AQA

General Certificate of Education
Advanced Level Examination
June 2014

Information and Communication Technology   INFO3/PM

Unit 3   The Use of ICT in the Digital Word

Candidate Booklet

To be opened and issued to candidates on or after 15 March 2014

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INFO3/PM

Information and Guidance

1   On receipt of this booklet, you are advised to check carefully that it is complete and that no pages are missing or illegible. There should be 4 pages. If there are any problems you should consult your teacher.

2   The material contained in this booklet is provided for you to use in preparing for Section A of the INFO3 examination.

3   Prior to the examination, your teacher may give you assistance and advice to help you understand the content of this material.

4   You should use the time between receiving this material and the examination to familiarise yourself with its contents.

5   You are allowed to make comments or annotations on this copy of the material but you are **not** allowed to take this copy, or any other materials, into the examination.

6   A clean copy of this booklet will be provided in the examination with the INFO3 question paper and therefore there is no benefit from learning the contents by rote.

7   The INFO3 examination is on **Tuesday 17 June** (morning session).

Top Hat Consulting

The following is a transcript of a webinar, delivered to the company's staff at 8.00 a.m. on the first working day of January by Matt Brady, Chief Executive Officer (CEO) of Top Hat Consulting. Top Hat Consulting is an outsourcing and consultancy company which concentrates its activities on ICT systems for debit and credit card companies and local/national government agencies.

"Good morning, everyone, and Happy New Year! At least, I say "everyone" but I notice that only 83.5% of you have logged on. I hope the remaining 16.5% have good reason not to be listening to this announcement. Whilst I'm talking, please feel free to use the chat room facility and I'll answer your queries at the end.

Last year was satisfactory - a year of consolidation, really. Despite the economy being flat, our level of profit was about the same as the previous year. Thanks are due to all who spent a frantic few weeks at the end of last year.

I'm sure you all realise that a successful business doesn't just stagnate; it has to grow year-on-year to remain at the top. So I have some ideas to get Top Hat moving forward and, after this webinar, I'd like you to put forward thoughts and ideas of your own.

I'll start with some good news. I can now reveal that we've been awarded a contract by the government to develop an on-line system for holding referenda and for training all users. A referendum has not been used for many years but, increasingly, there are some cross-party issues which are best resolved by directly asking the electorate their views. The high cost of holding referenda is one reason put forward by previous governments for not using them. The costs are similar to those involved in holding an election, with polling stations and staff needing to be hired, plus the disadvantages of closing schools for the day, paying some teachers for a day off, and the fact that pupils lose a day's schooling. An on-line Referendum System can reduce these costs, although each town and city will need at least one location where voters without an internet facility can access the Referendum System.

You're probably thinking, "What can be difficult about a Referendum System?" After all, at its basic level it's just about recording people's preferences for a particular course of action, and adding up the Yes and No votes. I agree, but there is also the security aspect to consider, plus scale issues, and training requirements for voters, administrators and senior government officials who will need to study summarised results and investigate hacking attempts.

Government ICT contracts. What does that usually mean? What has it meant to us?

I guess you know what I'm referring to. Government contracts have a long and notorious history of not meeting client and user requirements and of exceeding cost estimates by a high margin. In the past, Top Hat has been as guilty as others. We're very lucky to have been given another opportunity, so I have one very important announcement to make: We WILL meet user requirements and we WILL NOT exceed cost estimates. To achieve this, I recommend we use formal methods for this development.

I'm looking for your help here. After this webinar, please email your view of the factors which contribute to a successful development process and the achievement of a systematic formal method. After all, we are industry leaders, so let's demonstrate it for this project.

One area in which we had some success last year was the introduction of workflow systems and document management systems to our large corporate customers. I'd like you all to read up about these systems in our research library and inform our clients about the availability of these systems.

Turn over ▶

Looking forward to the future, part of our success has been to predict future trends and to have products, services and software in place to meet these trends; in other words, to be ahead of our competitors in understanding the technology lifecycle. And so, now for a little speculative risk, which is a departure for our company. We could make a great deal of money with this new device I've had designed.

(He holds up to the camera a device that looks like a USB dongle.)

I'm calling this the "location dongle" and intend it to be the next weapon in the war against debit and credit card fraud.

I don't use the word "war" lightly. As fast as the debit and credit card companies and banks introduce new security measures, criminals find ways of circumventing or neutralising them. The location dongle

(he holds up the device again)

makes use of GPS technology and it needs to be plugged into a USB port when making a card purchase of more than £100. The purchase won't be allowed unless the GPS co-ordinates generated by the location dongle are the same as those originally registered when the device was supplied.

Now, the location dongle is just a prototype, so not much money has been spent so far. But I need your help. I want you to discuss the concept amongst yourselves and consider any possible disadvantages. And, of course, I'd be grateful for any alternative methods that you believe could help to reduce debit and credit card fraud. Please use the chat room for this or email me with your thoughts.

Well, I've spoken long enough. I'm sure you want to make a good start to the New Year.

Thank you for your attention."

END OF PRELIMINARY MATERIAL