

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson
BTEC Level 3
Foundation Diploma,
Nationals Diploma,
Extended Diploma

Centre Number

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Learner Registration Number

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Wednesday 6 January 2021

Morning (Time: 3 hours)

Paper Reference **20149K**

**Forensic and Criminal
Investigation**
Unit 5: Applications of Criminology

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** activities.
- Answer the activities in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 60.
- The marks for **each** activity are shown in brackets
– *use this as a guide as to how much time to spend on each activity.*

Advice

- Read each activity carefully before you start to answer it.
- Try to answer every activity.
- Check your answers if you have time at the end.

Turn over ►

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Pearson

Instructions for Learners

Read the set task information carefully.

You are advised to spend 30 minutes reading through all the stimulus material in the set task carefully.

You must use the stimulus material to complete the activities in the set task.

You may add your own notes to the stimulus material before starting the activities.

Plan your time carefully so you can finish all the activities.

You will complete the activities within the set task under supervision and your work will be kept securely during any breaks taken.

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Set Task Information

You are a police officer in Juryham. You have been asked to support the cyber-crime team.

Activity 1: Reasons for criminal behaviour

You should spend 50 minutes on this activity.

Use the **Case study** and **Figures 1** and **2** to complete this activity.

(Total for Activity 1 = 24 marks)

Activity 2: Punishment and prevention

You should spend 40 minutes on this activity.

Use the **Case study** to complete this activity.

(Total for Activity 2 = 16 marks)

Activity 3: Victims and victimisation

You should spend 30 minutes on this activity.

Use the **Case study** and the **Article** to complete this activity.

(Total for Activity 3 = 10 marks)

Activity 4: Media and crime

You should spend 30 minutes on this activity.

Use the **Case study** and the **Article** to complete this activity.

(Total for Activity 4 = 10 marks)

TOTAL FOR TASK = 60 MARKS



Set Task

You must complete ALL activities within the set task.

Please do not write answers outside the spaces provided.

Use the **Case study** and **Figures 1** and **2** to complete Activity 1.

Case study

Lepharm is a large pharmaceutical company in Juryham that manufactures and distributes medication around the world. Lepharm was the victim of a cyber-attack several months ago. The company is owned by Graham Gurson and was founded by Graham's father in 1988. Lepharm makes £10 billion a year from selling cancer medications.

Lepharm experienced a cyber-attack when malware¹ was used to disrupt the company's distribution of cancer medication to hospitals around the world. This malware was known as OhNa by cyber-security agencies. OhNa was thought to be a type of ransomware² but was later found to be a disk wiper³. The cyber-attack was not done to get money from the company, however, the impact has cost the company at least £5 million.

The cyber-attack on Lepharm has disrupted the supply of many medications; including Aireztin, which Lepharm distributes to the NHS. Aireztin is used to treat lung cancer and was recently discovered to be effective in treating breast cancer.

Last week, the National Crime Agency carried out raids with the help of police across the country. Thirty men were arrested for cyber-related offences, including Zak Bennett aged 25. Bennett previously worked at a local computer repair centre in Juryham. He was sacked last month after the repair centre found he was using its IT equipment to send computer viruses. Bennett is now unemployed.

Bennett admitted to hacking Lepharm's IT systems and installing the malware. He is a member of the 'hactivist' group No-One. No-One is a politically motivated group that claims to be hacking the capitalist system to redistribute wealth. Bennett said he joined the hacking group No-One when he was 14 years old. He joined the group for the thrill as the members were well known for not getting caught.

¹ Malware is a program or software that is harmful to a computer.

² Ransomware is harmful software that blocks access to a computer until payment is received.

³ A disk wiper destroys data that cannot be recovered.

