

HKIA / ARB Professional Assessment 2018
Paper 1: Statutory Controls in Building Works
Examiners' Report

STRUCTURE OF PAPER

Paper 1 comprised two sections, one for multiple-choice (MC) questions and the other for essay questions.

The MC section had 40 questions. Each MC question carried 2 marks. The passing mark was set at 65%.

For the essay question section, candidates were required to answer 1 compulsory essay question and 2 out of 3 other essay questions. The compulsory question carried 30 marks and the other two questions carried 15 marks each. The passing mark was set at 50%.

Set on topics detailed in the syllabus of PA Handbook, the questions tested candidates' knowledge, skills and maturity to handle their day-to-day work as an Architect.

ASSESSMENT OBSERVATIONS

FOR WHOLE PAPER

367 candidates took Paper 1 and 141 candidates (38.42%) passed.

FOR MULTIPLE-CHOICE QUESTIONS

Whereas the standard deviation was comparable to that of the previous years, the mean marks of both papers was slightly higher than that of the last year.

116 candidates passed (31.61%) and the mean mark was 58.0% marks out of 100.

FOR ESSAY QUESTIONS

122 candidates passed (33.24%). The passing rates of the essay questions were as follows:

Q1 – 61.10% (223 out of 365 candidates)

Q2 – 33.89% (102 out of 301 candidates)

Q3 – 46.95% (77 out of 164 candidates)

Q4 – 6.98% (15 out of 215 candidates)

Question 1 (Compulsory)

Purpose of the Question

Question 1 was based on the hypothetical acquisition and amalgamation of several lots into a large development site on the fringe of a built-up, urban district. As in previous years, it was subdivided into four sections designed to test the candidates in the following areas:

(a) Basic understanding of statutory zoning under the Town Planning Ordinance and control parameters applicable to the specific site

Candidates were tested for their competence in reading and understanding the Outline Zoning Plan and accompanying Notes, as applied to a site zoned Comprehensive Development Area.

(b) Basic understanding of land issues and lease modification procedures

Candidates were expected to be familiar with certain restrictions under the land lease and the process of obtaining relaxation for redevelopment to a higher density through lease modification.

(c) Application of controls under the Outline Zoning Plan

Candidates were asked to determine the development potential of the amalgamated site for a comprehensive development consisting of a residential tower, an office tower and ancillary facilities within a podium. Allowance should be made for internal access, plant rooms and parking of vehicles. An outline development schedule was also required.

(d) Checking the proposed development for compliance with Building (Planning) Regulations

Based on the proposal outlined in (c) above, candidates were asked to demonstrate compliance with Building (Planning) Regulations in terms of actual plot ratios and percentage site coverages, as against maximum permitted values. They were also asked to evaluate exempted gross floor areas, as applicable and permitted under the regulations.

Candidates' Performance

Sections (a) and (b) were relatively straightforward and candidates were expected to know the mechanics of complying with planning parameters and addressing land issues. This was generally reflected in the candidates' answers, as the majority correctly identify the development control criteria and describe application procedures for relaxation of controls. These subjects have been well covered in various seminars, workshops and foundation lectures.

Section (c) was relatively straightforward for candidates who have studied past papers. Some candidates failed to demonstrate the correct steps in assessing building heights of the tower blocks and to strike an optimal balance between residential and non-domestic gross floor areas, as required in the question. Others failed to demonstrate compliance with OZP limits on plot ratios and confuse them with controls under Building (Planning) Regulations for composite buildings.

Section (d) appeared to be the most challenging part of the question and few candidates managed to work out the problem as expected. The correct site classification, which was 'A', evades some candidates who fail to recognise the effect of amalgamation of various lots. Apart from making such wrong assumption, many also failed to correctly assess the actual plot ratios and percentage site coverages of the different components within an overall, composite development.

Summary of Evaluation

The passing rate for this question, was a moderate improvement on the overall trend of previous years. That many candidates answered Sections (a) to (c) reasonably well was evidence that working on past papers and attending training sessions organised by the Professional Assessment Committee have paid off. The disappointing performance in Section (d) might be an indication of candidates' lack of practical experience in local projects, particularly in the inception and scheme-design stages, and hence their inability to respond to a somewhat nuanced situation which called for a more in-depth understanding of the problem.

