

HKIA/ARB

Professional Assessment

Sample Questions

September 2011

Sample Questions for Paper 1 Statutory Controls in Building Works

1. One of the purposes of “usable floor space” in building plan submissions is for determining
- A. the area of the refuse chamber.
 - B. the provision of sanitary fitments.
 - C. the area within a flat, exclusive of common areas.
 - D. the assumed population that has to be evacuated in case of emergency.

Ans. : A

2. Which of the following is exempted from the provisions of the Buildings Ordinance?
- A. Any street works
 - B. Any non-structural works.
 - C. Works for any building belonging to the Government.
 - D. Works for any building belonging to the Housing Society.

Ans. : C

3. Development proposal for a site zoned “Comprehensive Development Area” in an Outline Zoning Plan **always** requires
- A. submission of a traffic impact study.
 - B. submission of a landscape proposal.
 - C. approval by the Lands Department under “design, disposition and height” clause of the lease conditions.
 - D. approval by the Town Planning Board under “Section 16” of the Town Planning Ordinance.

Ans. : D

4. Who is the Licensing Authority for a restaurant situated at a licensed hotel?
- A. The Director of Buildings
 - B. The Commissioner of Police
 - C. The Secretary for Home Affairs
 - D. The Director of Food and Environmental Hygiene

Ans. : D

Sample Questions for Paper 1 Statutory Controls in Building Works

5. Which of the following **always** requires approval and consent?

- A. Hoardings for demolition works
- B. Contractor's shed to be erected above hoardings
- C. Provision of show flats within a construction site
- D. Ground investigations works

Ans. : C

6. Under Building (Planning) Regulations, which of the following statements about "open space" is **correct**?

- A. Open space is required for both office and domestic buildings.
- B. No part of a domestic building shall be within 1.5m from the rear site boundary.
- C. The level difference within any part of a required open space must not exceed 600mm.
- D. The minimum dimension of an open space shall be not less than 2.3m.

Ans. : B

7. Which of the following require a room to be provided with at least 2 exit doors?

- (1) The size of the room exceeds 30 m².
- (2) The capacity of the room exceeds 30 persons.
- (3) The direct distance is below 18m but exceeds 15 m.
- (4) The travel distance is below 18m but exceeds 15 m.

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

Ans. : C

Sample Questions for Paper 1 Statutory Controls in Building Works

8. When applying for an "Occupation Permit", which of the following documents are required?

- (1) Certificate of Compliance
- (2) Plan Index
- (3) Drainage connection advice
- (4) Completion advice from EMSD

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

Ans. : C

9. Irrespective of its distance from adjoining buildings, the roof

- (1) of a domestic building must have an FRP of not less than 1 hour.
- (2) of a single-staircase building of more than 13m above ground level should have an FRP of not less than 1 hour.
- (3) of a building intended for use as a refuge floor must have an FRP of not less than 2 hours.

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

Ans. : C

10. Required smoke outlets for any basement **must** be

- (1) not more than 30m apart.
- (2) not less than 1m in its least dimension.
- (3) covered with stall-boards with an FRP not less than that of the basement.
- (4) located on external walls at the ground floor of the building.

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

Ans. : A

Sample Questions for Paper 2 Building Contracts, Professional Practice, Professional Conduct, Conditions of Agreement & Scale of Charges

In all cases, the term “Building Contract” shall mean the “Agreement and Schedule of Conditions of Building Contract (With Quantities) (2005 edition) and (Without Quantities) (2006 edition)” and “Standard Form of Building Contract” unless stated otherwise.

1. The Architect's duty as agent of the Employer commences when he
- A. is instructed to invite tenders on behalf of the Employer.
 - B. is instructed to assume a supervising role empowered under the contract conditions.
 - C. enters into agreement with the Employer and proceeds to the feasibility stage of the works.
 - D. proceeds to General Building Plan preparation and make submission to the Buildings Department.

