



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2018

Centre Number

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Candidate Number

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Health and Social Care

Assessment Unit AS 7

assessing

Understanding the Physiology of
 Health and Illness



SHC71

[SHC71]

WEDNESDAY 23 MAY, MORNING

TIME

2 hours.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all three** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 100.

Quality of written communication will be assessed in questions

1(c)(ii), 2(c)(iii) and 3(b).

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

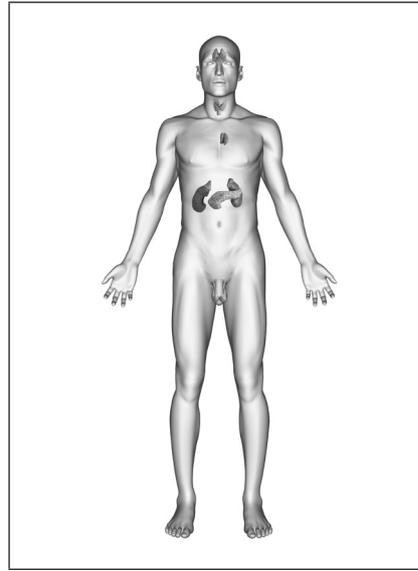
For Examiner's use only	
Question Number	Marks
1	
2	
3	
Total Marks	

1 (a) (i) Identify each of the body systems shown below.



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_____ [1]



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_____ [1]

(ii) Explain what is meant by the following terms:

Tissue

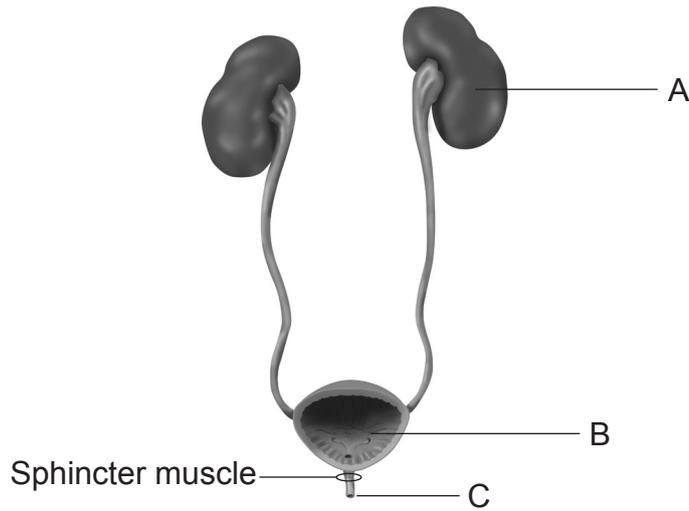
_____ [2]

Organ

_____ [2]

Examiner Only	
Marks	Remark

(c) (i) The diagram below shows the structure of the urinary system. Identify the parts labelled A–C and state their functions.



A: Name _____ [1]

Function _____
 _____ [1]

B: Name _____ [1]

Function _____
 _____ [1]

C: Name _____ [1]

Function _____
 _____ [1]

Examiner Only	
Marks	Remark

(d) Mary is a retired teacher with a keen interest in golf. She meets friends at least twice a week for a round of golf in the morning and then enjoys a long lunch catching up with them. Mary has recently begun to experience incontinence.

(i) Explain the physiological cause of incontinence.

[2]

(ii) Describe how Mary's incontinence could impact on her leisure.

[3]

