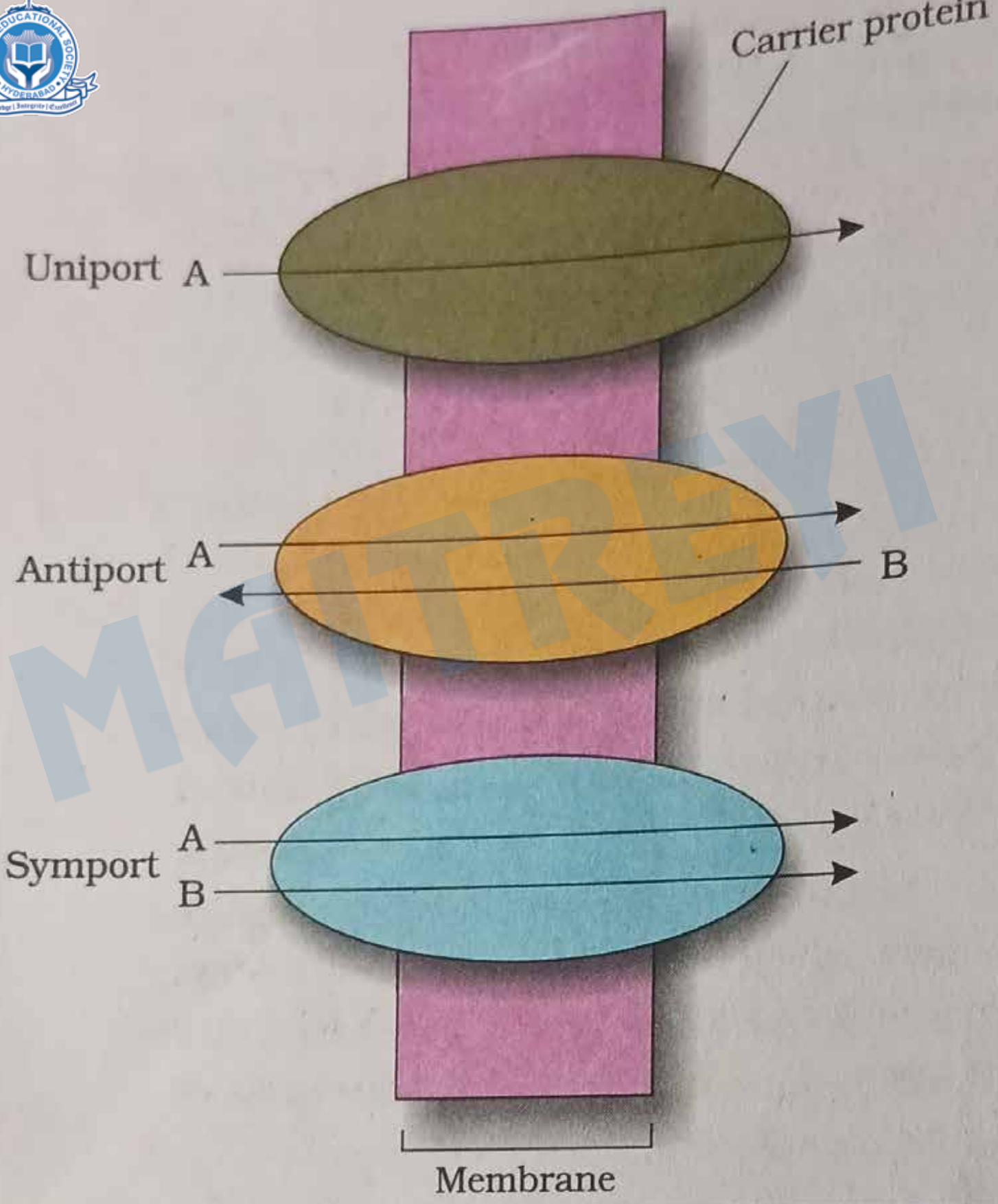
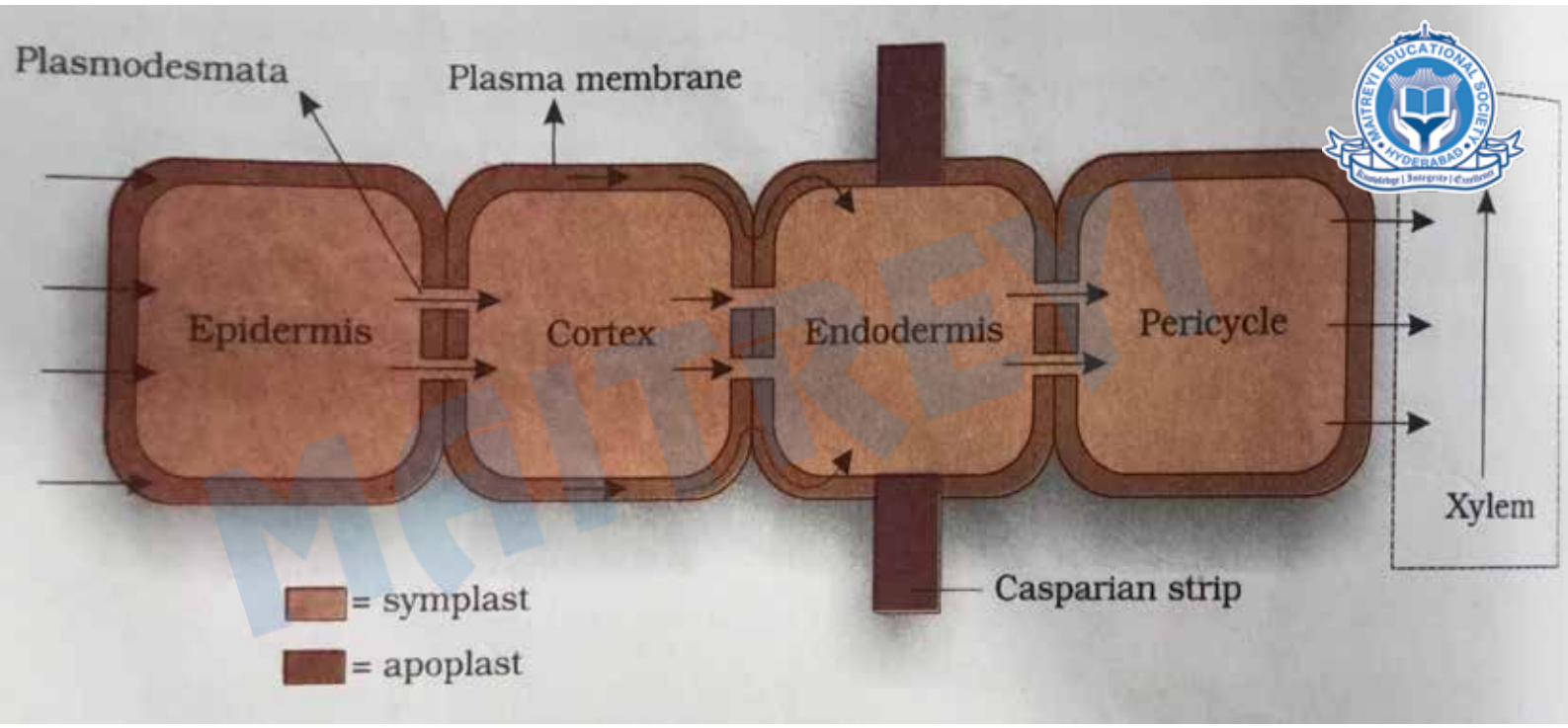


Figure 1.2 Facilitated diffusion


Plasmodesmata
Plasma membrane
Epidermis
Cortex
Endodermis
Pericycle
Xylem
Casparian strip
= symplast
= apoplast