Ans. : A

2. Which of the following acts by an HKIA member is considered in breach of the Code of Professional Conduct?
- A. Working as in-house Architect for a developer and preparing design sketches for him.
 - B. Disclosing information of an on-going project to a building journal without prior consent of the Client.
 - C. Submitting an office brochure with perspectives and designs of completed projects to potential clients.
 - D. Inquiring about the fee scale of another Architect quoting for the same project before submitting his own fee proposal.

Ans. : D

Sample Questions for Paper 2 Building Contracts, Professional Practice, Professional Conduct, Conditions of Agreement & Scale of Charges

3. A Client intends to appoint you as Architect for a project, of which the foundation system has been completed under the supervision of another Architect. Which of the following action(s) should you take prior to your acceptance of the appointment?
- (1) Notify the other Architect in writing.
 - (2) Obtain the other Architect's permission for the use of the foundation design in the remaining part of the project.
 - (3) Ensure that the client has settled all fees for the services given by the previous Architect.
 - (4) Request the other Architect to confirm in writing that he consents to your taking up the project.
- A. (1) only
 - B. (1) and (2) only
 - C. (2) and (4) only
 - D. (1), (2), (3) and (4)

Ans. : B

4. If a date for completion of the Works is set out in the Appendix but time for completion of the Contract is "set at large" by a delaying event, the date for completion will be
- A. a reasonable time.
 - B. the date for completion included in the Appendix.
 - C. a date fixed by the Employer after consideration of all events.
 - D. the date for completion included in the Appendix plus any extension of time granted by the Architect for the delaying event.

Ans. : A

Sample Questions for Paper 2 Building Contracts, Professional Practice, Professional Conduct, Conditions of Agreement & Scale of Charges

5. When assessing a claim for an extension of time, the Architect is obliged to
- (1) follow any instruction or opinion provided by the Employer.
 - (2) disregard the views of the Employer and Contractor.
 - (3) act fairly and independently between the Employer and Contractor.
 - (4) follow the reasoning submitted by the contractor only.
- A. (1) and (3) only
B. (2) and (3) only
C. (2) and (4) only
D. (3) and (4) only

Ans. : B

6. If the Architect properly issues a Certificate of Delay under Clause 24 (Damages for non-completion) but subsequently grants an extension of time to the Contractor, the Certificate that he has issued
- A. remains effective.
 - B. is automatically cancelled.
 - C. remains effective for a reasonable time.
 - D. is cancelled only if and when a new certificate is issued.

Ans. : B

7. Which of the following shall form part of a Building Contract?
- (1) Letter of award
 - (2) Technical specification
 - (3) Master programme submitted during the tender
 - (4) Method statement submitted during the tender
- A. (1) only
B. (2) and (3) only
C. (1) and (2) only
D. (1), (2), (3) and (4)

Ans. : C

Sample Questions for Paper 2 Building Contracts, Professional Practice, Professional Conduct, Conditions of Agreement & Scale of Charges

8. Which of the following architect's instructions to the Contractor is **not** empowered by the Conditions in the Standard Form of Building Contract?
- A. Instructing additional works after Substantial Completion.
 - B. Postponing the carrying out of some portion of the works.
 - C. Rescheduling of works sequence to suit the Employer's sales campaign.
 - D. Removing a domestic sub-contractor employed by the Main Contractor for the works.

Ans. : C

9. If a minor arithmetical error is found in the lowest returned tender, which of the following statements is **correct**?
- A. The tenderer shall be allowed to correct the error.
 - B. There is no need to inform the tenderer that he has made an error in the tender.
 - C. The tenderer must be informed about the error and requested to abide by the tender sum.
 - D. All the other tenderers shall be informed about the error made by the lowest tenderer and ask them to review if there is any error in their tenders.

Ans. : B

10. During a routine site inspection, the Architect suspects one of the construction elements is not constructed in accordance with Contract requirement. Which of the following is **not** empowered by the Contract?
- A. Issue an Architect's Instruction to remove the work from site.
 - B. Issue instruction to open up the work for inspection and tests.
 - C. Call in independent parties for testing and seek remedial proposal from Contractor.
 - D. Advise Employer to terminate contract with the Contractor and engage another contractor to finish the project.

