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



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17BI2013** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **BIOETHICS, IPR AND BIOSAFETY** | **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. | Illustrate the different levels of moral development attained by women as per Kohlberg's and Gilligan's theory. | CO1 | 15 |
| b. | List different types of inquiry. | CO1 | 3 |
| c. | Define Moral autonomy. | CO1 | 2 |
| **(OR)** | | | | |
| 2. | a. | Discuss in detail the different models of professional roles. | CO2 | 12 |
| b | List the theories of right action and religion moral values. | CO2 | 04 |
| c. | State the variety of moral issues. | CO2 | 04 |
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| 3. | a. | Discuss in detail the role of engineers in directions for yield effect in agriculture and aquaculture. | CO4 | 10 |
| b. | Explain in detail the role of engineers in bioremediation of environment and its importance in present scenario. | CO4 | 10 |
| **(OR)** | | | | |
| 4. | a. | Elaborate the special procedures for r-DNA based product production with suitable examples. | CO1 | 15 |
| b. | Discuss the ethics behind release of genetically modified organisms in the environment . | CO5 | 05 |
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| 5. | a. | Expand TRIPS. | CO3 | 02 |
| b. | List the uses of copy rights. | CO3 | 03 |
| c. | Illustrate the importance of farmers right with special emphasis of GM crops and the need for engineers to develop research focus to the need of poor with suitable statistics and examples. | CO4 | 15 |
| **(OR)** | | | | |
| 6. | a. | What is biodiversity? | CO3 | 02 |
| b. | Define Intellectual Property Rights. | CO1 | 02 |
| c. | Elaborate the technical details and claims to be provided in the Form II of patent filing with necessary example. | CO4 | 16 |
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| 7. |  | Elaborate in detail the role of engineers in development of weapons in DRDO, India and its importance in present scenario. | CO4 | 20 |
| **(OR)** | | | | |
| 8. | a. | Illustrate the various factors governing the global issues of MNC with suitable examples. | CO5 | 10 |
| b. | Explain in detail the model code of ethics of different Associations of engineers in India. | CO5 | 10 |
|  | | **Compulsory:** |  |  |
| 9. | a. | What is Biosafety? | CO4 | 02 |
| b. | List the different levels of containment. | CO1 | 04 |
| c. | Illustate the rDNA guidelines formulated by DBT India in development of GMO and state its importance in rDNA products in present scenario. | CO5 | 14 |