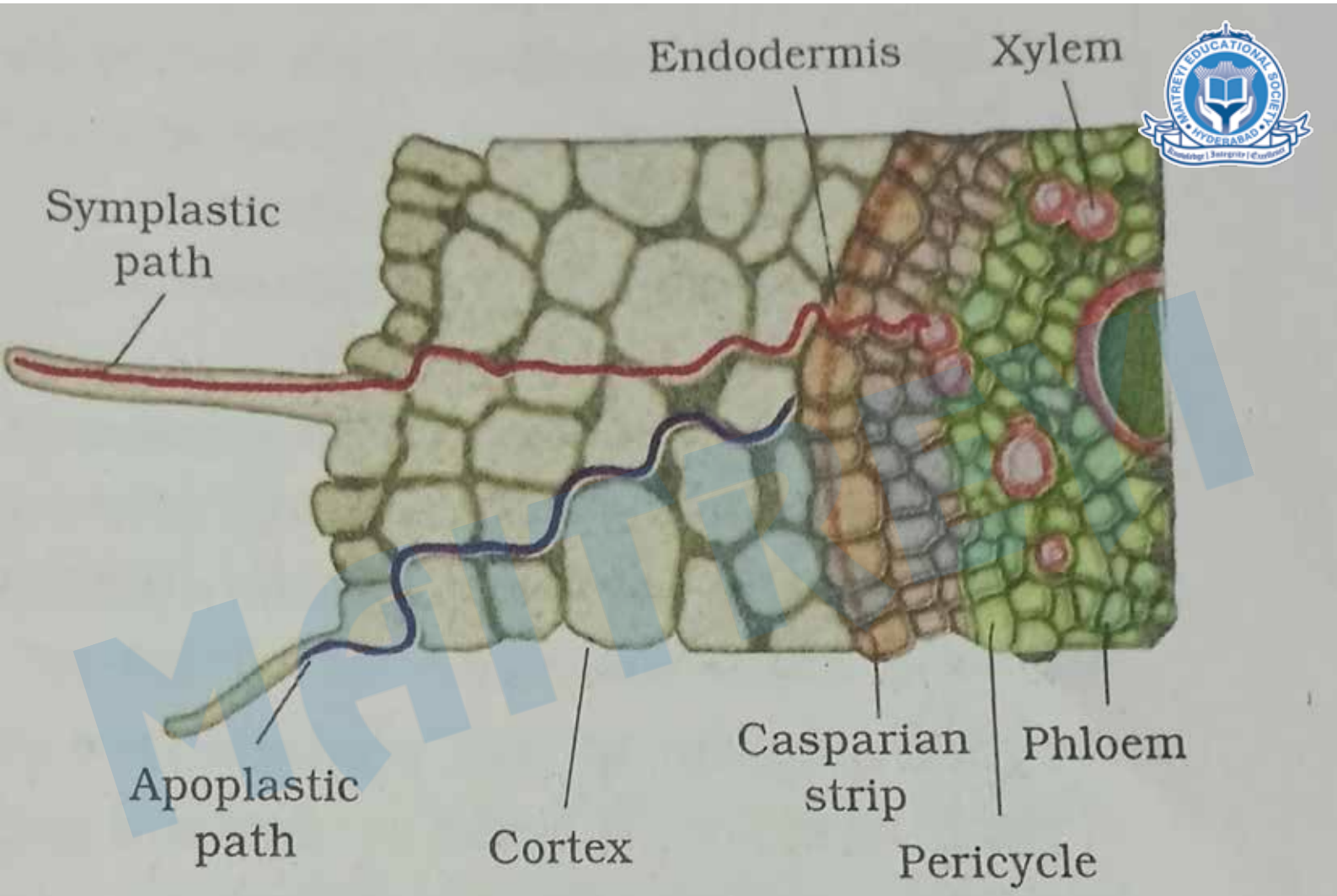


Figure 1.7 Symplastic and apoplastic pathways of water and ion absorption and movement in roots