Ans. : D

Sample Questions for Paper 3 – Building Structures

1. Load path is one of the key considerations in structural design, and it is about how to bring the load acting on the building
- A. to the building façade.
 - B. to the ground / foundation.
 - C. to the columns.
 - D. to the beams.

Ans : B

2. End enlargements or bellout in piles are
- A. used to increase frictional resistance.
 - B. used to increase end-bearing resistance.
 - C. more suitable in driven rather than bored piles.
 - D. used to prevent water penetration from artesian pressure.

Ans : B

3. In general, which of the following foundation systems gives the largest founding capacity?
- A. Bored pile on rock
 - B. Driven H-pile
 - C. Mini-pile on rock
 - D. Shallow raft foundation

Ans : A

4. Which of the following statements is **not** true about a framed-tube structural system for tall buildings?
- A. This system requires closely spaced perimeter columns.
 - B. The shear lag phenomenon occurs in this system.
 - C. This system achieves an interior floor plan relatively free of core bracing and large columns.
 - D. The perimeter structure primarily resists vertical loads while the core primarily takes the lateral loads.

Ans : D

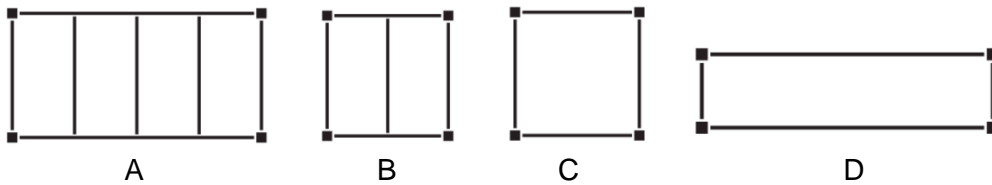
Sample Questions for Paper 3 – Building Structures

5. Which of the following steel sections is most ideal for resisting torsion?

- A. Channel section
- B. H section
- C. T – section
- D. Circular hollow section

Ans : D

6. Which of the following reinforced concrete beam slab floors would be considered an effective two-way system?



Ans : C

7. The main function of a transfer slab is to

- A. transfer column loads from above to widely spaced piers or mega-columns below.
- B. transfer mechanical services such as HVAC conduits.
- C. transfer passengers between express lifts and local lifts.
- D. transfer lateral loads to outrigger trusses and super columns.

Ans : A

8. In general, which of the following gives a stiffer column section assuming all are of the same dimension?

- A. Plain concrete column
- B. Reinforced concrete column of 4% reinforcement ratio and normal-strength concrete
- C. Reinforced concrete column of 4% reinforcement ratio and high-strength concrete
- D. Composite column of 10% structural steel section

Ans : D

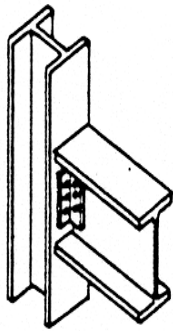
Sample Questions for Paper 3 – Building Structures

9. For a 30-storey commercial building with a central core, which of the following is the **most** common lateral force resisting system?

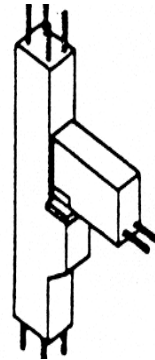
- A. Bearing- and shear-wall system
- B. Truss-wall frame
- C. Tubular frame
- D. Core and frame

Ans : D

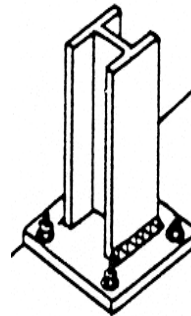
10. Which of the following is considered to be a rigid connection?



