

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch -**BIOTECHNOLOGY**

NANO BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

Answer **ALL** questions
ALL questions carry **EQUAL** marks (2 + 5+ 8)

- 1 a What are examples of nanotechnology?
b Explain the principal and working of a scanning electron microscope,
c Explain the construction and working of an atomic force microscope.
OR
d What are the uses of nanomaterials?
e Explain the Quantum Dots and carbon Nano tubes,
f Explain briefly preparation gold nano particles.
- 2 a What is bioelectronic medicine?
b Outline the biological functions of neuronal cell,
c Give detail notes on DNA computing.
OR
d What is DNA chips used for?
e Write notes on molecular processor,
f Discuss the biologically inspired nanocomposite.
- 3 a What are biosensor and its applications?
b Discuss the using protein in nano devices.
c Explain nucleic acid based biosensor for clinical applicators.
OR
d What are the genetic properties of DNA?
e Write note on biomagnetic sensors,
f Explain DNA protein conjugated based sensors.
- 4 a What are targeted cancer therapies?
b Give a brief note on prospects and future of immune sensors,
c Briefly explain DNA profiling process.
OR
d What are drug delivery devices?
e Write notes on nanoparticles based bio-barcode assay,
f Explain targeted drug delivery.
- 5 a What is UV resistant?
b Discuss on application area of nano technology in textile finishing,
c Explain chemical nanosensors for monitoring environmental pollution.
OR
d What is the nanofiber?
e Discuss electro spinning of nanofibres for tissue engineering applications.