Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec– 2017**

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| **Code :** | **14CS2020** | **Duration :** | **3hrs** |
| **Sub. Name :** | **FUNDAMENTALS OF HUMAN COMPUTER INTERACTION** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Give three examples of future ways for interacting with computers because of the inverse of Moore’s Law that why the inverse law will actually make the necessary difference. | CO1 | 15 |
| b. | Which leads to the problem described by Don Norman as the “Gulf of Evaluation”? | CO2 | 5 |
| (OR) | | | | |
| 2. |  | Draw the architecture of Interactive Systems and describe the functions of various components. Design interactive system for controlling the room temperature using Temperature Control Model which consists of Min, Max, Temp integer values, also describe view and controller for the following scenario.   1. Graphical temperature control 2. Speech temperature control 3. Physical world temperature control | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | Write three different types of widgets and explain the widget types with the proper examples. | CO1 | 15 |
|  | b. | Discuss the difference in purpose between key focus and mouse focus? | CO3 | 5 |
| (OR) | | | | |
| 4. | a. | Define the role of event handlers in terms of Event/Code binding methods. | CO3 | 8 |
|  | b. | List the three issues in event handling. What are responsibilities of windowing system in converting user action into events and sending it to widgets? | CO2 | 4 |
|  | c. | How widget modified the traditional model view controller? Design the container widget for any pane application. | CO3 | 8 |
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| 5. | a. | Differentiate Layout and Constraints. Discuss any two layout algorithms with example. | CO2 | 15 |
|  | b. | How does MAC Operating System uses struts and springs in widget placement? | CO1 | 3 |
|  | c. | Difference between Over- Constraint and Under-Constraint. | CO1 | 2 |
| (OR) | | | | |
| 6. | a. | Why do implementations that use abstract model widget frequently have translator objects between the widget and the real model? Explain with the neat sketch. | CO3 | 5 |
|  | b. | Discuss about the features of Digital ink. | CO2 | 15 |
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| 7. | a. | Identify and explain which type of widget allow you to group things by similarity, topic, information and variety. List out some of the applications related with these widgets and find the similarities and differences between them. | CO3 | 12 |
|  | b. | A Toolbar contains the following components New, Open, Save, Print, Search, Spell Check and so on. All these items are saved into a file called ToolBar.properties (using the Java convention). How would you localize this user interface into French? | CO2 | 8 |
| (OR) | | | | |
| 8. | a. | List out the advantages and disadvantages of each?   1. Pixel Distribution 2. Graphics Interface Distribution 3. Programmable Clients 4. Model Semantics Distribution 5. Data Layer Distribution | CO1 | 15 |
|  | b. | Explain about the state machine diagram for the following vent methods:  i) mouseDown (), ii) mouseMove (), iii) mouseUp() | CO2 | 5 |
|  | |  |  |  |
|  | | **Compulsory:** |  |  |
| 9. | a. | Briefly explain about the three pieces of web application. | CO1 | 15 |
|  | b. | Explain about the functionalities used in Functional Design. | CO3 | 5 |

ALL THE BEST