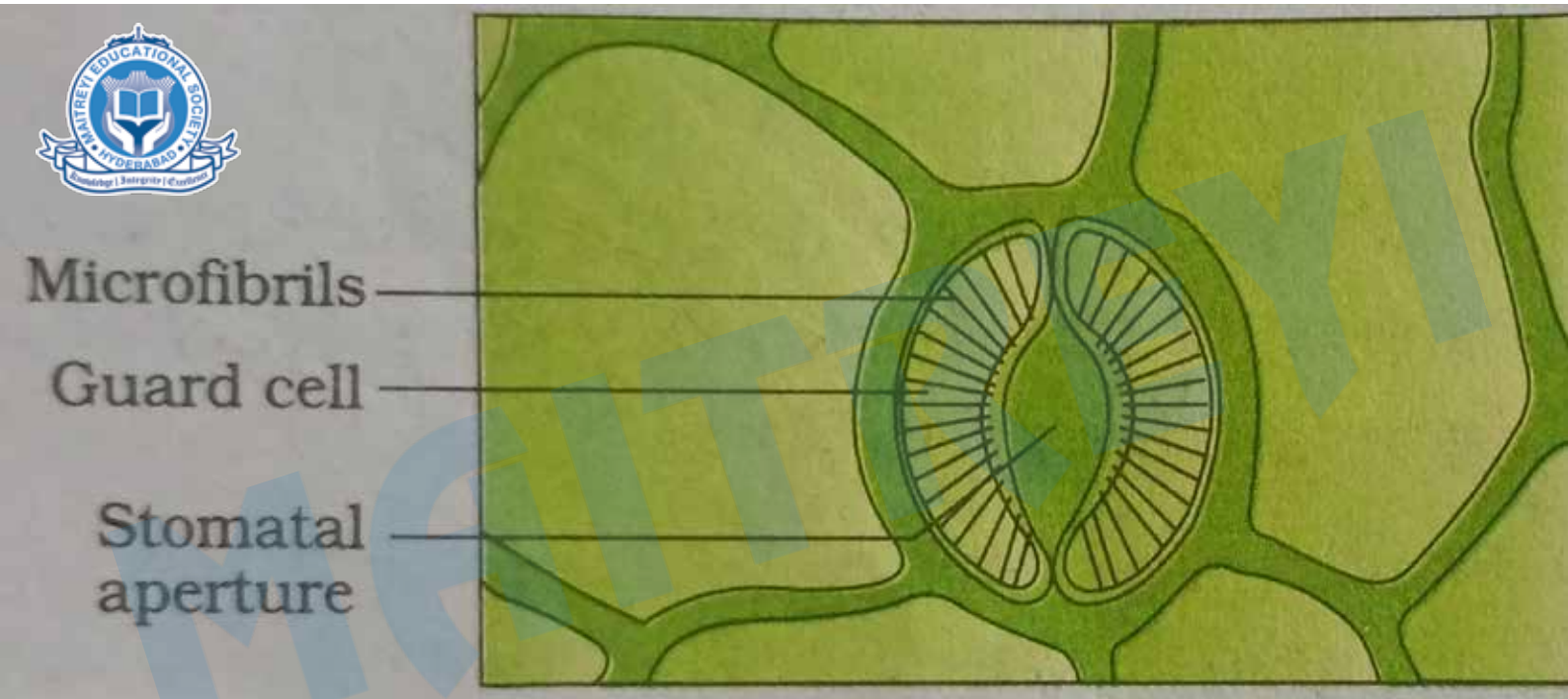


Figure 1.9 A stomatal aperture with guard cells

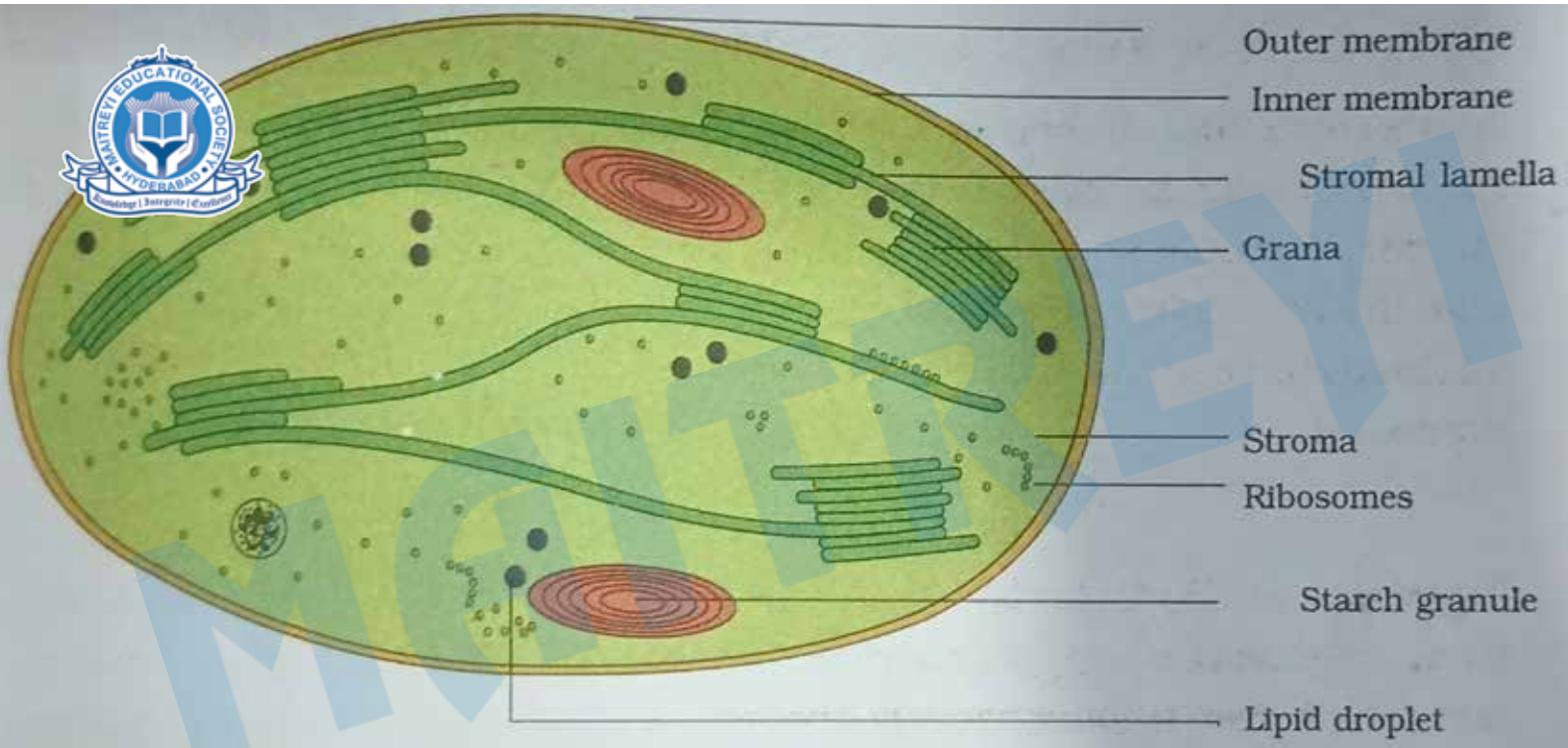


Figure 4.2 Diagrammatic representation of an electron micrograph of a section of chloroplast

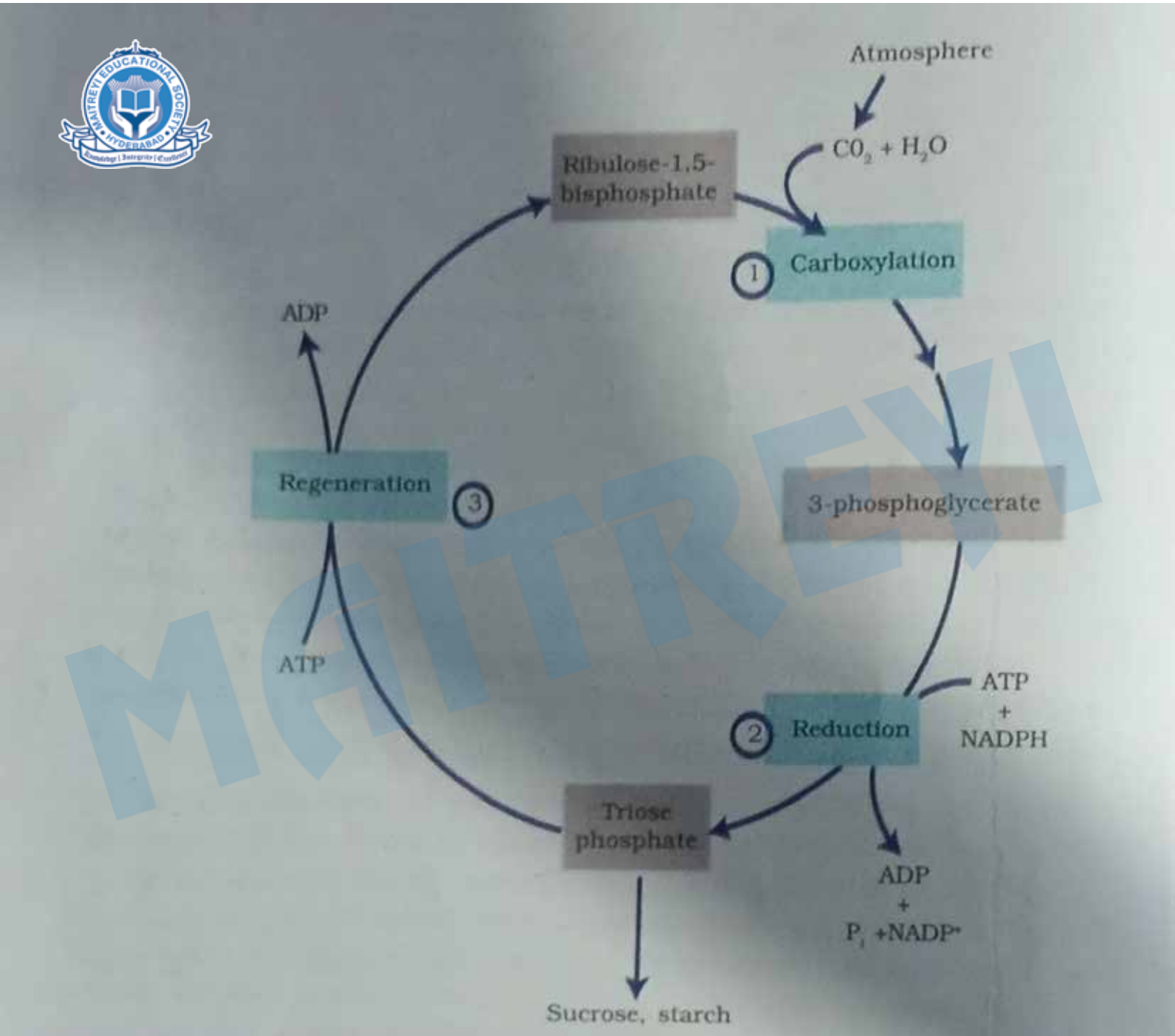
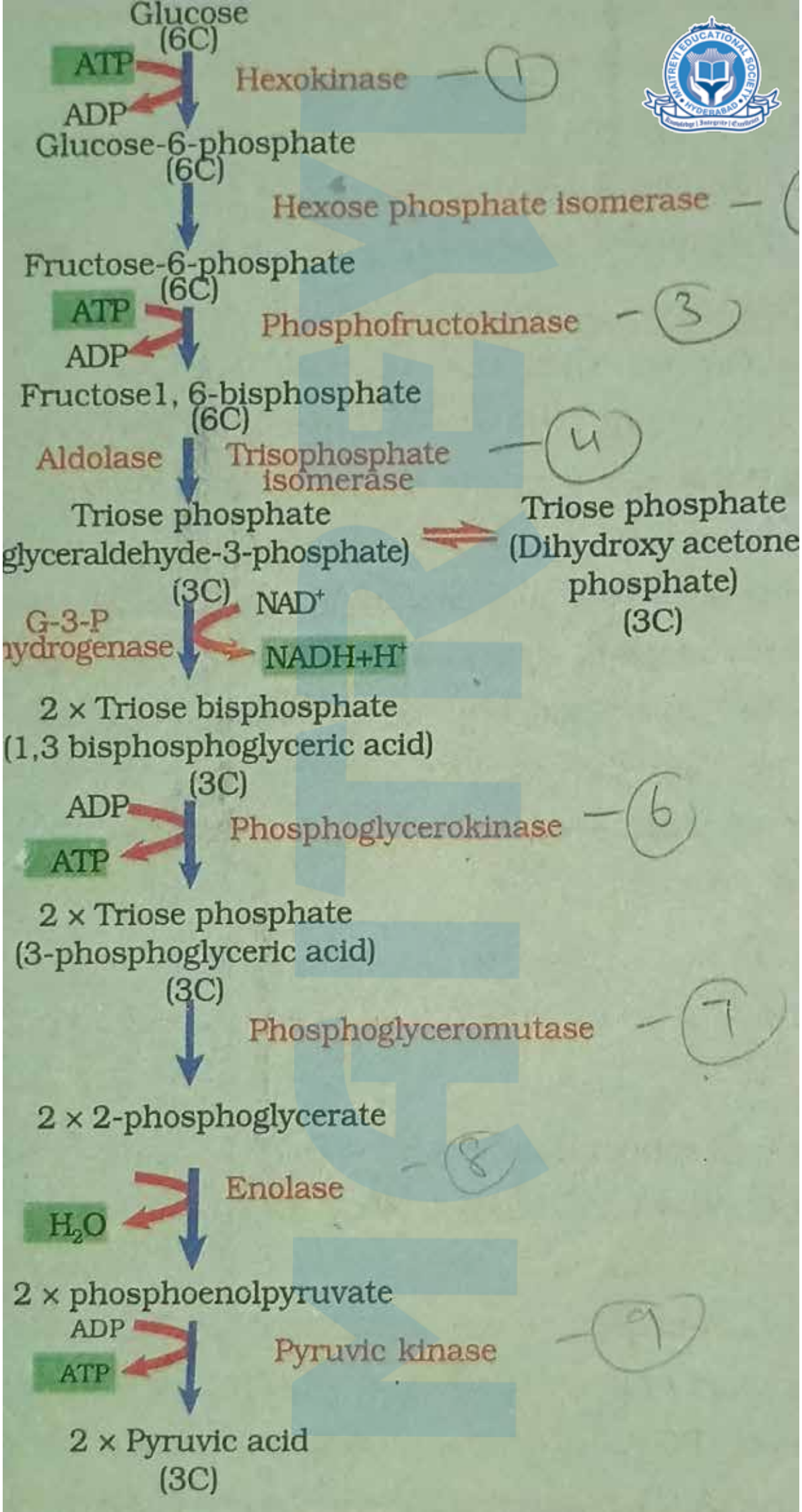


