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Access to Higher Education

# Example Assignment Brief

Biology



# Access to Higher Education Assignment Brief



Achieved (if ungraded)	Pass	Merit	Distinction
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Learner's Name:	
<b>Learner Declaration: I can confirm that, apart from correctly referenced quotations, this assignment is my own work and contains no plagiarised content. All sources have been acknowledged and referenced.</b>	
Learner Signature:	Date:

Provider: Great College	Pathway: Health
Diploma Title: Access to Higher Education Diploma ( Health Professions )	
Module: Human Biology	Group:
Unit Title: Human Cardiovascular System	Unit Code: GA33BIO14
Tutor/Assessor: James Watson	Internal Verifier: Rosalind Franklin

Assignment Title: Cardiovascular System
Type of Assignment: Structured Questions
Word Count: 2000
Time allowed for supervised assessment:

## Submissions, Extensions and Referrals

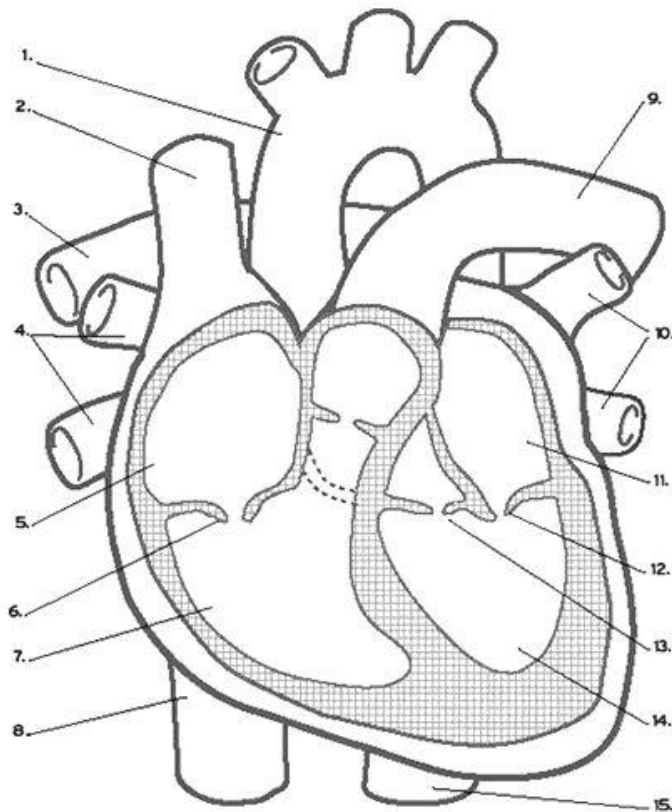
Please refer to the Course Handbook for regulations relating to submission of assessment evidence, extensions, resubmissions and referrals.

Date Assignment Issued: 11/04/2016	Submission Deadline: 25/04/2016		
Extension negotiated?    Yes    No	Agreed Extension Date:		
Tutor Signature for Extension:			
Date of Submission:	Date Marked:	Resubmission Required? Yes / No	
Second Submission Date:	Referral Requested?            Yes            No		
Date Second Submission Marked:			
Internally Verified?            Yes            No	Internal Verifier:		

Completed forms to be made available for external moderation.

Assignment Brief:

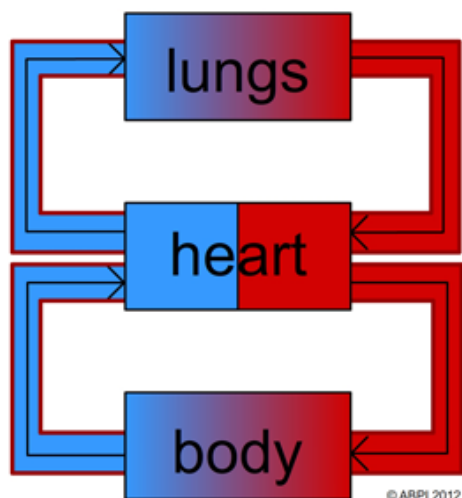
1. Name structures 1 - 15 on the diagram and explain their roles in maintaining circulation. (AC 1.1)



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2. Use hand drawn diagrams of an artery, vein and capillary and explain how they differ and how their structures are related to their functions. (AC1.2)

