

FINAL EXAMINATION

Directions. Carefully read each question and all of the possible answers before you mark your answers on the answer sheet provided. There is only one correct answer for each test item. Using a soft lead (#2) pencil, record the best answer for each of the following questions. When you have answered all the questions, prepare the answer sheet as directed and mail to the address provided. Your examination will be evaluated and the results returned to you as quickly as possible.

1. How can you make a gabled roof more resistant to hurricane winds?
 - a) Check the attic for wood sheathing.
 - b) Install hurricane straps.
 - c) Keep trusses in place.
 - d) Use nails and staples to attach plywood.

2. What is meant by *dry floodproofing* your home?
 - a) Protecting service equipment inside and outside your home.
 - b) Permanently closing all doors that lead to the outside.
 - c) Sealing a building's windows and doors to keep floodwaters out.
 - d) Modifying a building so that floodwaters will cause minimal damage to the building and its contents.

3. A 100-year flood means:
 - a) The flood occurs exactly once every 100 years.
 - b) Once the flood occurs, there is little risk of another 100-year flood occurring in the near future.
 - c) Hundreds of floods happening at one time.
 - d) The flood has a 1 percent probability (1 in 100) of being equaled or exceeded in any year.

4. A good way to protect your home from sewer backups during a flood is:
 - a) Install backflow valves on all pipes that leave the house.
 - b) Buy flood insurance.
 - c) Turn off all water pipes.

5. The National Flood Insurance Program (NFIP) provides federally backed insurance coverage for your building in a participating community including walls, floors, wall-to-wall carpet, and furnace. Name another item included in the building coverage:
 - a) storage shed
 - b) swimming pool
 - c) insulation
 - d) driveway

6. One of the advantages of elevating a home in floodprone areas is:
 - a) Elevating doesn't cost very much.
 - b) There is no need to move vulnerable contents to a higher level during flooding.
 - c) There is no need to evacuate during the flooding event.
 - d) You don't need professionals to accomplish it.

7. Hurricane season as established by the National Weather Service is:
 - a) June 1 through November 30
 - b) February through April
 - c) March through April
 - d) June 1 through September 30

8. With regard to relocating a house that is subject to deep flooding, which statement is true?
 - a) Only small one-story homes and commercial buildings with less than 4 rooms can be relocated.
 - b) Once a house has been relocated outside the flood hazard area, flood insurance is still needed.
 - c) The local government locates the new site for residents.
 - d) Moving a house is a complex operation that requires a professional house mover.

9. Which is a good measure in preparing your kitchen for an earthquake?
 - a) Attach hanging plants and kitchen utensils to wall studs.
 - b) Put guard rails on open shelves so items can't slide off
 - c) Keep delicate crystal, china and stemware in cabinets.
 - d) All of the above.
 - e) a & b above.

10. Why is it necessary to secure your water heater if you live in an earthquake zone?
 - a) If it walks, it could cause gas or water leakage, or electrical shocks, fires or explosions.
 - b) It is the most vulnerable appliance to earthquake damage.
 - c) You could be without water after an earthquake.
 - d) All of the above.

11. One way to protect a home from damage in a windstorm is to install _____ over all large windows and doors.
 - a) safety film
 - b) plastic sheeting
 - c) impact-resistant plywood shutters
 - d) masking or other strong tape

12. What is the best type of house roofing material to use in wildfire protection?
 - a) Asphalt shingles
 - b) Tile
 - c) Slate
 - d) Wood shakes
 - e) b & c above.

13. A house in Mississippi was flooded several times. During the largest flood, the water reached as high as 2 feet above the first floor. The owners realized they needed to make changes to their home to protect it from flooding in the future. This process is called:
 - a) Retrofitting
 - b) Rehabilitating
 - c) Stabilizing
 - d) Construction technology

14. The first thing you should do in taking steps to reduce risk to your home in the event of a wind hazard is:
 - a) Replace all windows with shatter-proof glass.
 - b) Strengthen doors.
 - c) Determine what type of roof you have.
 - d) Evacuate

15. Most of the flooding that occurs in the U.S. is _____.
 - a) flash flooding.
 - b) either riverine or ocean flooding.
 - c) coastal.
 - d) lake.

16. When do tornadoes usually occur?
 - a) mornings
 - b) evenings
 - c) afternoons and evenings
 - d) after midnight

17. The elevation of the highest flood that a retrofitting method is intended to protect is:
 - a) Base flood elevation
 - b) 100-year flood
 - c) 500-year flood
 - d) Flood Protection Elevation

18. According to the text, what areas in the U.S. that are vulnerable to earthquakes?
 - a) South Carolina and California
 - b) California and Alaska
 - c) All 50 states
 - d) The Mississippi Valley and the West

19. The amount of damage to your furnace or hot water heater during flooding will depend on what two factors?
 - a) Where you live and the location of the equipment.
 - b) Depth of the flooding and the amount of time the equipment remains under water.
 - c) When your house was built and the type of soil it sits on.
 - d) How energy-efficient and how old the units are.

20. Installing flexible gas and water connection pipes between your appliances and their supply lines should be done by:
 - a) you, the homeowner.
 - b) a plumber.
 - c) a licensed contractor.
 - d) the people who sold you the appliance.

