



**BAHAGIAN SEKOLAH BERASRAMA PENUH DAN
SEKOLAH KECEMERLANGAN
KEMENTERIAN PELAJARAN MALAYSIA**

**PERFECT
SCORE
BIOLOGY**

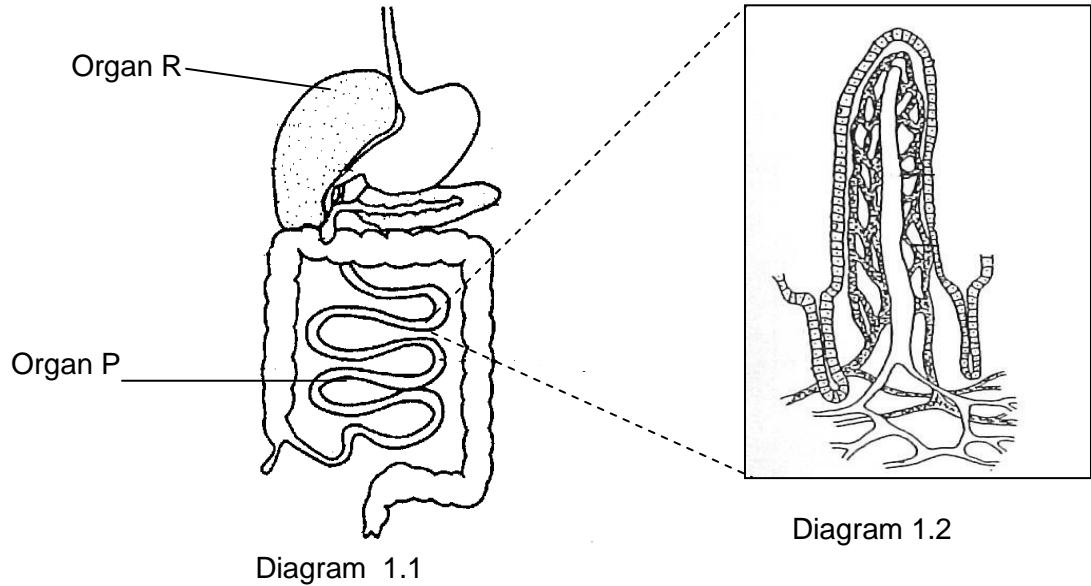
2011

Student's Module

**Paper 2
Section B**

Paper 2 – Section B:

1. Diagram 1.1 show the human digestive system and Diagram 1.2 show the structure inside organ P.



No	Essay Questions	Marks	Student notes
1(a)(i)	Explain the process of absorption of glucose and amino acids in Organ P. <div style="text-align: right;">[4 marks]</div>		
1(a)(ii)	Explain three structural adaptation of Organ P for effective absorption of food <div style="text-align: right;">[6 marks]</div>		
1(b)	Describe the process of assimilation in organ R. <div style="text-align: right;">[10 marks]</div>		