3. With reference to the diagram below (figure 1) explain what is meant by a double circulatory system and why it is important for humans. (AC 1.3)



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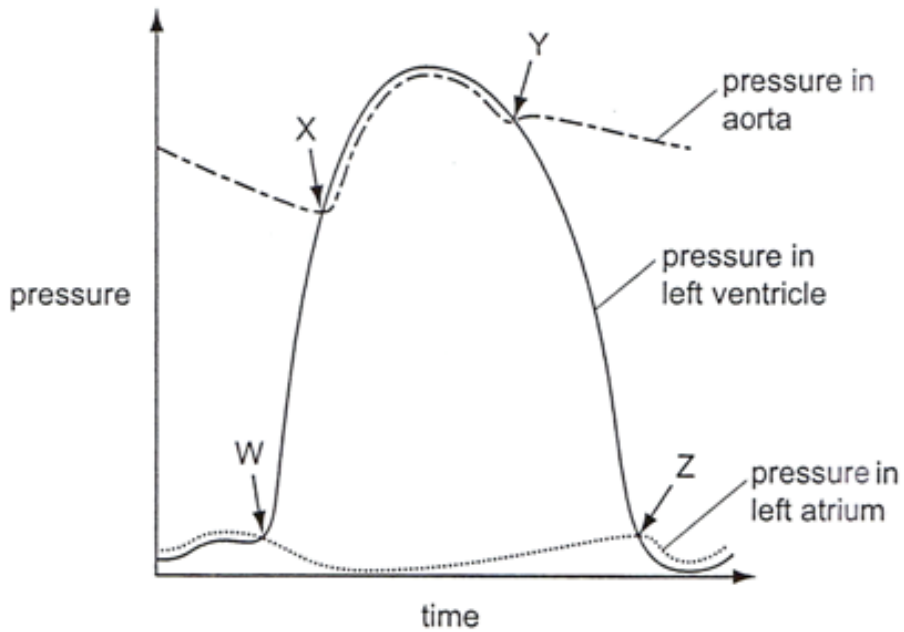
<http://www.abpischools.org.uk/>

4. The cardiac cycle begins at the sinoatrial node by initiating an electrical signal. The signal is transmitted in a particular order via four other structures. (AC2.1)

- Identify the full names for the four structures.
- Draw a flow chart to show the order in which the signal is transmitted.
- Explain the role of the four named structures in maintaining the cardiac cycle.

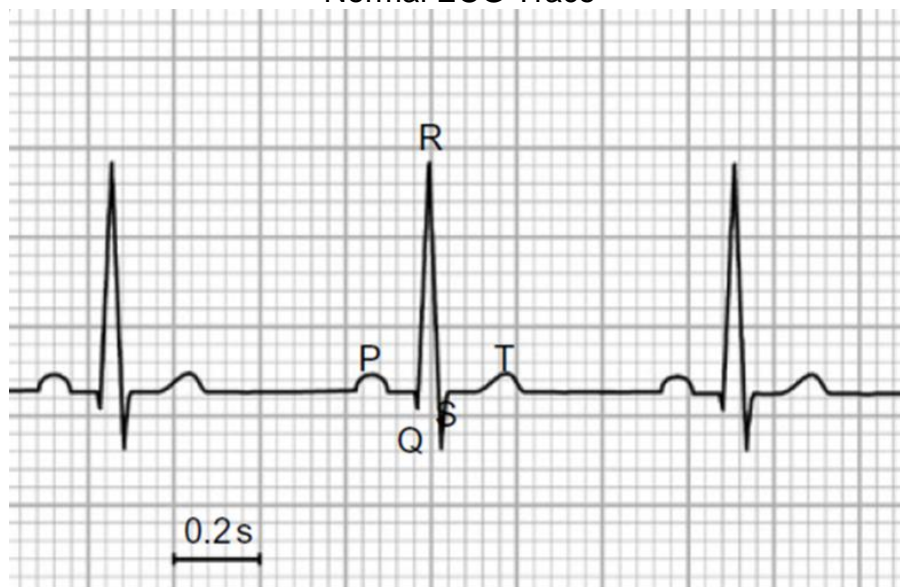
5. Study the diagrams below (figures 2 and 3) and answer the questions that follow. (AC 2.3)

### Pressure changes in the heart



<http://dc206.4shared.com>

### Normal ECG Trace



- In figure 2 explain the rise in pressure in the left atrium just before position W and identify the wave on the ECG trace (figure 3) that corresponds to this event.

