## BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI <br> (END SEMESTER EXAMINATION)


Q.1(a) Describe briefly about calibration, qualification and validation.
Q.1(b) What do you mean by FAT \& SAT? Explain in detail about various aspects of FAT \& SAT.
Q.2(a) Justify the role of intellectual property right in pharmaceutical industry.
Q.2(b) Define Patent and discuss about significance of PCT in patent filing.
Q.3(a) Explain the qualification of Pharmaceutical water system.
Q.3(b) Explain the qualification of Dissolution test apparatus
Q.4(a) Discuss the Computerized system validation with respect to Validation of Hardware.
Q.4(b) Define and differentiate between digital signature, electronic signature and handwritten signature?
Q.5(a) Discuss the Validation of facilities in sterile plant.
Q.5(b) Explain the validation of analytical method used in cleaning with a suitable example.
Q.6(a) Define and discuss the types of process validation with suitable examples.
Q.6(b) Discuss the Validation of an analytical method as per ICH guidelines.
Q.7(a) Explain the qualification of UV-Visible spectrophotometer.
Q.7(b) Explain the qualification of Tablet Compression Machine.

