

Biophilic Design and Biophilic Urbanism Final Exam

- 1. What significant event happened in 1984 with regards to the concept of biophilic design?**
 - a. The AT&T building was declared a National historic monument
 - b. E.O. Wilson published a book titled “Biophilia”
 - c. Central Park in New York celebrated it’s 200th anniversary
 - d. DNA fingerprinting became the basis for biophilic design

- 2. What is the meaning of biophilia?**
 - a. Covered with plants
 - b. It is a term made up by city planners with no meaning
 - c. Love of life
 - d. Worship of living things

- 3. Which of the following is a benefit derived from a biophilic city?**
 - a. Enhanced biodiversity
 - b. Segregation of lower income people
 - c. More use of soft plastics
 - d. Total climate control

- 4. Which city changed its description from “Garden City” to “City in a Garden”?**
 - a. Portland, OR
 - b. Austin, TX
 - c. Perth, Australia
 - d. Singapore

- 5. Which of the following does not affect plant life?**
 - a. Insects
 - b. Sunlight
 - c. Building style
 - d. Winds

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- 6. How many species of plants are used within the Oasia hotel tower?**
- a. 54
 - b. 21
 - c. 33
 - d. 243
- 7. According to an RICS publication, “Human costs are ____ times greater than energy costs in the workplace.”**
- a. 2
 - b. 10
 - c. 58
 - d. 112
- 8. A Harvard-led study in 2015 found that raising these levels impaired the cognitive function of participants by as much as 50%?**
- a. N₂
 - b. CO₂
 - c. Oxygen
 - d. Humidity
- 9. The Ford Motor Company’s Rouge plant is known for what biophilic feature.**
- a. Recycling
 - b. It’s donut shape
 - c. Living, green roof
 - d. Extensive planting around the factory interior
- 10. Preserved moss walls are:**
- a. Encapsulated moss in panels
 - b. Living moss preserved with low maintenance irrigation
 - c. Stabilized dead moss
 - d. Any soft textured interior plant covered walls

11. “zenithal” lighting is used to rain light as a biophilic design element in which project by architect Jean Nouvel?

- a. La Marseillaise Tower
- b. One Central Park
- c. Longwood Gardens
- d. Louvre Abu Dhabi

12. The Metropol parasol in Seville Spain is an example of:

- a. Biophobic architecture
- b. Bioclimatic architecture
- c. Biomorphic architecture
- d. Urban Rewilding

13. Which of the following is not a design element used biophilic design:

- a. Air conditioning
- b. Light and Shadow
- c. Color
- d. Views

14. Which of the following are examples of natural patterns and textures?

- a. Stone textures
- b. Wood Grain
- c. Leafy patterns
- d. All of the above

15. According to its definition, a ‘concrete jungle’ :

- a. has a lot of modern buildings without grass or trees, and you think it is ugly or unpleasant to live in.
- b. is an area of paved structures engulfed with artificial trees.
- c. is an urban oasis
- d. is a phrase coined by Le Corbusier

16. Which term in color theory describes the addition of white?

- a. Shade
- b. Hue
- c. Tone
- d. Tint

17. What are two problems associated with uniform distribution of light?

- a. Energy costs and maintenance
- b. Dynamism and diffusion
- c. Glare discomfort and a boring space
- d. None of the above

18. One of the downsides of using water features in biophilic design is:

- a. Biological response from humans
- b. Sanitation concerns
- c. Attracts people
- d. Sound

19. Which building inspired by a desert rose has forms that are highlighted by the interplay of light and shadow?

- a. The Portland Building in Portland, OR.
- b. The Entex building in Houston, TX.
- c. Russian pavilion at Expo 2020 in Dubai
- d. Qatar National Museum in Doha

20. What are fractals?

- a. Fragments of natural materials like pieces of stone.
- b. An industrial process to recreate natural patterns.
- c. Patterns in nature created by repeating shapes in different scales where parts resemble the whole.
- d. A finite shape with no mathematical relationships.

21. Primary colors are:

- a. RAL, Violet, Orange,
- b. Red, Green, Blue, White
- c. Cyan, Magenta, Yellow, Black
- d. Red, Yellow, Blue

22. Greening grayfields and brownfields is what level of implementation in Green Urban design?

- a. Neighborhood
- b. Community
- c. Region
- d. Block

23. How many cities are members of the Biophilic Cities network, as referenced in the course material?

- a. 18
- b. 42
- c. 31
- d. 65

24. Which of the following buildings mentioned in the course is not mentioned as an example of biophilic design?

- a. Fallingwater
- b. AT&T (Sony) Tower
- c. The Orchard, Hammad International Airport
- d. La Sagrada Familia

25. Which of the following is not a challenge with biophilic design implementation?

- a. Availability of plants
- b. Awareness
- c. Funding
- d. Space

26. A “Heat island” is:

- a. An area of communal gathering with a fireplace or a large heating source at the center, used in cold climates.
- b. A localized weather pattern that brings in hot air.
- c. Any island where average temperatures exceed 90° F for more than 8 months out of the year.
- d. Created due to increased temperatures in populated areas.

27. What is a common trait shared by an Eskimo village and a traditional African village?

- a. Both use solar energy.
- b. They both have a close affinity to their animals and the nature around them.
- c. They are both primitive arrangements that offer little value to modern design.
- d. They are completely different in all aspects.

28. Which of the following are parts of a structured framework to addressing challenges to implementing biophilic design?

- a. Assess your needs and goals.
- b. Be creative and flexible.
- c. Both a. and b.
- d. None of the above.

29. Stone, Wood and Concrete are examples of:

- a. Natural materials
- b. Pre-engineered materials
- c. Materials that are non-biophilic
- d. Post-industrial materials

30. What is the premium for a green roof compared to a conventional roof?

- a. 25%
- b. There is no singular metric for the premium.
- c. More than double the cost
- d. Ranges from 10% - 19%