

**Tuesday 23 April 2019
9.30 am – 10.30 am
(Duration: 1 hour)**

DEGREES OF MSci, MEng, BEng, BSc, MA and MA (Social Sciences)

Professional Skills & Issues (H)

Answer ALL questions.

This examination paper is worth a total of 40 marks.

QUESTION 1 RUBRIC

**A mark (1) is awarded for each correct response,
a half mark (1/2) is deducted for each incorrect response and
no mark (0) is awarded or deducted for an unanswered question.**

**You are provided with an answer grid (for QUESTION 1)
and an answer book (for QUESTION 2).**

**At the end of the examination,
tuck your answer grid securely into your answer book.**

The use of a calculator is not permitted in this examination

INSTRUCTIONS TO INVIGILATORS

**Please collect all exam question papers and exam
answer scripts and retain for school to collect.
Candidates must not remove exam question papers.**

1. Answer the following multiple-choice questions, using the answer grid provided. There is only one correct answer to each question. A mark (1) is awarded for each correct response, a half mark (1/2) is deducted for each incorrect response and no mark (0) is awarded or deducted for an unanswered question.

(a) In European law, the General Data Protection Regulations (GDPR) superseded the European Directive on Data Protection in May 2018. How were the fundamental aspects of the legislation enabled in the United Kingdom?

- A. Data Protection Bill 2016 passed into law.
- B. Data Protection Act 1998 updated to reflect the requirements of the GDPR.
- C. GDPR was enforceable immediately without requiring member state legislation.
- D. GDPR has yet to be enabled in the United Kingdom.

[1]

(b) In European law, the General Data Protection Regulations (GDPR) affords data subjects several rights. Which one of the following is **not** a data subject right under GDPR?

- A. Right to erasure.
- B. Right to approbation.
- C. Right to access.
- D. Right to object.

[1]

(c) The (UK) Freedom of Information Act 2000 (FoIA) gives every citizen the right to request information from specific organisations. To which one of the following organisations does FoIA **not** apply?

- A. UK Parliament.
- B. Private Primary Schools.
- C. Local Authorities.
- D. National Health Service (NHS).

[1]

(d) The (UK) Investigatory Powers Bill 2016 requires communication service providers (CSPs) to retain communication data and weblogs (websites visited, not particular pages) for how long?

- A. 72 hours.
- B. 3 months.
- C. 12 months.
- D. 48 months.

[1]

(e) The General Data Protection Regulation (GDPR) is European Union (EU) law for data protection and privacy. In what scenario does the GDPR apply outside the territory of the European Union?

- A. GDPR applies to controllers and processors outside the territory of the EU when dealing with data subjects inside the territory of the EU.
- B. GDPR applies only to processors outside the territory of the EU when dealing with data subjects inside the territory of the EU.
- C. GDPR applies only to controllers outside the territory of the EU when dealing with data subjects inside the territory of the EU.
- D. GDPR does not apply to controllers and processors outside the territory of the EU.

[1]

(f) The (UK) Data Protection Act 2018 introduced changes to data protection laws in the United Kingdom. What significant change did the act introduce?

- A. The act updated data protection laws in the United Kingdom to supplement the European General Data Protection Regulations (GDPR).
- B. The act only updated data protection laws in the United Kingdom that were necessary to enable the European General Data Protection Regulations (GDPR).
- C. The act only updated data protection laws in the United Kingdom to replicate some aspects of the European General Data Protection Regulations (GDPR) as GDPR has not yet been enabled in the UK.
- D. The act updated data protection laws in the United Kingdom to remove specific protections on sensitive data.

[1]

(g) The (UK) Copyright, Design and Patents Act 1988 is the primary copyright law in the United Kingdom. Which of the following is accurate in the case of source code?

- A. Original and boilerplate source code are classified as literary work.
- B. Original source code is classified as literary work, but not boilerplate source code.
- C. Boilerplate source code is classified as literary work, but not original source code.
- D. Original source code is not classified as literary work, but boilerplate source code can be classified as established artistic work.

[1]

(h) The (UK) Copyright, Design and Patents Act 1988 is the primary copyright law in the United Kingdom. What are authorised individuals permitted to do with software programs under the act?

- A. Decompile the program to understand how to write another program to inter-operate with it.
- B. Decompile the program to alter with improvements and add additional features.
- C. Decompile the program to alter with improvements and add accessibility features.
- D. Decompile the program to remove unnecessary features.

[1]

(i) What is cyber squatting?

- A. The practice of companies relying on employees using their own personal devices to conduct important business processes, e.g. email.
- B. The practice of registering domain names for trade marks that belong to others, then offering to sell the domain name at an increased price.
- C. The practice of companies registering multiple domain names that are variants of their trademark, e.g. the company Google registering `www.google.com` and `www.g0ogle.com`.
- D. The practice of employees utilising corporate file space to store personal data, e.g. personal photos and media files.

[1]

(j) The (UK) Trade Marks Act 1994 provides protection for trade marks. What tactic do some companies utilise to curtail the illegal sale of software?

- A. Individuals are required to enter the trade mark name at the point of application launch.
- B. Registered trade mark is displayed prominently on-screen whenever the application is executing.
- C. Software is only distributed via websites and customers are required to acknowledge the company trade mark prior to purchase.
- D. Application confirms registered trade mark with automatic service offered by the UK Trade Mark office.

[1]

(k) A professional body is an organisation that promotes high standards in a particular profession. Which professional body is most relevant to software engineers?

- A. Association of Computing Mechanical Engineers.
- B. Institution of Engineering and Technology.
- C. Institution of Electronics and Engineering.
- D. Institute of Electronics and Security.

