54	Which one of following is not a Lipid ?			
	a) Rubber	✓b) Chitin	c) Cutin	d) Cholesterol
55	A heterogeneous group of compound related to fatty acid is .			
	a) Proteins	✓b) Lipid	c) Carbohydrate	d) Nucleic Acid
56	Lipids are insoluble in .			
	✓a) Water	b) Chloroform	c) Alcohol	d) Carbon tetra chloride
57	Which one of the following is not lipid ?			
	a) Cholesterol	b) Wax	c) Terpenes	✓d) Keratin
58	Iron containing protein is .			
	a) Cytochrome	✓b) Ferredoxin	c) Plastocyanin	d) Plastoquinone
59	Which of the following is not a fibrous protein .			
	a) Keratin	b) Myosin	c) Fibrin	✓d) Hormones
60	In the			
	✓a) 3-6	b) 4-6	c) 5-6	d) 6-6
61	Enzymes , antibodies , hormones and hemoglobin are examples .			
	a) Carbohydrates	✓b) Globular proteins	c) Fibrous proteins	d) Lipids
62	Haemoglobin is an example of which functional class of proteins ?			
	a) Contractile	b) Structural	✓c) Transport	d) Regulatory
63	Type of bond associated with maintaining primary structure of protein is .			
	✓a) Disulfide bond	b) Peptide bond	c) Ester bond	d) Hydrogen bond

64	Type of bond principally associated with maintaining alpha helix shape of protein ;			
	a) Disulphide bond	b) Peptide bond	c) Ester bond	✓d) Hydrogen bond
65	Which of the following structure is best represents structure of haemoglobin ?			
	a) Primary	b) Secondary	c) Tertiary	✓d) Quaternary
66	Amino acids are linked to each other by .			
	a) Ester bond	b) Glycosidic	c) Hydrophobic	✓d) Peptide bond
67	An amino acid contains an amino group and a carboxyl group attached to the same .			
	✓a) Carbon atom	b) Hydrogen atom	c) Nitrogen atom	d) Oxygen atom
68	Poisons like cyanide , antibiotics , anti-metabolites and some drugs are examples of .			
	a) Holoenzymes	✓b) Inhibitors	c) Coenzymes	d) Enzymes
69	An inhibitor is a chemical			
	a) Enzyme	b) Protein	✓c) Substance	d) None of these
70	An inhibitor react with enzyme but not transformed into			
	a) Enzyme	✓b) Product	c) Co-enzyme	d) None of these
71	The inhibitor which may destroy the globular structure of enzyme is .			
	a) Competitive	b) Non-competitive	✓c) Irreversible	d) Reversible
72	Irreversible inhibitors form which bond with active site ?			
	a) Hydrogen bonds	b) Ionic bonds	✓c) Covalent bonds	d) Hydrophobic bonds
73	The reversible inhibitors usually constitute			
	a) Strong linkage with enzyme	b) No linkage with enzyme	✓c) Weak linkage with enzyme	d) Medium linkage with enzyme
74	Non-competitive Inhibitors form enzyme inhibitor complex at a point other than the .			
	a) Catalytic site	✓b) Active site	c) Binding site	d) Non-catalytic site
75	Three dimensional globular protein is .			
	a) Starch	b) Glucose	c) Antibiotic	✓d) Enzyme
76	Enzyme lowers down the energy of .			
	a) Kinetic	b) Potential	✓c) Activation	d) Ionic
77	Small amounts of an			
	a) Protein	b) Lipid	✓c) Enzyme	d) None of these
78	Some enzymes require a ---- for their proper functioning .			
	a) Co-enzyme	✓b) Co-factor	c) Holoenzyme	d) Apoenzyme
79	Pepsinogen is an			
	a) Active	✓b) Inactive	c) Inhibitor	d) None of these
80	Which statement about enzyme is not true ?			
	a) They consist of proteins , with or without a non-protein part	b) They change the rate of catalyzed reaction	c) They are sensitive to heat	✓d) They are non-specific in their action
81	An enzyme is a three dimensional protein.			
	a) Fibrous	b) Elastic	✓c) Globular	d) Insoluble
82	Induced fit model was proposed by .			
	a) Emil Fisher	✓b) Koshland	c) Jenner	d) Pasteur
83	Lock and key model was proposed by .			
	✓a) Emil Fisher	b) Koshland	c) Rudolph Virchow	d) Lorenz Oken
84	Any factor that can alter the chemistry and shape of an enzyme can effect its rate of .			

	a) Activity	b) Hydrolysis	✓c) Catalysis	d) Photolysis
85	The catalytic activity of an enzyme is restricted to its small portion called .			
	✓a) Active site	b) Allosteric site	c) Binding site	d) Catalytic site
86	Koshland in 1959 proposed the modified form of .			
	a) Fluid mosaic model	b) Unit membrane model	c) Induce Fit model	✓d) Lock and key model
87	The active site of the enzyme is made up of two definite regions i.e., the binding site and the			
	a) Non-binding site	b) Non-catalytic site	c) Inactive site	✓d) Catalytic site
88	The non protein part of enzyme responsible for its proper functioning is known as .			
	a) Substrate	✓b) Cofactor	c) Reactant	d) Product
89	Poisons like cyanide , antibiotics , anti-metabolites and some drugs are examples of .			
	a) Holoenzymes	✓b) Inhibitors	c) Coenzymes	d) Enzymes
90	An inhibitor is a chemical			
	a) Enzyme	b) Protein	✓c) Substance	d) None of these
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93	Irreversible inhibitors form which bond with active site ?			
	a) Hydrogen bonds	b) Ionic bonds	✓c) Covalent bonds	d) Hydrophobic bonds
94	The reversible inhibitors usually constitute .			
	a) Strong linkage with enzyme	b) No linkage with enzyme	✓c) Weak linkage with enzyme	d) Medium linkage with enzyme
95	Robert Brown reported the presence of .			
	a) Lysosome	b) Ribosomes	c) Mitochondria	✓d) Nucleus
96	Nucleus can be seen in a .			
	a) Mature cell	✓b) Non-dividing cell	c) Germinating cell	d) Dividing cell
97	Nucleus contains soluble sap called .			
	a) Protoplasm	b) Cytoplasm	✓c) Nucleoplasm	d) Nuclear sap
98	The size of prokaryotic ribosome is .			
	a) 30S	b) 50S	✓c) 70S	d) 80S
99	Prokaryotes include blue - green algae and .			
	a) Viruses	✓b) Bacteria	c) Protozoans	d) Protists
100	The prokaryotic cell can divide by .			
	a) Multiple fission	b) Mitosis	c) Meiosis	✓d) Binary fission
101	Perhaps the most distinctive feature of prokaryotic cell is its .			
	a) Cell membrane	b) Hereditary material	c) Ribosomes	✓d) Cell wall
102	Binomial system of nomenclature was devised by .			
	a) E-Chatton	b) Robert Whittaker	c) Ernst Hackle	✓d) Carlous Linnaeus
103	The Common name for solanum melangena is .			
	a) Onion	✓b) Brinjal	c) Potato	d) Amaltas
104	In the binomial system of taxonomy , developed during the 18th century by C. Linnaeus , the first word of an organism's name is its .			
	a) Species	✓b) Genus	c) Race	d) Family
105	Linnaeus published his list of animals in .			

