

MARKING GUIDE
FORM TWO
BIOLOGY.

i)	ii	iii	iv	v	vi	vii	viii	ix	x
C	C	B	B	B	A	A	C	A	D

(10)

LIST A	i	ii	iii	iv	v
LIST B	C	A	E	F	B

(05)

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SECTION B (70 Marks)

- (a) (i) Dependent variable. (01)
 - Is the condition or factor that is measured or tested to obtain the results of the experiment.
- (ii) Independent Variable (01)
 - A condition or factor that is changed systematically to obtain different results (01)
- (iii) Controlled variable
 - A condition or factor that is kept constant during the experiment (01)
- (iv) A way of studying things by testing facts systematically (01)
- (v) The factors or conditions that can be changed or change. (01)
- (b) (i) Problem identification (01)
 (ii) Hypothesis formulation (01)
 (iii) Experimentation (01)
 (iv) Data analysis and interpretation (01)
 (v) Conclusion. (01)

4. (a) Briefly (i) Coming in contact with an infected person. (02)
 (ii) Inhaling air droplets from an infected person. (02)
 (iii) Touching surfaces contaminated by the virus when touching eyes, nose and mouth. (02)

- (b) (i) Lung damage
 (ii) Blood clotting (02) (02) = (04)
 (iii) Death. any two

- 5 (a) (i) Hydrogen sulphide (0.5)
 (ii) Iron (0.5)
 (iii) Methane (0.5)
 (iv) Ammonia (0.5)

(b) (i) Oxygen production

→ It is used for respiration of most living organisms

(ii) Energy source (0.2)

→ Converts solar energy into chemical energy in form of glucose, required by animals for food.

(iii) Carbon dioxide reduction (0.2)

→ Reduces global warming

(iv) Soil health (0.2)

→ Plants contribute to soil formation by adding organic matter.

⊖

6 (i) Carbon dioxide Concentration

→ High concentration of Carbon dioxide increase the rate of gaseous exchange

(ii) Haemoglobin Concentration

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→ Efficient transportation of respiratory gases takes place when the body has adequate concentration of haemoglobin.

(iii) Physical activity

→ More active body requires more oxygen than a less active body

(iv) Health Status

→ Generally the rate of gaseous exchange increase when the person is fit

(v) Altitude

→ Rate of gaseous exchange increase with increase of altitude

(vi) Age

→ Rate of gaseous exchange decrease with increase of age

⊖

(10)

(0.2) = (0.2) Marks
 any five points

(a) (i) Large surface area. (01)

→ to maximize the surface area exposed to sunlight, allowing more light absorption.

(ii) Chloroplasts. (01)

→ are numerous in number to capture light energy for photosynthesis.

(iii) Thin structure (01)

→ Allows light to penetrate deeper into the leaf, facilitating the absorption of light

(iv) Stomata (01)

→ regulate gas exchange during photosynthesis

(v) Mesophyll tissue. (01)

→ contain loosely packed cells with air spaces to facilitate gaseous exchange and light capture

(vi) Vascular tissue (01)

→ Xylem and phloem transport water, nutrients and products of photosynthesis throughout the plant

(vii) Cuticle

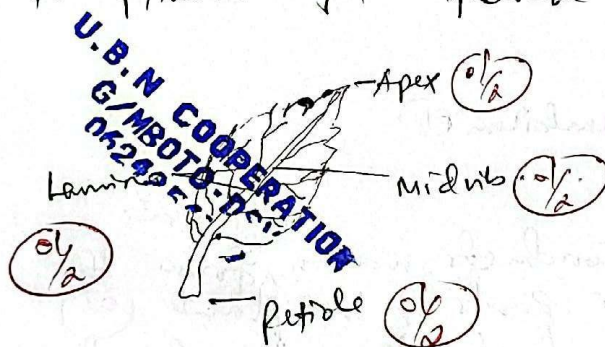
→ Reduces water loss on the leaf (01)

(viii)

Leaf orientation (01)

→ many leaves orient themselves towards the sun to optimize light exposure throughout the day.

(b)



(i) Paramecium

Advantages (01)

→ feed on bacteria, helping to minimize the harmful ones

→ Help to clean up small particles of debris in water (01)

Disadvantages

→ Can't live in animals

→ feed on bacteria that decompose organic matter, helping to recycle nutrients in the environment

8

(a)

(i) Amoeba

- Used in laboratory to study cell structure and function (01)
- Cause disease which kill overpopulated animals. (01)

(ii) Yeast

- Brewing beer by fermenting sugar to produce alcohol (01)
- Food manufacturing as in bakeries. (01)

(b) (i) Amoeba (Phylum Rhizopoda)

- Have two layers of cytoplasm (02) = (02)
- Are free living feeding on plants and animals
- Have pseudopodia for locomotion and feeding.
- Have contractile vacuoles.

(ii) Alcomycetes (Yeast)

- Some are unicellular
- Grow and feed on decaying matter
- Have hyphae (02) = (02)
- Reproduce asexually through ascospores and sexually through fragmentation, or budding

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(a) A - Epidermis (01)

B - Cortex (01)

C - Pith (01)

D - Xylem (01)

E - Vascular Cambium (01)

F - Phloem (01)

(b) D - Xylem Conducts water and minerals from the roots to the upper parts of the plant (02)

F - Phloem Conducts the manufactured food from the leaves to the lower parts of the plant (02)

SECTION C (15 Marks)

10

Introduction (Meaning of blood transfusion) (02)

Main Body

- (i) Blood from the donor must be checked for compatibility with the blood from the recipient in terms of ABO blood group (02)
- (ii) checking of Rh factor compatibility to avoid agglutination (02)
- (iii) Donor's blood must be screened to ensure that there is no

- 10 Pathogens (03)
- (iv) Donated blood must be stored in special bags in a refrigerator (02)
 - (v) Anticoagulant must be added (02)
 - (vi) Transfusion should be done only when extremely necessary. (02)
- Conclusion. (01)

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