

A Level Biology B

H422/01 Fundamentals of biology

Question Set 6

1. (a) (i) The recovery time of the heart is a good indicator of aerobic fitness.

A widely-publicised training programme claimed to improve aerobic fitness for various exercises after three months. To evaluate this claim, an investigation was conducted:

- 20 volunteers completed a series of test exercises at increasing intensities
- recovery time was recorded after each exercise
- the volunteers followed the training programme for three months
- after three months, the test exercises and measurements were repeated.

State **two** factors, other than **intensity of exercise**, that must be considered before an exercise is included in a training programme.

[2]

- (a) (ii) Suggest **one** safety precaution that should have been taken before any volunteers took part in the exercises.

[1]

(b) (i) The results of the investigation are shown in Fig. 36.

The columns represent the mean recovery times before and after the training. The error bars represent the standard deviation above and below the mean.

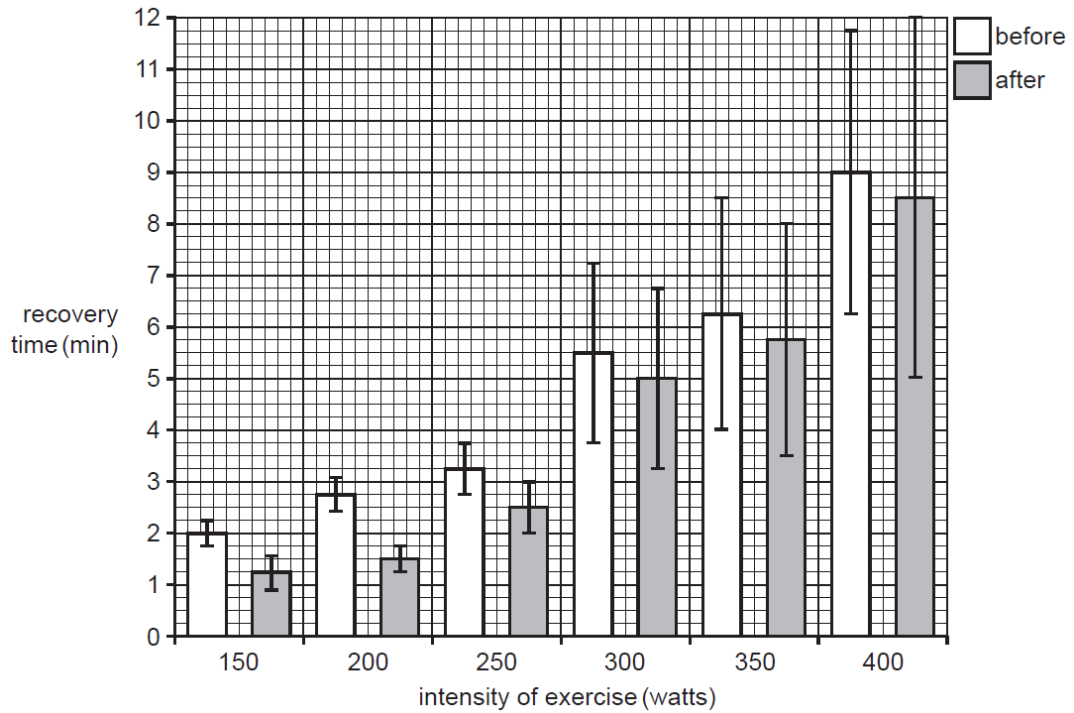


Fig. 36

Name **one** statistical test that could be used to analyse the data in Fig. 36. Justify your choice.

[2]

(b) (ii) Comment on how well this training programme improved fitness.

[2]

(b) (iii) Promoters of the training programme claimed that it was good for training **weightlifters**. Comment on the **validity** of this statement.

[2]

Total Marks for Question Set 6: 9

OCR

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