	a) 1747	b) 1748	✓c) 1758	d) 1753
106	In the scientific name of onion , <i>Allium cepa</i> , the <i>Allium</i> belongs to its .			
	✓a) Genus	b) Group	c) Species	d) Family
107	Scientific name has advantage of having .			
	a) No scientific basis	✓b) Scientific basis and universally accepted	c) Same organisms having different names in different areas	d) Same name applied to different organism
108	Carlous Linnaeus took the scientific name from .			
	a) Greek word	b) Arabic word	✓c) Latin word	d) Urdu word
109	Initially , the classification was based on .			
	a) Genetic features	b) Physiology	✓c) Morphology	d) Cytology
110	The basic unit of classification is .			
	a) Genus	b) Phylum	c) Class	✓d) Species
111	<i>Solanum esculentum</i> is the scientific name of .			
	a) Potato	b) Tobacco	c) Onion	✓d) Tomato
112	Phylogeny describes a species .			
	a) Morphological similarities with other species	✓b) Evolutionary history	c) Reproductive compatibilities with other species	d) Geographical distribution
113	In the five - kingdom system of classification developed by Robert Whittaker , member of the kingdom Plantae are autotrophic , eukaryotic and .			
	✓a) Multicellular	b) Either unicellular or multicellular	c) Motile	d) Have sexual reproduction
114	Five kingdom system of classification proposed by Margulis and Schwartz is not based on .			
	a) Genetics	✓b) Nucleic Acid	c) Cellular organization	d) Mode of nutrition
115	A third Kingdom protista was proposed to accommodate <i>Euglena</i> like organisms and bacteria , in 1866 by .			
	a) E-Chatton	✓b) Ernst Hackel	c) Linnaeus Carlous	d) Aristotle
116	The system of classification associated with three principal modes of nutrition photosynthesis , absorption and ingestion was proposed by .			
	✓a) Robert Whittaker	b) Carlous Linnaeus	c) Margulis & Schawartz	d) Ernst Hackel
117	Kingdom Animalia include eukaryotic multicellular .			
	✓a) Consumers	b) Reducers	c) Producers	d) Decomposers
118	Bactria range in size from about 0.1 to			
	a) 500	✓b) 600	c) 700	d) 800
119	The smallest bacteria are approximately the size of the largest viruses i.e.			
	a) Paramyxoviruses	b) Adenoviruses	c) Parvoviruses	✓d) Poxviruses
120	The diameter of staphylococcus and streptococcus is about .			
	a) 100 - 200 nm	b) 1.5 - 2	✓c) 0.75 - 1.25	d) 2 - 6
121	An outer flexible covering of ciliates is .			
	a) Cell wall	✓b) Pellicle	c) Sheath	d) Cuticle
122	Amoebic dysentery in .			
	a) Amoeba	b) Plasmodium	✓c) Entamoeba histolytica	d) Trypanosoma
123	<i>Entamoeba histolytica</i> cause amoebic .			
	a) Cholera	b) Fever	✓c) Dysentery	d) Migraine

124	The tsetse fly of African countries transmits trypanosome , the cause of .			
	✓a) Sleeping sickness	b) Measles	c) Lung infection	d) Malaria
125	The protozoans having two kinds of nuclei .			
	a) Zooflagellates	b) Amoeba	✓c) Ciliates	d) Actinopods
126	Amoeba moves and obtains food by means of .			
	a) Flagella	✓b) Pseudopodia	c) Flexing	d) Cilia
127	Pelomyxa palustris is an example of			
	a) Bacterium	b) Ciliate	c) Algae	✓d) Amocba
128	Pelomyxa Palustris is commonly called .			
	a) Entamoeba	b) Trypanosoma	c) Trichonymphas	✓d) Giant amoeba
129	The example of zooflagellates is .			
	a) Forams	b) Vorticella	c) Entamoeba	✓d) Trypanosoma
130	One of the most unusual protest phylum is that of .			
	✓a) Dinoflagellates	b) Zooflagellates	c) Euglenoids	d) Oomycetes
131	What regulation in freshwater ciliates is controlled by special organelles called .			
	a) Vacuoles	b) Golgi apparatus	✓c) Contractile vacuoles	d) Lysosomes
132	Complex specialized flagellates with many flagella are .			
	✓a) Trichonymphas	b) Trypanosoma	c) Euglena	d) Vorticella
133	The protists that live as symbionts in the guts of termites and help in the digestion of dry wood are .			
	✓a) Trichonymphas	b) Trypanosoma	c) Euglena	d) Vorticella
134	Members of phylum chrysophyta are commonly called .			
	a) Brown Algae	b) Red Algae	c) Dinoflagellates	✓d) Diatoms
135	Algae which take part in building coral reefs along with coral animals are .			
	✓a) Red algae	b) Brown algae	c) Green algae	d) Diatoms
136	Diatoms belongs to phylum .			
	a) Rhodophyta	b) Phaeophyta	✓c) Chrysophyta	d) Pyrrophyta
137	The largest brown algae are called .			
	a) Diatoms	✓b) Kelps	c) Dinoflagellates	d) Gelidium
138	The edible algae is .			
	✓a) Mushroom	b) Kelps	c) Dinoflagellates	d) Diatoms
139	Length of brown algae range from few centimeters to .			
	a) 170 meters	✓b) 75 meters	c) 70 meters	d) 75 cm
140	Most green algae possess cell wall with .			
	✓a) Cellulose	b) Chitin	c) Silica	d) Pectin
141	Phyco erythrin is found in .			
	a) Green algae	✓b) Red algae	c) Brown algae	d) Blue green algae
142	Which of the following possess leaf like blades , stem like stipes , and root like anchoring holdfast ?			
	a) Eucalyptus	b) Agaricus	✓c) Kelps	d) Phytophthora
143	Most green algae possess cell walls with .			
	✓a) Cellulose	b) Chitin	c) Peptidoglycan	d) Pectin
144	Which phylum of algae do not have forms with flagellated motile cells in at least one stage of their life cycle .			
	a) Euglenophyta	b) Chlorophyta	✓c) Rhodophyta	d) Phaeophyta
145	Which is member of Pyrrophyta ?			

