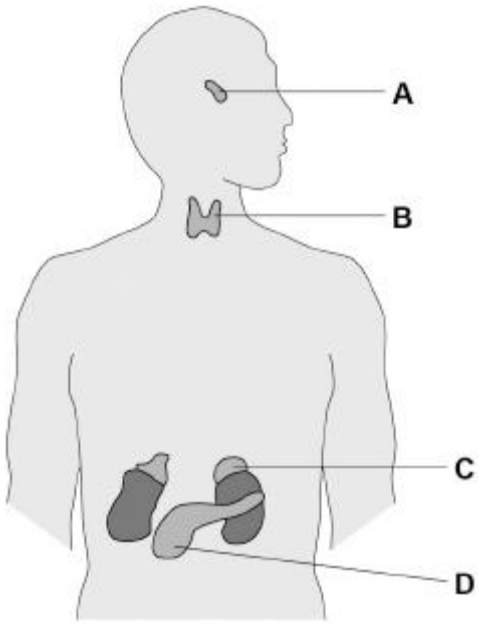
Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B3 Infection And Response

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

Name of the Student:_____
Max. Marks : 25 Marks **Time : 25 Minutes**

Q1.

The figure below shows glands in the human body.



(a) Which organ system includes the glands shown in the figure above?

_____

(1)

(b) Which gland produces insulin?

Tick (✓) **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐

(1)

(c) Which gland produces hormones that stimulate the other glands to produce hormones?

Tick (✓) **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐

(1)

Downloaded from www.merit-minds.com

(d) How do hormones travel from one gland to another gland?

_____

_____

(1)

(e) Name **two** glands involved in human reproduction.

Do **not** refer to glands shown on the figure above in your answer.

1 _____

2 _____

(2)

(f) Ovulation test kits can help women know when they are most fertile.

Ovulation test kits detect the increase in the hormone that stimulates ovulation.

Which hormone is detected by ovulation test kits?

Tick (✓) **one** box.

Follicle stimulating hormone (FSH)	☐
Luteinising hormone (LH)	☐
Oestrogen	☐
Progesterone	☐

(1)

(g) A new contraceptive drug for men is being tested.

The drug:

- is given in one injection
- stops sperm being able to fertilise eggs
- is effective for up to 13 years.

Evaluate the use of the new drug compared with existing contraceptive methods.

_____

_____

_____

_____

_____

_____

Downloaded from www.merit-minds.com

_____

_____

_____

_____

_____

_____

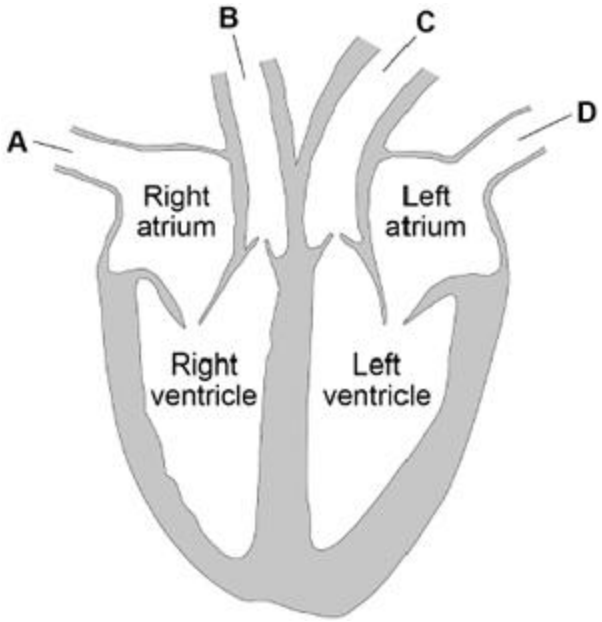
(6)

(Total 13 marks)

Downloaded from www.merit-minds.com

Q2.

The diagram shows a human heart.



(a) Which blood vessel carries deoxygenated blood away from the heart to the lungs?

Tick (✓) **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐

(1)

(b) The natural resting heart rate is controlled by a group of cells that act as a pacemaker.

Where in the heart are 'pacemaker cells' found?

Tick (✓) **one** box.

Left atrium ☐

Left ventricle ☐

Right atrium ☐

Right ventricle ☐

(1)

Some people may be treated with a drug to slow their heart rate.

(c) Digitalis is a drug that slows the heart rate.

Where does the drug digitalis originate from?

Tick (✓) **one** box.

Downloaded from www.merit-minds.com

Bacteria ☐

Foxgloves ☐

Mould ☐

Willow ☐

(1)

Beta blockers are another type of drug that slows the heart rate.

The table shows information for people who do not take beta blockers and for people who do take beta blockers.

- Stroke volume is the volume of blood pumped out of the heart each time it beats.
- Cardiac output is the total volume of blood pumped out of the heart each minute.

	No beta blockers taken		**Taking beta blockers**	
	At rest	**During exercise**	**At rest**	**During exercise**
Heart rate in beats per minute	68	150	52	88
Stroke volume in cm^3	80	120	**X**	98
Cardiac output in cm^3 per minute	5440	18 000	2800	8624

(d) Calculate stroke volume **X** in the table above.

Use the equation:

cardiac output = stroke volume × heart rate

Give your answer to 2 significant figures.

_____

_____

_____

_____

Stroke volume **X** = _____ cm^3

(3)

Downloaded from www.merit-minds.com

(e) Some people who take beta blockers get out of breath when they exercise.

Explain why beta blockers can have this effect during exercise.

You should refer to information given in the table in part (d).

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(6)

(Total 12 marks)

Downloaded from www.merit-minds.com