2. Diagram 2 shows various processed food on a supermarket shelf.



Salted plum



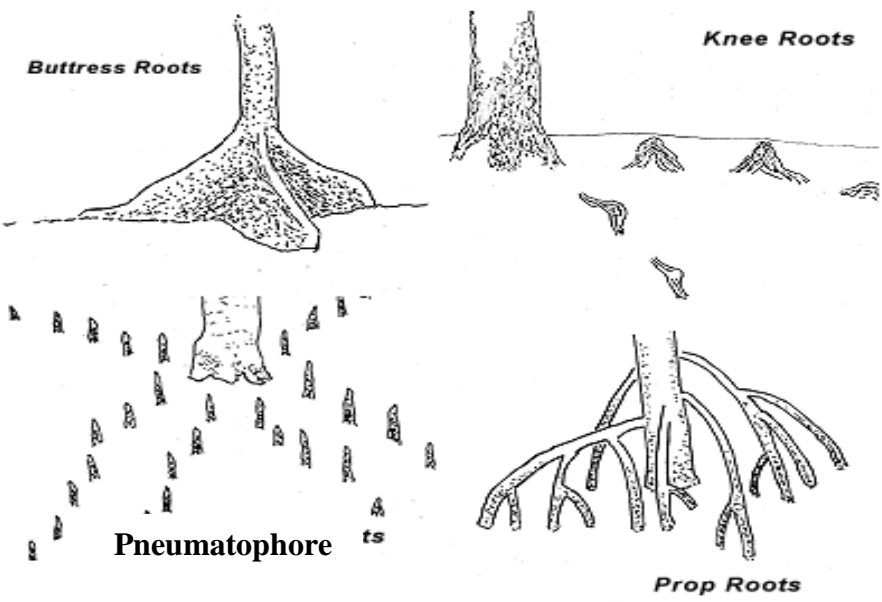
Potato chips



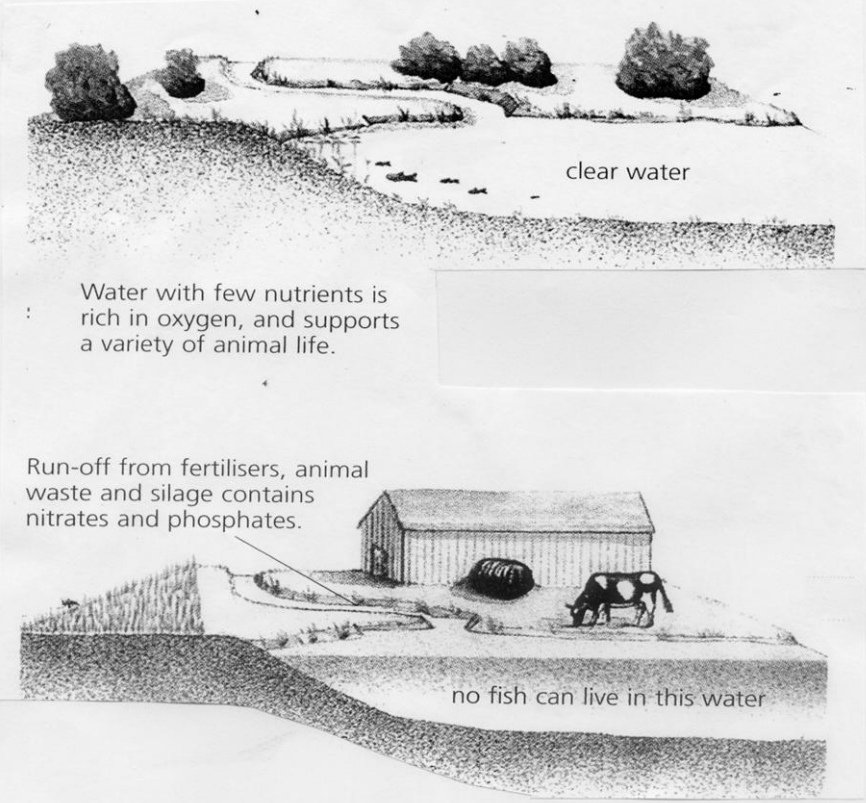
Prawn crackers

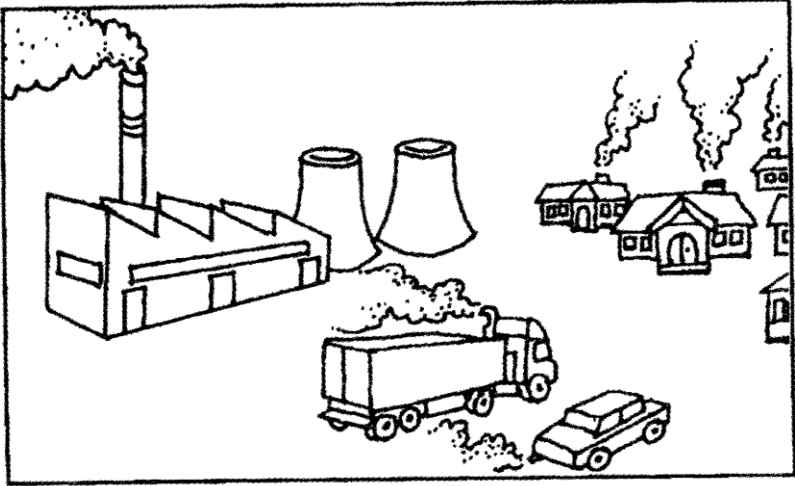
Diagram 2

No	Essay Questions	Marks	Student notes
2(a)	Based on your biology knowledge, Explain the good and the bad of food processing on human being. [10 marks]		
(b)	Explain the food processing methods which are related to the factors that cause food spoilage. [10 marks]		

