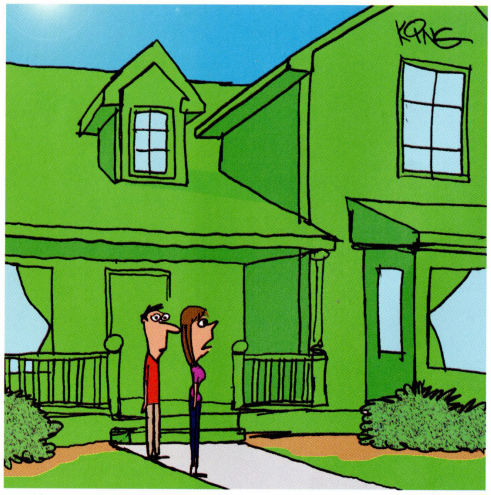
Arch 464
ECS
Midterm II
Spring 2018

30 Multiple Choice Questions



"Yes, I did say I wanted a 'green' home. But not in the literal sense."

1. Climate change effects the evapotranspiration cycle by
    A. creating more potable water
    B. reducing the likeliness of draught
    C. raising sea levels
    D. none of the above

2. A National Geographic Magazine photo-essay revealed the highest water use was by
    A. a Bolivian family of 6
    B. a Jordanian family of 6
    C. an Indian family of 8
    D. a Myanmar family of 4

3. Which water scarcity problem in the western U.S. led to the use of xeriscaping?
    A. frequent draughts
    B. excessive ground water extraction
    C. pressing ecological issues
    D. none of the above

4. Typical domestic water use patterns changed from 1979 to 2015 in that
    A. a smaller percentage of water is used outdoors
    B. a smaller percentage of indoor use goes to toilets
    C. a larger percentage of indoor use goes to showers and baths
    D. all of the above

5. Rain water harvesting is legal
    A. in all US states
    B. in most US states
    C. in some US states
    D. in no US states

6. Regional reservoirs can
    A. suffer significant evaporative losses
    B. be depleted by draught
    C. entail energy use for pumping and delivery
    D. all of the above

7. Bioswales are used to manage storm water runoff
    A. at Village Homes in Davis, CA
    B. in UI's Sweet Avenue parking lot
    C. at the Portland Water Pollution Control Laboratory
    D. all of the above

8. Scuppers at the Portland Water Pollution Control Laboratory are similar in that the both
    A. direct stormwater to a bioswale
    B. filter the water before it enters the cistern
    C. allow the initial polluted run-off to be retained
    D. all of the above

9. Sadly, the UI SUB green roof has been dismantled, so now
    A. our only green roof is above the entry to the Commons food court
    B. our largest green roof is on the IRIC
    C. only the Commons and IRIC have green roofs
    D. none of the above

10. Waste water sent off-site for treatment
    A. must be handled by a mechanized waste water plant
    B. can be purified by biological means
    C. can never become potable
    D. none of the above

11. Which of the following can be treated on site through biological means
    A. black water
    B. gray water
    C. storm water
    D. all of the above

12. An example of a building that treats gray water for potable uses is
    A. Jim Davis' Paws Inc. studio in Muncie, IN
    B. John Lyle's Center for Regenerative Studies
    C. Mike Reynolds earthships
    D. all of the above

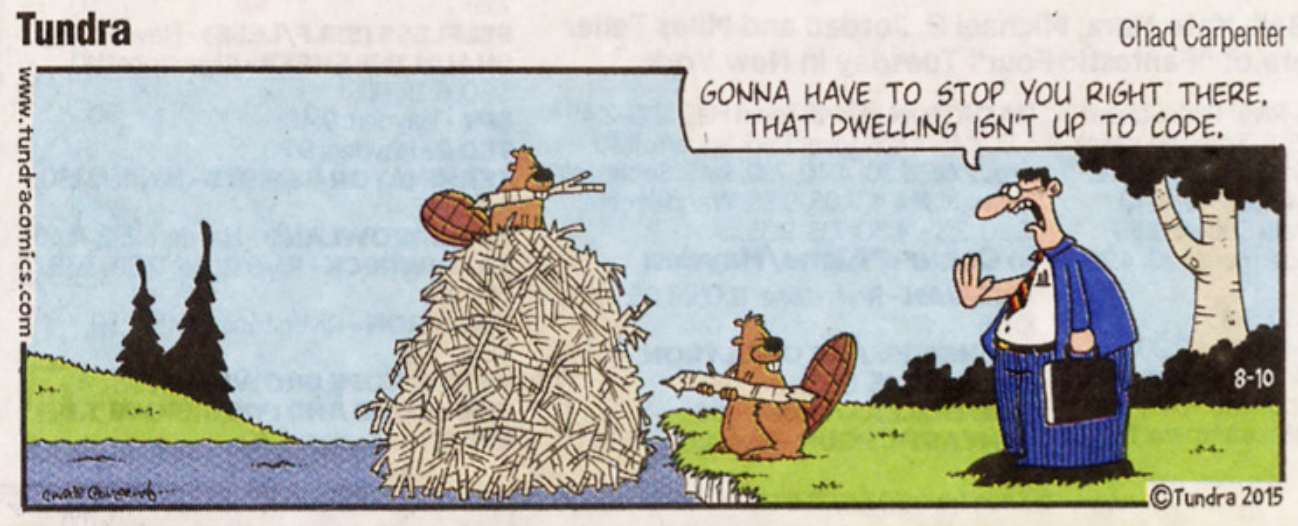
13. My research shows that public toilets in Copenhagen and Cusco are similar and are
    A. of a sleek modern design
    B. Victorian ensembles
    C. primitive trough urinals
    D. both B. and C. above

