**NAIROBI INSTITUTE OF BUSINESS STUDIES**

**DEPARTMENT OF COMPUTER SCIENCES**

**DIPLOMA IN COMPUTER ENGINEERING (ABMA LEVEL 5)**

**END OF TERM EXAMINATION– SEPTEMBER 2014**

**TIME ALLOWED: 3 HOURS**

**HUMAN COMPUTER INTERRACTION**

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| **INSTRUCTIONS:**   1. Answer **ALL the Seven questions.** 2. **Time allowed is 3 hours.** 3. Any examination **irregularity** will lead to **disqualification.** 4. Indicate your **Admission No**. in each answer sheet provided. 5. Cell phones should be switched off during the examination. 6. No reference material of any kind should be carried into the examination room. 7. Marks may be lost for illegibility. 8. All questions carry equal marks. |

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**Question 1**

Critically evaluate the value of consistency in a user interface. (20 marks)

**Question 2**

Iterative design processes often rely on heuristic evaluations as a means to assess the usability of both early and late stage prototypes. Evaluate different of heuristic rules and identify key heuristics, with justification for the choices made. (20 marks)

**Question 3**

Analyse techniques that can be used to ensure that people with different levels of visual ability are able to access the same content. Provide examples where appropriate.

(20 marks)

**Question 4**

Traditional WIMP (windows, icons, menus, pointers) interfaces that use mice and keyboards have been the norm for many years. Contemporary systems have begun to rely on more novel, haptic and tactile solutions. Assess the value of both traditional and novel approaches and associated impacts of each. (20 marks)

**Question 5**

Fitts’ law dictates that the size and position of a button relative to other elements on the screen can affect how long it takes a user to click a button. Compare and contrast other techniques which could be used to improve efficiency within a system. (20 marks)

**Question 6**

Many users with visual disabilities choose to use a screen reader to browse the web. Examine the challenges that a screen reader causes to its user that are not present in a traditional web browser environment. (20 marks)

**Question 7**

Buttons and switches exist in the real world and have been translated to computer systems in order to ease the transition between technology and the real world. Analyse other examples of translations that have been taken from the real world and implemented in software and discuss their value in a given context. (20 marks)