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 – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **15EI2023** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SENSORY AND MOTOR REHABILITATION** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q. No | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Rehabilitation technology provides support to the disabled. Justify the statement with suitable illustration. | CO 3 | 10 |
| b. | Write notes on community based rehabilitation. | CO 1 | 10 |
| (OR) | | | | |
| 2. | a. | Discuss the methods of assistive device design. | CO 2 | 10 |
| b. | Explain any one applications of assist devices. | CO 1 | 10 |
|  |  |  |  |  |
| 3. | a. | Explain the methods of integrating accelerometer and LDR in assist device. | CO 2 | 10 |
|  | b. | Explain the applications of using sensors in assist devices. | CO 2 | 10 |
| (OR) | | | | |
| 4. | a. | Explain the functions of tread mill robot in rehabilitation training. | CO 1 | 10 |
|  | b. | List few applications of robots in lower limb rehabilitation. | CO 3 | 10 |
|  |  |  |  |  |
| 5. | a. | Explain the construction of the robot. | CO 1 | 8 |
|  | b. | Classify the robots based on its applications. | CO 3 | 4 |
|  | c. | How does robots useful in rehabilitation? | CO 3 | 8 |
| (OR) | | | | |
| 6. | a. | List the advantages of prosthetic arm to disabled. | CO 3 | 5 |
|  | b. | Elaborate the working of prosthetic arm with myoelectric signals. | CO 1 | 15 |
|  |  |  |  |  |
| 7. | a. | Mention the advantages of assist devices to old aged subjects. | CO 3 | 10 |
|  | b. | Discuss few assistive devices that can be useful to old aged subjects at home. | CO 1 | 10 |
| (OR) | | | | |
| 8. | a. | Design the smart assistive device for the following categories: a) disabled b) paralyzed subjects c) children | CO 2 | 15 |
|  | b. | List the activities carried out using the assist devices. | CO 1 | 5 |
|  |  |  |  |  |
|  | | **Compulsory:** |  |  |
| 9. | a. | Discuss the mobility devices used by disabled subjects. | CO 3 | 5 |
|  | b. | How does mobility devices be useful to disabled and elderly subjects. | CO 3 | 5 |
|  | c. | Identify a suitable methods of monitoring the elderly subjects from remote location. | CO 3 | 10 |

ALL THE BEST