	a) Ulva	✓b) Gonyaulax	c) Fucus	d) Frequilaria
146	Marine algae are also source of many useful substances like .			
	a) Algin	b) Agar	c) Carrageenan	✓d) All of these
147	Oomycetes are close relatives of the .			
	a) Algae	✓b) Fungi	c) Protozoa	d) Bacteria
148	Which one has played infamous roles in human history as they were the cause of Irish potato famine of the 19th century ?			
	a) Entamoeba histolytica	b) Physarum polycephalum	c) Trypanosoma gambiense	✓d) Phytophthora infestans
149	Plasmodium (slime mold) is a multinucleate mass of cytoplasm that can grow in diameter to .			
	a) 5 cm	b) 10 cm	c) 20 cm	✓d) 30 cm
150	Cell walls of Oomycetes contain .			
	✓a) Cellulose	b) Chitin	c) Peptidoglycan	d) Glycogen
151	Fungus - like protists have bodies formed of threadlike structures called .			
	a) Fibres	b) Yarns	✓c) Hyphae	d) Twines
152	The plasmodial slime mold that is a model organism is .			
	✓a) Physarum polycephalum	b) Ustilago tritici	c) Phytophthora infestans	d) Frequilaria
153	Oomycetes include a number of pathogenic organisms , including .			
	a) Physarum polycephalum	b) Rhodotorula	✓c) Phytophthora infestans	d) Candida albicans
154	Parasitic fungi directly absorb nutrients from living host by .			
	✓a) Haustoria	b) Roots	c) Rhizoids	d) Gametangia
155	The cell wall of fungus contains .			
	a) Cellulose	✓b) Chitin	c) Calcium carbonate	d) None of these
156	Non-septate hyphae are called			
	a) Monokaryotic	b) Dikaryotic	c) Mononucleatic	d) Coenocytic
157	The body of a fungus (except yeast) is called .			
	a) Thallus	b) Hyphae	✓c) Mycelium	d) Prothallus
158	The non - hyphal unicellular fungi are .			
	✓a) Yeasts	b) Morels	c) Truffles	d) Puffballs
159	Some fungi are used to control environmental pollution , the process is called			
	a) Biological control	✓b) Bioremediation	c) Fungal culture	d) Hydroponic
160	Lichens are very good -----of air quality .			
	a) Bioremediation	✓b) Bioindicators	c) Both a & b	d) None of these
161	Kingdom plantae mainly includes eukaryotic , autotrophic , multicellular , non motile organisms which develop from			
	a) Zygote	✓b) Embryo	c) Seed	d) None of these
162	The sporophyte of bryophytes is .			
	a) Haploid	✓b) Diploid	c) Triploid	d) Tetraploid
163	Which plants are said to be the amphibians of the plant world ?			
	a) Angiosperms	✓b) Bryophytes	c) Tracheophytes	d) Spermatophytes
164	Production of two types of gametes is called .			
	a) Homogamy	b) Heterogamy	c) Sporophyte	✓d) Gametophyte

165	Which of the following is a modified leaf ?			
	a) Tendril	b) Thorn	✓c) Flower	d) Both b & c
166	The process of evolution of leaf was completed in more than .			
	a) 15 - 16 million year	b) 15 - 19 million year	c) 15 - 17 million year	✓d) 15 - 20 million year
167	Which of the following were the first plants that formed true leaves and roots ?			
	a) Psilopsids	✓b) Lycopods	c) Megaphylls	d) Ferns
168	When the for in immature and young , it is coiled , this pattern of development is called .			
	a) Nutation	b) Circum nutation	✓c) Circinate vernation	d) Reticulate vernation
169	Large leaves having divided veins and veinlets with an expanded leaf blade or lamina are known as .			
	a) Microphylls	✓b) Megaphylls	c) Frond	d) Compound leaf
170	The leaves are called fronds in class .			
	a) Angiospermae	✓b) Filicineae	c) Gymnospermae	d) Sphenopsida
171	Sori are protected by the bent margin of the leaflet , forming false .			
	✓a) Indusium	b) Stomium	c) Annulus	d) Capsule
172	The microspores produced inside microsporangia germinated to form .			
	a) Male gametophyte	b) Microgametophyte	c) Female gametophyte	✓d) Both a & b
173	It is a dry , indehiscent fruit in which fruit wall is completely fused with seed coat .			
	a) Dryopsis	b) Testa	✓c) Caryopsis	d) Legume
174	Development of protective layers around megasporangium is called .			
	a) Microsporangium	b) Embryo sac	✓c) Integument	d) None of these
175	The distal end of the megasporangium became modified for capturing			
	a) Fruit	b) Seed	c) Zygote	✓d) Pollen
176	In this group animals with symmetry have been included .			
	✓a) Radial	b) Bilateral	c) Both a & b	d) None of these
177	In grade radiate the animal is divide into two equal halves and are			
	✓a) Mirror image	b) Opposite	c) Right angle	d) None of these
178	All the animals in grade radiate are			
	a) Triploblastic	✓b) Diploblastic	c) Tetrablastic	d) Both a & b
179	Water is more viscous than air .			
	a) 10 times	b) 20 times	✓c) 50 times	d) 100 times
180	The exchange of gases (CO ₂ and O ₂) between the organism and its environment is called .			
	✓a) Respiration	b) Cellular respiration	c) External respiration	d) Anaerobic respiration
181	Oxygen contents of fresh air are .			
	✓a) 200 ml / litre	b) 100 ml / litre	c) 10 ml / litre	d) 150 ml / litre
182	During photorespiration , glycine is converted into serine in the .			
	✓a) Mitochondria	b) Ribosome	c) Golgi Bodies	d) Chloroplast
183	During photorespiration , glycolate diffuses into the membrane bounded organelle named as .			
	a) Mitochondria	b) Ribosome	✓c) Peroxisome	d) Golgi Bodies
184	The main sites of exchange of gases in plants are .			
	✓a) Stomata	b) Lenticel	c) Cuticle	d) Epidermis
185	Respiration activity which occurs in plants during day time is called			
	a) Respiration	✓b) Photorespiration	c) Digestion	d) None of these
186	In the mitochondria where two glycine molecules are converted into			

