

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST - I EXAMINATION- 2025

B.Tech. - VIII Semester

COURSE CODE (CREDITS): 21BIWBT731 (3)

MAX. MARKS: 15

COURSE NAME: HUMAN DISEASE AND DIAGNOSTICS

COURSE INSTRUCTORS: Dr. Rahul/Dr. Jitendraa/Dr. Saurabh

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

Q. No.	Question	CO	Marks
Q1.	Case Study: A rural patient with diabetes lives 200 km away from the nearest hospital. Due to mobility issues, she cannot visit frequently. The Healthcare Centre installs a glucose monitoring device that automatically sends her blood sugar readings to the city hospital, where doctors adjust her insulin dose remotely. Based on the above case, explain how telemedicine helps in managing chronic diseases. Mention how remote monitoring of a patient's health is advantageous for both <u>patient</u> and <u>doctor</u> .	I	[3]
Q2.	"Improper handling of clinical samples during collection and transport can affect diagnostic accuracy and patient outcomes". Justify this statement with blood samples as a diagnostic material, for a specific disease.	V	[3]
Q3.	Explain the molecular pathology/symptoms of Diabetes Mellitus in humans and define the two diagnostics tests employed for detection of above mentioned disease.	V	[3]
Q4.	Differentiate between molecular, physiological, and imaging biomarkers with suitable examples.	III	[3]
Q5.	Case Study: A 32-year-old female with a family history of diabetes shows HbA1c of 6.2%, Normal fasting glucose, and elevated Alanine Transaminase (ALT). a) What does this biomarker combination suggest? b) Propose a preventive strategy and explain how biomarkers can track its effectiveness.	III	[1] [2]