Figure 4.8 The Calvin cycle proceeds in three stages : (1) carboxylation, during which CO_2 combines with ribulose-1,5-bisphosphate; (2) reduction, during which carbohydrate is formed at the expense of the photochemically made ATP and NADPH; and (3) regeneration during which the CO_2 acceptor ribulose-1,5-bisphosphate is formed again so that the cycle continues.


Glucose
(6C)
ATP
ADP
Hexokinase
1
Glucose-6-phosphate
(6C)
Hexose phosphate isomerase
2
Fructose-6-phosphate
(6C)
ATP
ADP
Phosphofructokinase
3
Fructose1, 6-bisphosphate
(6C)
Aldolase
Trisophosphate isomerase
4
Triose phosphate
glyceraldehyde-3-phosphate)
(3C)
Triose phosphate
(Dihydroxy acetone phosphate)
(3C)
G-3-P hydrogenase
NAD+
NADH+H+
2 × Triose bisphosphate
(1,3 bisphosphoglyceric acid)
(3C)
ADP
ATP
Phosphoglycerokinase
6
2 × Triose phosphate
(3-phosphoglyceric acid)
(3C)
Phosphoglyceromutase
7
2 × 2-phosphoglycerate
8
Enolase
H2O
2 × phosphoenolpyruvate
ADP
ATP
Pyruvic kinase
9
2 × Pyruvic acid
(3C)

