



DUBLIN INSTITUTE OF TECHNOLOGY

DT228 BSc. (Honours) Degree in Computer Science

Year 1

WINTER EXAMINATIONS 2015/2016

INFORMATION TECHNOLOGY FUNDAMENTALS [CMPU1012]

DR. ART SLOAN
DR. DEIRDRE LILLIS

THURSDAY 14TH JANUARY

9.30 A.M. – 11.30 A.M.

TWO HOURS

ANSWER **QUESTION 1** AND **ANY TWO** QUESTIONS OF THE REMAINING THREE
AVAILABLE.

QUESTION 1 CARRIES 40 MARKS WHILE ALL FURTHER QUESTIONS EACH CARRY 30
MARKS.

1. Compulsory

- (a) Compare the main aspects of analogue and digital computer devices. (10 marks)
- (b) Give three examples of modern computer types and identify their practical use based on their type classification. (10 marks)
- (c) Describe briefly the functionality of hardware and software as part of an information technology system. (10 marks)
- (d) Define the operating system of a computer. List some of its main attributes as systems software. (10 marks)
2. (a) Compare the four generations of computer hardware in terms of their history and main technology. (10 marks)
- (b) How do information systems solve problems for the areas of society known as Government, Business and Education? (10 marks)
- (c) Give a definition of software 'coding' and compare procedural and object-oriented programming. (10 marks)
3. (a) What are the main aspects of an information system project? You should include the roles of Project Manager and Information Technology Manager as part of your answer. (10 marks)
- (b) Describe the role of the Systems Analyst in information technology development. (10 marks)
- (c) Describe information technology 'complexity' in terms of hardware, software and networking. (10 marks)
4. (a) Give an account of the 'user' of an information system and list some end user features of an information system that a user might want from the system. (10 marks)
- (b) List some of the disciplines associated with information technology and expand on the discipline of Computer Science as one example of the list. (10 marks)
- (c) Compare the information technology domains of Mathematics, Chemistry and Education. (10 marks)