GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION - SUMMER 2016

Subject Code: 2163903 Date:11/05/2016

Subject Name: NANOTECHNOLOGY AND MEDICINE

Time: 10:30 AM to 01:00 PM Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

| Q.1 | (a) | Explain role of nano magnetic particle in medical field. | 07 |
|-----|------------|--|----|
| | (b) | Write a short note on Magnetic Hyperthermia. | 07 |
| Q.2 | (a) | Write a short note on magnetic chemotherapy. | 07 |
| | (b) | Write a short note on use of maghemite (Fe2O3) for the cancer treatment. OR | 07 |
| | (b) | Explain Biocompatibility issues of magnetic NPS | 07 |
| Q.3 | (a) | Gold Nanoparticles as Drug Carriers | 07 |
| | (b) | Explain encapsulation of magnetic nanoparticle. | 07 |
| | | OR | |
| Q.3 | (a) | Explain use of Nano biotechnology in medicine. | 07 |
| | (b) | Mention few landmarks in the evolution of nano medicine. | 07 |
| Q.4 | (a) | Write a shrot note on Cyclodextrin Nanoparticles for Drug Delivery. | 07 |
| | (b) | Write a short note on use of Ceramic Nanoparticles in medicine. | 07 |
| | | OR | |
| Q.4 | (a) | Write a short note on Nano capsules | 07 |
| | (b) | Write a short note on polymer based nano capsules. | 07 |
| Q.5 | (a) | Expalin Flash Nano Precipitation | 07 |
| | (b) | Explain Prolonging Circulation of Nanoparticles by Attachment to RBCs | 07 |
| | | OR | |
| Q.5 | (a) | Write a short note on application of magnetic nanoparticles as drug carrier. | 07 |
| | (b) | Write down properties of magnetic particles for use a drug or drug carrier. | 07 |