Question 2

Candidates were expected to show their understanding of the objectives of the Buildings Ordinance, and from the construction of which, on how the Building Authority could exercise his powers given under the ordinance to set standards and sanctions related to “Building Safety and Health” aspects in all kinds of building activities, in order that the objectives could be achieved and upheld.

In a broad sense, the Building Authority would be able to ensure that the objectives of the Buildings Ordinance were upheld through relevant legislation from time to time based on the need of the society and through exercising control of building activities with the established system under the Ordinance.

Most candidates were able to list and summarise the objectives of the Buildings Ordinance but forgot to demonstrate the role of the Building Authority and respond to the question in the perspective of the BA, and they would rather just plainly describe the building control mechanism. Some answers were “off-focus”, being too detailed on requirements of lighting and ventilation, EVA, BFA, etc.; and some over-elaborated on the objectives of the Buildings Ordinance without demonstrating how the Building Authority would exercise his powers under the Ordinance to achieve those objectives, notwithstanding describing in detail the statutory control aspects and hence fetching low marks.

The few who got high scores were those who responded to the question sensibly with a logical outlay and convincing presentation to demonstrate a good understanding of the question.

The answer scripts reveal a general lack of writing skill of the candidates across the board. Many had just thrashed out a number of points and assumed or expected whoever marking the scripts would know how to read between the lines to link their thoughts together and automatically award them the scores they wanted.

Question 3

In this question, candidates were asked to demonstrate their knowledge and give their appraisal for the current site supervision system. The question was relatively simple and straight forward, in particular for part (a), and the performance of the candidates in this question was acceptable.

In part (a), many candidates managed to table the details of the site safety supervision plan and explained how supervision can control hazards and ensure works were carried out in general accordance with the provision of the Ordinance.

Part (b) expected the candidates’ reflection of the current system. Most of the candidates rephrased and repeated their answers from part (a). It reflected the candidates’ insufficient depth of knowledge of the topic discussed and their lack of critical thinking.

Performance of part (c) was barely satisfactory. Again it demonstrated the candidates’ lack of critical judgement of the current supervision system. Very few thought-provoking suggestions to enhance the effectiveness of the current system were given. Nonetheless, marks were given to sensible proposals.

Question 4

The first two parts of the question tested the candidates' understanding of the continuous projected façade length (Lp) and greenery site coverage requirements under the Sustainable Building Design Guidelines. The most common mistake for candidates was that they did not check for compliance of the Lp requirement at all the low, middle and high zones, and for all abutting streets. Some candidates managed to point out that the part of the building located within the low zone and of a height of not more than 6.67m could be disregarded. However, they forgot to check for compliance for the rest of the low zone. As for the greenery site coverage requirement, only a few candidates applied the 50% reduction factor in computing the greenery area contributed by grass paving, though this was clearly stated in Appendix D of PNAP APP-152. Even fewer candidates were aware that such greenery area could contribute not more than 30% of the total required greenery area.

The last part of the question was related to the possible constraints faced by a redevelopment project in the Mid-levels of Hong Kong Island. Most candidates knew that surrendering part of the site for street widening did not necessarily mean reduction of its development potential. However, not many candidates knew that they needed to check whether the site fell within Scheduled Area No. 1 and this would have implication on the feasibility of basement construction.

RECOMMENDATIONS TO CANDIDATES

To improve performance in the Paper, candidates are recommended to:

- (a) Attempt to answer the required number of essay questions.
- (b) Attend the lectures and workshops arranged by HKIA. Prepare for the lectures beforehand and familiarize themselves with the materials and topics covered.
- (c) Get on-the-job experience and site experience, and go through a Hong Kong project from the inception to completion stage if possible.
- (d) Discuss with colleagues on what they have done, and reflect on how statutory controls have affected their projects.
- (e) Keep abreast of the times, and observe and reflect on the impact of government policies on the built environment.

