

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson BTEC
Level 3 Nationals
Extended
Diploma

Centre Number

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Learner Registration Number

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Thursday 14 January 2021

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.*

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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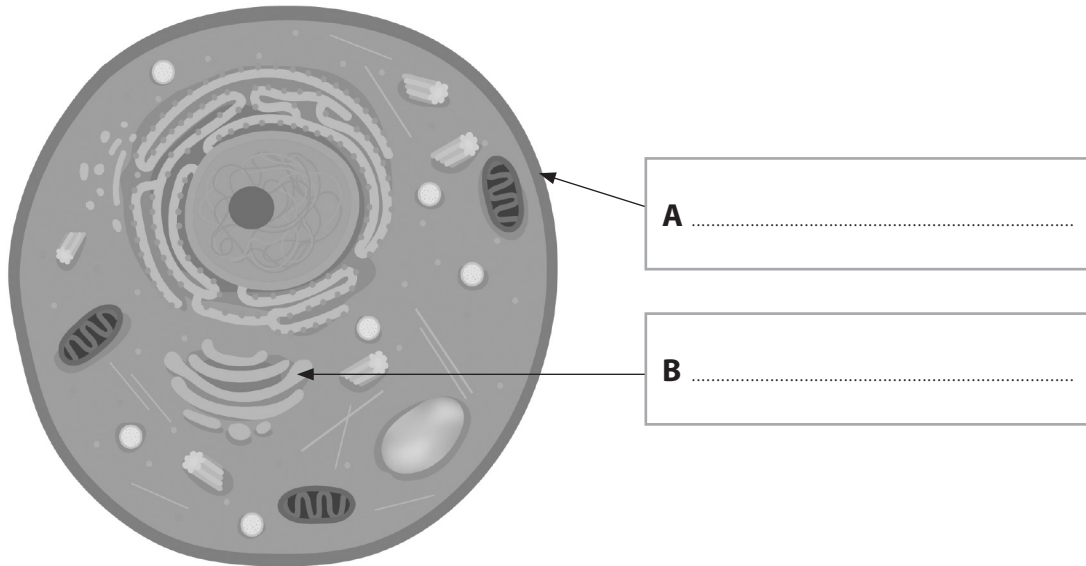


Pearson

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

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

(2)



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(b) Outline the role of Lysosomes and Ribosomes.

(4)

Lysosomes

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Ribosomes

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(c) Outline aerobic respiration and anaerobic respiration.

(4)

Aerobic respiration

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Anaerobic respiration

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(Total for Question 1 = 10 marks)

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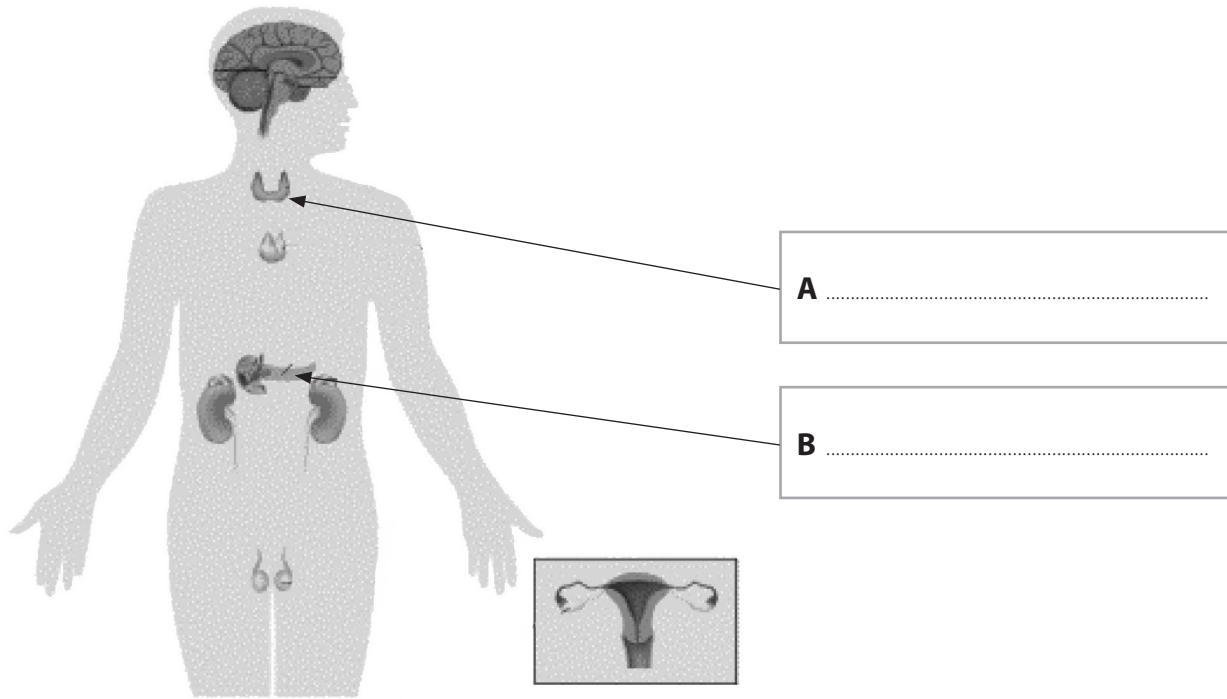
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2 (a) Identify the structures **A** and **B** on the diagram of the endocrine system.

