

**PART - I**

22/01 (★★)

(INTERMEDIATE)

Sign. Dy. Supdnt.

Fictitious Roll No. (For Office Use)

Sign. Candidate

**BIOLOGY**

(INTERMEDIATE)

(★★)

(PART - I)  
(OBJECTIVE PART)

22/01

Marks : 17  
Time : 20 Minutes

Note:- Write your Roll No. in space provided. Over writing, cutting, using of lead pencil

AJK-22

will result in loss of marks. All questions are to be attempted.

1- Each question has four possible answers, Tick (✓) the correct answer. (17)

1	CO <sub>2</sub> is not released during;							
	A	Pyruvic acid oxidation	B	Alcoholic fermentation	C	Lactic acid fermentation	D	Krebs cycle
2	Pitcher Plant has a pitcher that is modified form of;							
	A	Root	B	Stem	C	Leaf	D	Flower
3	A tubular structure that lies ventral to oesophagus and extends to chest cavity or thorax is called;							
	A	Bronchus	B	Larynx	C	Alveolus	D	Trachea
4	Hydrostatic pressure in sieve tube cells of phloem at level of sink;							
	A	Is raised due to inflow of sucrose	B	Is lowered due to inflow of sucrose	C	is raised due to outflow of water	D	Is lowered due to outflow of water
5	Greater is the concentration of solutes in a cell;							
	A	Greater is the solute concentration	B	Greater is the water potential	C	Lower is the water potential	D	All conditions are possible
6	Which one of these is a macromolecule;							
	A	H <sub>2</sub> O	B	DNA	C	CO <sub>2</sub>	D	O <sub>2</sub>
7	It is a potential source of chemical energy for cellular activities;							
	A	C-N Bond	B	C-O Bond	C	C-H Bond	D	C-P Bond
8	Reversible inhibitors form weak linkages with;							
	A	Substrate	B	Product	C	Enzyme	D	Coenzyme
9	Micrographia is a famous publication of;							
	A	Robert Hooke	B	Lorenz Oken	C	Robert Brown	D	Rudolph Virchow
10	HIV belongs to the group of viruses which cause AIDS.							
	A	Pox Viruses	B	DNA Viruses	C	Bacteria phage	D	Retroviruses
11	Pseudomonas is example of;							
	A	Anaerobic bacterium	B	Aerobic bacterium	C	Facultative bacterium	D	Microaerophilic bacterium
12	The largest Brown Algae are called;							
	A	Diatoms	B	Kelps	C	Dinoflagellates	D	Water moulds
13	Most of the visible part of lichen is;							
	A	Fungi	B	Bacteria	C	Algae	D	Root
14	In flowering plants ovary wall develops in to;							
	A	Seed	B	Fruit	C	Flower	D	Seed coat
15	Which group of animals has no circular muscles in body;							
	A	Polychaeta	B	Hirudinea	C	Aschelminthes	D	Oligochaeta
16	One of the following is a coelomate;							
	A	Ascaris	B	Hirudo	C	Branchioceratus	D	Scolymastra
17	During one Krebs cycle, how many ATP molecules are formed directly and from NADH and FADH <sub>2</sub>							
	A	10	B	12	C	15	D	18

(The End)

**SECTION - I**

2- Write short answers of any eight parts. **AJK-22 (2 x 8 = 16)**

i	What is the reason of difference between somatic and germ cells?	ii	How change in pH effects the enzyme activity?
iii	What is the role of temperature on enzyme action?	iv	What happen to the enzyme when non protein part is detached or remains attached?
v	Differentiate rust from smut.	vi	Write down the functions of Lovastatin and cyclosporine.
vii	Write down the zoological names of (i) garden Snail (ii) Leech	viii	Write down any four characters of Mammals.
ix	Write down two affinities of Echinoderms with Chordates.	x	Differentiate ostia and osculum.
xi	Differentiate Stroma from Grana.	xii	Define compensation point with special reference to morning and evening.

3- Write short answers of any eight parts. **(2 x 8 = 16)**

i	What is community? What are its properties?	ii	What is deductive reasoning?
iii	Why nucleus in plants is not present in center of mature cells?	iv	Why glyoxysome is present in lipid rich seeds only?
v	Why red algae incorporate calcium carbonate?	vi	Why chlorella is so important?
vii	Enlist any four characteristics of ciliates.	viii	What are Kelps?
ix	Define ovule and when it becomes seed.	x	What is prothallus?
xi	Define pressure flow theory.	xii	What is pulmonary circulation?

4- Write short answers of any six parts. **(2 x 6 = 12)**

i	What are prions?	ii	How does prokaryotic plasma membrane differ from eukaryotic plasma membrane?
iii	Differentiate between ingestion and egestion.	iv	What are piles?
v	Name three pairs of salivary glands and their location in human oral cavity.	vi	Define breathing.
vii	Why does scuba diver breath pressurized air from air cylinder?	viii	Why is Haemoglobin important to many animals?
ix	Why is fast and deep breathing necessary during exercise?		

**SECTION - II**

Note:- Attempt any three questions. **(8 x 3 = 24)**

5	(a)	How does Biology help us to overcome the problem of shortage and low quality of food?	(04)
	(b)	Describe cohesion tension theory for ascent of sap.	(04)
6	(a)	Write a detailed note on different types of RNAs?	(04)
	(b)	What are asexual methods of reproduction in fungi? Explain.	(04)
7	(a)	How many taxonomic groups of bacteria can be made on the basis of mode of nutrition? Give details of each group.	(04)
	(b)	What two groups comprise the angiosperms? How do the two groups structurally differ from each other?	(04)
8	(a)	Describe any four viral diseases which are common in Pakistan.	(04)
	(b)	Define glycolysis and discuss its two phases in detail.	(04)
9	(a)	Describe the role of Lysosomes in the cell life with a sketch.	(04)
	(b)	Give mechanism of food absorption in small intestine in man with diagram.	(04)