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1. Which of the following paints are most suitable to be applied on galvanized steel?

   A. Aluminum paint as finishing coat and aluminum primer.
   B. Lacquer as finishing coat on red lead primer.
   C. Emulsion paint as finishing coat and prime lime as primer.
   D. Synthetic paint as finishing coat and calcium plumbate as primer.

   Ans. : D

2. To apply for consent from the Building Authority, the quality assurance scheme for Precast Concrete Construction should include

   A. test for chlorides in water.
   B. frequency of audit by qualified quantity surveyor.
   C. efficiency and proper operation of equipment at the casting yard.
   D. calibration of laboratory equipment for measurement of quantities.

   Ans. : C
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Answer questions 3 - 7 based on the following external wall section detail for a high-rise building.

3. What is the system for building enclosure as shown in the drawing?

A. Window-wall system  
B. Stick curtain-wall system  
C. Unitized curtain-wall system  
D. Suspended glass-wall system

**Ans.** : C
4. What does the annotation “a” represent?
   A. Durasteel panel  
   B. Thermal insulation  
   C. Waterproofing board  
   D. Metal honeycomb panel
   Ans. : B

5. Which surface of the insulated glass unit is most suitable and effective for application of the low-e coating?
   A. 1  
   B. 2  
   C. 3  
   D. 4
   Ans. : B

6. In consideration of wind load and safety, what is the most appropriate glass type for the outer glass panel of the insulated glass unit annotated “b”?
   A. Float glass  
   B. Acrylic glass  
   C. Laminated glass  
   D. Heat strengthened glass
   Ans. : D

7. What is the minimum dimension annotated “H” for fire safety?
   A. 600mm  
   B. 750mm  
   C. 900mm  
   D. 1100mm
   Ans. : C
8. Which of the following is not an advantage of prefabrication in construction?
   
   A. Quick assembling and installation on site.
   B. Large amount of cost saving compared with in situ construction.
   C. Suitable for mass production of standardized modules and components.
   D. Better quality control can be achieved by means of factory prefabrication.

   Ans. : B

9. Tolerance limits for construction are usually stated in the
   
   A. wall sections.
   B. specifications.
   C. bills of quantities.
   D. production drawings.

   Ans. : B

10. Which of the following is not an acceptable risk for demolition?

    A. Cutting up the concrete structural frame
    B. Piling up heavy loads of debris on unused floors
    C. Removal of building component containing asbestos
    D. Keeping the existing trees on the pavement with the hoarding

   Ans. : B

11. Which of the following is used to determine the consistency of fresh concrete?

    A. Slump test
    B. Hammer test
    C. Crushing test
    D. Concrete test cubes

   Ans : A
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12. Which of the following is not correct for tests on concrete core samples?
   A. The concrete cores should not show sign of segregation or honeycomb.
   B. A minimum of one set of core samples should be taken every two floors.
   C. A person independent from the contractor is required to supervise the drilling of core sample.
   D. The diameter of concrete cores to be taken depends on the size of concrete aggregates.

   Ans. : B

13. In the pattern or bond in brickwork, the best practical lap to the bricks
   A. is given by the Irish Bond.
   B. is required for rake-out joints.
   C. will cater for the tolerance of 20mm.
   D. should not be less than a quarter of a brick length.

   Ans. : D

14. Which of the following is commonly used as sealant for uPVC windows?
   A. Silicone
   B. Acrylics
   C. Structural butyls
   D. Oil-based caulking

   Ans. : A

15. Which of the following provides a nearly undistorted vision?
   A. Float glass
   B. Sheet glass
   C. Wired glass
   D. Tempered glass

   Ans. : A
16. Which of the following is not a testing method commonly applied to a curtain wall system?

A. Air infiltration test  
B. Glass panel pull-out test  
C. Water infiltration test under dynamic pressure  
D. Safety test by means of cyclic test or static load test

Ans. : B

17. As a defect of plasterwork, efflorescence is

A. inevitable due to the nature of the plaster.  
B. caused by water absorption in the background.  
C. due to relative movement between different plaster coats.  
D. caused by water transmitting the soluble salts from the background.

Ans. : D

18. Which of the following does not require submission to the Buildings Department for approval?

A. Glass shop front at ground floor with design span of 8m.  
B. Window wall system with a structural opening of 2m x 1.2m.  
C. Window at a location where the design wind pressure is greater than 2.86kPa.  
D. Stone cladding works at external walls of a ground floor with area 4m high x 6m long.

Ans. : D
19. Which of the following is represented by the following isometric diagram?

A. Skylight  
B. Suspension glass details  
C. Environmental screen for windows  
D. Unitized glazing panels in curtain wall

Ans. : B
Answer questions 20 to 22 by referring to the following typical roofing detail.

20. What does the annotation “a” represent?

A. Rockwool  
B. Rigid insulation  
C. Metal honeycomb panel  
D. Marine grade plywood board  

Ans. : B

21. What does the annotation “b” represent?

A. Drainage layer  
B. Light weight concrete fill  
C. Cement lime screed laid to fall  
D. Cement sand screed laid to fall

Ans. : D
22. What is the appropriate minimum dimension annotated “c”?

A. 50mm  
B. 150mm  
C. 300mm  
D. 400mm

**Ans.** : B

Answer questions 23 to 25 by referring to the following free-standing glass protective barrier section detail.

23. Under the Building (Construction) Regulations, a protective barrier will be required where there is a difference in adjacent levels of greater than

A. 450mm  
B. 600mm  
C. 900mm  
D. 1100mm

**Ans.** : B
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24. What is the suitable glass type for the glass panel annotated “a” for such protective barrier mentioned in Question 24?

A. Float glass
B. Wired glass
C. Tempered glass
D. Low iron float glass

Ans. : C

25. What is the minimum required height for the dimension annotated “b” for such protective barrier mentioned in question 24?

A. 900mm
B. 1000mm
C. 1100mm
D. 1200mm

Ans. : C

26. Arrange the following tasks in the most appropriate sequence for top-down construction of a 3-level basement.

(1) Pile test
(2) Construction of ground beam
(3) Superstructure construction and top-down basement construction simultaneously
(4) Construction of vertical structural members from pile cap to ground slab level
(5) Construction of piles
(6) Pile cap construction

A. (3), (5), (4), (6), (1), (2)
B. (5), (6), (1), (4), (3), (2)
C. (5), (1), (6), (4), (2), (3)
D. (3), (5), (6), (1), (4), (2)

Ans. : C
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27. Which of the following is a requirement for transformer room?

A. The doors must face into an unobstructed space.
B. Location of transformer rooms must be at street level.
C. Fire resisting period requirement of the room may be exempted.
D. The doors of the room located above ground level when open outwards over a street should be at a height of not less than 3.5m.

Ans. : A

28. What aspects of works are better described by means of specifications than drawings?

(1) Dimensions and shape
(2) Construction tolerances
(3) Quality and acceptance criteria
(4) Disposition and arrangement of components in a construction.

A. (1) and (2) only
B. (1) and (4) only
C. (2) and (3) only
D. (3) and (4) only

Ans. : C

29. Which of the following is not suitable for wet-fixed tiles on external walls?

A. Tiles with good water absorption
B. Tiles of size 300mm x 600mm fixed by mechanical means
C. Joints not allowed to be greater than 3mm to avoid water penetration
D. Spatterdash applied to substrate within 1 day after removal of formwork

Ans. : C

Revised on 23 January 2015