**Week 5: Question Bank**

Course: M.Sc., Microbiology Semester II

Subject: Industrial Microbiology

Course Code: MICR-522

Subject teacher: Dr. Shrivardhan Dheeman

**MCQs (1 points each)**

Q. 1 Product are produced in the medium outside of the microbial cell are called-

 a) Endocellular

 b) Exocellular

 c) Ect-endo cellular

 d) Periplasmic metabolite

Q. 2 Which of the following enzyme is recovered by deamination?

 a) Lipase

 b) Protease

 c) Xylanase

 d) Cellulase

Q. 3 Development of inoculum is a step of-

 a) Up-stream process

 b) Down-stream process

 c) Both

 d) None of the above

Q. 4 Which of the following is **not** related to down-stream process?

 a) Cell separation

 b) Crystallization

 c) Starter Culture

 d) Centrifugation

**Short Answers (2 points each)**

Q. 5 Describe the filtration process in brief.

Q. 6 What is cell disruption?

Q. 7 Write Media composition and fermentation conditions for cellulose production.

Q. 8 Why xylanase is utilized for paper decolourization? Provide reason.

**Long Answers (4 points each)**

Q. 9 Outline up-stream and down-stream processes for fermentation.

Q.10 Describe an overview of microbial enzyme production using fermentation.