

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-2 EXAMINATION OCTOBER 2018

B.Tech 7th Semester

Dr. Abhishek

COURSE CODE: 18B1WBT731

MAX. MARKS: 25

COURSE NAME: Biosensors: Principle and applications

COURSE CREDITS: 03

MAX. TIME: 1HR 30 MIN

Note: All questions are compulsory. Carrying mobile phone during examinations will be treated as a case of unfair means.

1. Draw a neat sketch and explain how electrochemical biosensors play a crucial role in diabetes management. [4] [CO-2,3]
2. Write the physical principles of surface plasmon resonance (SPR). How biosensor can be used in environmental monitoring [2+3] [CO-4]
3. Define "Label" and "Label free" biosensor and briefly describe label biosensor with suitable example. [5] [CO-2,4]
4. Explain the following. [CO-1]
 - (a) Photoelectric effect [1.5]
 - (b) Indicator electrode [1.5]
 - (c) PMT [2.0]
 - (d) Immunosensors [2.0]
5. Draw a neat sketch and explain the design of colorimetric biosensor [4] [CO-4]