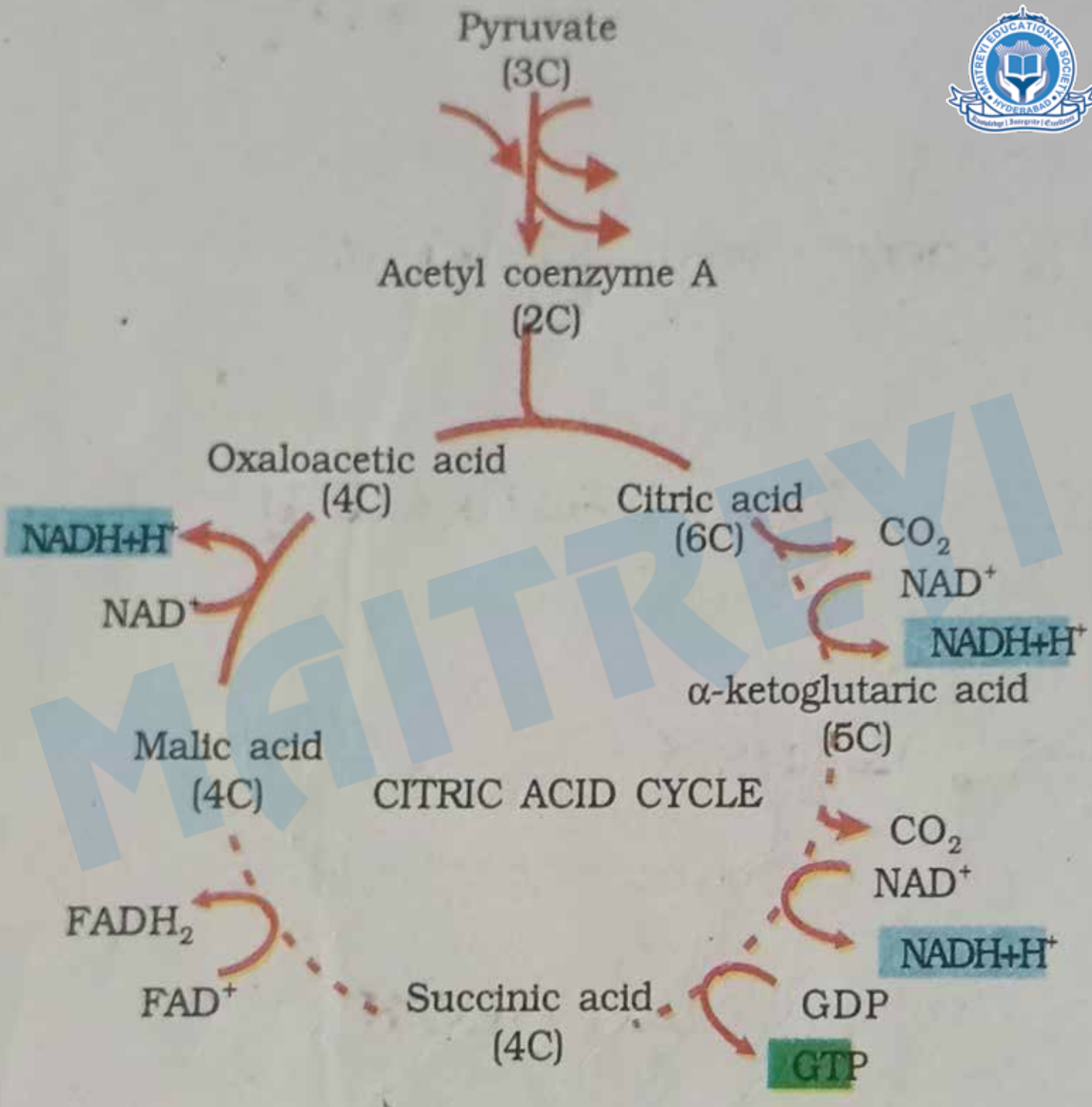


Figure 5.3 The Citric acid cycle

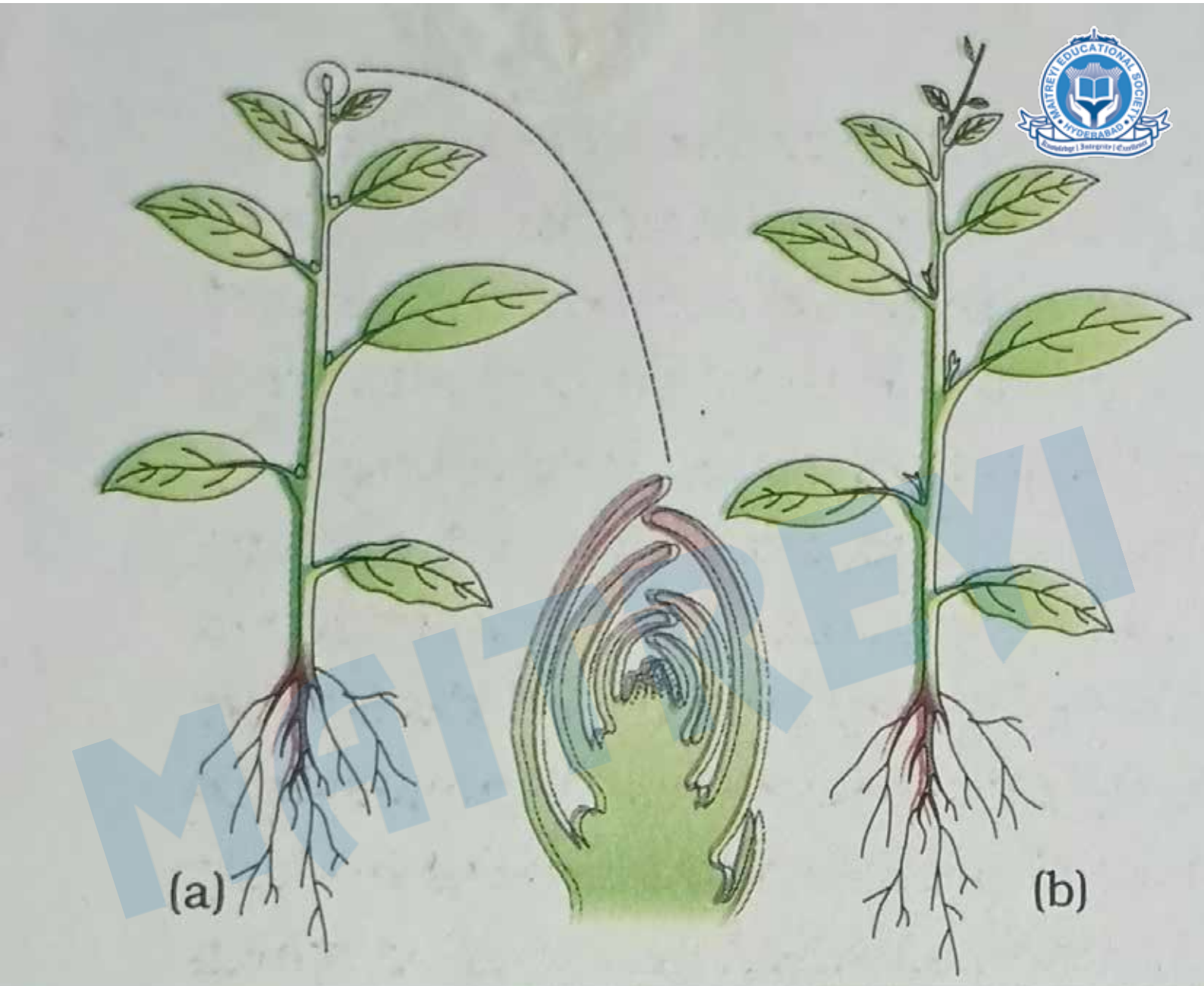


Figure 6.11 Apical dominance in plants :
(a) A plant with apical bud intact
(b) A plant with apical bud removed
Note the growth of lateral buds into branches after decapitation.