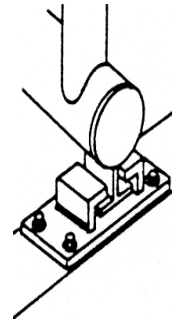
A. Bolted at web of beam



B. Precast



C. Column welded to base plate



D. Sliding joint

Ans : C

Sample Questions for Paper 4 Building Services & Environmental Controls

1. Which of the following is fundamental in preventing the spread of legionnaires' disease in building services installations?
- A. Using CFC refrigerants for chiller plants
 - B. Using single-stack drainage system to avoid cross contamination
 - C. Using water strainers to filter the incoming water at the supply mains
 - D. Carrying out regular inspection and maintenance to the water-cooled air-conditioning plants

Ans : D

2. Which of the following is **not** an assessment criteria for green assessment system BEAM Plus?
- A. Cost effectiveness
 - B. Barrier-free access
 - C. Life Cycle Assessment
 - D. Nature Outlook Assessment

Ans. : A

3. Which of the following is **least** effective to reduce "heat island effects" in designing an open air car parking lot?
- A. Using natural asphalt for paving
 - B. Planting trees to provide shading
 - C. Providing a roof cover of high solar reflectance
 - D. Laying a lawn with traffickable open-grid paving

Ans : A

Sample Questions for Paper 4 Building Services & Environmental Controls

4. Which of the following actions may **best** help maintain human comfort even in an increased indoor temperature?
- A. Lowering the humidity
 - B. Re-circulating the air supply
 - C. Lowering the lighting intensity
 - D. Increasing the ventilation rate

Ans : A

5. Which of the following are valid benefits of FM200 system, which is commonly adopted as the fire-fighting provision for computer centres?
- (1) Plant room is not a must.
 - (2) Water is not necessary for fire fighting.
 - (3) Easy to reinstate the system after false alarm.
 - (4) Less expensive than pre-action sprinkler system.
- A. (1) and (2) only
 - B. (1) and (4) only
 - C. (2) and (3) only
 - D. (3) and (4) only

Ans : A

6. Which of the following pipes without internal lining is **not** acceptable to the Water Authority for use as cold/hot/salt water inside service within a building?
- A. uPVC pipe
 - B. Copper pipe
 - C. Cast iron pipe
 - D. Galvanized steel pipe

Ans : D

Sample Questions for Paper 4 Building Services & Environmental Controls

7. Which of the following are **correct** as an energy efficient measure on lighting installation?

- (1) Replace “thin” fluorescent tube (T5 lamp) with “fat” tube (T8 lamp)
- (2) Replace incandescent lamp with compact fluorescent lamp
- (3) Replace conventional exit sign with LED exit sign
- (4) Use motion sensor as an on/off control

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

Ans : D

8. Which of the following parameters does **not** affect the lift waiting time?

- A. Rated load
- B. Number of stops
- C. Door closing time
- D. Handling capacity

Ans. : A

9. Which of the following is **not** considered as an effective way of reducing noise nuisance from construction activities?

- A. Use of hydraulic crushers
- B. Adoption of percussive piling
- C. Disposal of rubble through plastic chutes
- D. Erection of acoustic barriers around the construction site

Ans : B

Sample Questions for Paper 4 Building Services & Environmental Controls

10. The main objective of producing combined building services drawing is to
- A. provide a useful tool for maintenance in the related inside services
 - B. identify the problematic areas for services and structural co-ordination
 - C. help finalise the schematic designs of all related building services trades
 - D. show all related services elements on one drawing for ease of inspection

Ans. : B

Sample Questions for Paper 5 Building Materials and Technology

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.