	a) Glycine	✓b) Serine	c) ATP	d) Glycolate
187	Guard cells become turgid and stoma or pore			
	a) Close	✓b) Open	c) Both a & b	d) None of these
188	is incorrect about guard cells .			
	a) Have chloroplasts	✓b) Connected to surrounding cells by plasmodesmata	c) Surrounding stoma	d) Bean shaped
189	According to one hypothesis , stomata opens due to the active transport of .			
	a) Sodium	✓b) Potassium	c) Sulphur	d) Nitrogen
190	A circulatory fluid is the			
	✓a) Blood	b) Water	c) Secretion	d) Hormones
191	A contractile pumping device .			
	a) Lung	b) Liver	✓c) Heart	d) Vein
192	Normal pH of human blood is .			
	a) 4.4	b) 5.4	c) 6.4	✓d) 7.4
193	Which of the following is not true about histamine ?			
	a) Produced by basophils	b) Causes dilation of blood capillaries	c) Cause inflammation	✓d) Released by Eosinophils
194	Platelets are fragments of large cells called .			
	a) Microkaryocytes	b) Erythrocytes	✓c) Megakaryocytes	d) Leucocytes
195	One cubic millimeter of human male blood contain RBC .			
	a) 4 - 4.5 millions	✓b) 5 - 5.5 millions	c) 6 - 6.5 millions	d) 7 - 7.5 millions
196	The plasma proteins constitute percent by weight of plasma .			
	✓a) 7 - 9 %	b) 9 - 11 %	c) 11 - 13 %	d) 13 - 15 %
197	Histamine is produced by .			
	a) Neutrophils	b) Eosinophils	✓c) Basophils	d) Monocytes
198	Thalassaemia is also called .			
	✓a) Cooley's anaemia	b) Thomas anaemia	c) Pete's anaemia	d) Mendl's anaemia
199	Enlargement of spleen is seen in .			
	a) Blood cancer	b) Thalassaemia	c) Odema	✓d) Hepatitis
200	The substance which inhibits blood clotting .			
	✓a) Heparin	b) Histamine	c) Fibrin	d) Albumin
201	The helps defend the body again foregind invaders .			
	a) Circulatory system	✓b) Lymphatic system	c) Heart	d) None of these
202	Antibodies are produced from .			
	a) Eosinphils	b) Basophils	c) Monocytes	✓d) Lymphocytes
203	Antiserum is a serum containing .			
	✓a) Antibodies	b) Antigen	c) Antibiotics	d) Anticancer chemicals
204	In cell mediated response			
	a) B - cells	✓b) T - cells	c) Lymphs	d) None of these
205	Antigen or immunogen is a foreign substance , often a protein which stimulates the formation of			
	✓a) Antibodies	b) Antiseptic	c) Both a & b	d) None of these
206	The use of which stimulate the production of antibodies in the body , and making a person immune .			
	a) Antibodies	✓b) Vaccines	c) Antigen	d) None of these

207	Naturally induced immunity is also called .			
	✓a) Auto immune	b) Anti serum	c) Passive immunity	d) None of these
208	Curved or comma shaped bacteria are called .			
	✓a) Vibrio	b) Spirillum	c) Spirochetes	d) Bacilli
209	When cocci occur in pairs , their arrangement is .✓Example of rod shaped bacteria is .			
	a) Spirocheta	b) H.microbium	c) S.Aureus	✓d) Escherichia coli
210	When cocci form long chain of cells then arrangement is called as .			
	a) Tetrad	b) Diplococcus	c) Sarcina	✓d) Streptococci
211	A tetrad is a square of .			
	a) 2 Cocci	✓b) 4 Cocci	c) 6 Cocci	d) 8 Cocci
212	When the division is in three planes , it will produce a .			
	✓a) Sarcina arrangement	b) Tetrad arrangement	c) Bivalent arrangement	d) Helical arrangement
213	When division occurred is random planes it will produce a ----- arrangement.			
	✓a) Staphylococcus	b) Diplococcus	c) Streptococcus	d) Bacillococcus
214	If tuft of flagella is present only at one pole of bacteria then these are called as .			
	a) Monotrichous	b) Peritrichous	c) Amphitrichous	✓d) Lophotrichous
215	Bacterial pathogenicity is due to .			
	a) Envelope of all cell	b) Capsule	✓c) Slime	d) Cell wall
216	Important vector in modern genetic .			
	a) Nucleoid	✓b) Plasmid	c) Mesosome	d) Ribosome
217	Cysts are dormant , thick - walled , desiccation resistant forms and develop during .			
	a) Late stage of cell growth	b) Differentiation of reproductive cells	✓c) Differentiation of vegetative cells	d) During conjugation
218	When tuft of flagella is present at each of two poles in bacteria is known as .			
	a) Artichous	b) Lophotrichous	c) Peritrichous	✓d) Amphitrichous
219	Mesosomes are internal extensions of .			
	a) Cell wall	b) Golgi complex	✓c) Cell membrane	d) Endoplasmic reticulum
220	Cell wall is absent in .			
	a) E.Coli	✓b) Mycoplasma	c) Vibrio	d) Spirochete
221	Pili are made up of special protein called .			
	✓a) Pillin	b) Flagellin	c) Tubulin	d) Myosin
222	Bacteria without any flagella are called.			
	a) Amphitrichous	b) Monotrichous	c) Lophotrichous	✓d) Atrichous
223	Cell wall of gram positive bacteria are stained .			
	a) Pink	b) Red	c) Green	✓d) Purple
224	Which one is present in all bacteria ?			
	✓a) Cell membrane	b) Mesosome	c) Ribosomes	d) Plasmid
225	Primary function of flagella is to help in .			
	a) Induction	✓b) Motility	c) Conjugation	d) Adhesion
226	Hollow , nonhelical , filamentous appendages present in bacteria are .			
	a) Cilia	b) Fimbriae	c) Flagella	✓d) Pili
227	Slime provides greater pathogenicity to bacteria and protects them against .			
	a) Pinocytosis	✓b) Phagocytosis	c) Invasion	d) Exocytosis
228	The cell walls of most bacteria have a unique macromolecule called .			

	a) Teichoic acid	b) Lipoprotein	✓c) Peptidoglycan	d) Polysaccharide
229	Spores are resistant to adverse physical environment condition such as .			
	a) High temperature	b) Desiccation	c) Chemical agents	✓d) All of these
230	Dormant , thick-walled , desiccation resistant forms present inside bacteria are .			
	✓a) Cysts	b) Exospores	c) Endospores	d) Mesosome
231	Bacteria that cannot synthesize their organic compounds from simple inorganic substances are .			
	a) Autotrophs	✓b) Heterotrophs	c) Symbionts	d) Lichen
232	Chemosynthetic bacteria oxidize inorganic compounds like .			
	a) Ammonia	b) Nitrogen	c) Sulphur	✓d) All of these
233	Bacteria which get their food from dead organic matter are .			
	a) Parasitic	✓b) Saprophytic	c) Symbiotic	d) Chemosynthetic
234	Which one is a microaerophilic bacterium ?			
	a) E.coli	b) Spirochete	c) Pseudomonas	✓d) Campylobacter
235	Which of the following is anaerobic bacteria ?			
	a) Pseudomonas	b) Escherichia coli	✓c) Spirochete	d) Campylobacter
236	Asexual reproduction in bacteria occurs by .			
	a) Conjugation	b) Transduction	c) Transformation	✓d) Binary Fission
237	Bacteria divided at exponential rate during .			
	a) Stationary phase	b) Decline phase	✓c) Log phase	d) Log phase
238	Which is an aerobic bacterium ?			
	a) E.coli	b) Spirochete	c) Campylobacter	✓d) Pseudomonas
239	The interval of time until the completion of next division is known as .			
	a) Incubation time	✓b) Generation time	c) Multiplication time	d) Cell cycle
240	The heat that causes coagulation of proteins and kills the microbes .			
	✓a) Moist heat	b) Dry heat	c) Intense heat	d) Mild heat
241	The heat that causes oxidation of chemical constituents of microbes and kills them .			
	a) Moist heat	✓b) Dry heat	c) Intense heat	d) Mild heat
242	Membrane filters are used to sterilize heat sensitive compounds like .			
	a) Antibiotics	b) Seras	c) Hormones	✓d) All of these
243	Disinfectants inhibit the growth of vegetative cell and are used on .			
	a) Living materials	b) Living and non living materials	✓c) Non living materials	d) Living tissues
244	Methods of prevention and treatment that have been introduced to control microbial diseases included .			
	a) Immunization	b) Antisepsis	c) Chemotherapy	✓d) All of these
245	The rays generally used for sterilization process are .			
	a) Alpha	b) Beta	✓c) Gamma	d) X-rays
246	Antibiotics are synthesized and secreted by certain bacteria , actinomycetes and .			
	a) Algae	✓b) Fungi	c) Lichen	d) Virus
247	Misuse of antibiotic such as penicillin can cause .			
	✓a) Allergic reactions	b) Headache	c) Deafness	d) Mental retardness
248	Chemotherapeutic chemical substances which are used in treatment of Infectious disease are .			
	a) Antibodies	b) Antigens	✓c) Antibiotics	d) Disinfectants
249	Lovastain is used for lowering blood .			
	a) Pressure	b) Glucose	✓c) Cholesterol	d) Neraspora

