## NATIONAL OPEN UNIVERSITY OF NIGERIA
### PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWASY, JABI-ABUJA
### FACULTY OF SCIENCES
### DEPARTMENT OF COMPUTER SCIENCE ᴜᴢᴍ
### JANUARY 2021 EXAMINATIONS

**COURSE CODE** : CIT811
**COURSE TITLE** : **USER INTERFACE DESIGN AND ERGONOMICS**
**CREDIT UNIT** : 3
**TIME ALLOWED** : 2 ½ HOURS
**INSTRUCTION** : ANSWER QUESTIONS 1 (ONE) AND ANY OTHER FOUR (4)

1a) State the usefulness of the following user interfaces (**3mks**)
 i)   Attentive user interfaces  ii)  Crossing-based interfaces  iii) browser window  iv) Group interfaces  v) Executive-Process/Interactive Control System vi) Text user interfaces


1b)  Mention and briefly comment on the user interfaces that are common various fields outside desktop computing *(3mks)*

1 c.) Compare the following in relation to User Interface Design *(7Mks)*

1d) Enumerate and briefly comment on the concepts of Usability *(5marks)*

1e)  Justify the benefits of the following interaction styles
> i)      Command Language **(2 Marks)**
> ii)     Menu Selection      **(2 Marks)**


**2a).** In the context of user interface design, define the term Prototyping? What are the main stages of Prototyping? *(5mark)*

2b) what is IxD? List the six major steps of IxD  *(4 mks)*

2c)      Write short notes on
> i)      Visibility
> ii)     Accessibility

#### (3 Marks)

3.      What is Heuristics in relation to user interface design? Itemize any four Nielsen and Molich's Heuristics *(4mks)*

3b) why is usability necessary in HCI? What usability considerations you would you adopt during user interface design? **(5Mks)**

3c) What is you understand by Iterative Design? What requirements of interactive design should be met during Interface Design? **(3 Marks)**

4a)      Explain the aspects of ergonomics you know **(5mks)**

4b) Enumerate any eight (8) kinds of layout managers **(4marks)**

4c)  Sate the goal of zero training and briefly comment the types of training involved in software design you know **(3mks)**

5a. State any strengths and limitations of direct manipulation? *(5½Marks)*

5b) itemize the useful hints for debugging outputs **[4 marks]**

5c)      In what ways are constraints useful? **[2½  marks]**

6a)      Mention and briefly describe any four examples of Object-oriented user interface **(5 Marks)**

6b)  what is an interface builder? Enumerate their role in interface design? **(4mks)**

6c) State the advantages and disadvantages of Widgets **(3mks)**