Arch 464 ECS Midterm II Spring 2011

30 Multiple Choice Questions



- 1. Most of the earth's potable water
 - A. is in the oceans
 - B. will become available when the glaciers and ice caps melt
 - C. is stored on and under the surface in lakes, rivers, reservoirs, and aquifers
 - D. none of the above

2. Water supplies in the western U.S. are restricted because

- A. the west is predominantly a desert
- B. the dam building era is virtually over
- C. draughts are a frequent occurrence
- D. all of the above
- 3. Clean water is essential for
 - A. agriculture
 - B. transportation
 - C. waste disposal
 - D. all of the above
- 4. Residential xeriscaping is a powerful means to save potable water because
 - A. exotic plants require little irrigation
 - B. about half of household water use is for irrigation
 - C. native plants clean water and return it for domestic use
 - D. all of the above



- 5. Rainwater collected from a building's roof into a cistern can be a high-quality, potable source if
 - A. the roof is metallic
 - B. collected water is filtered before entering the cistern
 - C. cistern water is tested periodically for purity
 - D. all of the above
- 6. Stormwater run-off from a parking lot can be managed effectively by
 - A. directing stormwater to bioswales
 - B. using pervious asphalt paving
 - C. sending stormwater to a constructed wetlands
 - D. all of the above
- 7. An example of a building and site that was designed with a detailed stormwater management plan
 - A. is the Stillwell Friends School in Washington, DC
 - B. is BedZED in Beddington, UK
 - C. is the Eden Project near St. Austell, UK
 - D. all of the above
- 8. A suitable downspout design for a water catchment system
 - A. is a scupper that directs runoff to a bioswale
 - B. incorporates vegetation that helps clean water
 - C. rejects the initial runoff, then sends the ensuing runoff to the cistern
 - D. all of the above
- 9. An extensive green roof
 - A. requires soil depths of one to three feet
 - B. effectively controls storm water and mitigates the city effect
 - C. is illegal in high seismic vulnerability zones
 - D. all of the above

10. Successful living machines have been implemented at the scale of

- A. a single building
- B. a college branch campus
- C. a city neighborhood
- D. all of the above

11. The type of waste water that can be treated on site is

- A. stormwater
- B. grey water
- C. black water
- D. all of the above

12. Acceptable performance for a 1.6 gallon/flush toilet is defined by its ability to dispose of (in a single flush) at least

- A. 250 grams
- B. 500 grams
- C. 750 grams
- D. 1,000 grams

13. An ultra low-flush toilet that employs a compressor is most economical and practical in

- A. a small single family residence
- B. a multi-room guest house
- C. a 100-unit condominium project
- D. there is no difference in scale of application

14. The most basic requirement for a composting toilet is that

- A. it is installed in a smell-proof room
- B. the compost bin be kept at temperatures above 50°F
- C. it needs food scraps for the composting bin
- D. all of the above

15. Pollution is introduced to Paradise Creek through

- A. thermal discharge into the creek
- B. construction site run-off
- C. crop land erosion
- D. all of the above
- 16. The Sweet Avenue restoration project of Paradise Creek demonstrates
 - A. lessening flood hazard
 - B. reducing parking lot run-off pollution
 - C. providing wildlife habitat
 - D. all of the above



- 17. Dumpster diving by the UI Sustainability Center has found that
 - A. almost all of UI's solid waste can be recycled or composted
 - B. more than half of UI's solid waste can be recycled or composted
 - C. less than half of UI's solid waste can be recycled or composted
 - D. hardly any of UI's solid waste can be recycled or composted

18. Effective landfill design

- A. isolates the landfill from its local ecology and water table
- B. harvests methane for energy production
- C. requires re-capping the landfill on a daily basis
- D. all of the above
- 19. The solid waste impact of new construction can be eased by
 - A. designing for deconstruction
 - B. managing construction wastes for recycling rather than landfilling
 - C. using recycled materials
 - D. all of the above
- 20. Projects with ambitious waste neutral goals include
 - A. the city of Seattle recycling program
 - B. the Eden Project
 - C. Audubon House in New York City
 - D. all of the above
- 21. Architecture that is considered to exceed the standards of sustainable design is
 - A. LEED platinum certified design
 - B. regenerative design
 - C. passive solar design
 - D. all of the above

22. The Malcolm Wells checklist is an effective tool for evaluating sustainable design because

- A. it rewards positive traits and penalizes negative traits
- B. it is totally subjective
- C. it is easier to use than a LEED checklist
- D. all of the above

23. Idaho architects and designers can get consulting services for energy-efficient and daylighted building design for no charge or a nominal fee from

- A. BuildingGreen.com
- B. LEED accredited professionals
- C. Betterbricks supported labs in Boise, Bozeman, Spokane, Seattle, and Portland
- D. all of the above

24. According to Lester Brown's Plan B, the cost of addressing the world's environmental and social problems

- A. is a mere fraction of the cost of maintaining the world's armed forces
- B. is about half of the cost of maintaining the world's armed forces
- C. is about the same as the cost of maintaining the world's armed forces
- D. is far more than the cost of maintaining the world's armed forces

25. The first law efficiency of the U.S. as a whole is about

- A. 26%
- B. 38%
- C. 49%
- D. 99%

26. To help achieve high embedded energy (and carbon) in new construction you can use

- A. recycled materials
- B. locally produced materials
- C. hire local contractors and construction crews
- D. all of the above
- 27. The best way to demonstrate the value of your green design to a banker is to
 - A. use the simple profit = sales costs formula
 - B. show a life cycle cost analysis of the project
 - C. base your analysis in terms of btus instead of dollars
 - D. all of the above

28. Opting for a LEED Gold building over a comparable conventional building

- A. is guaranteed to cost your client a few percent more
- B. may or may not cost more
- C. will guarantee enhanced energy efficiency over the life of the building
- D. will be more sustainable

Blondie

Dean Young and John Marshall



- 29. European green buildings are the result of
 - A. European Union legislation on carbon emission mitigation
 - B. Green Party popularity in Europe
 - C. signing on to the Kyoto Accord
 - D. all of the above
- 30. Green building strategies prominent among exemplary new European buildings are
 - A. solar enhanced stack ventilation schemes
 - B. narrow buildings with workstations near windows
 - C. extensive and appropriate external shading
 - D. all of the above