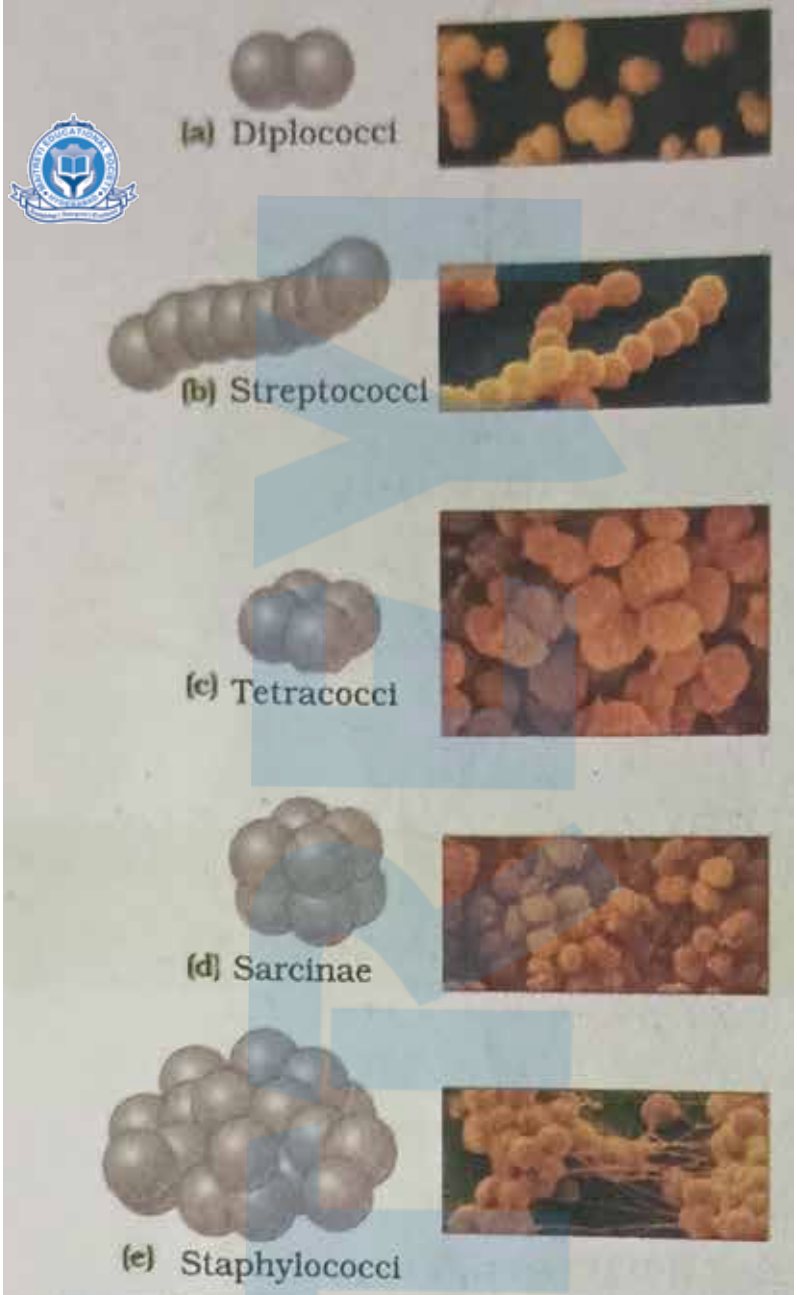


Figure 7.1 Arrangements in Coccal Forms of Bacteria

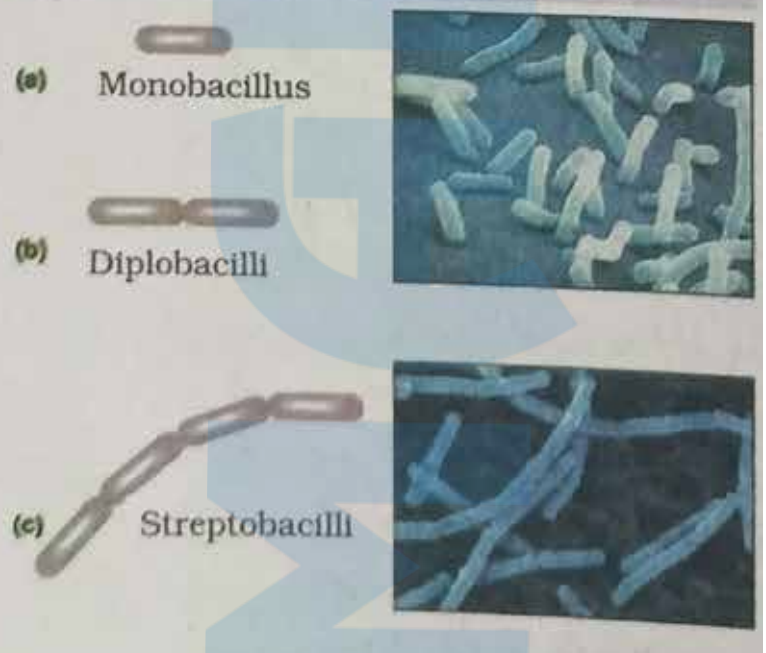
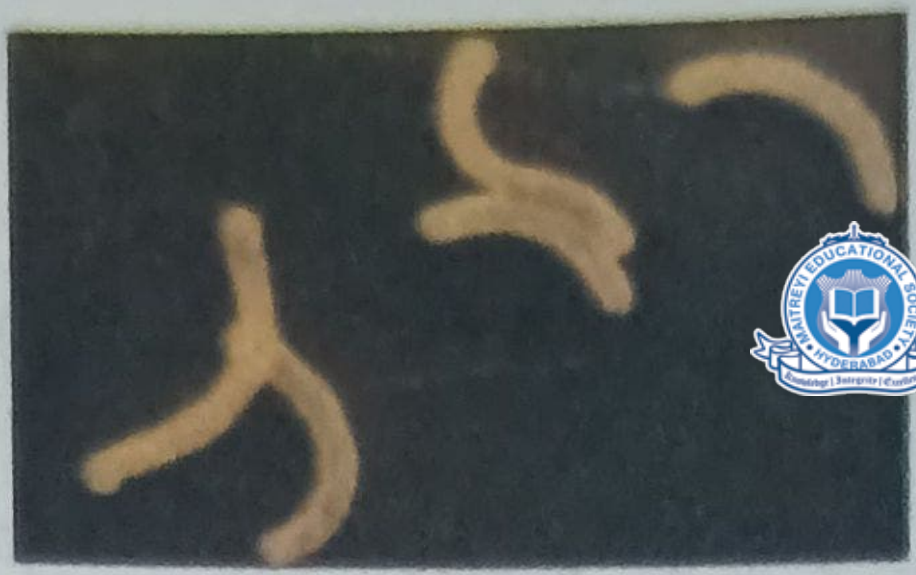


