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

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

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|  |  |  |  |
| **Code :** | **16NT3009** | **Duration :** | **3hrs** |
| **Sub. Name :** | **NANOTECHNOLOGY FOR CANCER DIAGNOSIS AND TREATMENT** | **Max. marks :** | **100** |

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

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| **Q. No.** |  | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Give a detailed account on how Gleevec acts in the treatment of chronic myeloid leukemia, the occurrence of relapse at the blast crisis phase, and the further inhibition of the relapse by Sprycel. | CO2 | 20 |
| (OR) | | | | |
| 2. |  | Describe the types of mutations in the development of cancer. | CO1 | 20 |
|  | | | | |
| 3. |  | Give a detailed account of monoclonal antibodies and topoisomerase inhibitors in the chemotherapy for cancer. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Elaborate the role of antibiotics and alkylating agents in the treatment of cancer. | CO3 | 20 |
|  | | | | |
| 5. |  | Discuss the principle and applications of MRI in the diagnosis of cancer. | CO3 | 20 |
| (OR) | | | | |
| 6. |  | Explain the working principle, mechanism, and advantages of ultrasonography in the diagnosis of cancer. | CO4 | 20 |
|  | | | | |
| 7. |  | Explain the role of rare earth element-based materials in the diagnosis of cancer. | CO4 | 20 |
| (OR) | | | | |
| 8. |  | Describe the applications of magnetic nanomaterials in cancer diagnosis. | CO5 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Explain the applications of magnetic nanoparticles in targeted drug delivery of cancer drugs. What are the criteria for designing nanomaterials for hyperthermia applications? | CO5 | 20 |