

Biology Mark Scheme- Unit 1

Question 1 [10]

1	B	6	D
2	C	7	C
3	D	8	A
4	A	9	B
5	A	10	C

Question 2

- (a) (i) A: Palisade mesophyll tissue B: Guard cell [2]
- (ii) 1: Has numerous chloroplasts for maximum absorption of light for photosynthesis
- 2: Located near the upper epidermis to absorb/ trap maximum light energy from the sun. [2]
- (b) (i) stomata (ii) chloroplast [2]
- (c) reactants: carbon dioxide + water
- Conditions (above and below arrow): sunlight and chlorophyll
- Products: glucose + oxygen [6]

Question 3

- (a) capillary [1]
- (b) *State mainly visible differences*
- 1: RBC has no nucleus whereas WBC has a nucleus
- 2: RBC is biconcave disc shape whereas WBC has an irregular shape [2]
- (c) (i) Plasma [1]
- (ii) Glucose; dissolved gases such as oxygen and carbon dioxide; antibodies; salts; amino acids [2]
- (d) large drawing; clear, even and smooth lines; proportionate to drawing [2]
- Label 2 of the following: cell membrane; lobed nucleus; granular cytoplasm [1]
- (e) measure length of drawing and fig 3.1 in mm. **R** in cm. [2]
- (f) Magnification = length of drawing/ actual length (**R** width, size or diameter in formula) X in front of Final answer [2]

Question 4

(a) (i)

- labelled axis:
X axis: distance of lamp from plant/ cm; Y axis: Number of bubbles of oxygen produced/ min
- Scaling of both axis
- Plotting of coordinates
- Join plots with smooth, clear and even lines or ruler [4]

(ii) measure distance correctly and show line on graph [2]

(iii) The higher the light intensity, the higher the rate at which oxygen is produced by the plant [2]

Question 5

(a) F: Ureter; yes; no [1]

G: Urethra; Yes; Yes [1]

H: Rectum: No; No [1]

J: Vas deferens; No; Yes [1]

(b) Sperm cell is mobile whereas ovum cell is immobile; sperm cell is small, ovum cell is larger [2]

(c) Site for fertilisation [1]