21. What is the best way to protect your heating, ventilation and cooling (HVAC) equipment from flooding?
 - a) Build a concrete or masonry block floodwall around it.
 - b) Set it on concrete blocks.
 - c) Move it from the basement or lower level of the house to an upper floor or attic.
 - d) Place it outside.

22. When a tornado has been sighted or indicated by weather radar, a(n) _____ is issued.
 - a) tornado watch
 - b) Emergency Alert System (EAS)
 - c) tornado warning
 - d) tornado threat

23. What should you do with a large amoire in your bedroom to prevent it from toppling over during an earthquake?
 - a) Make sure it is positioned away from the bed.
 - b) Make sure it is positioned away from the exit so it won't block your escape if it falls.
 - c) Bolt the furniture into the wall studs or use angle brackets.
 - d) There is nothing you can do for large furniture before an earthquake.

24. What dangers other than tornadoes often accompany thunderstorms?
 - a) flash floods
 - b) lightning
 - c) large hail
 - d) all of the above

25. Which home appliance below is most vulnerable to earthquake damage?
 - a) washer
 - b) air compressor
 - c) fuel tank
 - d) water heater

26. Which of the following improvements for hurricane protection that you can do yourself costs less than \$300?
 - a) Install hurricane clips/straps
 - b) Gather outdoor furniture, garbage cans, potential debris, etc., and move them inside.
 - c) Cover all large windows and patio doors with storm shutters made of plywood.
 - d) Replace roof covering.

27. Weak tornadoes that form over warm water are called _____.
 - a) thunderstorms
 - b) waterspouts
 - c) damaging straight-line winds
 - d) hurricanes

28. The electrical device used with a levee or floodwall to remove floodwaters from the protected area faster than water enters is called a _____.
- a) drain
 - b) generator
 - c) wall opening
 - d) sump pump
29. Removing shrubs and other landscaping away from the sides of your home or deck is a good mitigation measure against what hazard event?
- a) hurricane
 - b) flooding
 - c) wildfire
 - d) earthquake
30. In past hurricanes, many homeowners returning home noticed their temporary plywood shutters blew off. Why?
- a) Plywood is not impact-resistant or strong enough.
 - b) They were not adequately fastened.
 - c) They were not tested beforehand.
31. For hazard identification in your community, consider which of the following:
- a) how long disaster events last
 - b) past history of disasters
 - c) vulnerability analysis
 - d) both a & b
32. Which precaution will improve earthquake readiness in a mobile home?
- a) Use more bracing than conventional homes.
 - b) Keep the axle, wheels, and inflated tires on the unit.
 - c) Use heavy roofing materials.
 - d) Place the unit on gravel or pavement.
33. In deciding whether to purchase earthquake insurance, one question you should ask is....
- a) Do I have the money for premiums?
 - b) Is my house new?
 - c) Is my house wood-frame or brick?
 - d) Are the contents of my home worth insuring?
34. Mitigation:
- a) is the cornerstone of emergency management.
 - b) reduces the chance of an emergency happening.
 - c) lessens the impact disasters have on people and property.
 - d) all of the above

35. A community-based initiative that seeks to reduce vulnerability to natural hazards for the entire designated area through mitigation actions is known as:
- a) The National Flood Insurance Program
 - b) The Federal Emergency Management Agency
 - c) A Disaster Resistant Community
 - d) An Emergency
36. **True or False.** During an earthquake, the actual movement of the ground is the cause of death 90% of the time.
- a) True
 - b) False
37. **True or False.** Homeowner's insurance does not cover flood damage.
- a) True
 - b) False
38. Flood insurance is only available for homeowners.
- a) True
 - b) False
39. If you live outside the floodplain, there is no need to purchase flood insurance.
- a) True
 - b) False

Who to contact? Match the professional below with what they are trained to do in advising you on earthquake protection for your home. Please note: one profession may match more than one title.

- 40. _____ Architects
 - 41. _____ Contractors
 - 42. _____ Civil/Structural Engineers
 - 43. _____ Geologists
 - 44. _____ Foundation Engineers
- a) Are trained and licensed to evaluate soil conditions and recommend appropriate action.
 - b) Have to implement the detailed plans and specifications prepared by an architect and engineer.
 - c) Are trained to provide information about structures.

Match the following methods of flood mitigation:

- | | | |
|-----------|-------------------|--|
| 45. _____ | Levee | a) Moving your house out of the flood hazard area to higher ground where it will not be exposed to flooding. |
| 46. _____ | Wet Floodproofing | b) Engineered structure usually built of concrete, masonry, or a combination of both. |
| 47. _____ | Floodwalls | c) Tearing down your damaged house and either rebuilding properly on the same property or buying or building a house elsewhere. |
| 48. _____ | Elevation | d) Flood protection barrier -- typically a compacted earthen structure. |
| 49. _____ | Demolition | e) Allowing floodwaters to enter uninhabited portions of your house which will cause only minimal damage to the building and its contents. |
| 50. _____ | Relocation | f) Raising your house so that the lowest floor is above the flood level. |