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SHAMBHUNATH INSTITUTE OF ENGINEERING AND TECHNOLOGY, PRAYAGRAJ

Subject Code: BAS 202

Course: B.Tech.

Subject: Engg. Chemistry

SEMESTER: II

FIRST SESSIONAL EXAMINATION, EVEN SEMESTER, (2024-2025)

Branch : All

Time –1hr

Maximum Marks – 15

1. Attempt ALL questions.

Q N	QUESTION	Marks	CO	BL
a.	What is GREEN CHEMICALS. Write the characteristics of green chemicals.	1	CO1	L3
b.	Why does graphite show conduction property?	1	CO1	L1
c.	Write the difference between bonding and antibonding MO.	1	CO1	L3
d.	What are the differences between Top-down and Bottom-up approaches for the preparation of nanomaterials.	1	CO1	L2
e.	Arrange the following molecules or ions in order of their increasing bond length O_2 , O_2^- , O_2^{2-} , O_2^+	1	CO1	L3

2. Attempt any ONE of the following.

Q N	QUESTION	Marks	CO	BL
a.	Describe different types of liquid crystal. Discuss the applications of liquid crystal	5	CO1	L1
b.	Write molecular orbital diagram of CO molecule. Calculate their bond order and predict their magnetic behavior.	5	CO1	L3

2. Attempt any ONE of the following.

Q N	QUESTION	Marks	CO	BL
a.	Describes the structures and application of Fullerenes.	5	CO1	L1
b.	What are Carbon Nano Tubes? Discuss the applications of nanomaterials.	5	CO1	L3

Bloom's Taxonomy Level (BL) :-

Remember (L1), Understanding (L2), Apply (L3), Analyze (L4), Evaluating (L5), Creating (L6)