

KASNEB

CICT PART III SECTION 5

MOBILE APPLICATION DEVELOPMENT

THURSDAY: 26 May 2016.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

(a) Highlight five technical demerits of an iPhone as compared to an Android phone. (5 marks)

(b) Mobile application developers face many challenges.

With reference to the above statement:

(i) Identify five challenges faced by mobile application developers. (5 marks)

(ii) Suggest possible mitigation measures for each of the challenges identified in (b)(i) above. (5 marks)

(c) Outline five vulnerabilities affecting mobile applications. (5 marks)

(Total: 20 marks)

QUESTION TWO

(a) Distinguish between each of the following pair of terms in the context of mobile application development:

(i) "Google play" and "Apple app store". (2 marks)

(ii) "Client based app" and "Web based app". (2 marks)

(iii) "Android emulator" and "Android debug bridge". (2 marks)

(iv) "Explicit intents" and "implicit intents". (2 marks)

(b) Write code using jQuery script to display the following form on the screen of a mobile device:

Personal Details

Full Name

Date of Birth

Email

Physical Address

(8 marks)

(c) Using HTML code, differentiate between "ID selector" and "class selector".

(4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) The Android software development kit (SDK) includes a variety of tools that assist in the development of Android applications.

Required:

Explain the function of two types of tools under each of the following categories:

- (i) Virtual device tools. (4 marks)
 - (ii) Development tools. (4 marks)
 - (iii) Build tools. (4 marks)
- (b) Discuss four key challenges to the testing of mobile applications. (8 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Examine the procedure you would follow to create a single view application that would run on an iOS simulator. (4 marks)
- (b) Distinguish between the following pairs of terminologies in the context of mobile application development:
 - (i) "Linear layout" and "relative layout". (4 marks)
 - (ii) "Native code" and "bytecode". (4 marks)
 - (iii) "App store optimization" and "app store rating". (4 marks)
 - (iv) "Open handset alliance (OHA)" and "open source development labs (OSDL)". (4 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Analyse five best practices for ensuring the security of data in mobile devices. (10 marks)
 - (b) Describe six components that provide the building blocks for Android applications. (6 marks)
 - (c) Contrast between "mobile application management" and "mobile device management". (4 marks)
- (Total: 20 marks)**
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