

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
MID SEMESTER EXAMINATION-2015

M.Tech (Biotechnology), II Semester

COURSE CODE: 14M11BT211

MAX. MARKS: 30

COURSE NAME: Industrial Biotechnology

COURSE CREDITS: 3

MAX. TIME: 2 HRS

Note: All questions are compulsory.

Section A (6 Marks)

1. Match the following one's (3 Marks)
- | <u>Discovery /Invention</u> | <u>Scientist</u> |
|-----------------------------|-----------------------|
| (a) Magic Bullet | (i) Davey and Johnson |
| (b) Fed-batch Fermentation | (ii) Waksman |
| (c) Streptomycin | (iii) Paul Ehrlich |
2. Fill in the blanks (3 Marks)
- (a) What is Orlistat -----
- (b) Antitumor agent "Taxol" is produced from the bark of -----
- (c) Production of ----- is the first example of use of biological process to compete with a chemical process in petrochemical industry.
- (d) -----

Section B (9 Marks)

3. Write about the following one's
- (a) Firmicutes used in IB sector (2.5 M)
- (b) Types of resistant starch (2 M)
4. Discuss about the following one's
- (a) Important characteristics of microbes used in IB (2 M)
- (b) Bating enzymes Vs Meat tenderizing enzymes (2.5 M)

Section C (15 Marks)

5. Write a brief note on the following one's
- (a) Covalent chromatography Vs HIC (2.5M)
- (b) Aim of oil degumming and Enzymatic degumming (2.5M)
- (c) How to incorporate a -thiol (-SH) group in any protein (1 M)
- (d) For which type of biologicals, IMAC is used as a DSP step of interest (1 M)
6. Write in detail about the following one's
- (a) Key technological building blocks of Industrial Biotechnology (5 M)
- (b) Comparative characteristics of SSF and SmF (2.5 M)

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