

Information technology in a global society
Higher level and standard level
Paper 2

Tuesday 17 May 2016 (morning)

1 hour 15 minutes

ARTICLE

Instructions to candidates

- Do not open this booklet until instructed to do so.
- This booklet contains the article required for information technology in a global society higher level and standard level paper 2.

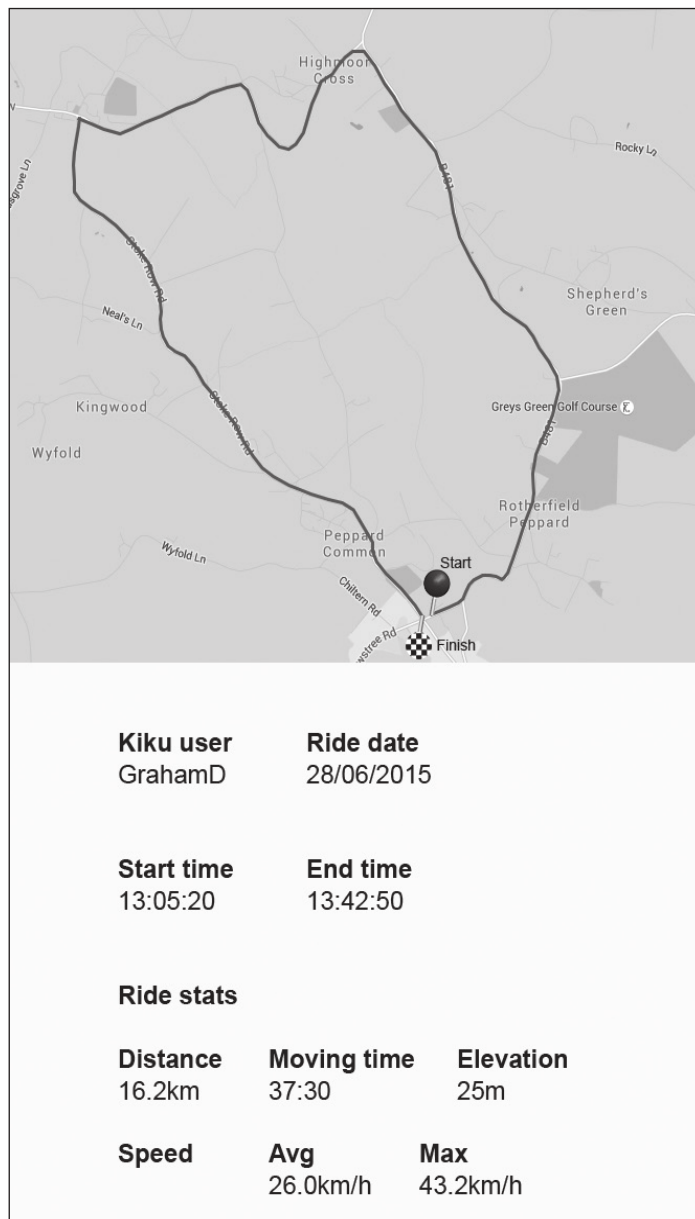
Theme: Home and leisure

IT system: GPS-based geolocation¹

Kiku is an app² aimed at runners and cyclists to log training sessions or to time themselves on routes they use frequently. Versions of the app are available for different mobile devices.

5 Kiku uses the built-in GPS of the user's mobile device to record geolocation data. This data is stored on the mobile device and also uploaded automatically to the user's account on the Kiku website. Kiku uses this data to calculate the start and finish times of the session, the total time taken and the overall distance covered.

Kiku continuously records the location of the device, allowing the exact route taken by the user to be displayed on an interactive map, both on the device and on the Kiku website.



10 Users can access their account on the Kiku website and see all the data and route maps for their previous training sessions. They can share this information via email, Facebook or Twitter with fellow athletes or cyclists, trainers, sports organizations and friends. Users can also see information uploaded by other users.

15 Kiku users can form online teams and can take part in challenges where they compete against other users over various routes. Challenge winners are awarded badges and can claim cash discounts on items marketed through the website.

Kiku has agreed to allow a rival company to add their own users' personal data and routes to the Kiku website, significantly increasing the quantity of data available. Kiku would like to make connections with other companies to share this user data.

20 However, there are some concerns about whether this app has been fully tested. In some cases the route shown on the map is not the route that was taken. In other cases the distance reported by the app for the same route can be different on different days. The app can sometimes crash while in use and must be re-started by the user.

25 Anyone with a Kiku account can access the stored route maps and other data uploaded by users, along with details of their team memberships and challenges. Many Kiku users choose to include photographs and create usernames that include personal details, for example Graham Dornan has created the username GrahamD.

Graham Dornan and two other cyclists recently had their bicycles stolen from their homes, as they had waited until they had completed their cycle ride before turning the app off. Users are now advised not to turn the app on until they are at least 500 metres away from home.

[Source: © International Baccalaureate Organization 2016]

¹ geolocation: detection of the physical location of an internet connected device

² app: application software, typically small, specialized programs downloaded onto mobile devices; apps can also run on the internet, on a computer, or on a cell/mobile phone or other electronic device
