JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T3 EXAMINATION- DECEMBER 2017
BTDD XI & M.Tech 3rd Semester

MAX.MARKS: 35

MAX. TIME: **2 Hrs**

COURSE CODE:14M1WBT332
COURSE NAME: Clinical Diagnostics
COURSE CREDITS: 3

Note: All questions are compulsory. Carrying of mobile phone and calculator during examinations will be treated as case of unfair means. Marks are indicated in square brackets.

Q1. Discuss the application of biosensors in clinical diagnostics. What are the various principles on which biosensors are working? Explain any enzyme based clinical biosensor.
(1+2+2)

Q2. Elaborate on the conventional methodology used to diagnose GI tract bacterial infections. What are the other technological advances reported over those conventional methods. (3+2)

Q3. Why Microscopy is regarded as the gold standard methods for diagnosis of malaria? Explain the role of RDT targets for identification of *Plasmodium falciparum*.
(2+3)

Q4. Discuss the principle of various diagnostic techniques used for detection of viral pathogens. Give a comment on advantages and disadvantages associated with these techniques. (3+2)

Q5. Enlist the factors and methodology for the development of an assay and its validation. (5)

Q6. Explain the following in brief: (10)

a) SKY

b) Fluorescent dyes used in diagnosis

c) Quantum dots in diagnosis

d) Flow cytometery

e) Proximity assay