



**Illinois Society of Professional Engineers - University of Illinois**  
**College of Engineering**  
**Professional Engineer On-Line Seminars**



**INSTRUCTIONS:**

1. View the on-line seminar.
2. Complete the quiz below.
3. Complete the "Engineer Information" section.
4. Make a copy for your records.
5. Mail the quiz along with your \$20 payment (credit card information or check payable ISPE) to:  
ISPE, 100 East Washington Street, Springfield, IL 62701.

If you score an 80% or better on the quiz, you will receive your certificate within 4 weeks. If you fail to earn an 80% score, the quiz will be returned to you and you will have the opportunity to retake it.

Each seminar/quiz is worth 1 Professional Development Hour.

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**QUIZ:** 04-02  
**TOPIC:** Specialty Structure Projects  
**PRESENTER:** Shane McCormick

1. The double curvature of the St Paul band shell
  - a) minimizes susceptibility to buckling.
  - b) is a particularly efficient design in that each member is supported by arches in two directions.
  - c) allows most of the load to be taken by in-plane axial forces with reduced bending and shear forces.
  - d) all of the above
2. In order to resist the lateral thrust of the St. Paul band shell, the design uses grade beams spanning from one base to the other.  
(circle) TRUE FALSE
3. Double nut and washer connections were used below grade between the pile cap and the 50-ton concrete shell base section in order to
  - a) satisfy code requirements for strength
  - b) reduce the threat of corrosion
  - c) allow for accurate positioning of the section
  - d) all of the above
4. Bedrock in New York City is generally much deeper than it is in Illinois, thereby complicating the design of foundations for tall buildings.  
(circle) TRUE FALSE
5. The setbacks of the proposed Trump Tower are designed to match the heights of the neighboring buildings.  
(circle) TRUE FALSE
6. Trump Tower, when completed, will be the tallest building in the United States.  
(circle) TRUE FALSE

## QUIZ 04-02 CONTINUED

7. To accommodate the relatively thin profile of the building in one direction, the structural system can best be compared to
- a) a sailboat mast with outriggers.
  - b) X bracing such as that used in the John Hancock building.
  - c) Egyptian pyramids.
  - d) A combination of all three
8. "Boundary layer" is a term used to describe the slower moving layer of air near the earth's surface.  
(circle)            TRUE            FALSE
9. The proposed world's tallest building in Dubai consists of a reinforced concrete core connected to steel exterior columns via link beams.  
(circle)            TRUE            FALSE
10. In order to account for the sandy desert soil conditions, the foundation for the Dubai tower will consist of
- a) concrete piles to bedrock
  - b) concrete piles that depend on side friction
  - c) a concrete mat
  - d) an array of spread footings
  - e) both b) and c)

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## ENGINEER INFORMATION

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_ Daytime Phone \_\_\_\_\_

Fax \_\_\_\_\_ E-Mail \_\_\_\_\_

Method of Payment:      Check (Payable to ISPE) # \_\_\_\_\_      Visa \_\_\_\_\_      Master Card \_\_\_\_\_

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Fax with credit card information to 217-528-6545.*

*Allow 4 weeks for certificate delivery. Certificate will be mailed to the address provided above.*

*Contact ISPE at 217-544-7424 with any questions.*