

**PARUL UNIVERSITY**  
**FACULTY OF PHARMACY**  
**M.Pharm., Summer 2017-18 Examination**

**Semester: 2****Subject Code: MPC204T****Subject Name: Pharmaceutical Process Chemistry****Date: 22-05-2018****Time: 10:00AM to 01:00PM****Total Marks: 75****Instructions:**

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

**Q.1 Essay Type Questions. (any 2 out of 3) (15 Marks Each) (30)**

1. Describe Impurities in API, types and their sources including genotoxic impurities?
2. Describe Principle and general methods of Preparation of polymorphs?
3. Describe in detail MSDS (Material Safety Data Sheet)?

**Q.2 Short Essay Type Questions. (any 5 out of 6) (5 Marks Each) (25)**

1. Write in brief families of reagents useful for scale-up?
2. Define Personal Protection Equipment (PPE)?
3. Write in brief fermentation. Production of Vitamins B12?
4. Describe catalytic halogenations?
5. Write types of oxidative reactions?
6. Write in brief Theory of filtration?

**Q.3 Short Answers. (2 Marks Each)? (20)**

1. Give 2 factors which affecting evaporation?
2. Define amorphous APIs?
3. Differentiate Bench, pilot scale process?
4. Difference between Aerobic and anaerobic fermentation?
5. Write full form of (OHSAS-1800)?
6. Describe ISO-14001?
7. Write full form of MSDS?
8. Write full form of (PPE)?
9. Define ozonolysis?
10. Give name of equipment used for technical nitration process?