Figure 7.2 Arrangements of Bacillus forms

(a) Vibrio



(b) Spirillum

(c) Spirochete

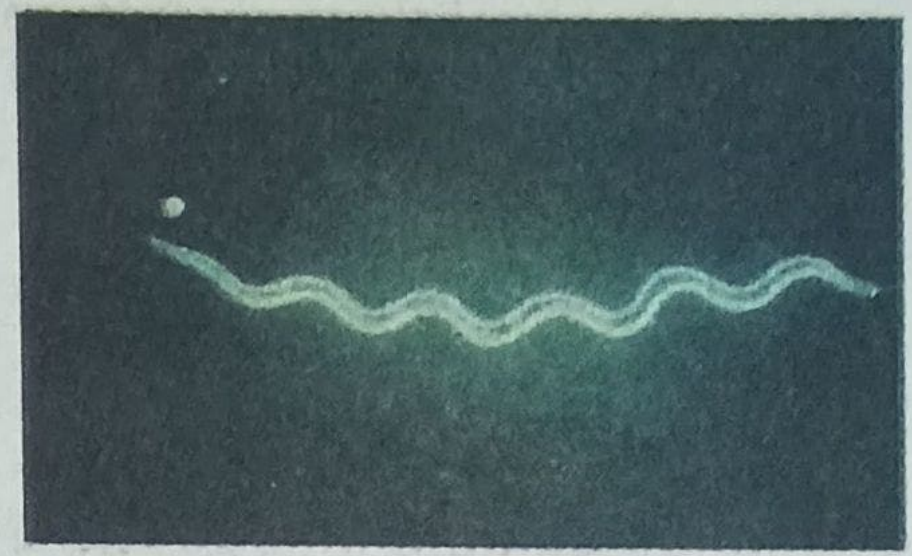


Figure 7.3 Spiral forms of Bacteria

Figure 7.4 Bacterial cells in conjugation

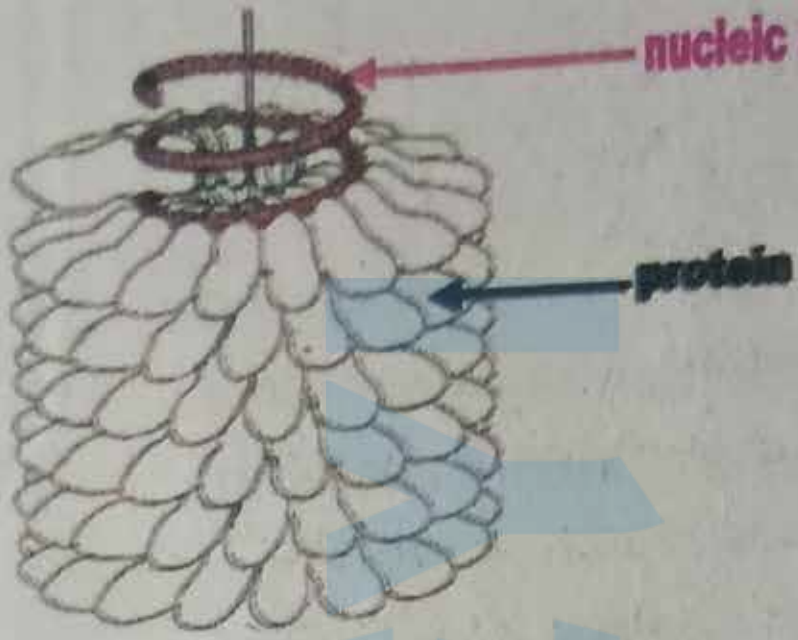


Figure 8.3 Tobacco Mosaic Virus – Helical Symmetry

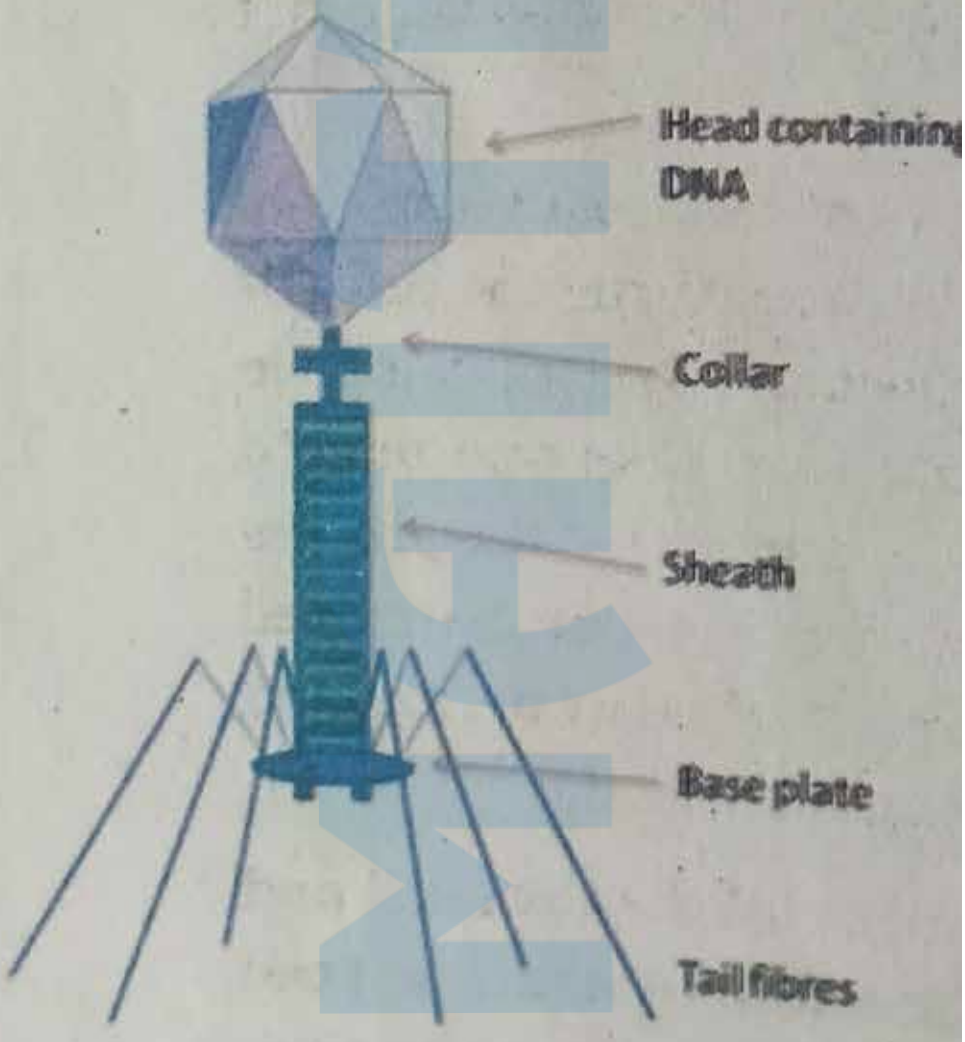


Figure 8.4 Bacteriophage- A complex virus