Paper 1 Subject Panel Chair

HKIA / ARB Professional Assessment 2018
Paper 2: Building Contracts, Professional Practice, Professional Conduct,
Conditions of Agreements
Examiners' Report

STRUCTURE OF PAPER

Paper 2 is an open-book examination comprising multiple-choice and essay questions.

The MC section had 80 multiple-choice questions. Each MC question carries 1 mark. The passing mark was set at 65%.

Candidates needed to answer 1 compulsory essay question for Part A Professional Practice, Code of Professional Conducts and Conditions of Agreement and 2 out of 3 essay questions for Part B Building Contract. Question for Part A carried 15 marks while questions for Part B Building Contract each carried 15 marks. The passing mark was set at 50%.

ASSESSMENT OBSERVATIONS

FOR WHOLE PAPER

320 candidates took Paper 2. 138 candidates (43.1%) passed.

FOR MULTIPLE CHOICE QUESTIONS

148 candidates passed (46.25%); the mean is 60.8 marks out of 100.

Whereas the standard deviation is comparable to those of the previous years, the mean mark is slightly higher than that of the last year.

FOR ESSAY QUESTIONS

127 candidates passed (39.70%). Passing rates of the essay questions are as follows:

SQ Part A - Q1 – 78.62% (250 out of 318 candidates)

SQ Part B - Q2 – 32.35% (66 out of 204 candidates)

SQ Part B - Q3 – 33.22% (101 out of 304 candidates)

SQ Part B - Q4 – 45.90% (56 out of 122 candidates)

Part A Question 1

Question 1a

Most candidates could do well in this part. They could identify the various alternatives that could be considered when tabling the fee proposal for the feasibility study. Many candidates could also point out the issues of “copyright” and that it applied for use on “Land A” only.

Question 1b

This is an open and apparently straight forward question asking for the candidates' vision on how to participate in local and international affairs concerning the environment. Many were able to understand the question and present their ideas clearly. Some had solid experience and could demonstrate well with supported examples on how they intended to contribute to the community. Most candidates could be able to score a passing mark for this question. However, there were also a number of candidates who mistakenly

interpreted the question and just copied the various rules under Principle 4 of the HKIA Code of Professional Conduct. No correlation with the “environment” or “the way they intended to participate” were mentioned. Although the expectation for this question was simple and straight forward, there were some blank answers submitted, possibly due to doubt by some candidates about the apparently non-technical and open-answer nature of this question.

Question 1c

This was the easiest question and those who attended lecture could successfully obtain high marks.

Part B Question 2

Question 2 (i)

Most candidates understood the meaning of “liquidated and ascertained damages” and were able to quote the clause 24 of the SFC. Only a few of them could not identify the difference between “liquidated and ascertained damages” and “penalty”.

Question 2 (ii)

Most candidates were able to answer that the sum would be unenforceable if it was greater than the Employer’s estimated loss.

However, less than 10% candidates understood that the Employer could recover the amount of unliquidated damages if he could prove subject to the judgement by the Court.

Question 2 (iii)

More than a half candidates understood the Employer was still entitled to deduct liquidated and ascertained damages in case he suffered no loss actually in the end due to the contractor’s delay to completion.

However, about only a quarter of them were able to highlight the liquidated damages clause automatically came into play when the contractor without a contractual justification completes late and the Employer was not required to demonstrate the loss.

Question 2 (iv)

Most of the candidates were just based on their perception to make decision whether the lump-sum liquidated and ascertained damages was enforceable. They considered it as a back to back and the Employer should recover the sum as he was liable to pay the same amount to others. They were unable to realize that the lump sum had no reasonable relation to the potential loss to the Employer whatever the extent of the delay in completion may be.

Also, only a few candidates could suggest that the Employer was free to sue the Contractor for such damage as he could prove.

Part B Question 3

Some of the candidates failed to explain the rationale of the EOT clauses under the Conditions of Contract; and the implication if the clause under the Conditions of Contract related to “Extension of Time” (EOT) due to inclement weather was deleted. Also, the

candidate was recommended to retrieve a copy of the EOT award letter from his or her office as reference.