250	Which of the following is not symptom of ergotism ?			
	a) Psychotic Delusion	b) Convulsion	c) Gangrene	✓d) Indigestion
251	Which is used to inhibit fungal growth ?			
	a) Lovastatin	b) Cyclosporin	c) Griseofulvin	d) Ergotin
252	Aspergillus fumigates causes aspergillosis but only in persons with defective immune system such as			
	a) HAV	b) Hepatitis	c) HIV	✓d) AIDS
253	Citric acid is obtained from .			
	a) Penicillium	✓b) Aspergillus	c) Sacchromyces	d) Nevrospora
254	Which one is an example of foliose lichens ?			
	a) Ramalina	b) Bacidia	c) Lecanora	✓d) Parmelia
255	They are ecologically important as bioindicators of air pollution .			
	✓a) Lichens	b) Mycorrhizae	c) Yeast	d) Viruses
256	Which one is not animal fungal disease ?			
	a) Ringworm	b) Athletes' foot	✓c) Powdery mildew	d) Histoplasmosis
257	Which one is not plant disease ?			
	a) Potato wilt	b) Powdery mildew	c) Ergot of rye	✓d) Histoplasmosis
258	Candida albicans , a yeast , causes oral and vaginal thrush i.e. ,			
	a) Candidiasis	b) Candidosis	✓c) Both a & b	d) None of these
259	Which of the following is not an example of poisonous mushroom ?			
	a) Death cap / death angel	b) Jack - O ' lantern mushroom	c) Amanita	✓d) Agaricus
260	Reindeer moss is .			
	a) Mycorrhiza	✓b) Lichen	c) Funaria	d) Alga
261	Ginkgo belongs to class .			
	a) Angiospermae	b) Filicineae	✓c) Gymnospermae	d) Anthocerosida
262	The term gymnospermae literally means .			
	a) Enclosed seeded	✓b) Naked seeded	c) Open seeded	d) Seedless
263	The megasporophylls bearing ovules are not folded and joined at the margins to form an ovary in .			
	a) Filicineae	b) Dicotyledonae	c) Monocotyledonae	✓d) Gymnospermae
264	The megasporophylls bearing ovules are not folded and joined at the margins to form an			
	a) Ovule	b) Seed	✓c) Ovary	d) Fruit
265	In angiosperm , megaspore develop into female gametophyte which consist of .			
	a) 3 Cells	b) 5 Cells	✓c) 7 Cells	d) 9 Cells
266	-----make up 235,000 of the 360,000 known species of plants .			
	✓a) Angiosperms	b) Gymnosperms	c) Ferns	d) Bryophytes
267	Female gametophyte in flowering plants is .			
	a) Ovary	b) Archegonium	✓c) Seed	d) Embryo sac
268	An ovule is an integumented in dehiscent .			
	a) Microporangium	✓b) Megasporangium	c) Sporangium	d) Seed
269	The interval of time unit the completion of next division is known as .			
	a) Interphase	✓b) Generation time	c) Reproductive time	d) Growth
270	The part of flower which develops into fruit is .			
	a) Flower	b) Seed	c) Ovule wall	✓d) Ovary
271	Ovary wall develops into the .			

	✓a) Fruit	b) Vegetable	c) Seed coats	d) Pericarp
272	Double fertilization is a characteristic of			
	a) Gymnosperms	✓b) Angiosperms	c) Bryophytes	d) Mosses
273	Which one of the following is the characteristics of monocots ?			
	a) 4 or 5 petals	✓b) Scattered vascular bundles in stem	c) Netted veins	d) Woody stems
274	The class Angiospermae is divided into two sub - classes according to the number of cotyledons in the			
	a) Zygote	b) Seed	✓c) Embryo	d) None of these
275	Nonocot have -----			
	✓a) Parallel	b) Net	c) Both a & b	d) None of these
276	The asexual reproduction in sponges occurs by .			
	✓a) Budding	b) Fragmentation	c) Spores	d) Conidia
277	The poriferans are pore - bearing animals , commonly called .			
	a) Nematodes	b) Cnidarians	✓c) Sponges	d) Roundworms
278	In most sponges this spongocoel may be divided into flagellated chambers or canals , lined by flagellated .			
	✓a) Choanocytes	b) Pinacocytes	c) Amoebocytes	d) Phagocytes
279	The polyp is reduced and medusa is dominant .			
	a) Sea Anemon	b) Hydra	✓c) Jelly fish	d) Obelia
280	Sea anemone belongs to phylum .			
	✓a) Coelentrata	b) Annelida	c) Arthropoda	d) Echinodermata
281	Coral reefs are mostly formed of .			
	✓a) Calcium carbonate	b) Silica	c) Chitin	d) Lignin
282	Haem portion of hemoglobin contains an atom of .			
	a) Magnesium Mg^{++}	b) Phosphorus K^{++}	c) Calcium Ca^{++}	✓d) Iron Fe^{++}
283	Which metal atom is present in chlorophyll ?			
	a) Cu	b) Fe	✓c) Mg	d) K
284	Chlorophyll a is .			
	a) Yellow green	✓b) Blue green	c) Orange green	d) Yellow green dark
285	Correct molecular formula for chlorophyll " a " is .			
	✓a) $C_{55}H_{72}O_5N_4Mg$	b) $C_{55}H_{72}O_4N_5Mg$	c) $C_{55}H_{70}O_5N_4Mg$	d) $C_{55}H_{70}O_5N_5Mg$
286	Which wavelengths are mainly absorbed by chlorophyll ?			
	✓a) Violet blue and orange red	b) Violet and orange	c) Green and blue	d) Red and indigo
287	Magnesium is an important nutrient in green plants as it is an essential component of .			
	a) Protein	b) Chlorophyll	c) Hemoglobin	✓d) Glucose
288	The colour of chlorophyll b is .			
	a) Orange - red	✓b) Yellow - green	c) Blue - green	d) Orange - green
289	Photosystem II has the form of chlorophyll a which absorbs best light of .			
	a) 670 nm	✓b) 680 nm	c) 690 nm	d) 700 nm
290	The products of photosynthetic light reactions are .			
	a) ATP and NADH	✓b) ATP , NADPH and O_2	c) ATP and NADPH	d) ATP and NAD
291	Light can work in photosynthesis if only it is .			
	✓a) Absorbed	b) Reflected	c) Transmitted	d) Refracted
292	Plastocyanin protein contains .			