No	Essay Questions	Marks	Student notes
3	<p>Diagram 3 shows roots of plants found in mangrove swamp.</p>  <p>The diagram shows four types of mangrove roots: <ul style="list-style-type: none"> Buttress Roots: A large, wide, horizontal root system spreading out from the base of a tree trunk. Knee Roots: A tree trunk with several roots that grow vertically up to the soil surface and then curve back down into the soil. Pneumatophores: A tree trunk with numerous small, vertical roots growing downwards from the soil surface. Prop Roots: A tree trunk with several roots that grow vertically down from the trunk and then curve horizontally outwards near the soil surface. </p> <p>Diagram 3</p> <p>Discuss how these roots are adapted for stability, salt tolerance and less oxygen of water logged mangrove swamp soil.</p> <p style="text-align: right;">[10 marks]</p>		

No	Essay Questions	Marks	Student notes
4.	<p>Diagram 4 shows part of a nitrogen cycle .</p> <p style="text-align: center;">Diagram 4</p>		
(a)(i)	<p>The atmospheric nitrogen cannot be absorbed directly by plants. Based on Diagram 4, state two form of nitrogenous compounds that can be absorbed directly by plants and explain how a deficiency of substances K in the soil affect the growth of the plants.</p> <p style="text-align: right;">[4 marks]</p>		
(ii)	<p>Based on Diagram 4, explain role of the microorganism in nitrogen cycle.</p> <p style="text-align: right;">[6 marks]</p>		

No	Essay Questions	Marks	Student notes
<p>5.</p>	<p>Diagram 5 shows the eutrophication process that occurs to a lake due to the human activities.</p>  <p>Water with few nutrients is rich in oxygen, and supports a variety of animal life.</p> <p>Run-off from fertilisers, animal waste and silage contains nitrates and phosphates.</p> <p>no fish can live in this water</p> <p>Based on the Diagram 5, explain what is meant by 'eutrophication'</p> <p>[10 marks]</p>		
<p>(b)</p>	<p>Explain how each of the following can reduce water pollution:</p> <p>(i) Treating sewage</p> <p>(ii) Using organic fertilizers rather than inorganic ones.</p> <p>[6 marks]</p>		
<p>(c)</p>	<p>Explain how deforestation of rainforest can cause flash flood.</p> <p>[4 marks]</p>		

No	Essay Questions	Marks	Student notes
6	<p>Diagram 6 shows the mankind activities.</p>  <p>Based on your knowledge in biology, explain the effects of the activities to the mankind and their surroundings. Suggest the ways to overcome this problem.</p> <p style="text-align: right;">[12 marks]</p>		

- 7 Diagram 7.1 shows the ozone layer in atmosphere that protects earth from ultraviolet rays from the sun.