14. Low-flush toilets' performance
    A. simply meets code
    B. is proven to handle average loads in all cases
    C. is so questionable that they are rarely installed
    D. all of the above

15. The most recent concern in public bathroom design is
    A. meeting ADA requirements
    B. providing all gender facilities
    C. solving public urination problems
    D. all of the above

16. Paradise Creek is purest
    A. in the farmlands upstream from Moscow
    B. in the Sweet Avenue creek restoration area
    C. just downstream from the Moscow Waste Water Treatment Plant
    D. no difference in any of the above

17. The first phase of the Sweet Avenue/University of Idaho Paradise Creek restoration project is successful in
    A. providing beaver habitat
    B. mitigating downstream flooding
    C. greatly reducing contamination from parking lot storm water
    D. all of the above



18. Since 1960 US municipal solid waste recycling was never over 10% until
    A. 1980
    B. 1985
    C. 1990
    D. 2000

19. A beneficial side effect of waste water treatment and solid waste landfills is
    A. adding green space to the landscape
    B. keeping wastes out of view
    C. methane harvesting for fuel
    D. all of the above

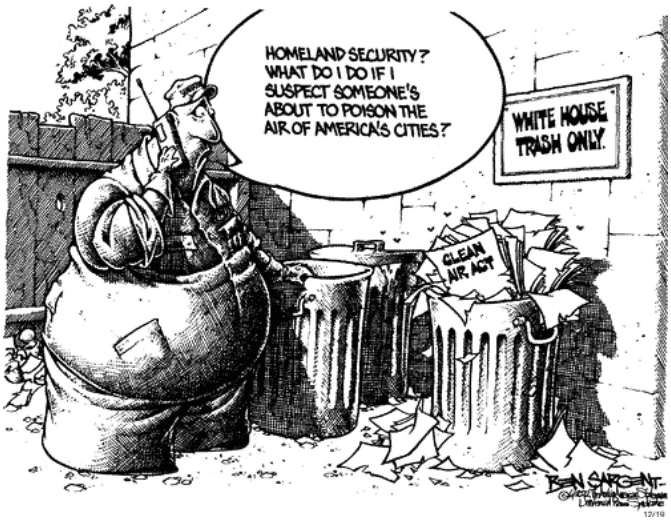
20. The handful of European countries that send less than 10% of their solid wastes to landfill

A. have aggressive recycling programs

B. incinerate a high percentage of trash, often for energy production

C. do both of the above

D. recycle and compost more that 90% of potential solid waste



21. The new building that is best for the planet

A. is rated LEED Platinum

B. meets the Living Building Challenge

C. is sustainable

D. is regenerative at both building and site scales

22. The architectural idea that makes London City Hall an exceptional high-performance building is

A. making it sphere-like to reduce building skin area

B. creating overhanging floors to provide self-shading

C. using an all-glass envelope to indicate government transparency

D. none of the above

23. London City Hall is seen as less than sustainable by

A. art students from Oberlin College

B. London's Guardian newspaper

C. its Display Energy Certificate

D. all of the above

24. The best way to assure that a building meets its energy-savings and performance goals is to

A. achieve LEED Platinum

B. do energy performance modeling before its design is finalized

C. conduct and respond to on-going post-occupancy evaluation

D. all of the above

25. A 2007 study found that cost per square foot of academic building was always highest for

A. LEED Gold

B. LEED Silver

C. uncertified buildings

D. none of the above

26. Multiple sources indicate the biggest advantage in green buildings is

A. energy savings

B. reduced maintenance and operating costs

C. increased worker productivity

D. reduced emissions

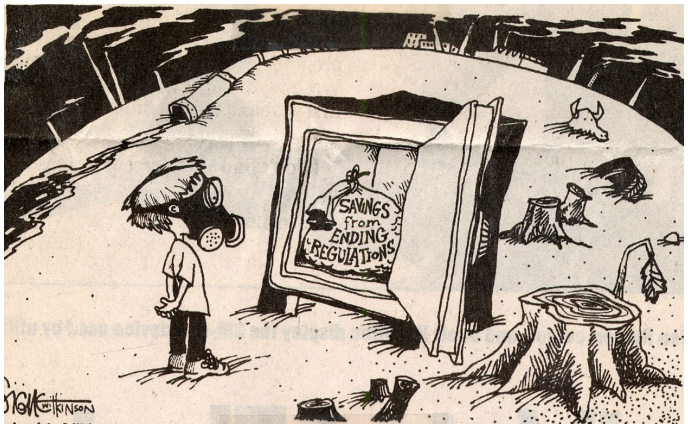
27. The major contribution that LEED has made to the building industry is

A. energy savings

B. job creation

C. market transformation toward green products

D. all of the above



28. Viewing the cost of energy in terms of dollars is short-sighted because

A. environmental, health, and social costs are not included

B. energy costs do not consider future scarcities

C. investment capital for future generation isn't included

D. all of the above

29. Ground-source heat pumps have a first law efficiency of

A. <100% like all other devices

B. are best so they rate 100%

C. <100% for heating and >100% for cooling

D. achieve >100% by using high grade energy to amass low-grade energy for space heating and cooling

30. Life cycle costing analysis

A. calculates energy savings over time

B. is impacted by building life expectancy

C. normalizes costs to a fixed dollar value

D. all of the above

Get ready for Quiz #3!