

National College of Ireland

MSc in Mobile Technologies – Full-time – Year 1 – MSCMTD 1
Postgraduate Diploma in Mobile Technologies – Part-time – Year 1 – PGDMT 1

Semester One Examinations – 2015/16

Saturday 9th January 2016
2.00pm – 4.00pm

Mobile Architecture & Security

Dr. John Murphy
Mr. Mikhail Timofeev

Full marks will be awarded for complete answers to **ALL** questions

Duration of exam: 2 hrs

Attachments: None

1.
 - (i) Give 5 examples of commonly used *Mobile Design Patterns* to do with *Interaction*.
[10 marks]
 - (ii) Outline the steps in *Secure Software Development Life Cycle (S-SDLC)*? What are the reasons for a developer to follow *S-SDLC* recommendations?
[15 marks]
2.
 - (i) Describe the main focus of *Business-to-Consumer (B2C)* mobile strategy and list *Delivery Models* for distributing a *B2C* mobile application.
[15 marks]
 - (ii) What should a developer consider when choosing between developing a *Native*, *Web* or a *Hybrid* application? Compare and contrast any 2 of the mentioned types of mobile applications.
[10 marks]
3.
 - (i) Describe how *Cross-Site Scripting (XSS)* and *Cross-Site Request Forgery (CSRF)* attacks are carried out.
[10 marks]
 - (ii) Describe briefly the *N-tier Architecture* and define the components of the *Business Layer (BLL)*.
[15 marks]
4.
 - (i) Define the following *Presentation Components*:
 - a. User Interface
 - b. Presentation Logic
 - c. Presentation Model
[10 marks]
 - (ii) What are the principles of *Object-Oriented Design (OOD)*?
[5 marks]
 - (iii) Give 5 examples of any of the *Structural* or *Behavioural Design Patterns* used in programming.
[10 marks]