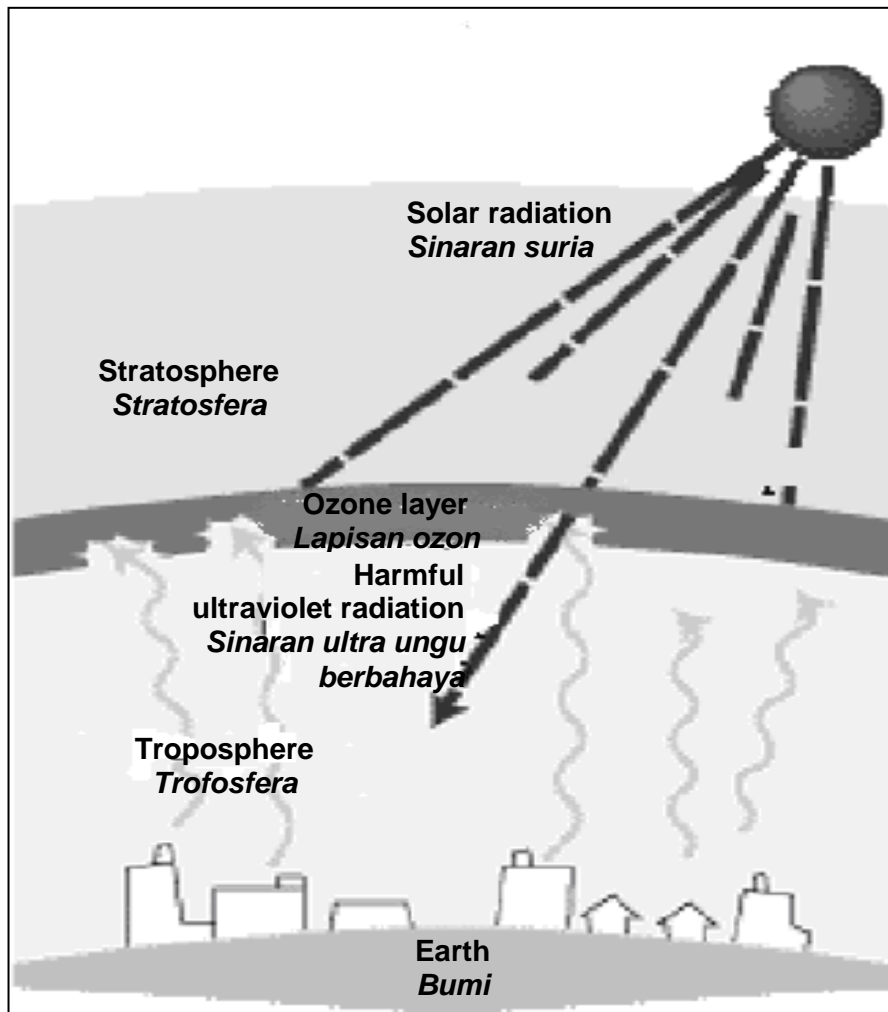


Diagram 7.1

No	Essay Questions	Marks	Student notes
7(a)	<p>Describe how the ozone layer becomes thinner. Discuss its effects on humans and the environment and suggest the ways to solve these problems.</p> <p style="text-align: right;">[10 marks]</p>		

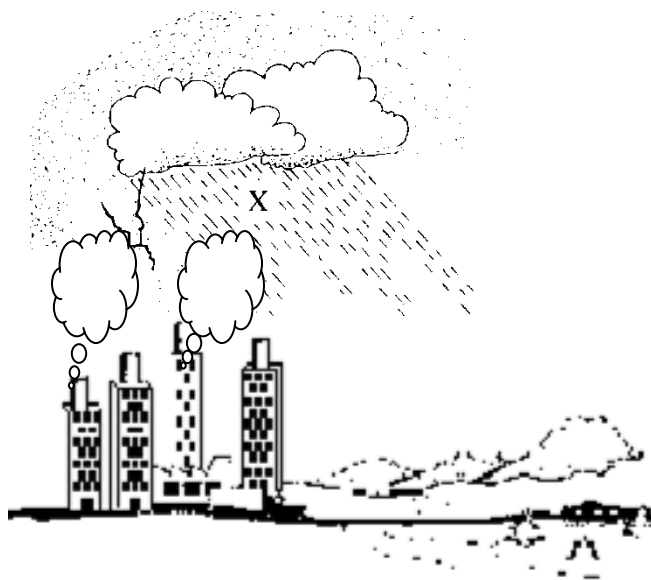


Diagram 7.2

No	Essay Questions	Marks	Student notes
7 (b)	<p>Diagram 7.2 shows a phenomenon X that occurs from air pollution. Describe the formation and the effects of the phenomenon on agriculture and aquatic ecosystem.</p> <p style="text-align: right;">[10 marks]</p>		