(2)



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(b) Outline the role of **one** hormone produced by the ovaries and testes.

(4)

Ovaries

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Testes

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(c) Explain **two** symptoms of type 1 diabetes.

(4)

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(Total for Question 2 = 10 marks)

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3 (a) Outline the roles of peristalsis and absorption in the digestive system.

(4)

Peristalsis

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Absorption

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(b) Explain the role of the enzymes amylases and lipases in digestion.

(4)

Amylases

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Lipases

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(c) Explain the role of amino acids in the body.

(4)

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(d) Explain the effect of coeliac disease on the body.

(6)

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(Total for Question 3 = 18 marks)



4 (a) State **two** components of blood.

(2)

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(b) Outline the probability of two people with sickle cell **trait** having a child that also has sickle cell **trait**.

Include a genetic diagram in your answer.

(4)

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(c) Explain the symptoms of leukaemia.

(6)

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(Total for Question 4 = 12 marks)

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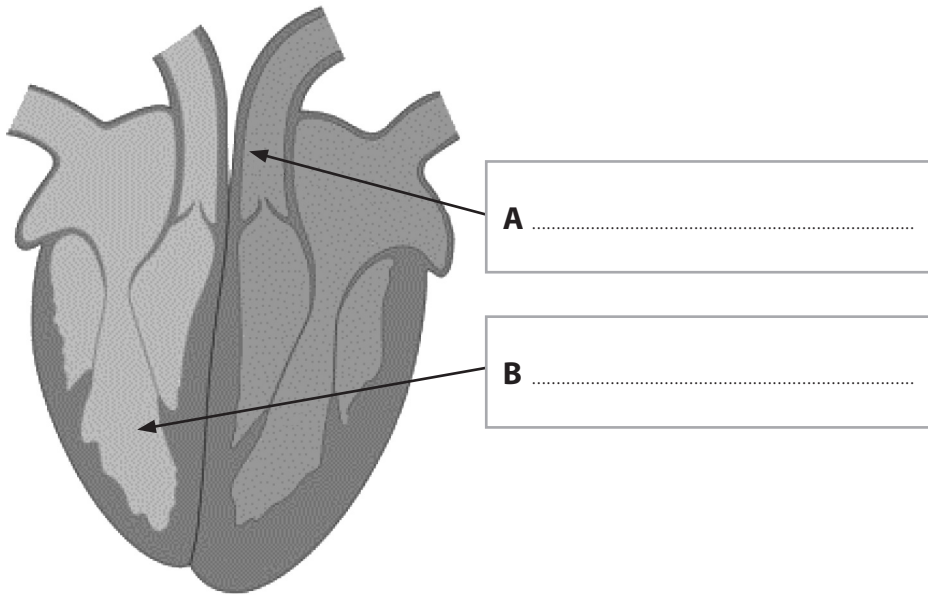
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5 (a) Identify structures **A** and **B** on the diagram of the heart.

(2)



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(b) Explain how the heart rate is regulated.

(4)

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(c) Describe the structures of capillaries and veins.