In the formation of a Contract, the essential elements were i) Offer, ii) Acceptance and iii) Consideration. Under the Articles of Agreement, the Contractor would carry out and complete the Works in accordance with and subject to the Contract for the consideration, i.e. The Employer would pay to the Contractor the sum of HK Dollars. Due to the uncertainty of the building work, EOT was an Express Term built into the Standard Form of Contract and a designed mechanism to deal with variation on the time element. EOT was a period of time which the date for Practical Completion was extended under term of Contract to compensate the Contractor loss of working time due to specified causes. There were 3 causes of delay, i) Delay by neither parties, ii) Delay by Employer and, iii) Delay by the Contractor. Only when Architect is satisfied that the completion of Works is likely to be delayed beyond the Completion Date by the listed events as stated under the EOT Clause, then he/she shall give the EOT, and the reasons for his/her decision as soon as practicable under the mechanism of the EOT clause.

The Employer might request the Architect to delete the EOT clauses due to inclement weather under the Conditions of Contract, however it would remove the mechanism to deal with variation on the time element due to adverse weather under the Building Contract. If events of delay arise due to by neither parties, then this would render the Architect no power to give any EOT to the Contractor and to fix a later Completion Date. This would render the Contract unenforceable and time at large. The Architect as the contract administrator has the duty to assess independently and grant EOT under the Contract even when it is due to default of the Architect.

Part B Question 4

1. Question 4 carried 15 marks.
2. Out of the 122 scripts, 56 candidates achieved 7.5 marks or more, representing 46% passing rate. 66 candidates achieved less than 7.5 marks.
3. The lowest mark was 0 while the highest score is 11.5, out of 15.
4. The average mark (Total marks divided by number of scripts) is 6.4.
5. Out of these 66 who achieved less than 7.5 marks, 14 candidates (21%) did not physically answer all sub-questions. Even some candidates answered all sub-questions, some answers were only two or three sentences, which was considered inadequate.
6. This is an integrated and contextual question specific to a situation. It requires a diagnosis of the circumstances and an analysis of the issues, including duties and responsibilities of the parties involved. The question requires the candidates to have a basic conceptual, contractual, technical, and practical understanding, then to analyze the situation and problem, in the light of the technical and contractual aspects, and then to come to an opinion in order to advise the client.
7. Sub-question 4(i) requested the candidates to explain the circumstances and identify

the key issues. Then the candidates were required to discuss the duties and responsibilities of the parties in the light of the technical and contractual processes. Most candidates understand the basics and were able to explain.

But there were some who appear to have no understanding about the duty and responsibility, and the relationship, between the individual lead consultant, sub-consultant, main contractor, and sub-contractor. Some were mixed up. Most could not suggest if the problems are in the contract conditions, specifications, or in the drawings. Most could not elaborate more about the design responsibility, which was the key issue. Some candidates, just jumped to the conclusion without an analysis of the technical and contractual justifications. Some candidates tried to answer by quoting the procedures, including BD procedures, which are not relevant.

It would appear the candidates were weak in the analysis of issues given a specific circumstance.

8. Sub-question 4(ii) requested the candidates to discuss and to come up with a practical way forward suggestion.

Some candidates could answer with confidence. But some candidates just could not suggest a sensible and practical way forward. Some suggested what could be done to avoid the problem in the first place, rather than what could be done now to resolve the problem in hand. Some quoted termination and a fresh contract as a solution, which appears too drastic and not practical. Interestingly, some suggested using business opportunity to influence the parties to come to a deal, which was not considered proper. Similarly, some suggested that the price could be “negotiated” rather than “assessed”. This illustrates a lack of understanding of the architect’s primary duty and responsibility.

It would also appear that some candidates have little real life experience in order to offer sensible and practical way-forward solution.