8. Diagram 8 shows three types of neurone in individual A.

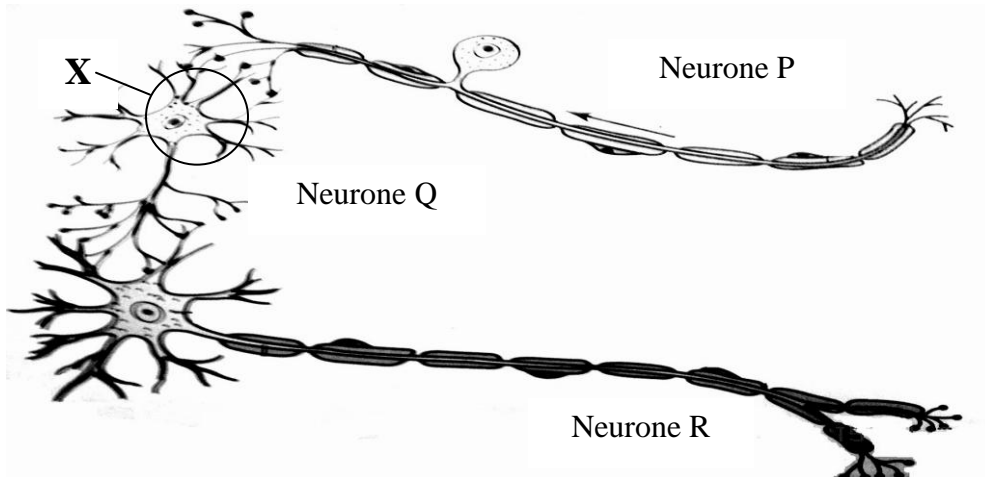
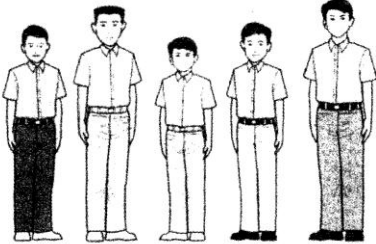
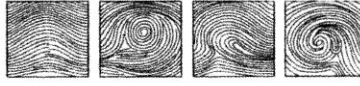

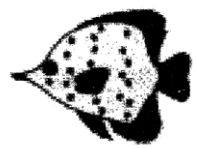





Diagram 8

No	Essay Questions	Marks	Student notes
8 (a)	Describe the process X in Diagram 8 [4 marks]		
(b)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> After an accident , individual A doesn't experience any response to hot object. </div> Explain the above situation. [6 marks]		

No	Essay Questions	Marks	Student notes
9	Mr. Q is married to Mrs. Q for more than 10 years but did not have any child due to low sperm count in Mr. Q. Mr. and Mrs. V have 6 children in 12 years of marriage. Mrs. V has high blood pressure and heart problem, so they decided not to have any more kids. Explain how reproduction technologies able to help these two families. [10 marks]		

No	Essay Questions	Mark	Student notes
10.	<p>The variation of ABO blood group determined by three different alleles, but an individual carry only two of the three allele.</p> <p>With <u>schematic diagram</u> , explain the possibilities of the <u>blood group</u> and <u>genotypes</u> of the offspring if the father's blood group is A and the mother's blood group is AB.</p> <p style="text-align: right;">[10 marks]</p>		

No	Essay Questions	Marks	Student notes
11. (a).	<p>Diagram 11.1 shows a group of boys with different height and Diagram 11.2 shows the various types of fingerprints.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Diagram 11.1</p> </div> <div style="text-align: center;">  <p>Diagram 11.2</p> </div> </div> <p>Based on the biology knowledge, identify the variation and explain the similarities and differences in Diagram 11.1 and Diagram 11.2.</p> <p style="text-align: right;">[10 marks]</p>		
(b).	<p>Diagram 11.3 shows the variants P, Q and R of a species of fish.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Variant P <i>Variasi P</i></p> </div> <div style="text-align: center;">  <p>Variant Q <i>Variasi Q</i></p> </div> <div style="text-align: center;">  <p>Variant R <i>Variasi R</i></p> </div> </div> <p>Describe how the variation occurs in the species of fish.</p> <p style="text-align: right;">[10 marks]</p>		

No	Essay Questions	Marks	Student notes
12	<p>Diagram 12.1 shows a mangrove swamp forest and Diagram 12.2 shows the same area 50 years later.</p>  <p style="text-align: center;">Diagram 12.1</p>  <p style="text-align: center;">Diagram 12.2</p> <p>Discuss the impact of the exploitation on the ecosystem.</p> <p style="text-align: right;"><i>[10 marks]</i></p>		