	a) Iron	✓b) Copper	c) Magnesium	d) Potassium
293	Water splitting process of photosynthesis releasing oxygen is called .			
	a) Glycolysis	✓b) Photolysis	c) Hydrolysis	d) Electrolysis
294	Which of the following is electron carrier ?			
	a) Plastocyanin	b) Cytochromes	c) Plastoquinone	✓d) All of these
295	An enzyme NADP reductase transfers electrons from .			
	✓a) Fd to NADP	b) NADP to Fd	c) Fd to NADPH	d) Fd to ADP
296	Each photon of light excites .			
	a) Many electrons	b) 3 electrons	c) 2 electrons	✓d) Single electrons
297	What is not produced during cyclic electron flow ?			
	a) Oxygen	b) ATP	c) NADPH	✓d) Both a & c
298	Sugar is formed during .			
	a) Dark independent reactions	b) Dark dependent reactions	✓c) Light independent reactions	d) Light dependent reactions
299	The dark reaction consists of .			
	a) Carbon fixation	b) Reduction	c) Regeneration	✓d) All of these
300	During the dark reactions of photosynthesis the main process which occurs is .			
	a) Release of oxygen	b) Energy absorption	c) Formation of ATP	✓d) Adding of hydrogen to carbon dioxide
301	For fixing of three molecules of CO ₂ in Clavin cycle , what is needed ?			
	a) 6 ATP + 9 NADPH	✓b) 9 ATP + 6 NADPH	c) 18 ATP + 9 NADPH	d) 3 ATP + 3 NADPH
302	The NADPH molecule will produce reducing power for the sugar in the .			
	a) Chemiosmosis	b) Cyclic phosphorylation	✓c) Calvin cycle	d) Electron transport chain
303	For the synthesis of one molecule of glucose Calvin cycle operate how many times ?			
	a) Once	✓b) Twice	c) Thrice	d) Four times
304	Which of the following is a parasitic plant ?			
	a) Drosera	b) Dionaea	✓c) Cuscuta	d) Sarracenia
305	Lichen is a symbiotic relationship between an alga and .			
	a) Gymnosperm	b) Pteridophyte	✓c) Fungus	d) Angiosperm roots
306	Root nodules are present in .			
	a) All photosynthetic plants	b) Gymnosperms	c) Non - leguminous plants	✓d) Leguminous plants
307	All of the insectivorous plants are .			
	a) Heterotrophs	✓b) Autotrophs	c) Saprotrophs	d) Parasitic
308	One of the following is not insectivorous plant .			
	a) Venus - fly trap	✓b) Cuscuta	c) Sundew	d) Pitcher plant
309	of oxygen in and carbon dioxide out occurs because of difference in partial pressures of these gases.			
	✓a) Diffusion	b) Effusion	c) Digestion	d) None of these
310	Blood in the lungs is separated from the alveolar air by extremely thin membranes of the and alveoli			
	a) Villi	b) Bronchi	✓c) Capillaries	d) Veins
311	In human being the respiratory pigment is .			
	✓a) Haemoglobin	b) Biliubin	c) Myoglobin	d) Haemocyanin

312	The maximum amount of oxygen which normal human blood absorbs and carries at the sea - level is about of blood .			
	✓a) 200 ml / 100 ml	b) 40 ml / 100 ml	c) 100 ml / 20 ml	d) None of these
313	When oxygen pressure falls below ----- mercury , as in many cells and tissues , the oxygen saturation of haemoglobin decreases very sharply .			
	✓a) 60 mm	b) 40 mm	c) 20 mm	d) None of these
314	When carbon dioxide pressure increases , the oxygen tension			
	a) Increase	✓b) Decrease	c) Both a & b	d) None of these
315	Increased carbon dioxide tension favours the greater liberation of from the blood to the tissue .			
	✓a) Oxygen	b) Sulphur	c) Carbon mono oxide	d) None of these
316	Carboxyhaemoglobin is formed when carbon dioxide combines with of haemoglobin .			
	a) Oxygen	b) Amino group	c) Ester group	d) None of these
317	About -----carbon dioxide is carried as bicarbonate ion combined with sodium in the plasma .			
	a) 80 %	✓b) 70 %	c) 20 %	d) 50 %
318	Carbon dioxide per 100 ml of venous blood is .			
	a) 50 ml	✓b) 54 ml	c) 98 ml	d) 99 ml
319	4 ml of carbon dioxide per 100 ml of blood as it passes through the			
	✓a) Lungs	b) Liver	c) Kidney	d) None of these
320	Asthma is associated with severe paroxysm of difficult .			
	a) Sleeping	b) Spreading	c) Walking	d) Breathing
321	Respiratory distress syndrome is common in .			
	a) All new borns	b) Adults	✓c) Premature infants	d) Old age people
322	Smoking especially in young adults is the most potential threat of			
	✓a) Lung cancer	b) Throat cancer	c) Kidney cancer	d) None of these
323	Tuberculosis is caused by			
	✓a) Mycobacterium tuberculosis	b) Smoking	c) Streptococcus	d) None of these
324	How many molecules of oxygen can bind with a molecule of myoglobin .			
	✓a) 01	b) 02	c) 03	d) 04
325	Myoglobin is also known as ----- haemoglobin .			
	a) Liver	b) Heart	✓c) Muscle	d) None of these
326	The volume of air taken inside the lungs and expelled during exercise is about			
	a) 1.5	b) 2.5	✓c) 3.5	d) 4.5
327	The amount of Carbon dioxide present in air is about .			
	a) 0.01 to 0.02 %	b) 0.03 to 0.04 %	✓c) 0.04 to 4 %	d) 0.05 to 0.07 %
328	At rest we inhale and exhale per munute .			
	a) 15 - 25 times	✓b) 15 - 20 times	c) 10 - 15 times	d) 11 - 20 times
329	The light falling on leaf surface is absorbed about .			
	✓a) 1 %	b) 25 %	c) 50 %	d) 100 %
330	The shrinkage of protoplast of a cell .			
	a) Incipient plasmolysis	b) Deplasmolysis	c) Guttation	✓d) Plasmolysis
331	Sieve tube cells and companion cells communicate with each other through .			
	a) Sieve pores	b) Casparian strip	✓c) Plasmodesmata	d) Cell membranes
332	In the maximum depth of roots of prosopis is .			