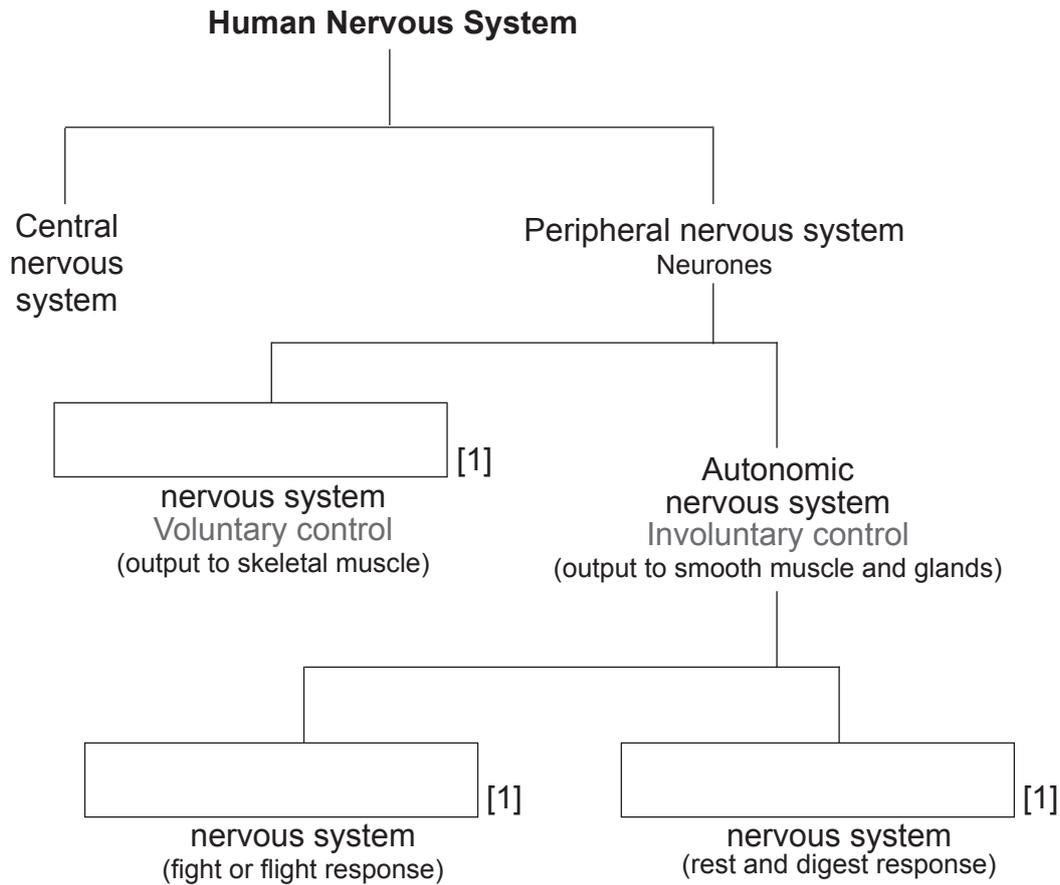
Examiner Only	
Marks	Remark

2 (a) (i) Most of our reactions are controlled by the central nervous system. Identify the two parts of the central nervous system.

1. _____ [1]

2. _____ [1]

(ii) The image below shows the organisation of the nervous system. Complete the diagram by identifying the divisions of the nervous system.



(iii) The autonomic nervous system shown in the diagram controls the release of hormones from glands. Name the system which is made up of hormone-releasing glands.

_____ [1]

Examiner Only	
Marks	Remark

(iv) Explain what is meant by the following, giving an example of each.

Reflex reaction

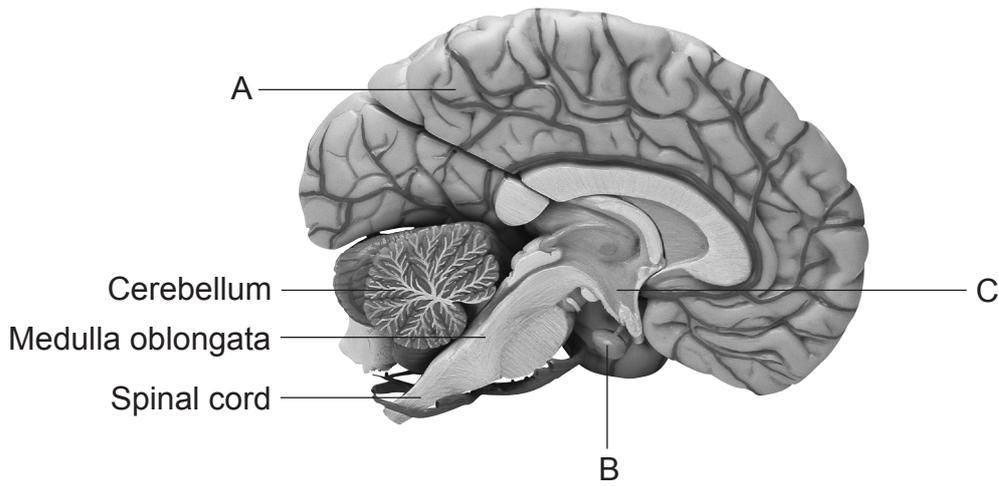
[2]

Voluntary reaction

[2]

Examiner Only	
Marks	Remark

(b) The diagram below shows the parts of the brain.



© Stockbyte / Thinkstock

Identify the name and one function of the parts labelled A–C.

A: Name _____ [1]

Function _____

_____ [1]

B: Name _____ [1]

