JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST - 2 EXAMINATION- 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

Note: (a) All questions are compulsory.

Q. No.	Question	CO	Marks
Q1.	**Case Study:** An Indian biotechnology firm is planning to launch a cost-effective wearable biosensor targeting rural and semi-urban populations. They must compete with international brands like Samsung's Galaxy Ring while considering local affordability and infrastructure. Answer the following question related to the scenario: i. Identify the key growth drivers for wearable biosensors in India. ii. What applications of wearable biosensor be used for the Indian population, adapting global technology.	V	[3 X 2=6]
Q2.	What are the unique features of Fungi? Elaborate classification of Fungi in different Phylum with their key characteristics and example. **OR** What are Aflatoxins? Elaborate their effect on human and animal health.	I	[3]
Q3.	What are the challenges in measuring vitamin levels in blood?	III	[2]
Q4.	With Reference to Cancers and their regulation, answer the following: a. What are the types of tumors based on behavior? Give one example of each. b. Describe the function of cyclins and cyclin-dependent kinases (CDKs) in regulating the cell cycle.	IV	[3 X 2 = 6]
Q5.	If someone experiences a persistent cough with blood-stained sputum for 2–3 weeks, accompanied by chest pain, fever, weight loss, and reduced or absent appetite, what could be the possible underlying disease? Explain how one can detect the disease and its causative organism using various diagnostic tests?	I	[5]
Q6.	Compare and differentiate between Latent Tuberculosis and Active Tuberculosis.	I	[3]