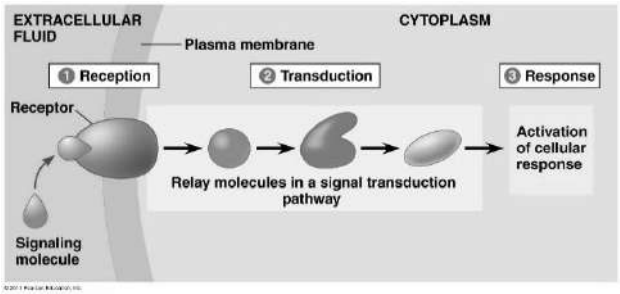
WLHS / AP Bio / Monson

Name_____
Date_____Per_____

CH 11 pt 1 Study Questions – Cell Communication

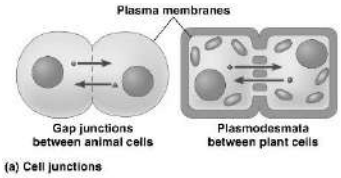
NOTE:** This chapter is often considered difficult as you have not covered it in your general biology course. **Plan on reading this chapter slowly!!** I would suggest that you read the key concepts in bold first and then for each concept, look at the headings, then the figures and then **READ for detail…and STUDY the figures and their captions.

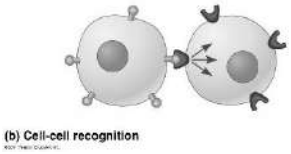
1) What is a **signal transduction pathway**?



2) How do yeast cells communicate while mating?

3) How do **intercellular connections** function in cell to cell communication?





4) Explain the two types of local signaling:

A) Paracrine signaling

B) Synaptic signaling

5) How are **long distance** signals sent?

6) Explain **Sutherland's** investigations with **epinephrine** AND the inferences that were derived from this work.

7) Define the three stages of cell communication:

A) Reception:

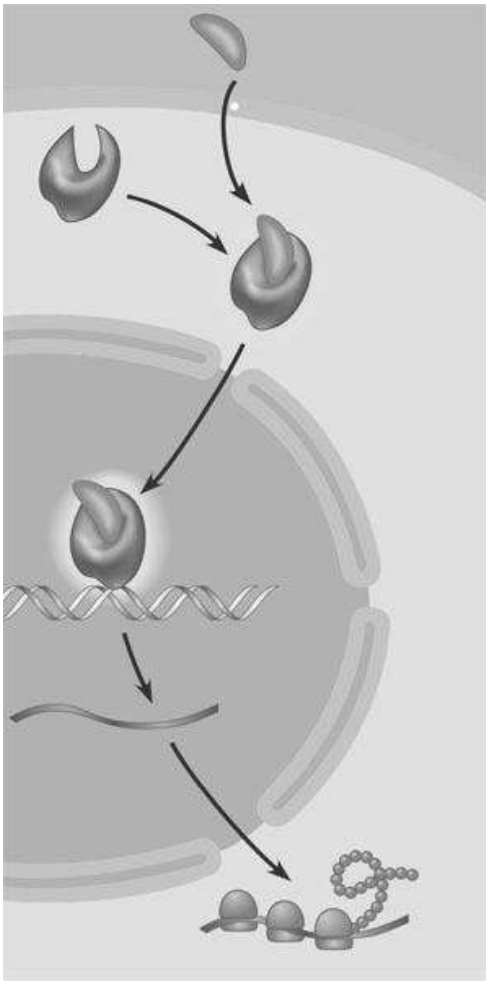
B) Transduction:

C) Response

8) What is a **LIGAND**?_____

9) What is special about **intracellular receptors**? (HINT: think of the structure of the cell membrane and how this relates)

10) Label this diagram of a steroid interacting with an intracellular receptor. (HINT: see fig. 11.9)



11) Where would you expect most **water soluble messengers to bind** and **WHY**?

12) What is a **G-protein-linked receptor**? (see fig. 11.7)

13) What is a **KINASE (i.e. a protein kinase)**? (see p.212; 215)

14) What triggers a ligand-gated ion channel to open/close?_____

LABEL DIAGRAM: Ligand-gated ion channel (see fig. 11.7, p. 213)