

**Survey of Knowledge Base (Prior): Introduction to Sustainable Urban Infrastructure FALL 2011**

Your Program of Study (e.g., Engineering, Anthropology, etc.): \_\_\_\_\_

Any work experience pertaining to sustainability: \_\_\_\_\_

For all the questions below, Please circle one among:

- A. I have no idea what this concept is about
- B. I learned of this concept in prior curriculum/projects in my own program of study
- C. I learned of this concept **for the first time** in a prior IGERT class (LIST\_\_\_\_\_)
- D. I learned of this concept first through sustainability projects/articles outside school

1. Human Development Index	A	B	C	D
2. Human Capabilities Approach	A	B	C	D
3. Infrastructures and human capabilities	A	B	C	D
4. Population doubling times	A	B	C	D
5. Water scarcity measures	A	B	C	D
6. Food and virtual water	A	B	C	D
7. Peak oil	A	B	C	D
8. Energy quantity and quality	A	B	C	D
9. Climate change projections for cities	A	B	C	D
10. Neoclassical economic theory	A	B	C	D
11. Tragedy of the Commons	A	B	C	D
12. Sustainability economic theory	A	B	C	D
13. Environmental Kuznets Curve	A	B	C	D
14. IPAT Equation	A	B	C	D
15. Concepts of 10xE	A	B	C	D
16. Rebound	A	B	C	D
17. 3 E's of sustainability	A	B	C	D
18. Infrastructures at different scales	A	B	C	D
19. Urban Metabolism	A	B	C	D
20. SEIS Framework for Sustainable Cities	A	B	C	D
21. Hard path and soft path approaches	A	B	C	D

22. Principles of Green Engineering	A	B	C	D
23. Principles of Industrial Ecology	A	B	C	D
24. Industrial Symbiosis	A	B	C	D
25. Process sum LCA	A	B	C	D
26. Economic Input-Output LCA	A	B	C	D
27. Hybrid LCA	A	B	C	D
28. Material Flow Analysis (MFA)	A	B	C	D
29. LEED building certification	A	B	C	D
30. Energy Use Intensity (EUI)	A	B	C	D
31. Principles of smart growth	A	B	C	D
32. Travel Demand Elasticity	A	B	C	D
33. LEED neighborhoods	A	B	C	D
34. Markets, regulations and cooperation	A	B	C	D
35. Ostrom's design principles	A	B	C	D
36. Wedge Game	A	B	C	D
37. Value Belief Norms Theory	A	B	C	D
38. Social Norming	A	B	C	D
39. Social Marketing	A	B	C	D
40. Theory of Planned Behavior	A	B	C	D
41. Roger's Theory of Diffusion of Innovation	A	B	C	D
42. Bottom of the Pyramid (BOP)	A	B	C	D
43. Theory of the Firm	A	B	C	D
44. Club Theory	A	B	C	D
45. Advocacy Coalition Framework	A	B	C	D
46. Multiple Streams Theory	A	B	C	D
47. IAD Framework	A	B	C	D
48. Community based participatory research (CBPR)	A	B	C	D

At the end of class we will administer this survey again to assess learning outcomes and how these concepts fit or not with your specific case study.

**Survey of Knowledge Base (Post): Introduction to Sustainable Urban Infrastructure FALL 2011**

Your Program of Study (e.g., Engineering, Anthropology, etc.): \_\_\_\_\_

Any work experience pertaining to sustainability: \_\_\_\_\_

For all the questions below, Please circle one among:

- E. I have no idea what this concept is about
- F. I learned of this concept in prior curriculum/projects in my own program of study
- G. I learned of this concept **for the first time** in a prior IGERT class (LIST \_\_\_\_\_)
- H. I learned of this concept first through sustainability projects/articles outside school
- I. I learned of this concept for the first time in this class.

1. Human Development Index	A	B	C	D	E
2. Human Capabilities Approach	A	B	C	D	E
3. Infrastructures and human capabilities	A	B	C	D	E
4. Population doubling times	A	B	C	D	E
5. Water scarcity measures	A	B	C	D	E
6. Food and virtual water	A	B	C	D	E
7. Peak oil	A	B	C	D	E
8. Energy quantity and quality	A	B	C	D	E
9. Climate change projections for cities	A	B	C	D	E
10. Neoclassical economic theory	A	B	C	D	E
11. Tragedy of the Commons	A	B	C	D	E
12. Sustainability economic theory	A	B	C	D	E
13. Environmental Kuznets Curve	A	B	C	D	E
14. IPAT Equation	A	B	C	D	E
15. Concepts of 10xE	A	B	C	D	E
16. Rebound	A	B	C	D	E
17. 3 E's of sustainability	A	B	C	D	E
18. Infrastructures at different scales	A	B	C	D	E
19. Urban Metabolism	A	B	C	D	E

20. Infrastructure GHG Footprints	A	B	C	D	E
21. SEIS Framework for Sustainable Cities	A	B	C	D	E
22. Hard path and soft path approaches	A	B	C	D	E
23. Principles of Green Engineering	A	B	C	D	E
24. Principles of Industrial Ecology	A	B	C	D	E
25. Industrial Symbiosis	A	B	C	D	E
26. Process sum LCA	A	B	C	D	E
27. Economic Input-Output LCA	A	B	C	D	E
28. Hybrid LCA	A	B	C	D	E
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36. Ostrom's design principles	A	B	C	D	E
37. Wedge Game	A	B	C	D	E
38. Value Belief Norms Theory	A	B	C	D	E
39. Social Norming	A	B	C	D	E
40. Social Marketing	A	B	C	D	E
41. Theory of Planned Behavior	A	B	C	D	E
42. Roger's Theory of Diffusion of Innovation	A	B	C	D	E
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44. Theory of the Firm	A	B	C	D	E
45. Club Theory	A	B	C	D	E
46. Advocacy Coalition Framework	A	B	C	D	E
47. Multiple Streams Theory	A	B	C	D	E
48. IAD Framework	A	B	C	D	E
49. Community based participatory research (CBPR)	A	B	C	D	E