MODEL QUESTIONS – BOTANY

1. **Assertion (A)**: In the leaves of the sugarcane C_3 and C_4 cycles are spatially separated.
Reason (R) : Hatch and Slack pathway occurs in bundle sheath cells and Calvin cycle in mesophyll cells.
1) Both (A) and (R) are true. (R) is the correct explanation of (A)
2) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
3) (A) is true but (R) is false
4) (A) is false but (R) is true

2. Arrange the following in the order of their occurrence in the life cycle of an angiospermic plant:
I. Primary Endosperm Nucleus II. Microsporogenesis
III. Xenogamy IV. Pericarp
The correct sequence is:
1) I, III, II, IV 2) III, I, IV, II
3) II, III, I, IV 4) IV, I, II, III

3. If one strand of DNA molecule has the nucleotide sequence TAC AAT CGG TAA, the new stand synthesized in transcription will have the nucleotide sequence as:
1) ATG TTA GCC ATT 2) TAC AAT CGG TAA
3) AUG UUA GCC AUU 4) TUC UUT CGG TUU

4. Study the following lists:

List I	**List II**
A) Spadix	I. *Allium*
B) Umbel	II. *Tridax*
C) Spike	III. *Cocos*
D) Head	IV. *Achyranthus*
	V. *Hibiscus*

The correct match is:

	(A)	(B)	(C)	(D)
1.	I	IV	V	II
2.	IV	I	III	V
3.	II	III	IV	I
4.	III	I	IV	II

5. Prokaryotic cell possesses the following:
I . Chloroplast II. Cell wall
III. 70 S ribosomes IV. Well defined nucleus

The correct combination is:
1) I and II 2) II and III 3) I and III 4) II and IV

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