[1]

(l) In European law, an Internet Service Provider (ISP) will not be held liable for damages or criminal sanctions for data up/downloaded by its customers in what circumstances?

- A. The ISP acts as a mere conduit and only transmits data up/downloaded by the customer.
- B. The ISP permanently stores known unlawful data uploaded by its customers, but notifies customer of such actions in writing.
- C. The ISP only temporarily stores known unlawful downloaded data, to speed up future downloading of the same data.
- D. The ISP only temporarily stores known unlawful data downloaded by its customers, but notifies customer of such actions in writing.

[1]

(m) Defamation is communication of a false statement that harms the reputation of an individual, group, or organisation. What is spoken defamation referred to in Scotland?

- A. Slander
- B. Libel
- C. Defamation
- D. Malediction

[1]

(n) What is a cost-plus contract?

- A. The contract specifies exactly what the customer will pay, except for penalty clauses.
- B. The contract specifies that the customer will pay the supplier's actual cost plus a profit margin.
- C. The contract specifies exactly what the customer will pay, excluding any profit margin.
- D. The contract does not specify an exact figure that the customer will pay, but instead sets an upper ceiling on cost.

[1]

(o) What is the most accurate definition of consultants?

- A. Suppliers that provide customers with the services of an agreed number of staff for an agreed period at agreed rates.
- B. Individuals who contract out their own services.
- C. Experts who are contracted to advise customers on their operations or project.
- D. Suppliers that provide customers with a team of varied professional staff for an agreed period and agreed rate.

[1]

(p) What is the purpose of the (UK) Unfair Contract Terms Act 1977 (UCTA)?

- A. The consolidation of existing consumer rights, protection and remedies.
- B. Ensures that liability-limiting terms are only enforceable in law according to the extent that they are reasonable.
- C. Requires that goods, including retail software, sold must be fit for purpose.
- D. Ensures that companies are able to enforce unfair, non-standard contract terms in specific scenarios, e.g. national economic crisis.

[1]

(q) In UK law, in what situation does the Computer Misuse Act (CMA) 1990 apply?

- A. UK citizens only, who access a computer in the UK.
- B. UK citizens only, who access computers anywhere except in the UK.
- C. Anyone, anywhere, who accesses a computer in the UK.
- D. Non-UK citizens only, who access a computer in the UK.

[1]

(r) The (US) Computer Fraud and Abuse Act 1986 was enacted to combat misuse. What does the act **not** specifically cover?

- A. Unauthorised access to any “protected computer”.
- B. Trafficking in passwords.
- C. Denial-of-service attacks.
- D. Providing misinformation to companies, e.g. lying on an application form.

[1]

(s) In UK law, what laws cover computer fraud?

- A. Computer fraud is covered by existing anti-fraud laws.
- B. Computer fraud is covered by the (UK) Computer Abuse Act 2018.
- C. Computer fraud is covered by the European General Data Protection Regulations (GDPR).
- D. Computer fraud is not covered in UK law.

[1]

(t) The (UK) Police and Justice Act 2006 (PJA) enhanced the (UK) Computer Misuse Act (CMA) 1990. Which of the following was directly addressed in the PJA act?

- A. Denial-of-service attacks
- B. Advanced persistent threats.
- C. Providing misinformation to websites, e.g. lying about age to join social network.
- D. Making private research papers publicly available.

[1]

2. Consider each of the following scenarios. Identify and briefly explain the professional, legal, ethical, and/or social issues raised by each scenario.

Note: Your answers should be short (50–100 words for each scenario).

- (a) Rosalind applied for a mortgage with a UK bank, unfortunately the application was unsuccessful. Rosalind subsequently learned that the bank relied on inaccurate data about her, that she believes has resulted in the unsuccessful application. Rosalind contacted the bank to have the data updated, but the bank states that the data is not inaccurate. Rosalind is not only concerned about the inaccurate data, but also has concerns about the automatic processing of her data for the application.

[5]

- (b) Russell and Bertrand have spent several years developing an event listing database for major cities in the United Kingdom. The database supports a web application that enables individuals to find events in their area. Russell is also employed as a software engineer for TicketKing - a large ticket sales company. TicketKing sells tickets for live events and concerts across the country and also has its own events database. Russell has created a publicly accessible service, without consulting anyone within TicketKing, that makes data available from the TicketKing database accessible to anyone that knows how to access it. Russell and Bertrand have used the service to update their own database with data from the TicketKing database. Russell and Bertrand are confident that their database will form the basis of a strong start-up company. However, Bertrand is concerned that they cannot legally protect their database.

[5]

- (c) Lamport Distribution Service (LDS) has developed a system (software and hardware) that significantly improves the efficiency of their operation. However, some employees have been injured from the system failing at various points during its development. LDS have apologised to the employees and have compensated them accordingly. LDS do not want to publicise the events as they do not want competitors to learn of their new system. Leslie, a software developer for the company, is concerned about the actions of the company and has decided to report the incidents to national media.

[5]

- (d) Ware and Willis are in discussions with a large company to deliver a bespoke software solution. Ware and Willis have limited experience, having never developed software at such scale. Nevertheless, Willis has heavily promoted their abilities and extensive experience to the company, stating they have delivered several systems across the world. Willis states that they are so confident in their abilities that the software solution will contain no errors or bugs. The company has confidence in the pair but have insisted that they must agree to a fixed-price contract as software requirements have not been finalised. The company also want the pair to agree to contract terms that explicitly state that software must not contain bugs and if any arise then a 50% fee penalty will be applied. The company state such practice is normal given the legal context of the UK.

[5]