

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson BTEC

Centre Number

Learner Registration Number

Level 3 Nationals

Extended

Diploma

Thursday 16 January 2020

Morning (Time: 1 hour 30 minutes)

Paper Reference **31493H**

Health and Social Care

Unit 3: Anatomy and Physiology for Health and Social Care

You must have:

Calculator (optional).

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- You may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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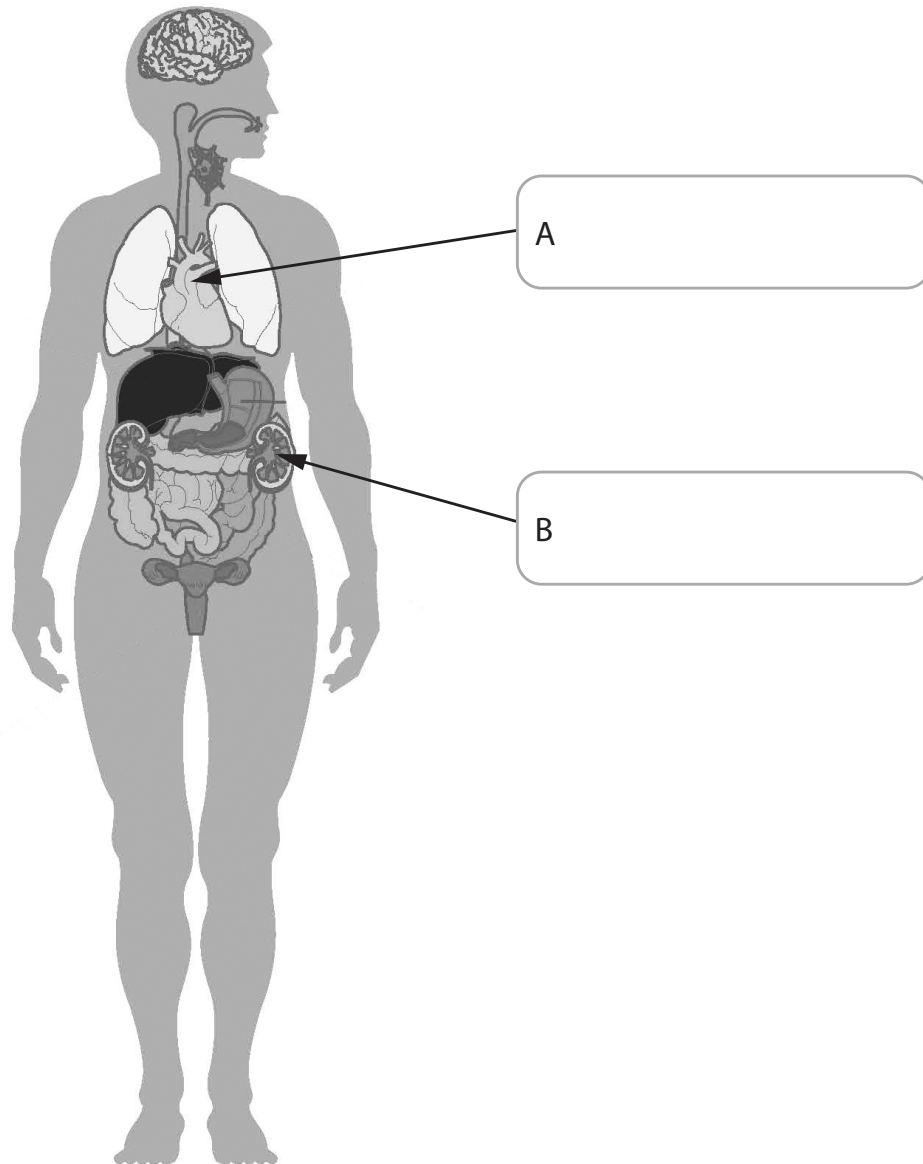

Pearson

Answer ALL questions. Write your answers in the spaces provided.

The diagram below shows the internal organs of a human.

1 (a) Identify structures A and B on the diagram.

(2)



(Source: © siart/Pearson Asset Library)

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(b) Outline **one** function of the skin and **one** function of the uterus.

(4)

Skin

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Uterus

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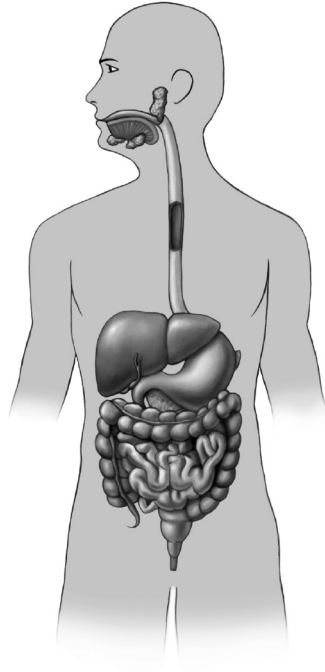
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The diagram below shows the human digestive system.



(Source: © Andrea Danti/Pearson Asset Library)

(c) State **four** organs of the digestive system.

(4)

- 1
- 2
- 3
- 4

(Total for Question 1 = 10 marks)

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2 (a) State the function of each of the following in reproduction.

