



VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.:

SCHOOL OF BIO SCIENCES AND TECHNOLOGY

CONTINUOUS ASSESSMENT TEST - II

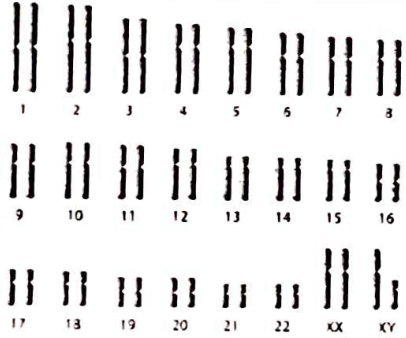
SLOT: B1+TB1

FALL SEMESTER 2024-2025

Programme Name & Branch : M.Sc Biotechnology (Intg.)
Course Code and Course Name : TBIT201L & Genetics
Faculty Name(s) : Dr John Thomas/Dr. R.Aravind Selvin kumar
Class Number(s) : VL2024250101183/ VL2024250104111
Date of Examination : 14/10/2024
Exam Duration : 90 minutes
Maximum Marks : 50

General instruction(s):

- Answer All Questions
- M - Max mark; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)
- Course Outcomes (Type the CO statements covered in this question paper. Use the CO number as per the syllabus copy)

Q.No	Questions	M	CO	BL
1.	 How are the human chromosomes classified based on the given information? How many groups are there, and what criteria are used for classification? Furthermore, how is chromosome nomenclature interpreted?	10	2	2
2.	The exact function of the gene 'YYY' in eukaryotes is currently unknown.	10	5	3

	Two research groups are working to determine its role: Group A has chosen a diploid model organism, while Group B is using a haploid model organism. Which group is likely to identify the gene's function first, and why? What is the reasoning behind this? Explain in detail			
3.	In agarose gel electrophoresis, a specific chemical carcinogen is routinely used. Write the name of the chemical, and what are its effects? In a cell culture lab, researchers use UV light before starting experiments. What is the purpose of this? Do you consider UV light to be a carcinogen? If yes, what type of carcinogen is it?	10	4	1
4.	In vitro and in vivo tests are designed to detect the compounds which induce genetic damage directly or indirectly by various mechanisms. What is the statement related to? Justify with appropriate examples.	10	4	4
5.	What type of virus is SARS-CoV-2? Do you agree that this type of virus is more prone to mutation? If so, what is the reason? Additionally, do you think vaccination can completely cure the virus?	10	6	1