Function _____

_____ [1]

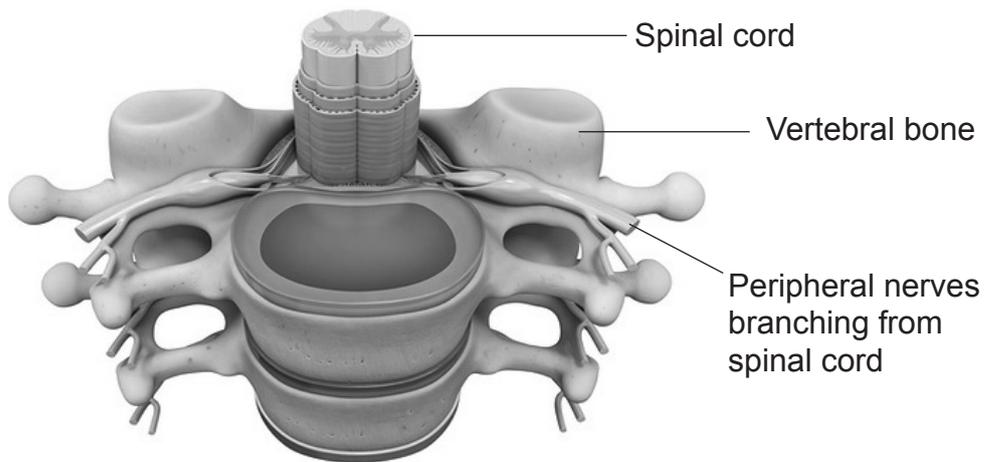
C: Name _____ [1]

Function _____

_____ [1]

Examiner Only	
Marks	Remark

- (c) (i) Nerve transmission from the brain is carried to the rest of the body via the spinal cord. The diagram below shows a cross-section of the spinal cord and its associated structures.



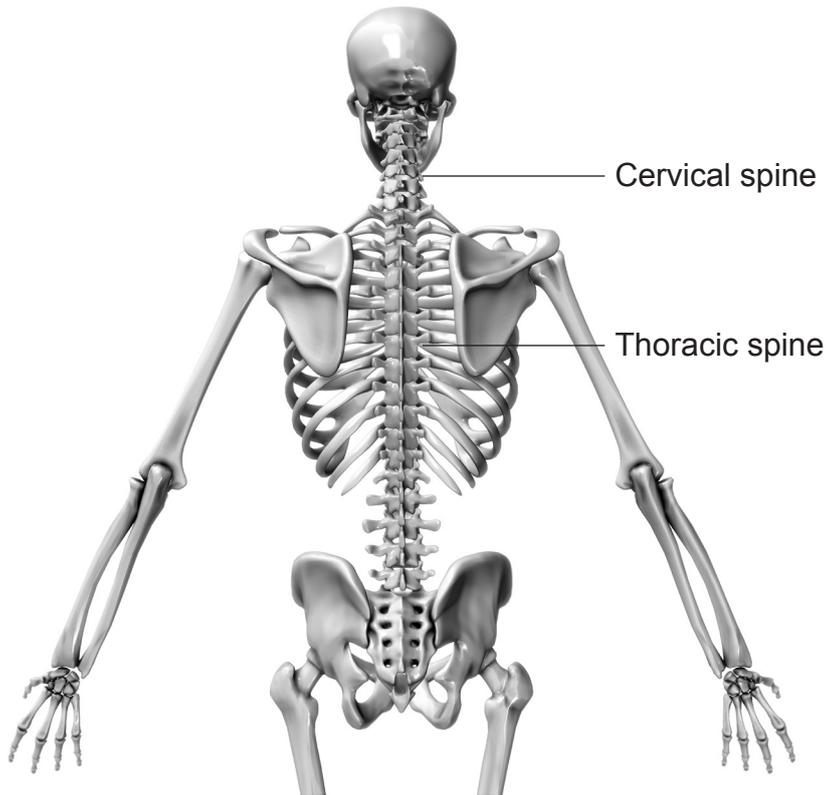
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Use the diagram to explain why damage to the spinal cord is rare.

[2]

Examiner Only	
Marks	Remark

(ii) The diagram below shows the areas of the spine.



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Using the diagram to help you, explain the physiological cause and the effect of both quadriplegia and paraplegia.

Quadriplegia

[2]

Paraplegia

[2]

Examiner Only	
Marks	Remark

[12]

Examiner Only	
Marks	Remark

3 (a) (i) Explain what is meant by digestion.

 [2]

(ii) Identify the part of the digestive system where digestion is completed.

 [1]

(iii) Complete the table to explain the function of each of the organs involved in digestion.

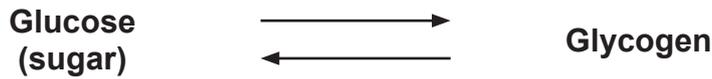
Organ	Function in digestion
Stomach	[2]
Small intestine	[2]
Large intestine	[2]

Examiner Only	
Marks	Remark

(c) The sugars produced during digestion are taken via the blood to the liver for storage as glycogen.

(i) Complete the diagram below by naming the hormones which control each of the processes shown.

Blood sugar levels high, body releases



Blood sugar levels drop, body releases

[2]

(ii) Lorraine has recently had blood tests to check her blood glucose levels. The test was carried out after she had been fasting for a few hours. The result of her blood glucose level was 16.5 mmol/L.

Explain why the doctor suspects Lorraine may have diabetes.

[2]

(iii) Further tests confirm that Lorraine has type I diabetes. Describe the physiological cause of type I diabetes.

[3]

Examiner Only	
Marks	Remark

THIS IS THE END OF THE QUESTION PAPER

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