(4)

Ovaries

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Testes

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Fallopian tubes

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Vas deferens

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(b) Explain how cells divide for growth.

(2)

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(c) Explain the effects of each of the following on someone's development.

(4)

Spina bifida

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Cerebral palsy

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(Total for Question 2 = 10 marks)

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3 (a) Describe how the nervous system reacts to stimuli.

(4)

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(b) Outline the role of the parasympathetic nervous system and the role of the sympathetic nervous system.

(4)

Parasympathetic nervous system

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Sympathetic nervous system

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(c) Outline **two** roles of the adrenal gland.

(4)

1

2

(d) Explain what the condition dementia is.

(6)

(Total for Question 3 = 18 marks)

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4 (a) Describe the role of air passages in the nose.

(2)

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(b) Describe the function of the respiratory muscles.

(4)

Diaphragm

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Intercostal muscles

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(c) Explain how asthma affects someone's ability to breathe.

(6)

Dotted lines for writing.

(Total for Question 4 = 12 marks)

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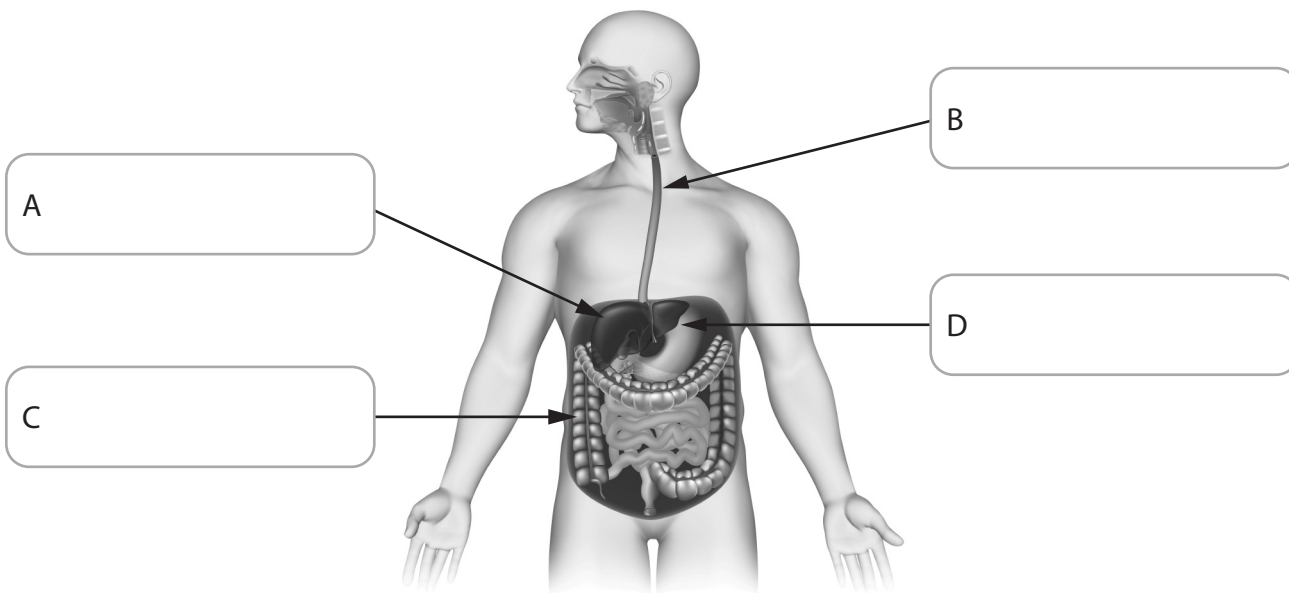
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5 The diagram below shows the digestive system.

(a) Identify the labels A, B, C and D on the diagram.

(4)



(Source: © Alila Medical Media/Pearson Asset Library)

(b) Describe **one** function of saliva.

(2)

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(c) Explain how villi in the gut are adapted to carry out their function.

(4)

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(d) Describe the breakdown of food in the digestive system.

(8)

A series of horizontal dotted lines for writing the answer.

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(e) What is the probability of two carriers of phenylketonuria (PKU) having a child with PKU? Use a genetic diagram in your explanation.

(4)

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(Total for Question 5 = 22 marks)

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Hepatitis B and C infect one in fifty adults in the WHO European Region

Over 13 million adults are living with hepatitis B and 15 million with hepatitis C in the WHO European Region – indicating a huge burden of treatment and care. New estimates published in an article on 30 May 2013 by WHO/Europe, the London School of Hygiene & Tropical Medicine and Public Health England suggest that almost one in fifty adults is infected with hepatitis B and a similar proportion of people have chronic hepatitis C.

(Source: © Cambridge University Press and World Health Organization 2013)

6 (a) What number of the European population have either hepatitis B or C? (2)

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(b) Explain **two** symptoms of hepatitis infection. (4)

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2

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(c) Explain **two** functions of the liver.

(4)

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(Total for Question 6 = 10 marks)

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7 Discuss the effects of cardiovascular disease on the body.

Dotted lines for writing.

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(Total for Question 7 = 8 marks)

TOTAL FOR PAPER = 90 MARKS