(4)

Capillaries

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Veins

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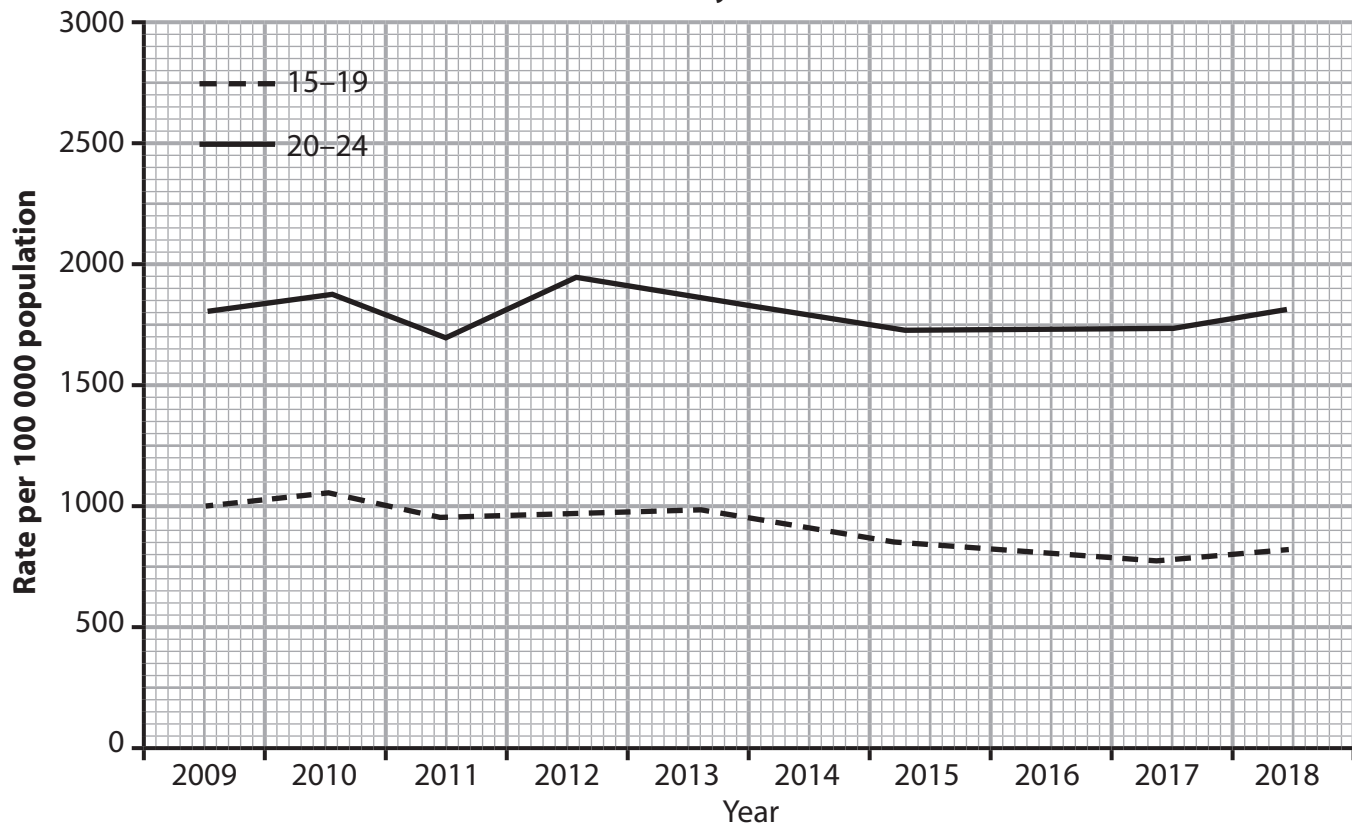
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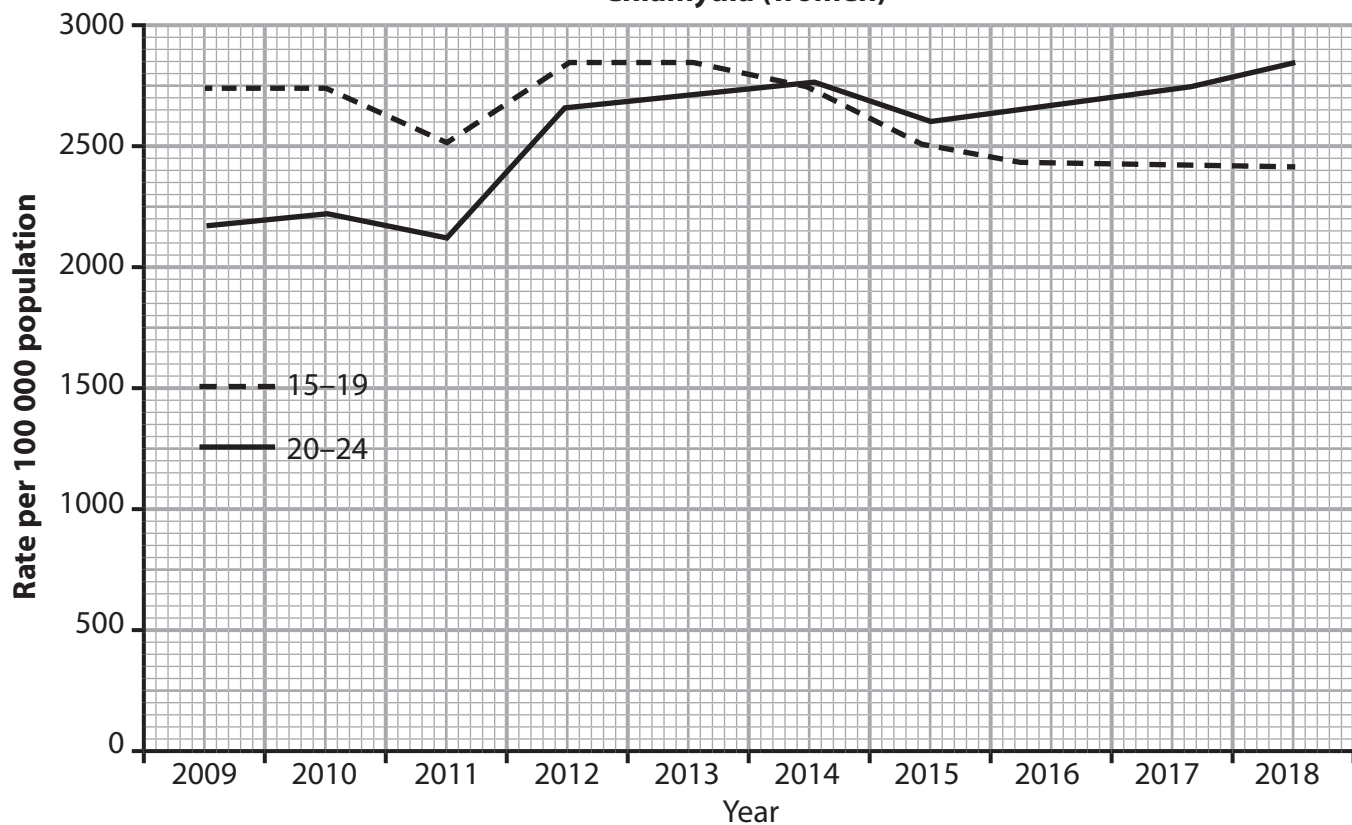


The graphs show the rates of new chlamydia diagnoses among men and women attending sexual health services aged 15 to 19 and 20 to 24.

Chlamydia (men)



Chlamydia (women)



(Source: Public Health England)

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6 (a) Compare the rates of chlamydia diagnoses for men aged 20 to 24 with those for women aged 20 to 24.

(4)

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(b) Describe double blind studies and placebo.

(4)

Double blind studies

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Placebo

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Acknowledgments

Public Health England, *Sexually transmitted infections and screening for chlamydia in England*, Health Protection Report Volume 13 Number 19, 7 June 2019.

(Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/806119/hpr1919_stis-ncsp_ann18.pdf)

Institute of Alcohol Studies, *UK foetal alcohol rates among highest in the world*, January 2017.

(Source: <http://www.ias.org.uk/What-we-do/Alcohol-Alert/January-2017/UK-foetal-alcohol-rates-among-highest-in-the-world.aspx>)

