

CBCS SCHEME - Make-Up Exam

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BBOK407

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2025 Biology for Engineers

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1				M	L	C
Q.1	a.	Explain the structure and function of plant cell.		10	L4	CO1
	b.	Discuss briefly about the properties and functions of nucleic acid.		10	L2	CO1
OR						
Q.2	a.	Discuss the classification and application of stem cells in brief.		10	L2	CO1
	b.	Apply the knowledge of lipid molecules use for the production of bio-diesel.		10	L3	CO1
Module – 2						
Q.3	a.	What is bio-bleaching? Explain the role of lignolytic enzymes in bio-bleaching.		10	L2	CO2
	b.	How DNA finger printing technology is applied in forensic applications? Discuss in detail.		10	L3	CO1
OR						
Q.4	a.	Outline the use of whey protein and meat analogues as food supplement. Mention their advantages.		10	L3	CO2
	b.	Illustrate the properties and applications of PHA.		10	L2	CO1
Module – 3						
Q.5	a.	Explain lugs as purification system.		10	L4	CO2
	b.	Describe the following: i) Electro Encephalogram (EEG) ii) Chronic Kidney Disease (CKD)		10	L2	CO2
OR						
Q.6	a.	Illustrate heart as a double pump.		10	L3	CO2
	b.	Write a note on: i) Pacemakers ii) Spirometry		10	L2	CO2

Module – 4

Q.7	a.	Distinguish between biological and technological ecolocation. Deliberate its significance in navigation.	10	L4	CO3
	b.	Explain the following : i) Lotus leaf effect ii) Photovoltaic cells	10	L2	CO3

OR

Q.8	a.	Discuss about engineering application of Velcro technology bio inspired by plant burrs.	10	L2	CO3
	b.	Illustrate the HBOCs and PFCs as human blood substitutes.	10	L3	CO3

Module – 5

Q.9	a.	Outline the process and materials involved in bio printing.	10	L2	CO4
	b.	Narrate the process of bio mining through microbial surface adsorption.	10	L3	CO4

OR

Q.10	a.	What are self-healing bio-concrete? Explain the process of self healing mechanism in bio-concrete. Mention its advantages.	10	L2	CO4
	b.	Write a note on : i) Bio-imaging ii) Artificial intelligence for disease diagnosis	10	L1	CO4
