Cell Biology Answer Key—point values for frq's are in red

1. B
2. D
3. E
4. B
5. E
6. C
7. E
8. C
9. B
10. D
11. D
12. E
13. A
14. D
15. C
16. E
17. E
18. D
19. B
20. C
21. H
22. F
23. J
24. B
25. E
26. D
27. I
28. A
29. C
30. G
31. Glycine or Proline (3)
32. Histidine (3)
33. By combining with the acetyl group of Acetyl-CoA, forming citrate (1); this helps compartmentalize the Citric Acid Cycle (2)
34. Niacin (B_3) (3)
35. Autophototrophs use light as an energy source and CO_2 or some related compound as a carbon source. Autochemotrophs use inorganic chemicals as an energy source and CO_2 or some related compound as a carbon source. Heterophototrophs use light as an energy source and organic compounds as a carbon source. Heterochemotrophs use organic compounds as both energy sources and carbon sources (2). Only prokaryotes are autochemotrophs and heterophototrophs (1).
36. The phragmoplast (1); callose, a polysaccharide (2)
37. Exposure to light for a few hours, basically any actively photosynthesizing chloroplast (3)
38. The y-intercept is $1/V_{max}$ (2)and the x-intercept is $-1/k_m$. (1)
39. By passing through the membrane and affecting transcription factors in the nucleous (regulating gene production)(2); water-soluble hormones mainly bind to receptors on the cell membrane to activate some signaling pathway(1).
40. Cytoplasmic streaming is the movement of organelles (and other components of the cytoplasm) in the cell(1). It occurs due to interactions between actin and myosin(2).