edcetera engineering

Final Exam
Fundamentals of Masonry
Part A

1. Using kilns to bake clay bricks was discovered in the late 1,600's.
- a. F
- b. T

2. Anticipating the severity of weather conditions at a certain geographic location is an exact science.
- a. T
- b. F

3. _____ is the term given to each vertical section of wall, one masonry unit in thickness – a wall one course of brick wide:
- a. Cull
- b. Bull header
- c. Shiner
- d. Wythe

4. The type of clay used in manufacturing clay masonry products is:
- a. Surface clays
- b. Fire clays
- c. Shale
- d. All of the above

5. Two of the three methods of forming clay bricks are _____ .
- a. stiff mud and dry mud
- b. soft mud and wet press
- c. dry press and soft mud
- d. wet press and wet mud

6. The tunnel kiln temperature during the firing portion of the manufacture of clay bricks can reach temperatures higher than 1,500 °F.
- a. T
- b. F

7. If a concrete block forming machine could produce 3 blocks per cycle and each cycle took exactly 10 seconds, how many block could be formed if the machine ran continuously for exactly 7 hours?
- a. 1,400
- b. 1,542
- c. 7,560
- d. 12,600

8. The kiln temperature during the curing portion of the manufacture of concrete blocks is:

- a. -10°F to 32°F (kept below freezing)
- b. 90°F to 120°F (similar to a wet sauna or a steam sauna)
- c. 220°F to 300°F (higher than boiling water)
- d. 1,600°F to 2,400°F (high enough to vitrify materials)

9. Mortar allows the pieces of masonry construction to act as a single element.
- a. T
- b. F

10. Today, when mixing mortar, which of the following is NOT a basic ingredient?
- a. Lime
- b. Burnt gypsum
- c. Sand
- d. Water

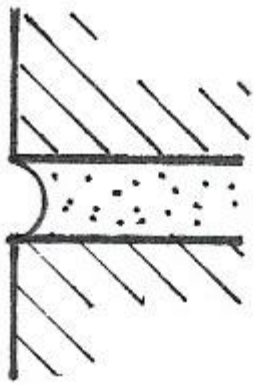
11. Today, the types of mortar are remembered using the acronym "mason work". What are the types of mortar today?
- a. Type M, Type N, Type K
- b. Type A, Type O, Type R
- c. Type M, Type S, Type N, Type O
- d. Type A, Type O, Type W, Type K

12. In the field, a good rule of thumb is "Good mortar is what the mason says in good mortar".
- a. T
- b. F

13. Which of the following is a main purpose of mortar joints?
- a. Bond the units together
- b. Make up for slight variations in size of the masonry unit
- c. Bond the masonry units to any reinforcement that may be placed in the joints
- d. All of the above

14. The normal thickness of a mortar joint is 3/8".
- a. T
- b. F

15. The mortar joint shown

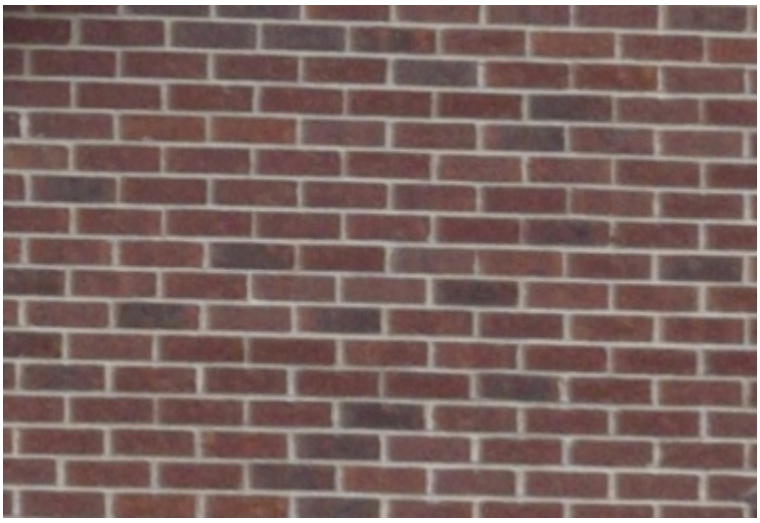


- a. is a concave joint
- b. is a tooled joint

○ c. resists the penetration of water
○ d. all of the above

16. The horizontal joint between bricks in adjacent courses is called the head joint.
○ a. T
○ b. F

17. The bond in the photo is:



○ a. Running bond
○ b. Flemish bond
○ c. Stack bond
○ d. None of the above

18. Aside from structural design errors, 90% of all masonry building problems are directly related to water.
○ a. T
○ b. F

19. In masonry walls, wind driven rain is the primary source of water penetrations.
○ a. T
○ b. F

20. Today, probably the two most common types of masonry walls are the single wythe concrete block wall and the brick veneer cavity wall.
○ a. T
○ b. F

21. The back-up wall for a brick veneer cavity wall can be:
○ a. Wood framing
○ b. Steel framing
○ c. Masonry
○ d. All of the above

22. In a brick veneer cavity wall, moisture that passes through the brick veneer, drains down the back side of the veneer, and exits the cavity
○ a. through the air/moisture barrier
○ b. by soaking through the bottom course of the bricks

- ○ c. through weep holes
- ○ d. through the soffit

23. Through wall flashing goes completely through the brick veneer.
- ○ a. T
- ○ b. F

24. Wall ties are used to
- ○ a. form corners in masonry walls
- ○ b. hold the veneer in a vertical plane
- ○ c. drain moisture from a cavity wall
- ○ d. attach the soffit to the back-up wall

25. A weep hole can be
- ○ a. an open head joint
- ○ b. a piece of rope
- ○ c. a plastic tube
- ○ d. all of the above