

AS Level Biology B

H022/01 Foundations of biology

Question Set 9

1 Different types of monitors are available for medical practitioners to measure the blood pressure of their patients.

These may include:

- digital upper arm monitor
- digital wrist monitor
- manual upper arm monitor

These blood pressure monitors all have inflatable cuffs.

(a) (i) Give **one** advantage of using a digital monitor for measuring blood pressure.

[1]

(ii) Sources of error when taking blood pressure measurements using these monitors include improper technique and observer bias.

Suggest **two other** sources of error when using these monitors for measuring blood pressure.

[2]

(iii) Fig. 1 shows the variation in systolic pressure in different arteries.

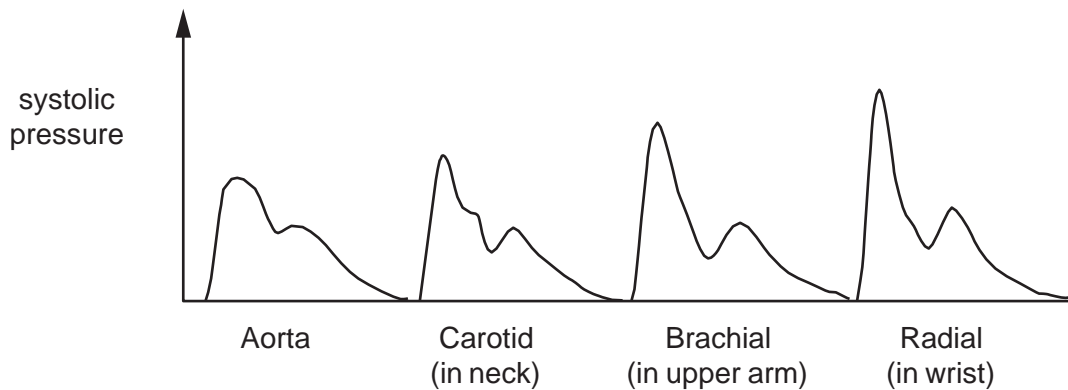


Fig. 1

Using the information in Fig. 1, comment on the suitability of using a digital wrist monitor for measuring blood pressure.

[2]

(b) Hemorrhagic shock is a clinical syndrome resulting from decreased blood volume caused by blood loss. Hypotension may occur in hemorrhagic shock patients where blood loss is greater than 15% of the total blood volume.

(i) Explain how the production of tissue fluid is affected in patients suffering from hemorrhagic shock syndrome.

[2]

(ii) In cases of severe blood loss, the body actively reabsorbs fluid from the tissues to restore blood volume.

Suggest how the composition of this restored blood would differ from that of the blood that has been lost.

[2]

Total Marks for Question Set 9: 9



Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge