## Chapter 10: Architecture

## Multiple Choice Questions

1. An extended arch is called a(n)
A. arch C. vault\* D. dome
2. A(n) \_\_\_\_\_\_\_\_\_\_\_\_ has a hemispherical form.
A. arch C. vault D. dome\*
3. \_\_\_\_\_\_\_\_\_\_\_\_ vaults are constructed by placing barrel vaults at right angles to cover a square space.
A. Groin\* B. Rib C. Pendentive
4. Pendentives would be found as part of a(n)
A. post-and-lintel construction B. arch C. dome\*
5. In \_\_\_\_\_\_\_\_\_\_\_\_ construction two uprights support a horizontal piece
A. post-and-lintel\* B. arch C. vault
6. "Falling Water," the popular name of a house designed by Frank Lloyd Wright, is properly called the \_\_\_\_\_\_\_\_\_\_\_\_.
A. Lever House B. Griswold House C. Kaufmann House\*
7. Stonehenge, the Temple of Amen-Re in Egypt, and the Parthenon in Greece were all built using which of the following techniques?
A. post-and-lintel\* B. truss C. vaulting
8. Ribs are a feature of which of the following?
A. post-and-lintel B. arch C. vault\*
9. Lengths of wood, iron, or steel pieced together in triangular shapes in order to expand the abilities of these materials to span distances best fits which of the following?
A. post-and-beam construction B. truss construction\* C. balloon framing
10. The wedge-shaped blocks of stone in an arch are called \_\_\_\_\_\_\_\_\_\_\_\_.
A. keystone B. centering C. voussoirs\*
11. Vertical and horizontal timbers are pieced together (similar to post-and-lintel) in which of the following types of construction?
A. post-and-beam\* B. truss C. balloon framing
12. A mass-production form of carpentry, dating back to the turn of the twentieth century, is known as
A. shell architecture B. post-and-beam construction C. balloon framing\*
13. A light-weight replacement for masonry domes is which of the following?
A. cast-iron B. reinforced concrete C. shell architecture\*
14. Which of the following techniques is based on riveted I-beams?
A. steel-cage\* B. reinforced concrete C. steel-cable
15. The dome of Hagia Sophia rests on \_\_\_\_\_\_\_\_\_\_\_\_.
A. stones placed in gradually diminishing concentric circles B. post-and-lintel supports C. pendentives\*
16. A flying buttress would most likely be found on a
A. Roman temple B. Romanesque church C. Gothic cathedral\*
17. The first material to allow the erection of tall buildings with relatively slender walls was \_\_\_\_\_\_\_\_\_\_\_\_.
A. cast-iron\* B. reinforced concrete C. steel-cable
18. Many parallel wires share the stress of support in which of the following techniques?
A. cast-iron B. reinforced concrete C. steel-cable\*
19. The Eiffel Tower and the Crystal Palace were early examples of which of the following techniques?
A. cast-iron\* B. reinforced concrete C. steel-cable
20. Who said, "A doctor can bury his mistakes, but an architect can only advise his clients to plant vines."
A. Frank Lloyd Wright\* B. Moshe Safdie C. Sir Joseph Paxton

## Completion/Fill-in-the-Blank Questions

1. In both the sciences and the arts we strive to weave our experiences into coherent bodies of knowledge and to \_\_\_\_\_\_\_\_\_\_\_\_ them.
{{communicate}}
2. Very early humans \_\_\_\_\_\_\_\_\_\_\_\_ rather than built their shelters.
{{found}}
3. Of all the arts, \_\_\_\_\_\_\_\_\_\_\_\_ probably has the greatest impact on our daily lives.
{{architecture}}
4. More than any other art form, architecture is experienced from \_\_\_\_\_\_\_\_\_\_\_\_ as well as without, and at great length.
{{within}}
5. In a sense, the architect is not only an artist but a \_\_\_\_\_\_\_\_\_\_\_\_, a compromiser between the needs of the client and the properties and aesthetic possibilities of the site.
{{mediator}}
6. Some of the most fascinating expressions of contemporary architecture are found in our \_\_\_\_\_\_\_\_\_\_\_\_
{{museums}}
7. As a building material, stone is massive and virtually \_\_\_\_\_\_\_\_\_\_\_\_
{{indestructible}}
8. \_\_\_\_\_\_\_\_\_\_\_\_ is stone construction without the benefit of mortar.
{{Dry masonry}}
9. At Mesa Verde, Colorado, circular, underground \_\_\_\_\_\_\_\_\_\_\_\_ served as community centers for early Native American inhabitants.
{{kivas}}
10. Arches have many functions, including supporting other structures and serving as actual and symbolic \_\_\_\_\_\_\_\_\_\_\_\_.
{{gateways}}
11. Gothic architecture employed so-called \_\_\_\_\_\_\_\_\_\_\_\_ buttresses to transmit part of the load of a vault to a support positioned outside the building.
{{flying}}
12. Stone is rarely used today as a structural material--it is too costly. However, modern buildings with steel skeletons are frequently dressed with thin \_\_\_\_\_\_\_\_\_\_\_\_ of costly stone.
{{veneers or facades}}
13. "The mother art is architecture. Without an architecture of our own we have no soul of our own civilization" was said by \_\_\_\_\_\_\_\_\_\_\_\_
{{Wright}}
14. Climate, site, materials, building codes, clients, contractors, service systems, and the amount of money available are just some of the variables that the architect must employ or cont with to create an aesthetically pleasing, \_\_\_\_\_\_\_\_\_\_\_\_ structure.
{{functional}}
15. Giorgio de \_\_\_\_\_\_\_\_\_\_\_\_ said, "Architecture completes nature."
{{Chirico}}
16. The \_\_\_\_\_\_\_\_\_\_\_\_ strength of stone allowed the builders of the Pont du Gard to place additional weight above the arches.
{{compressive}}
17. The greatest loads in the groin vault are thrust onto the four \_\_\_\_\_\_\_\_\_\_\_\_ that comprise the sides and the arches that run diagonally across them.
{{arches}}
18. The spaces enclosed by \_\_\_\_\_\_\_\_\_\_\_\_ vaults are dark, since piercing them to let in natural light would compromise their strength.
{{barrel}}
19. St. Étienne in France has some of the earliest \_\_\_\_\_\_\_\_\_\_\_\_ ribs in its high vaulting.
{{true}}
20. \_\_\_\_\_\_\_\_\_\_\_\_, which is built up from sheets of wood glued together, is unlikely to warp and is frequently used as an underlayer in the exterior walls of small buildings and homes.
{{Plywood}}

## Discussion Questions

1. What accounted for the enormous business success of Levitt & Sons.
2. How did the French people react to the Eiffel Tower when it was built?
3. Post-and-lintel construction is one of the oldest of building methods. It has also produced some of the most sophisticated buildings. Explain.
4. Are structures like Stonehenge or the Eiffel Tower more appropriately considered architecture or sculpture? Why?
5. Where is Paxton's Crystal Palace today? Explain your answer.
6. When Christo and Jeanne-Claude wrap a building, does the building become a piece of sculpture? Explain your answer.
7. Explain what Andy Rooney meant when he said, "An arch is two curves trying to fall."
8. Compare and contrast Roebling's Brooklyn Bridge and Saarinen's Dulles Airport. Consider both structure and function
9. Do you agree with Frank Lloyd Wright's assertion, "The mother art is architecture"? Explain your answer.
10. Why is architecture considered both an art and science?