

Resilient Design – What Is It and What It Means for Architects

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Resilient Design Final Exam

1. **Resilient Design is based on which of the following?**
 - a. A concept introduced by the AIA
 - b. The theory of Resilience
 - c. The iCodes formulated by the International Code Council
 - d. Fire Codes developed in California
2. **The 2021 changes to the California regulations require what additional type of continuing education for Architects?**
 - a. Resilient Design specific training courses
 - b. Sustainability and LEED continuing education
 - c. Zero Net Carbon Design continuing education
 - d. No new regulations have been implemented.
3. **A definition of resilience, as articulated by the Resilient Design Institute, states that resilience is ...**
 - a. The capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance.
 - b. The capacity to bounce back after a disturbance or interruption.
 - c. Ability to maintain livable conditions in the event of natural disasters, loss of power, or other interruptions
 - d. All of the above.
4. **Which of the following materials were banned for use in the downtown area of Chicago after the great fire?**
 - a. Wood
 - b. Terra cotta
 - c. Limestone
 - d. None of the above
5. **Which of the following is not one of the principles of Resilient Design?**
 - a. Transcending scale
 - b. Durability
 - c. Building style
 - d. Anticipation of interruptions
6. **Which of the following government agencies have resilience programs:**
 - a. The Environmental Protection Agency (EPA)
 - b. FEMA
 - c. HUD
 - d. All of the above
7. **The Resilient Building Codes Toolkit is published by which of the following**
 - a. LISC Division of HUD
 - b. IBC
 - c. FEMA
 - d. UN commission on Resilient design

- 8. The Better Buildings® program addresses which of the following?**
- Transportation networks
 - Building design awards
 - Water & Waste
 - All of the above
- 9. A set of rules that specify the standards for construction of objects such as buildings and non-building structures is called a _____?**
- code
 - guideline
 - practice
 - statute
- 10. Chapter 9 of the IBC supports which resilience strategy?**
- Inclusive communities
 - Fire Resistance
 - IAQ
 - Mold, mildew, rot
- 11. The first state to adopt an energy code was?**
- Oregon
 - Colorado
 - California
 - Minnesota
- 12. The Global Principles for Resilient Infrastructure were developed by :**
- COP 27 in Sharm Al Sheikh, Egypt
 - National Research Council Canada
 - UN office for Disaster Risk Reduction
 - AIA Resilient Design Committee
- 13. An example of a building that uses sustainable materials and has climate responsive features, as presented in this course, is:**
- Fallingwater in Pennsylvania, USA
 - Copenhagen, Copenhagen, Denmark
 - The Al Wasl Dome, Dubai
 - The Museum of Tomorrow in Rio de Janeiro, Brazil
- 14. The _____ of natural disasters refers to how often they occur while _____ refers to the severity of a single event.**
- frequency, magnitude
 - frequency, intensity
 - cycle, intensity
 - likelihood, damage
- 15. According to Novogradac, (average) property insurance rates between 2020 and 2021 changed in which way?**
- Increased by \$514
 - Increased by 13.0%
 - Decreased by 13.3%
 - Increased by 33.5%

16. In the United States, most damage has been done by which form of natural disaster?

- a. Wildfires
- b. Earthquakes
- c. Floods
- d. Tropical storms and cyclones (hurricanes)

17. According to the National centers for Environmental Information, the state that has suffered the highest cost of natural disasters since 1980 is:

- a. Texas
- b. California
- c. Florida
- d. Louisiana

18. Use of impact resistant roofing materials addresses which climate change impact?

- a. Shrapnel in a war zone
- b. Wildfire risk
- c. Flooding
- d. Hail events

19. What does DfD stand for?

- a. Department for Design.
- b. Design for Deconstruction
- c. Department for De-forestation
- d. Design for Development.

20. SHERPA is:

- a. An online assessment tool for evaluating sustainable housing
- b. A study by the European Union to analyze the impact of resilient design in Nepal
- c. A DoD program for promoting resilient design in military facilities
- d. A report on Resilience published by the International Center for Science and High Technology

21. Which of the following is / are published by the American Institute of Architects?

- a. Climate Change Adaptation Design Resources
- b. Guidelines and Solutions for Architects on Climate Resiliency
- c. Disasters and the Built Environment
- d. b & c

22. Which of the following is / are true of the wildfires around the Los Angeles, California area in January 2025:

- a. The Eaton and Hurst fires were cumulatively the worst fires
- b. Only 18,000 people were evacuated at the peak
- c. There were multiple fires with the Palisades fire being the largest, consuming over 24,000 acres
- d. a & b

- 23. Some of the structures that escaped damage while others around them perished in the 2025 Los Angeles wildfires are credited to have survived due to which of the following factors?**
- Luck
 - Use of resilient design strategies
 - Removal of debris and loose landscaping from around the home(s)
 - All of the above
- 24. Achieving zero or negative carbon emissions over the life of a building is a goal of which type of design approach?**
- Net Zero design
 - Zero Net Carbon (ZNC) design
 - Biophilic design
 - Negative carbon design
- 25. Architect Onah Jung has argued that we need to think beyond Net Zero to tackle climate change and sustainability. The approach that is proposed as a more effective approach is:**
- Minimalist design
 - More strict code enforcement
 - Resilient design
 - Universal design
- 26. What is the ASCE risk category for buildings designated as essential facilities?**
- IV
 - III
 - II
 - I
- 27. A key recognition about the Resilient design principle of not being absolute is:**
- Unless all aspects align, resilient design options cannot be implemented
 - All solutions will inherently be partial
 - A phased approach is not recommended
 - All risks have to be treated equally
- 28. “Economic Darwinism” refers to:**
- An economic practice which establishes that competition leads to lowest prices and maximum profits.
 - An economic theory which suggests that businesses that can adapt to change will survive will success, while those that cannot, will fail.
 - An unofficial measure for building life-cycle cost.
 - That notion that a population’s survivability is based on economic well-being.
- 29. Building strong foundations is a resilient design tactic that contributes to which of the following:**
- Improved operational efficiency
 - Cost savings
 - Earthquake resistance
 - None of the above

30. Which of the following is not a means of achieving resilience in landscaping?

- a. Use of artificial plants
- b. Using native plants
- c. Water efficient irrigation systems
- d. Using diverse plant species