	a) 40 meters	✓b) 50 meters	c) 60 meters	d) 70 meters
333	Path way of consulting interconnected protoplasts in roots cells is called.			
	a) Apoplast	✓b) Symplast	c) Tonoplast	d) Protoplast
334	Roots bear a dense cluster of tiny hair like structures which are extensions of .			
	✓a) Epidermal cells	b) Pericycle cells	c) Endodermal cells	d) Cortical cells
335	Apoplast pathway becomes discontinuous in endodermis due to .			
	a) Pericycle	✓b) Casparian strip	c) Cortex	d) Xylem
336	The theory called , pressure - Flow Theory , is the most acceptable theory for the transport in the phloem of			
	a) Gymnosperm	✓b) Angiosperms	c) Bryophytes	d) None of these
337	Water moves out of sieve tube cell by..... , lowering the hydrostatic pressure .			
	a) Diffusion	b) Effusion	✓c) Osmosis	d) None of these

Subjective

Q.NO.2 (Ch=2,3,8,10,11)

Most Important Questions		Ch	Most Important Questions		Ch
1.	What is heat capacity of water ? Give its importance.	2	2.	Define enzymes.	3
3.	Define protective role of water.	2	4.	Give role and examples of enzymes activator.	3
5.	Differentiate between Amylose and Amylopectin.	2	6.	Define cofactor with example.	3
7.	Differentiate between glycosidic and peptide bond.	2	8.	Differentiate between Co-factor and Co-enzyme.	3
9.	What are oligosaccharides?	2	10.	How is Prosthetic group different from Co-enzyme?	3
11.	What are lipids? Give two roles of waxes.	2	12.	Differentiate between co-factor and activator.	3
13.	What are waxes?	2	14.	What is difference between pepsin and pepsinogen?	3
15.	Give general formula for an Amino Acid.	2	16.	Give any two characteristics of enzymes.	3
17.	What are Globular proteins? Give examples.	2	18.	Define lock and key model of enzyme.	3
19.	Differentiate between Nucleoside and Nucleotide.	2	20.	Differentiate between reversible and irreversible enzyme inhibitors.	3
21.	What is phosphodiester linkage? Sketch.	2	22.	What are competitive and non-competitive enzyme inhibitors?	3
Most Important Questions		Ch	Most Important Questions		Ch
23.	Enlist four plant diseases caused by fungi.	8	24.	What are lichens? Write about their ecological role.	8
25.	Differentiate between obligate and facultative parasite.	8	26.	Define lichens. Give its significance.	8
27.	Name the type and hyphae and sexual spores in sac fungi.	8	28.	Differentiate between plasmogamy and karyogamy.	8
29.	Write down two similarities between plants and fungi.	8	30.	What are septate and non-septate hyphae?	8
31.	What are carnivorous fungi?	8	32.	What do you know about budding and parasexuality?	8
33.	Write four important points of algae.	8	34.	What are conidia and spores?	8
35.	Differentiate between fungus like protists and fungi.	8	36.	What is meant by parasexuality? Give its importance.	8
37.	8- What is histoplasmosis?	8	38.	18- Differentiate between conidiophores and coenocytic hypha.	8
39.	9- Why rust and smut are called so?	8	40.	19- Differentiate between ascus and basidium.	8
41.	10- What is nuclear mitosis?	8	42.	20- What are toad stools? Give example.	8

Most Important Questions	Ch	Most Important Questions	Ch
43. What is hermaphrodite organism?	10	44. Name four harmful effects of insects.	10
45. Write basic characteristics of chordates, give example.	10	46. Give three basic characteristics of phylum chordate.	10
47. What are coral reefs?	10	48. What is polymorphism? Give example.	10
49. Define swim bladder. Give its functions.	10	50. Differentiate between sac like and tube like digestive system.	10
51. What is regeneration? Give example.	10	52. What is metamorphosis?	10
53. What are diploblastic animals?	10	54. Differentiate between parazoa and eumetazoa.	10
55. Define placenta. Write its functions.	10	56. What are archaeopteryx? Give its two characteristics.	10
57. Write the two differences between protostomes and deuterostomes.	10	58. Differentiate between polyps and medusae.	10
59. Differentiate between gastropods and cephalopods.	10	60. Differentiate between diploblastic and triploblastic organism.	10
61. What is regeneration, give its importance.	10	62. Write down affinities of echinoderm with hemichordates.	10
Most Important Questions	Ch	Most Important Questions	Ch
63. Give the importance of ATP.	11	64. What are accessory pigments? Give their one importance.	11
65. Define the term Bioenergetics.	11	66. What is fermentation? Give its two types.	11
67. What is glycolysis? Where it takes place in cell?	11	68. Differentiate between antenna complex and reaction center.	11
69. How action spectra can be obtained?	11	70. Give the function spectrophotometer.	11
71. What is cellular respiration?	11	72. Define glycolysis. Where does it take place?	11
73. What is payoff phase of glycolysis?	11	74. Write the photolysis of water in photosynthesis.	11
75. How does carbon dioxide absorb by cell wall of mesophyll cells?	11	76. What is Z-scheme of photosynthesis?	11
77. Define photosynthesis with equation.	11	78. Differentiate between photophosphorylation and oxidative photophosphorylation.	11
79. What do you mean by action spectrum.	11	80. Define alcoholic fermentation. Write its equation.	11

Q.NO.3 (Ch=1,4,7,9,14)

Most Important Questions	Ch	Most Important Questions	Ch
1. What is biome?	1	2. Write down salient features of cell theory.	4
3. What is hydroponic culture technique?	1	4. What is endosymbiosis?	4
5. Differentiate between deductive and inductive reasoning.	1	6. What is endocytosis? Differentiate between phagocytosis and pinocytosis.	4
7. Differentiate between micro and macromolecules?	1	8. Define differentially permeable membrane.	4
9. What is biome?	1	10. What are storage diseases? Give an example.	4
11. Write the name of four eras of geological times.	1	12. Give the important functions of cytoplasm.	4
13. What is phyletic lineage?	1	14. What is chloroplast? Give its functions.	4
15. Define theory. Give important features of a good theory.	1	16. Give the chemical composition of primary and secondary cell wall.	4
17. Define population, give its one example.	1	18. What are microfilaments? Give their functions.	4
19. What is deductive reasoning? Give one example.	1	20. Define fluid mosaic model of cell membrane.	4
21. Define parasitology.	1	22. Write down two functions of golgi apparatus.	4
23. Differentiate between anatomy and morphology.	1	24. Give the function of endoplasmic reticulum.	4
25. Define ecosystem with an example.	1	26. Define autophagosome.	4
27. Differentiate between gene therapy and chemotherapy.	1	28. What is resolution of human eye and electron microscope?	4
Most Important Questions	Ch	Most Important Questions	Ch