9. Very few candidates were able to use contractual keywords like duty of care, unforeseen, responsibility, reasonable, etc in their argument. Those who were not familiar with these contractual or legal keywords had difficulty in writing their argument.
10. Some of the answers, like only two or three sentences, were far too short to adequately address and elaborate the issues.
11. Some candidates could not write in clear and simple English, in essay format, while there were some with very poor handwriting making it very difficult to read.

RECOMMENDATIONS TO CANDIDATES

- (a) In general, candidates did better this year in organization and presenting their knowledge in written English.
- (b) Candidates are advised to fully understand the rationale behind the contract terms, get more involved in contract administration and drafting contract letters at work.

- (c) Candidates should read and analyze the question carefully, identify the issues and make proper references and applications of the learnt principles. The examiners are looking for discussions and reasoning based on contract principles, and there may not be only one answer to the question.

Paper 2 Subject Panel Chair

HKIA/ARB Professional Assessment 2018
Paper 3 - Building Structures
Examiner's Report

STRUCTURE OF PAPER

Paper 3 was an open-book examination comprising multiple-choice questions only. The paper consists of 60 multiple-choice questions. The passing mark is set at 65%.

Two assessments were carried out for Paper 3 in March and July in 2018. The paper for each of the two assessments was set in a similar format and structure covering a variety of topics.

Questions covered various aspects of building structures, including general structural principles, different structural forms and systems, foundation systems, excavation and lateral support systems, load paths and force diagrams, practice and construction, and a case study. Diagrams were included as appropriate for better understanding of the questions.

ASSESSMENT OBSERVATIONS

The passing rates for the two assessments were 59.66% and 63.83%. The overall passing rate of Paper 3 in PA2018 was 81.88%, which was higher than that in PA2017.

The “mean mark” for the two assessments this year was 64.8% and 65.8% respectively, with a “standard deviation” ranging from 12.12% to 12.4%.

The “mean mark” of the two assessments is close to passing mark of 65%, which indicates that the average candidates' performance was generally up to the required standard. A reasonable “standard deviation” indicates that the assessment had generated a broad range of marks, and was fair, and effective in differentiating the abilities and depths of knowledge of the candidates.

It was also observed from the results that the candidates had shown weaknesses in certain areas, including the less common and less conventional structural systems (such as suspension structures, trusses, etc), and construction and practice (such as material properties, real-life application of different structural systems, etc). It was also observed that the results and general performance on the questions on the basic structural principles and concepts (such as load path, simple bending moment diagrams, etc) were also not very satisfactory.

RECOMMENDATIONS TO CANDIDATES

On top of the studying the recommended reading list, the candidates are also encouraged to gain more knowledge and exposure by the following means:-

- (a) Candidates are recommended to attend the Professional Assessment Seminar / Lecture Series organised by HKIA, not only for the Professional Assessment but also to broaden their knowledge.
- (b) Candidates are encouraged to get more on-job experience, guidance from office supervisors and seniors, and learn through better communication / coordination with structural engineers at work.
- (c) Sharing of knowledge and experience with fellow colleagues and graduates is also encouraged, and should be helpful if job exposure is limited.

Paper 3 Subject Panel Chair

HKIA / ARB Professional Assessment 2018
Paper 4 – Building Services and Environmental Controls
Examiners' Report

STRUCTURE OF PAPER

Paper 4 followed the same format as used previously: an 'open-book' test with 60 multiple-choice questions. Passing mark was set at 65%.

Questions were worded in clear and straightforward language and answers involving combination of choices were used with discretion and restraint. Test topics were as prescribed in the syllabus, viz. basic principles, sustainable design and environmental issues, HVAC, fire services, plumbing and drainage, electrical services and acoustics, with emphases as outlined below:

1. Aspects of different disciplines in building services, both fundamental and pertaining to real-life applications, that a practising architect is expected to be familiar with;
2. Issues concerning safety, hygiene, human comfort and enjoyment;
3. Matters related to sustainable design and environmental issues that have been gaining attention in recent years.

Essentially, questions were designed to test candidates' knowledge, skills and maturity in handling day-to-day situations as leader of the building team.

As in previous years, a significant portion of the paper was based on questions asked before. The intention of reusing past questions was to encourage candidates to study those familiar topics in greater depth, so as to enrich their knowledge in the respective fields.

