

***** EXAMINATION *****

EVALUATION AND REPAIR OF CONCRETE STRUCTURES

1. **Evaluation of the current condition of the concrete may include:**
 - a) review of design and construction documents
 - b) relating observations to causes
 - c) selection of repair materials
 - d) None of the above.

2. **Selecting methods and materials involves:**
 - a) evaluation of current conditions
 - b) relating observations to causes
 - c) constraints such as access to the structure
 - d) None of the above.

3. **Advantages of making permanent versus temporary repairs is**
 - a) part of the preparation of plans phase
 - b) part of evaluation of the concrete phase
 - c) part of relating observations to causes phase
 - d) part of selecting methods and materials phase

4. **The final phase of correcting deficiencies in concrete is:**
 - a) evaluation
 - b) relating observations to causes
 - c) execution of work
 - d) preparation of plans

5. **Evaluation of the concrete involves:**
 - a) review of the available design documentation
 - b) review of observations to cause reports
 - c) comparison to new design techniques
 - d) None of the above.

6. **Core drilling for specimens is part of:**
 - a) the planning and design report
 - b) the testing during repair construction
 - c) the evaluation of the concrete
 - d) None of the above.

7. **Cold joints, bug holes, and exposed rebars are:**
- a) cracking
 - b) construction faults
 - c) honeycombing
 - d) None of the above
8. **Description of cracking may be:**
- a) width of the crack
 - b) physical state where cracking occurred.
 - c) structural nature of the crack.
 - d) All of the above
9. **Two terms association with erosion are:**
- a) exudation and abrasion
 - b) abrasion and buckling
 - c) cavitation and abrasion
 - d) spalling and seepage
10. **Incrustation and exudation are terms associated with:**
- a) erosion
 - b) seepage
 - c) spalling
 - d) distortion of movement
11. **Chalking is a term associated with:**
- a) disintegration
 - b) cracking
 - c) construction faults
 - d) erosion
12. **Disintegration differs from spalling because:**
- a) particles are being removed from the mass
 - b) spalling is more linear
 - c) disintegration occurs more often
 - d) disintegration is easier to visibly detect
13. **Scaling is usually due to:**
- a) freezing and thawing
 - b) erosion effect of passing water
 - c) unanticipated loads
 - d) acidic water
14. **The arrival of powdered material at the surface of hardened**
- a) concrete is spalling
 - b) concrete is exudating
 - c) concrete is cracking residual
 - d) concrete is dusting

15. **The movement of water through pores is known as:**
- a) wetting
 - b) infiltration
 - c) seepage
 - d) draining
16. **Popouts are special case of:**
- a) construction faults
 - b) disintegration
 - c) erosion
 - d) spalling
17. **Delaminated concrete is most efficiently tested by:**
- a) drilling
 - b) sampling
 - c) hammer-sounding
 - d) chain dragging
18. **Surface mapping of cracks may be determined by:**
- a) photographs
 - b) drilling
 - c) X-rays
 - d) seismic exploration techniques
19. **High-resolution acoustic mapping systems are used to:**
- a) determine soil instability
 - b) determine submerged erosion and faulting
 - c) determine seepage
 - d) measure structural load points.
20. **Ultrasonic pulse velocity provides a method for:**
- a) evaluating soil bearings
 - b) finding submerged seepage
 - c) evaluating structures non-destructively
 - d) None of the above

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