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29. What is sleeping sickness?	7	30. Differentiate between ovule and seed.	9
31. Write down functions of micro and macro nuclei in ciliates.	7	32. Why bryophytes are called amphibious plants?	9
33. Write down four characteristics of green algae similar to plants.	7	34. Differentiate between microphyll and megaphyll.	9
35. Write down two differences between fungi and oomycetes.	7	36. Define double fertilization.	9
37. What are choanoflagellates?	7	38. Write down two steps involved in evolution of seed.	9
39. What are protists? How are they different from animals and plants?	7	40. Describe adaptation of bryophytes to land habitat.	9
41. What are trichonymphs?	7	42. Write two advanced characteristics of anthocerosida sporophyte.	9
43. How algae differ from plants?	7	44. What are gymnosperms? Give an example.	9
45. Write down two characteristics of ciliates.	7	46. Differentiate between bryophytes and tracheophytes.	9
47. How ciliates are different from other protozoans?	7	48. Define cercinate venation.	9
49. Write down two characteristics of apicomplexans.	7	50. Define ovule and embryo sac.	9
51. What is chlorella? Give its importance.	7	52. What are fronds?	9
53. Write down two characteristics of dinoflagellates.	7	54. Write botanical name of two plants belong to family solanaceae.	9
55. Write four important features of algae.	7	56. Differentiate between microgametophyte and megagametophyte.	9
57. How do flagellates get food?	7		
Most Important Questions	Ch	Most Important Questions	Ch
58. What is guttation?	14	59. Differentiate between single and double circuit heart.	14
60. Define immunity.	14	61. What is humoral immune response.	14
62. Differentiate between active and passive immunity.	14	63. Differentiate between thrombus and embolus.	14
64. Differentiate between plasmolysis and deplasmolysis.	14	65. Describe CO ₂ concentration in artery and venous blood.	14
66. What is single circuit heart? Give an example.	14	67. What is imbibition?	14
68. Differentiate between apoplast and symplast pathway.	14	69. What is honey dew? Give its composition.	14
70. What is pressure potential?	14	71. What are factors affecting capacity of hemoglobin to combine with oxygen.	14
72. What are blue babies?	14	73. What do you know about bleeding in plants?	14
74. What is pressure flow theory? Who proposed it?	14	75. What is cell-mediated and humoral immune response?	14

Q.NO.4 (Ch=5,6,12,13)

Most Important Questions	Ch	Most Important Questions	Ch
1. Write down four characteristics of viruses.	5	2. Define species and virology.	5
3. What are pox?	5	4. What are prions?	5
5. Write four names of viral diseases common in human beings.	5	6. Define binomial nomenclature. Give an example.	5
7. What are symptoms of small pox?	5	8. Differentiate between prokaryotic and eukaryotic.	5
9. Sketch and label diagram of bacteriophage.	5	10. Write down five postulates of germ theory of disease by Robert Koch.	5
11. Differentiate between gram positive and gram negative bacteria.	6	12. Name three general shapes of bacteria and explain only one.	6
13. Write down misuses of antibiotics.	6	14. Differentiate between tetrad and sarcina.	6

15. What are pilli? Give their functions.	6	16. Differentiate between lophotrichous and amphitrichous.	6
17. Differentiate between streptococcus and staphylococcus bacteria.	6	18. Differentiate between amphitrichous and peritrichous bacteria.	6
Most Important Questions	Ch	Most Important Questions	Ch
19. What is rubisco? Give its functions.	13	20. What is respiratory distress syndrome?	13
21. What are spiracles? Give their functions.	13	22. What is diving reflex?	13
23. How air is better medium for respiration than water.	13	24. What is lung cancer?	13
25. What is asthma? Give its cause.	13	26. Why oxygen can be easily obtained from air as compared to water?	13
27. Write different ways of respiration in frog.	13	28. How does respiration take place in earthworm?	13
29. What is larynx or voice box?	13	30. What are alveoli? Give their functions.	13
31. What is diaphragm? In which group of animals it is found?	13	32. Give the composition of breath air in humans.	13
33. Differentiate between bronchi and bronchioles.	13	34. Give two properties of respiratory surfaces in animals.	13
35. What is emphysema?	13	36. What is photorespiration?	13
37. Write two properties of respiratory surfaces.	13	38. Differentiate between pulmonary and cutaneous respiration.	13
39. What is chlorosis and what is their cause?	12	40. Write only two functions of oral cavity.	12
41. What are the main reason of chlorosis in plants?	12	42. Define peristalsis.	12
43. Discuss parasitic nutrition in plants.	12	44. What are the advantages of a digestive tract as compared with a digestive cavity?	12
45. What are root nodules? Give their role.	12	46. Differentiate between chyme and bolus.	12
47. What is detritus feeding? Give examples.	12	48. Describe the role of trypsin in digestion.	12
49. What is filter feeding?	12	50. Give two functions of human liver.	12
51. What are fluid feeders? Give example.	12	52. What is bile? Give its functions.	12
53. Differentiate between facultative and obligate parasite.	12	54. Define Villi? write down functions of Villi.	12
55. Define gastrovascular cavity with example.	12	56. Give the role of large intestine of human.	12
57. Define sac like digestive system and tube like digestive system regarding their efficiency.	12	58. What is Dyspepsia?	12
59. Differentiate between Herbivores and Carnivores.	12	60. How adipose tissue is formed?	12
61. Differentiate between ingestion and Egestion.	12	62. Write down causes and treatment of anorexia nervosa.	12
63. Differentiate between detritivores and omnivores.	12	64. What is ulcer?	12
65. Differentiate between absorption and assimilation	12	66. Write only two functions of oral cavity.	12

LONG QUESTIONS

Question No. 5

1	(a)	How study of Biology helped mankind to improve production of food?	(b)	Soil water moves and reaches xylem tissues by various pathways, explain.
2	(a)	What is the role of study of Biology in the welfare of mankind in the field of protection and conservation of environment?	(b)	Discuss two main types of immunity.

3	(a)	Give various components and functions of Lymphatic System.	(b)	Discuss transpiration as a necessary evil.
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Question No. 6

1	(a)	Explain mutualistic nutrition in fungi.	(b)	Describe biological properties and importance of water.
2	(a)	Describe asexual reproduction in fungi.	(b)	What are polysaccharides? Describe different types and give examples.
3	(a)	Explain various economic gains and losses due to fungi.	(b)	Write the Watson and Crick model of DNA.

Question No. 7

1	(a)	Explain about use and misuse of antibiotics.	(b)	Describe the different adaptive characters for terrestrial environment in bryophyte.
2	(a)	Discuss nutrition in bacteria.	(b)	Discuss evolution of megaphyll leaf.
3	(a)	Describe habitat, structure and reproduction in nostoc.	(b)	Describe prothallus of adiantum and What is alternation of generation? Give its significance

Question No. 8

1	(a)	Describe some viral diseases, which are common in Pakistan.	(b)	What is photo phosphorylation? Explain non-cyclic photo phosphorylation.
2	(a)	What is hepatitis? Give its symptoms and discuss its three common types.	(b)	Give in detail the phases of Calvin cycle.
3	(a)	Describe lytic cycle of bacteriophage (with diagram).	(b)	Sketch Krebs Cycle, (no description).

Question No. 9

1	(a)	Discuss structure and functions of endoplasmic reticulum.	(b)	Give the role of large and small intestine in human beings.
2	(a)	What are plastids? Explain the structure and function of chloroplast. Draw figure.	(b)	Describe digestion in hydra.
3	(a)	What are lysosomes? Explain their phagocytic role with the help of diagram.	(b)	Discuss the process of nutrition in insectivorous plants.