JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

MAKE-UP EXAMINATION- NOV 2025

B.Tech. - VIII Semester

COURSE CODE (CREDITS): 21B1WBT731 (3)   MAX. MARKS: 25

COURSE NAME: HUMAN DISEASE AND DIAGNOSTICS

COURSE INSTRUCTORS: Dr. Rahul/Dr. Jitendraa/Dr. Saurabh   MAX. TIME: 1 Hour 30 mins

Q. No.	Question	CO	Marks
Q1.	Discuss any two future trends in telemedicine (such as AI-powered diagnostics, robotics, or global networks). How will these improve healthcare access and outcomes.	V	[4]
Q2.	With reference to wearable biosensors, write short notes on the following: a. Ring Sensor b. Smart Shirt	I	[2+2=4]
Q3.	*Case Study:* Ajit, a 45 year old individual with a sedentary lifestyle, undergoes routine blood investigations. His reports indicate elevated LDL cholesterol, increased HbA1c levels, and raised ALT activity. i. Based on these biomarker findings, identify the possible health conditions Ajit may be at risk for. ii. Propose a comprehensive action plan—including lifestyle modifications, dietary strategies, and monitoring approaches—to improve Ajit's biomarker profile and reduce long term disease risk.	IV	[1+2=3]
Q4.	Define and discuss the concept of biomarkers in health and disease. For each of the following categories of biomarkers, describe their role and provide suitable examples to illustrate their application: a) Diagnostic biomarkers b) Predictive biomarkers c) Molecular Biomarkers	III	[5]
Q5.	Describe Diabetes mellitus? Explain the different diagnostics methods to diagnose Diabetes in humans.	I	[3]
Q6.	Illustrate the following in brief: a) Clinical symptoms of Tuberculosis Disease b) Mantoux Test	IV	[3 X 2 = 6]