ASSESSMENT OBSERVATIONS

Paper 4 was conducted twice, in March and July, in 2018. 'Mean marks' were 56.5% and 60.8%, with corresponding 'standard deviations' at 10.05% and 10.8%, and passing rates at 41.56% and 46.92% respectively. The overall passing rate in 2018 (64.10%) was similar to that of 2017 (64.04%). The seminar series was organised with particular focus on environmental issues, as in previous years, and the recommended reading list included literature on these topics.

Generally, candidates tended to perform better in book-based questions, such as those on theories, fundamentals and basic knowledge, which they had learned through reading, but were generally less competent in answering job-based questions, even though answers could be found in circular letters, manuals and codes of practice.

ADVICE TO CANDIDATES

Broadening of exposure is the key to success. In addition to following the recommended reading list, candidates would do well to enhance their knowledge by:

- (a) Attending the 'Paper 4' seminars and related public events organised by the HKIA and other professional bodies;
- (b) Getting on-job experience and working in closer coordination with building services and environmental consultants;
- (c) Getting hands-on experience in complying with OTTV, RTTV, IAQ, BEAM Plus and other environmental assessment criteria;
- (d) Reading documents and records kept by other members of the project team if on-job exposure, as mentioned in (b) and (c) above, is either inadequate or unavailable; and
- (e) Taking the initiative to go through specifications, material and equipment submissions, shop drawings, method statements, etc. to get a general picture of how things work, even though technical details are normally handled by building services engineers.

Paper 4 Subject Panel Chair

**HKIA / ARB Professional Assessment 2018
Paper 5 Building Materials and Technology
Examiners' Report**

STRUCTURE OF PAPER

Paper 5 was an open-book examination comprising multiple-choice questions only. The paper consisted of 60 multiple-choice questions. The passing mark was set at 65%. The questions were set at a very similar format and variety in each examination. In 2018, the paper was set for two assessments in March and July.

The content of the paper covered the various trades of construction regarding materials and technology, actual practices including working procedures and detailing as well as law related construction questions such as the Building Ordinance and Regulations, PNAP, Codes of Practices, etc. Questions with diagrams were set so that more than one question can be asked out of it. Generally, the questions were quite straight forward and all based on Hong Kong local practices and experience. About half of the questions were past paper questions.

ASSESSMENT OBSERVATIONS

The respective passing rates for the two assessments were: 51.61% and 43.69%. The passing rates and degree of difficulties had been consistent with papers 3 and 4. The overall passing rate of the paper (66.87%) had dropped when compared to that in PA2016 (75.69%).

OUTLOOK FOR COMING YEAR 2019

The panel will maintain its standard of setting questions and insist on preparing new questions for the year 2019. However, more focus is given to the lectures for explaining clearly the scope of examination.

RECOMMENDATIONS TO CANDIDATES

1. Study the materials and technology in terms of the various building trades.
2. Look at building control on construction and updates with the PNAP.
3. Study detail construction drawings of various components at the candidates' office or through local book references.
4. Learn the procedure of construction for various trades.
5. Read about how to write the specification of materials.
6. Attend all lectures given by the panel.

Paper 5 Subject Panel Chair

HKIA / ARB Professional Assessment 2018
Paper 6: Site Design
Examiners' Report

1. The Question

The test case is a Social integration Complex comprising Youth Hostel/ Senior Housing with Residential Flats for Family. The Site is generally flat (+10mPD) with an old well and a preserved precious tree next to it. It is irregular in shape, bounded by roads to the north and east, a stream to the south, and a 2 storey factory building to the west.

The task is to produce a preliminary master layout plan which includes towers for residential flats for local families (2 blocks from calculations), hostel for both local and overseas young couples (2 blocks from calculations), and housing for senior citizens (1 block from calculations), together with a covered / basement car park (for 50 nos. motor vehicles). A prototype of all the proposed housing types is given to the candidates, with hostel for young and housing for citizens sharing the same prototype. The height restriction is set at +55mPD.