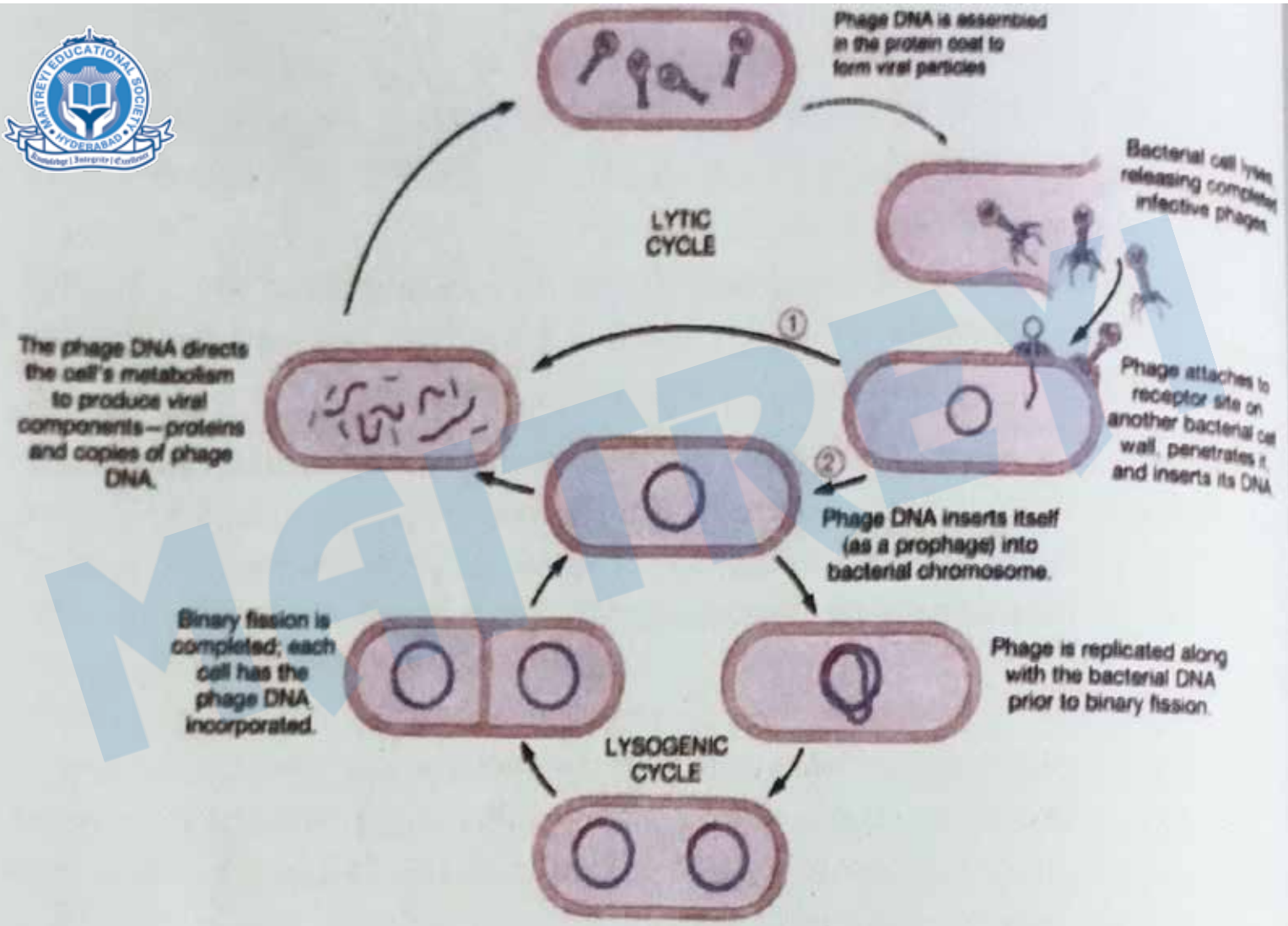


Figure 8.5 Viral multiplication cycles

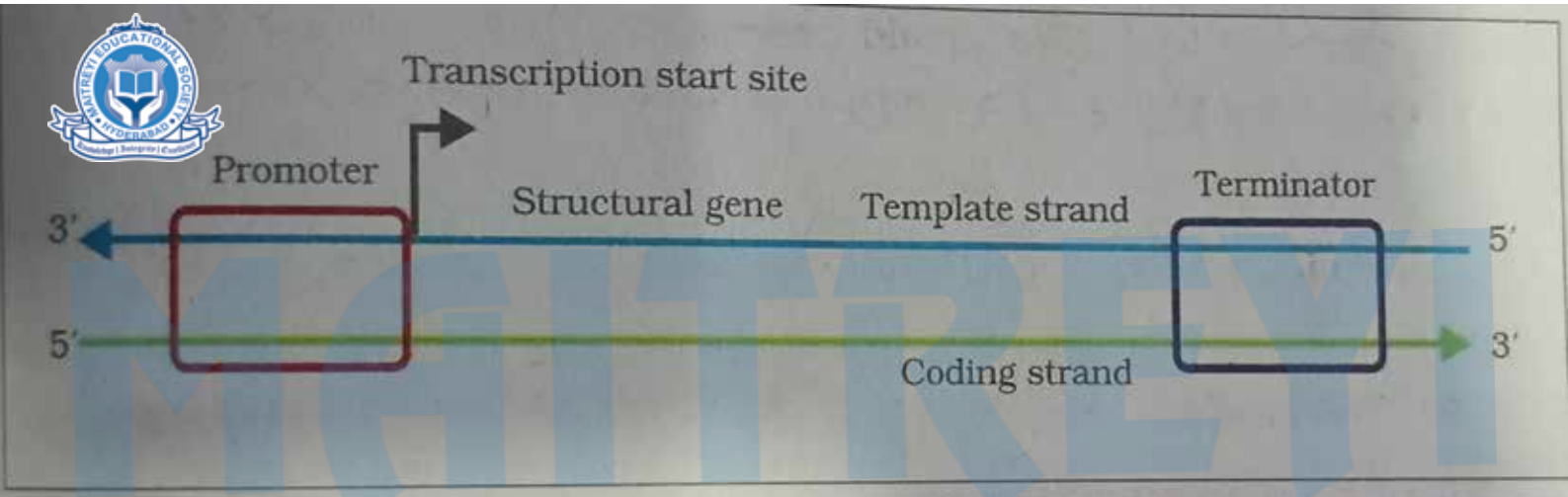


Figure 10.11 Schematic structure of a transcription unit

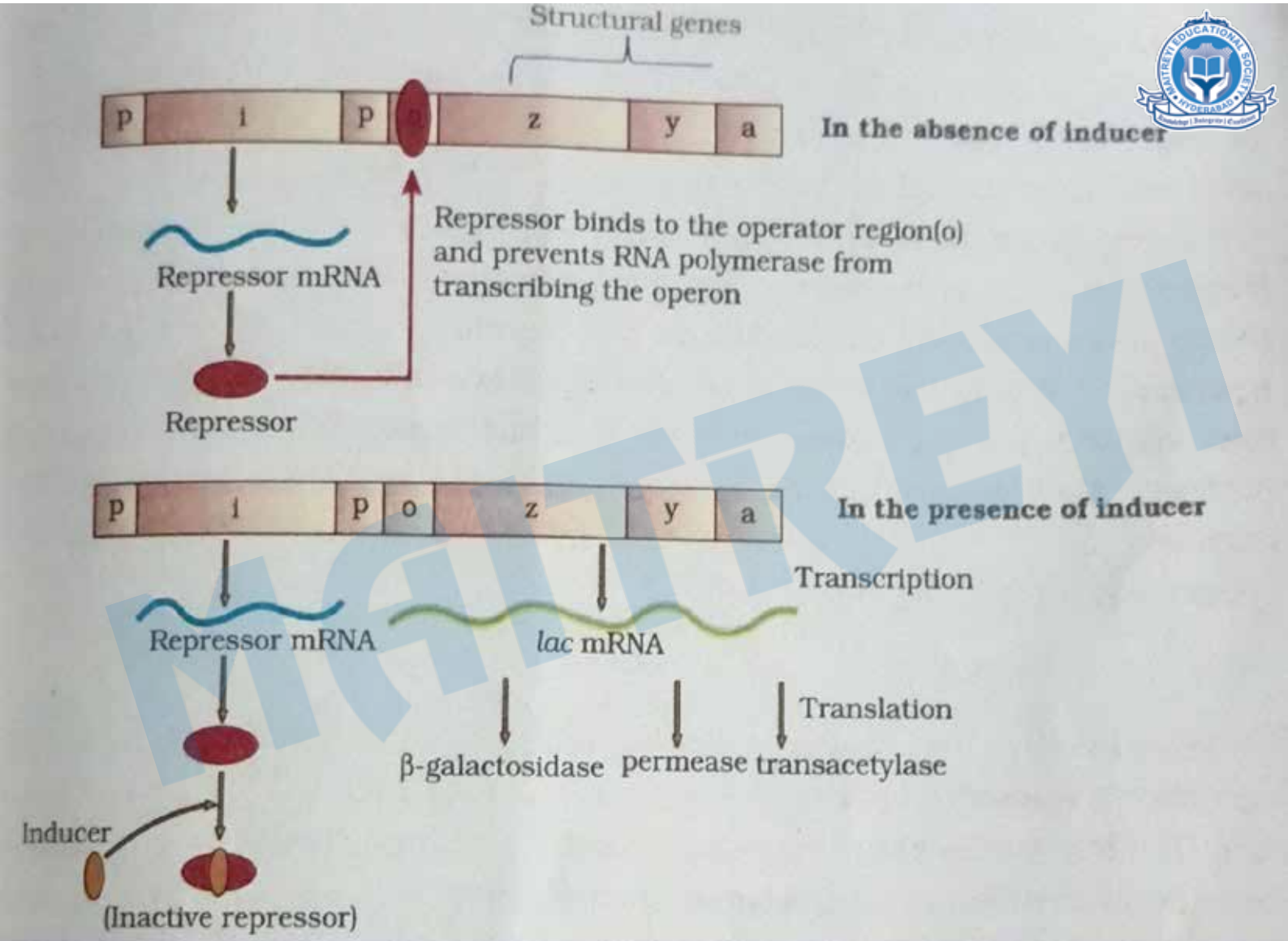


Figure 10.17 The *lac* Operon

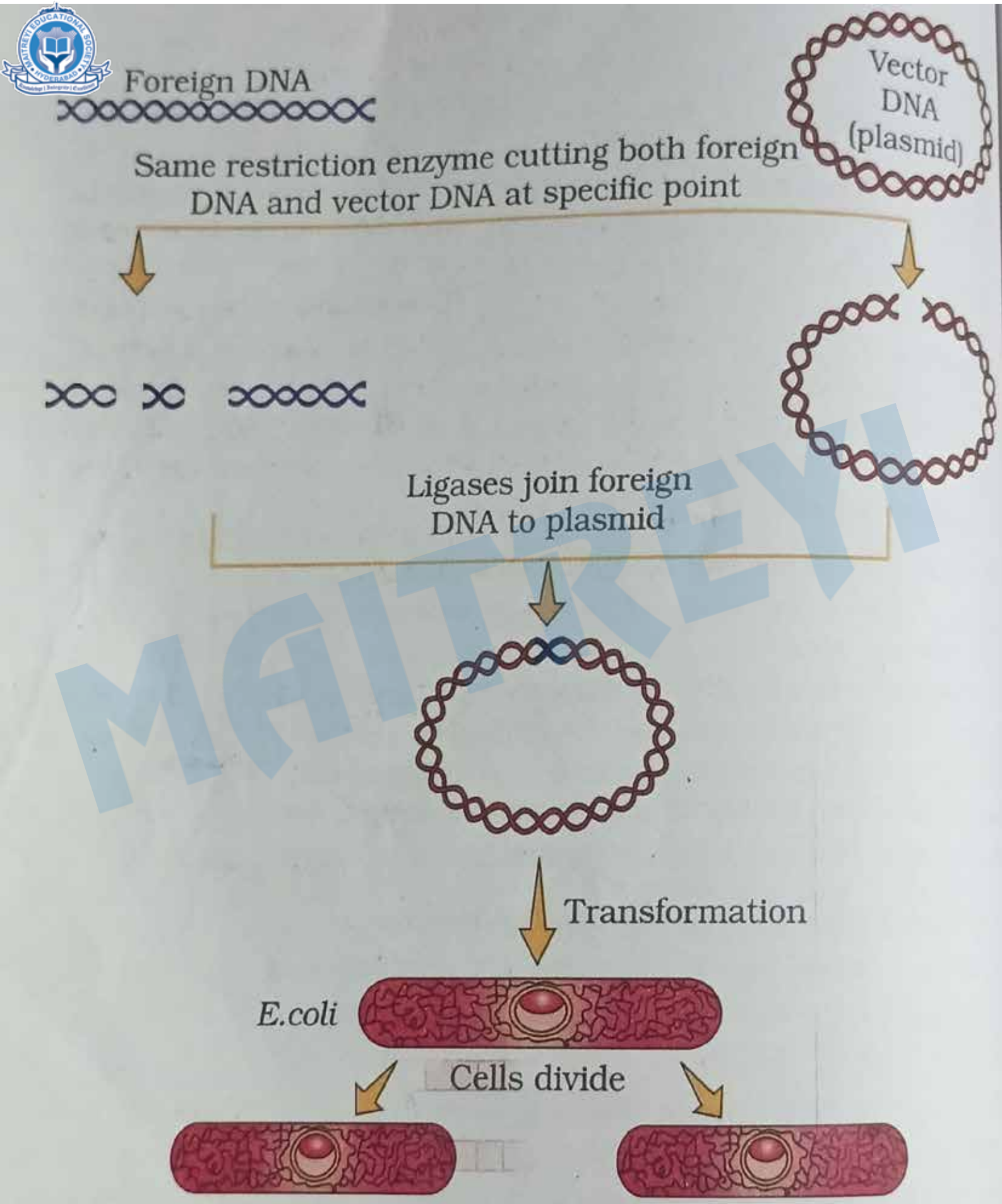


Figure 11.5 Diagrammatic representation of recombinant DNA technology