- b) Explain the effect of the change in pressure in the left atrium and left ventricle at position W and relate this to the flow of blood through the heart.
- c) Explain the rise in pressure in the left ventricle between positions W and X and identify the wave on the ECG trace that corresponds to this event.
- d) Identify the position from figure 2 (w, x, y, or z) where the first heart sound (S1) is heard and explain the cause of this sound.
- e) Identify the position from figure 2 (w, x, y or z) where the second heart sound (S2) can be heard and explain the cause of this sound.

6. (a). During a training session a student nurse was given the following blood pressure readings (table 1) for two patients (A) and (B). What answer, should the student nurse give, when asked to explain the difference, between systolic blood pressure and diastolic blood pressure? (AC 2.2)

Table 1

Patient	Reading (1)	Reading (2)
A	153	95
B	85	

(b). Patient C had a blood pressure reading of 105 over 72 mm Hg, where both readings are in the normal ranges. What answer should the student nurse give, when asked to identify the normal ranges for systolic and diastolic blood pressure? (AC 2.2)

(c) The blood pressure reading (2) in table 1 was initially not recorded. State a suitable reading (2) that is consistent with patient B, having low blood pressure and provide two possible reasons for low blood pressure. (AC 2.2)

9. Cardiac output of the heart adapts to meet the body’s needs and is influenced by nervous and hormonal control. (AC 2.3)

$$\text{Cardiac output} = \text{stroke volume} \times \text{heart rate}$$

- a) Explain the terms cardiac output and stroke volume.
- b) During strenuous exercise changes occur to blood pressure and blood gases. Explain how this affects both heart rate and stroke volume.

Grading Information for this Assignment

Grade Descriptor:1 Understanding of the subject
For a <b>Merit</b> your work or performance must: demonstrate a very good grasp of the relevant knowledge base.
For a <b>Distinction</b> your work or performance must: demonstrate an excellent grasp of the relevant knowledge base
<b>Guidance notes:</b> In order to achieve higher grades you must show a clear understanding of the subject by interpreting the information you read and writing in your responses in your own words.

Grade Descriptor : 2 Application of knowledge

For a **Merit** your work or performance must: make use of relevant facts with very good levels of accuracy.

For a **Distinction** your work or performance must: make use of relevant facts with excellent levels of accuracy

**Guidance notes:** In order to achieve merits and distinctions here you will need to show that you have included information relevant to the subject area as well as including information you have researched for yourself. Read the questions carefully and answer accurately. Where you are asked to draw diagrams/flow charts do not just download from the internet but draw your own diagrams.

Grade Descriptor: 5 Communication and presentation

For a **Merit** your work or performance must: show very good command of language (including technical or specialist language, spelling, punctuation and referencing).

For a **Distinction** your work or performance must: show excellent command of language (including technical or specialist language, spelling, punctuation and referencing).

**Guidance notes:** In order to achieve merits and distinctions here you will need to ensure that you check all your spelling and punctuation and include referencing within text and a full reference list.

Grade Descriptor: 7 Quality

For a **Merit** your work or performance must: taken as a whole, demonstrates a very good response to the demands of the brief/assignment

For a **Distinction** your work or performance must: taken as a whole, demonstrates an excellent response to the demands of the brief/assignment

**Guidance notes:** Ensure your work is well presented. You must keep within the word count but can be 10% either below or above the specified assignment word count.

*Add or remove tables as appropriate*

No.	Assessment Criteria The Learner can:	Achieved? (Tutor Initial)		
		First Submission	Second Submission	Referral
1.1	Identify the main structures and blood vessels of the human heart and explain their roles in maintaining circulation.			
1.2	Discuss the structures of arteries, veins and blood capillaries in relation to their functions.			
1.4	Explain the importance of a double circulation for humans.			
2.1	Identify the conductive tissues of the heart and explain the roles of these in the cardiac cycle.			
2.2	Explain the difference between systolic and diastolic blood pressure and identify normal ranges.			
2.3	Explain the control of heart rate and stroke volume in response to changes in blood gases and blood pressure.			