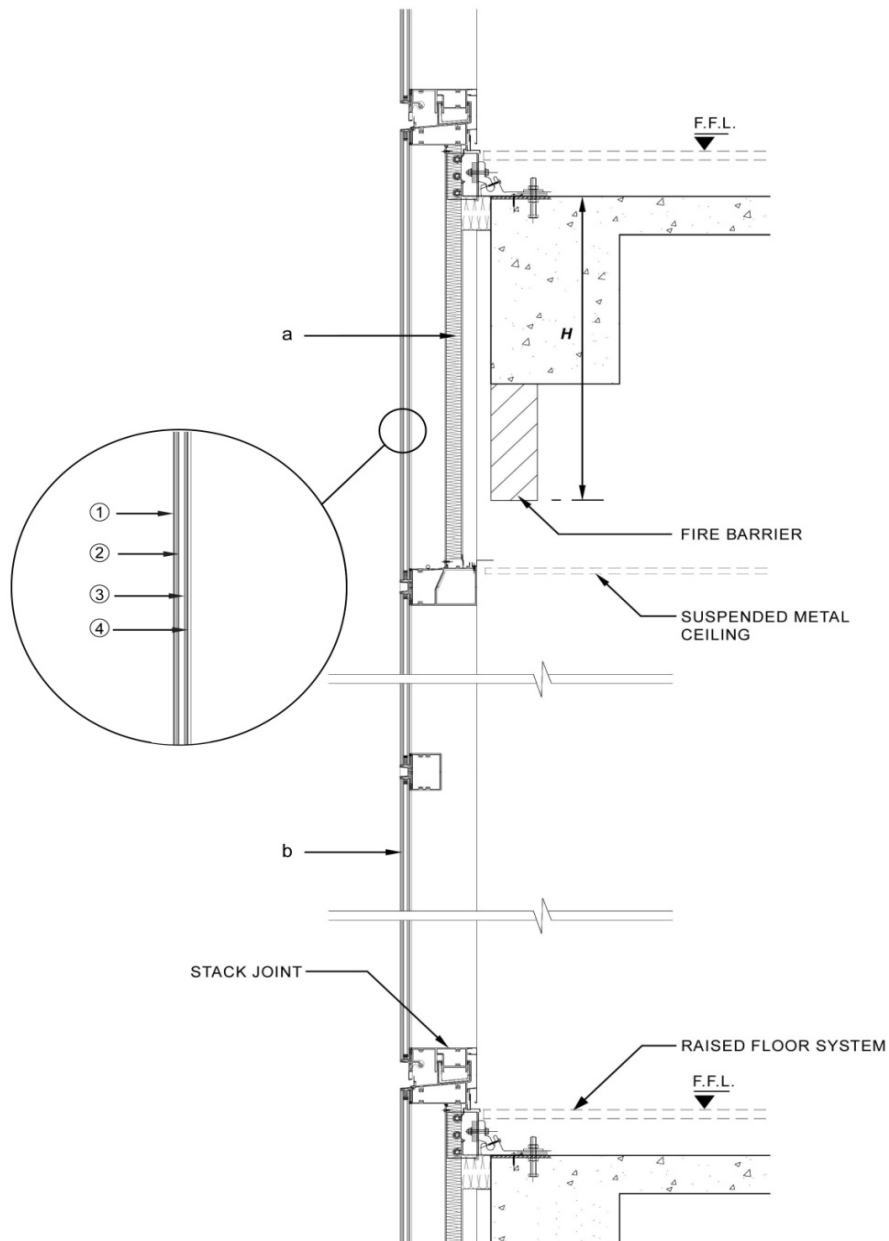
Ans. : C

3. What is the **most** appropriate timing for applying spatterdash to a concrete wall after striking of formwork?
- A. 2 days later
 - B. 3 days later
 - C. 5 days later
 - D. 7 days later

Ans. : A

Sample Questions for Paper 5 Building Materials and Technology

Answer questions 4 – 8 based on the following external wall section detail for a high-rise building.



4. 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

Sample Questions for Paper 5 Building Materials and Technology

5. What does the annotation “**a**” represent?

- A. Durasteel panel
- B. Thermal insulation
- C. Waterproofing board
- D. Metal honeycomb panel

Ans. : B

6. 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

7. 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

8. What is the minimum dimension annotated “H” for fire safety?

- A. 600mm
- B. 750mm
- C. 900mm
- D. 1100mm

Ans. : C

Sample Questions for Paper 5 Building Materials and Technology

9. 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

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

Ans. : B