These hostel/ housing and flats will share a number of common facilities including:

- a Club house / Day Care Centre with an outdoor swimming pool which will be used by all hostel/ housing/ flats,
- a Communal Farm with allotments (piece of land for growing vegetables) for the residents

Specific to the site is the need to retain an existing precious tree and an old well within site, and the provision of irrigation water for the Communal Farm allotments from the nearby stream.

As per Paper 6 in recent years, it is specified that the design shall comply with the building separation, street setbacks and green coverage requirements in accordance with the Sustainable Building Design (SBD) Guidelines (PNAP APP-152).

The candidates are expected to demonstrate their competence in coming up with a sensible site arrangement that generally meets the statutory requirements and the design brief.

2. Answer Scripts

2.1 General

Similar to previous years, given the ample site area, the panel appreciates a wide range of design approach in response to the design brief and the site.

The panel is satisfied with the performance standard this year. The majority of the candidates managed to produce a layout that generally complies with the relevant statutory requirements and the design brief requirements, and handle sensibly the disposition of buildings in relation to various characters of external spaces.

2.2 Fundamental Non-compliances

Despite special reminders in the Design Paper seminar, there are still a few cases of grossly under-development (mostly due to incorrect calculation of the number of blocks from the required floor areas and building height restriction), which are considered fundamental breaching of the question requirements and are not acceptable.

KEY INDICATORS

The preliminary master layout plan of each answer script was carefully scrutinised by the assessment panel, which did not look for perfect design solutions and absolute compliance with the regulations, but a sensible approach and reasonable execution of site planning with a general understanding of the statutory requirements.

The following key indicators are specific to the Paper this year, which indicate the level of competence of the candidates in their sensibility, mastering of technical knowledge, understanding of statutory control, and skill of implementation:

- (a) General compliance with development parameters – maximising development potential with correct number of residential towers and hostels, compliance with building height limit and SBD requirements, particularly on building separation.
- (b) General compliance with the special design feature requirements – retaining the old well and preserved tree, to be well integrated with the new development. Also the provision of irrigation water by extending the water channels from the nearby stream to the Communal Farm allotments within the site.
- (c) General compliance with major statutory requirements – prescribed windows, EVA, ingress / egress points, etc.
- (d) Sensibility in disposition of residential towers and hostels to exploit views, minimize overlooking, and to avoid close proximity to factory to the west.
- (e) General compliance with traffic and circulation requirements, including the adequate and sensible provision of car parking spaces and loading / unloading bays as required.
- (f) Sensibility in the optimal segregation of vehicular and pedestrian circulation, demonstrated by the arrangement of internal roads and pedestrian paths, car park, drop off, and loading / unloading provisions, and access to each building.
- (g) Sensibility in arranging the relationship of various external spaces with buildings, and the pedestrian linkages.

3. WEAKNESSES

In addition to the fundamental non-compliance described in paragraph 2.2, the

following major weaknesses are observed:

3.1 Non-compliance with SBD requirements

- (a) Disposition of the residential towers/ hostel/ housing in cluster without proper separation between buildings, so that the Projected Façade Length (LP) exceeds 60m under SBD Guidelines.

3.2 Non-compliance with prescribed window requirements

- (a) Failure in fulfilling the prescribed window requirements for the residential blocks and hostels, particularly in cases of placing the buildings with rooms requiring natural lighting and ventilation right along the common boundary with adjacent lot.

3.3 Insensible disposition

- (a) Residential towers and hostels seriously overlooking each other.
- (b) Residential towers and hostels dispositioned to be fronting the factory (environmental nuisance) to the west.
- (c) Non-user-friendly / unusable / non-accessible leftover space between blocks.

3.4 Non-compliance with special design feature requirements

- (a) Awkward planning around the retained existing precious tree and the old well among the new developments, resulting in poor access and/or constrained open space around for proper enjoyment/ appreciation of the features.
- (b) Irrigation water for the Communal Farm allotments are not properly provided and channeled from the adjoining stream. For example, substantially long winding irrigation channel, or farm allotments unreasonably far away from the stream.
- (c) Farm allotments are located away from the Clubhouse and Day Care Centre.
- (d) The communal garden is grossly under provided, or is located far away from housing for senior.

