

Pearson BTEC Level 3 Nationals

Write your name here

Surname

Forename

Learner Registration Number

Centre Number

Level

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3

Health and Social Care

Unit 3: Anatomy and Physiology for Health and Social Care

Extended Diploma

Sample Assessment material for first teaching September 2016

Time: 1 hour 30 minutes

Calculator (optional).

Total

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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 grey boxes
– *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.

Paper reference

31493H

S51932A

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S 5 1 9 3 2 A 0 1 1 7

Turn over ►



Pearson

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

1 (a) (i) State **one** role of each of the following:

2 marks

gastric sphincter

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pancreas

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(ii) Describe peristalsis.

2 marks

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(b) (i) Explain the cause of coeliac disease.

2 marks

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(ii) Describe **one** symptom of coeliac disease.

2 marks

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(c) State the role of the gall bladder.

1 mark

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Total for Question 1 = 9 marks



2 (a) Explain **two** functions of the femur.

4 marks

1

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(b) Describe **one** cause and the effects of osteoporosis on the skeletal system.

6 marks

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Total for Question 2 = 10 marks



3 (a) Explain the function of mitochondria.

3 marks

Handwriting practice area for part (a) consisting of a large rectangular box with horizontal dotted lines.

(b) Explain how proteins are produced in the cell.

4 marks

Handwriting practice area for part (b) consisting of a large rectangular box with horizontal dotted lines.

Total for Question 3 = 7 marks

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4 (a) (i) Define the term *endocrine gland*.

2 marks

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(ii) Identify **one** endocrine gland, other than the pancreas.

1 mark

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(b) (i) Describe how type 1 diabetes leads to weight loss.

6 marks

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(ii) Compare type 1 and type 2 diabetes.

4 marks

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(c) Explain the long-term effects of type 2 diabetes.

4 marks

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Total for Question 4 = 17 marks



5 (a) (i) Identify **two** muscles and where they are found in the body.

4 marks

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(ii) Explain **two** ways muscles are attached to the body.

4 marks

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(b) Compare synovial and fibrous joints.

4 marks

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(c) Explain how body systems work together to ensure ventilation of the lungs.

8 marks

Area for writing the answer, consisting of multiple horizontal dotted lines.

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Total for Question 5 = 20 marks



6 (a) (i) Explain how mortality statistics are collected.

3 marks

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(ii) Outline how morbidity statistics are collected and used.

4 marks

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(iii) Explain how mortality statistics may be used to evaluate the effect of lifestyle choices.

6 marks

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(b) To what extent do morbidity and mortality statistics contribute to the understanding of the prevalence of disease in the population?

6 marks

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Total for Question 6 = 19 marks



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A study has found that there is a link between diabetes in parents and type 2 diabetes in adult children. This is a summary of the findings.

277,261 people were involved in the study.

257,715 individuals were of white ethnicity and not twins (singletons); of these, 6576 had type 2 diabetes, 19,478 reported maternal diabetes (but not paternal), 20,057 reported paternal diabetes (but not maternal) and 2754 participants reported both parents as having diabetes.

- 7 What is the probability for white, singleton individuals of neither parent being diabetic?

Show your working.

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[Empty answer area for Question 7]

Total for Question 7 = 8 marks

END OF EXAM

TOTAL FOR PAPER = 90 MARKS

