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

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14ME2044** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INDUSTRIAL DESIGN** | **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. | List out the three important considerations of a good design and with a example explain the design performance. | CO1 | 10 |
| b. | Explain the various strategies for generating an innovative solution to a design problem. | CO1 | 10 |
| (OR) | | | |  |
| 2. | a. | What do you mean by ideality? Suggest how to improve the ideality of a system. | CO1 | 10 |
| b. | Explain the three major subsystems to PLM. | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Illustrate with an example how PDM links between product design and manufacturing. | CO2 | 10 |
| b. | Show the methods to reduce the manufacturing cost and by improving the product quality with a suitable diagram. | CO2 | 10 |
| (OR) | | | |  |
| 4. | a. | With a suitable example list out the hierarchy of human needs. | CO2 | 10 |
| b. | With a suitable example list out the characteristics of an environmentally responsible design. | CO2 | 10 |
|  |  |  |  |  |
| 5. | a. | Can we get an intellectual property for Environmental and human safety, justify. | CO3 | 10 |
| b. | With a suitable example explain the legal and ethical domains. | CO3 | 10 |
| (OR) | | | |  |
| 6. | a. | How to solve the standards of conduct of the individuals within society. | CO3 | 10 |
| b. | With a neat sketch explain the concepts of ergonomics, to improve the design of an on/off switch in a right-angle drill. | CO3 | 10 |
|  |  |  |  |  |
| 7. | a. | Design a workspace suitable for assembly of electronic components, to improve the efficiency of assembly. | CO2 | 10 |
| b. | Design a process to eliminate the variations occurs in the repetitive task. | CO2 | 10 |
| (OR) | | | |  |
| 8. | a. | Define brittle Fracture? Design a product which is free from Brittle fracture and explain. | CO2 | 10 |
| b. | Design and explain a product which has Infinite Life Design. | CO2 | 10 |
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|  | | **Compulsory**: |  |  |
| 9. | a. | Explain the correspondence between human factors characteristics and product performance with a suitable example. | CO1 | 10 |
| b. | Explain the Spectrum of engineering functions with a suitable example. | CO1 | 10 |