

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/2023)

CLASS: BTECH
BRANCH: BIOTECHNOLOGY

SEMESTER : III
SESSION : MO/2023

SUBJECT: BE203 MICROBIOLOGY

TIME: 02 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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			CO	BL
Q.1(a)	Classify microbes based on the temperature requirements along with examples.	[2]	A1	2
Q.1(b)	Define sterilization? What the different types of sterilization methods?	[3]	A1	2
Q.2(a)	What is selective media? Give one example.	[2]	A1	1
Q.2(b)	Discuss the technique and principle of Gram staining.	[3]	A2	2
Q.3(a)	Differentiate between compound microscope and electron microscope.	[2]	A2	1
Q.3(b)	Why do we stain the microorganisms before visualizing them under microscope? Give name of different staining method used in microbiology with examples of each type of stain.	[3]	A2	2
Q.4(a)	What do you mean by synchronous culture?	[2]	B1	1
Q.4(b)	Write a short note on growth curve of bacteria and give the formula for calculating generation time.	[3]	B2	2
Q.5(a)	What are archaebacteria? Classify them with examples.	[2]	B2	2
Q.5(b)	A researcher inoculated 10 cells of <i>E. coli</i> into the nutrient broth. How many cells would there be after 5 hours if <i>E.coli</i> has a generation time of 20 minutes.	[3]	B2	2

:::21/09/2023 E:::