**Question Bank-7**

**Course- B.Sc. Biotechnology 6th Semester, B.Sc. CBZ 6th Semester, B.Sc. Biotechnology (H) 4th Semester & B.Sc. Botany (H) 4th Semester**

**Subject: Molecular Biology; Topic: Protein Targeting**

1. **Multiple Choice Questions:**
2. The process of sorting and transporting of newly synthesized protein to its correct destination is called ……………………..
3. [Protein](https://brainmass.com/biology/cell-biochem) insertion into the mammalian ER [membrane](https://brainmass.com/biology/membranes-and-cell-walls) is typically
a) co-translational
4. Pre-translational
5. post-translational
6. quasitranslational
7. Sorting of protein to mitochondrian and [chloroplasts](https://brainmass.com/biology/mitochondria-and-chloroplasts) is
8. Co-translational
9. Pre-translational
10. post-translational
11. quasitranslational
12. A vesicular compartment involved in the sorting and transport to lysosomes of material taken up by endocytosis.
13. Clathrin
14. Unfolded Protein Response (UPR)
15. Endosome
16. Endoplasmic Reticulum (ER)
17. Proteins that binds to signal sequences and targets polypeptide chains to the endoplasmic reticulum.
18. Mannose-6-Phosphate
19. Signal Recognition Particle (SRP)
20. Clathrin-Coated Vesicle
21. ER-Associated Degradation (ERAD)
22. Transmembrane protein that mediates fusion of vesicle(s) and target membranes.
23. Microsome
24. Flippase
25. Exocyst
26. SNARE
27. The golgi compartment in which proteins are sorted and packaged to exit the golgi apparatus.
28. SRP receptor
29. Unfolded Protein Response (UPR)
30. Clathrin-Coated Vesicle
31. trans-Golgi Network
32. The uptake of extracellular material in vesicles formed from the plasma membrane.
33. Golgi Apparatus
34. Lysosome
35. COPI + COPII
36. Endocytosis
37. The region of the golgi apparatus at which proteins enter from the endoplasmic reticulum.
38. cis-Golgi network
39. Mannose-6-Phosphate
40. trans-Golgi network
41. Rough ER
42. A Membrane-enclosed sac that transports proteins from the golgi apparatus cell surface.
43. COP-coated Vesicle
44. Clathrin-coated Vesicle
45. Endoplasmic Reticulum (ER)
46. Secretory Vesicle
47. Many peroxisomal matrix proteins are imported as
a) folded proteins
48. nascent chains in the process of completing their elongation
49. protein fragments that are spliced together within the peroxisome
50. unfolded proteins
51. Secretary proteins are synthesized by

a) free ribosomes

b) rough ER

c) ribosomes on nuclear membrane

d) all of the above

1. Proteins tagged with mannose-6- phosphate are destined to
2. nucleus
3. lysosome
4. mitochondria
5. chloroplast
6. **Short Questions**
7. What is protein sorting?
8. What are protein targeting sequences?
9. Where are the protein targeting sequences located?
10. How do signal peptides work?
11. What are the major membrane bounded compartments in eukaryotic cells?
12. What is the rough endoplasmic reticulum?
13. What proteins are sent to the ER?
14. What is co-translational transport?
15. What is post-translational transport?
16. What is SRP?
17. What happens to the protein in the ER?
18. Discuss the role of chaperons in protein targeting.
19. Explain SNARE.
20. **Long Questions**
21. What is protein sorting?
22. How do signal peptides work?
23. Explain how proteins cross membrane barriers to get into the different compartments of the cell?
24. Discuss the targeting of protein to the thalakoid lumen.
25. How are Peroxisomal proteins targeted to their final destination?
26. What kinds of modification do proteins undergo in the ER?
27. How do transport vesicles form?
28. How does a vesicle, once formed, deliver its contents to the correct destination?