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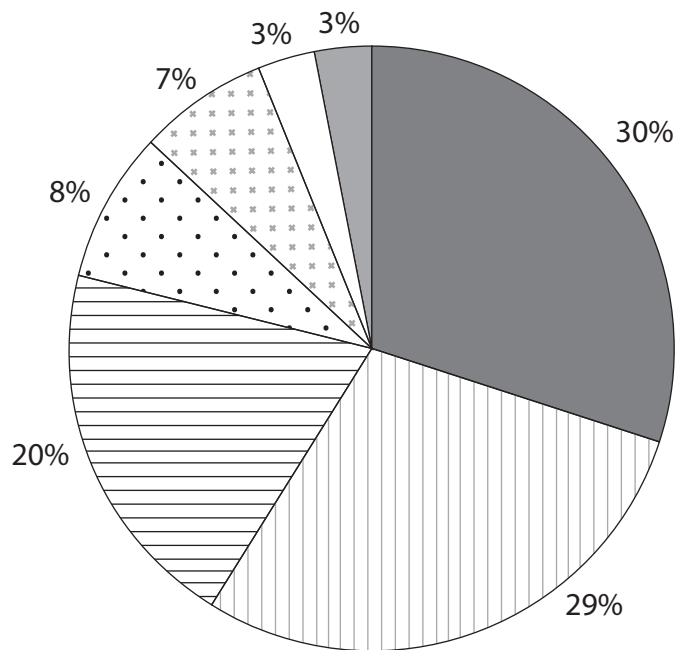
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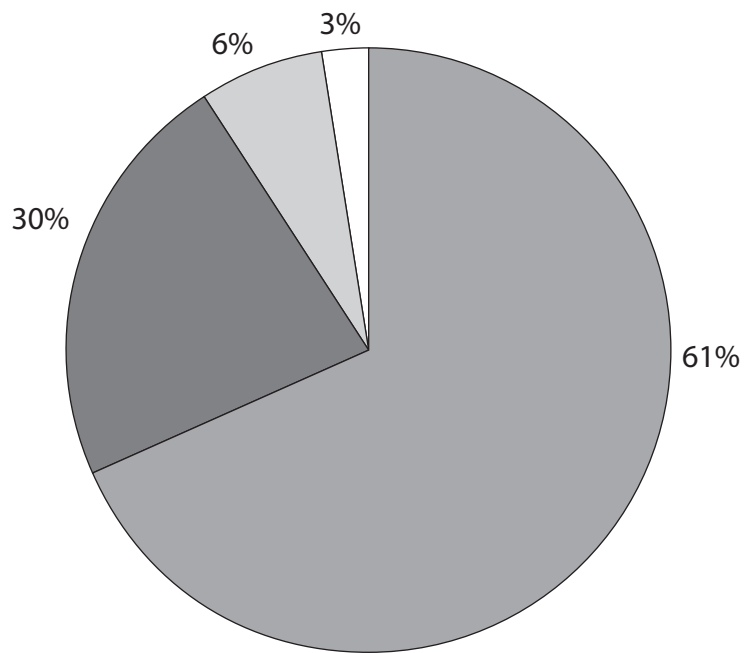


10 to 20
 21 to 25
 26 to 30
 31 to 34
 35 to 40
 41 to 45
 over 45

(Source: Adapted from Bosco (2012) Hacker Profiling Project – Self Reported from Hackers)

Figure 1

Age of cyber-criminals



10 to 15
 16 to 20
 21 to 25
 26+

(Source: Adapted from Bosco (2012) Hacker Profiling Project – Self Reported from Hackers)

Figure 2

Age of cyber-criminals when they started to hack



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(Total for Activity 1 = 24 marks)



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(Total for Activity 2 = 16 marks)



Article: Interview with Audrey Freedman

Selfish 'Hactivist' brings chaos to the lives of the innocent

Pharmaceutical manufacturer Lepharm, a company that sends life-saving treatment around the world, was hit by a self-proclaimed 'hactivist' last month. A cyber-attack that cost owner Graham Gurson over £5 million. Lepharm produces and sends Aireztin, a life-saving cancer treatment around the world. We contacted Gurson who said that this was not the first time that cyber-criminals had targeted the company. "A few years ago, we were the victim of a ransomware attack. We had to pay in bitcoin¹ to get our files released. After that cyber-attack I made sure the company had cyber-insurance. Cyber-insurance covers us financially if anything like this happens again."

Audrey Freedman, whose husband Arthur tragically passed away last week, contacted the Juryham Times reporter. "My husband was a coal miner for 40 years. He got lung cancer from his job and he was taking Aireztin. The NHS wasn't getting any supplies and we couldn't afford to pay for private care from our pensions." Arthur's lung cancer got worse and he died. "I miss him so much" explained Audrey, "I worry about my own health now. These criminals scare me; you don't know where they are. I have diabetes and I'm worried that I won't get my own medication."

This is not the first time that cyber-crime has affected the Freedmans. Audrey was the victim of another attack when she clicked a link in a phishing email that she thought was from her bank. Cyber-criminals stole £300 from her bank account. Audrey said "I'm even more worried now because Arthur used to manage all our online payments."

Cyber-criminals such as Zak Bennett, who hacked Lepharm, are a new type of criminal; targeting victims and keeping their identities a secret. Bennett, an unemployed college dropout, says that he is politically motivated to destroy the greedy corporations by damaging their profits. However, he has been known to use the internet to get money from ordinary victims, such as Audrey, too. Cyber-crime is now widespread around the world and with criminals being difficult to identify, the authorities don't seem to be any more successful in bringing them to justice.

¹ Bitcoin is a digital currency that is separate from usual currency and does not use banks.



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(Total for Activity 3 = 10 marks)



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Lined writing area for student responses.

(Total for Activity 4 = 10 marks)

TOTAL FOR TASK = 60 MARKS





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