3.5 Insensible internal road planning/ carparking

- (a) Vehicular access not complying with XYZ points (e.g. introduction of additional ingress/egress points beyond the permitted location).
- (b) Grossly over-provided internal roads leading to fragmented open space, excessive pedestrian crossings, and buildings surrounded by rounds with disjointing external spaces within the development.
- (c) Under-provision of internal roads leading to inadequate drop off and loading / unloading provisions for each block.
- (d) Car parking spaces and loading / unloading bays provided directly from roundabouts, or even accessed from external roads. Poor provision of turning and reversing in carpark and loading/unloading bays.
- (e) Inappropriate location or grossly inadequate length and headroom for

ramp to basement carpark.

3.6 Non-compliance with EVA requirements

- (a) Substandard hammerheads and turning circles for fire fighting vehicles.
- (b) Inadequate coverage of building facades for EVA.
- (c) Excessive internal roads for EVA at the expense of open space where the buildings can be easily reached from the public roads.

Paper 6 Subject Panel Chair

HKIA / ARB Professional Assessment 2018
Paper 7: Building Design
Examiners' Report

THE PAPER

This year's Paper aims to examine the candidates' competence in the design of a **Community Clubhouse for the Elderly and the Young**, serving an adjacent residential development for the elderly as well as public to encourage interaction, healthy and social lifestyle.

The design brief calls for a schematic design comprises the following principal elements:-

1. Clubhouse to be used exclusively by the elderly residents with recreational and therapy facilities;
2. Community facilities to be shared with the public including Multipurpose Hall, Indoor Swimming Pool, Therapy Pool and other recreational facilities;
3. Outdoor Open Space on ground level to be shared with the public including Tai Chi Garden, Jogging Path and Children Play Area.
4. Other ancillary facilities including back of house, vehicular drop off, loading/unloading bay and carparking space within site

Apart from the ability to integrate different functional requirements within the building, the question also aims to test our candidates' sensitivity to provide a reasonable solution to segregate between the elderly exclusive and public shared functions and circulations, as well as to provide a direct covered walkway connection to the adjacent residential development. The candidates' solutions are also expected to incorporate preliminary provisions and requirement for building structure, building services, utilities etc.

Submission requirements includes Site Plans, Building Layout Plans and Building Sections at 1:200 scale. 3-Dimensional Illustrations or Detailed Calculations are not compulsory.

THE ANSWER SCRIPTS

The Subject Panel agreed that the design brief has called for numbers of Indoor and Outdoor facilities, both for the use of the elders and shared with the public, in a relatively moderate sized subject site.

The question paper posted challenges and demanded a comprehensive understanding of the spatial and functional relationship. The candidates were required to come up with a sensible solution, which integrates various functional requirements as well as achieves the required segregations. As a result, it was uncommon to find an answer script that could be considered completely free from flaws.

KEY INDICATORS

The detailed layout of each answer scripts was scrutinized carefully and jointly by the Assessment Panel. Rather than a totally innovative and ground breaking ideas on the architectural design, the Panel are looking for a sensible design solution that could meet the design brief, and in general compliance with the building regulations.

The Panel made the assessment based on the following key indicators that can reveal the competence of the candidates in their design sensibility, level of technical knowledge and skill of implementation:

- a) General compliance with development parameters – mainly on building height, plot ratio and site coverage requirements;
- b) General compliance with major statutory requirements – including Fire Escape and Emergency Vehicular Access;
- c) General compliance with specific site constraints and requirements – including provision of separate entrances, connection to the adjacent residential development and reasonably segregated vehicular access, pedestrian accesses and outdoor open spaces;
- d) Sensibility in arrangement of reasonably segregated functions and circulations between the elderly exclusive and public shared facilities,
- e) Sensibility in arrangement and integration of long-span structures such as the Multipurpose Hall and the Swimming pool;
- f) Sensibility in the design of floor-to-floor height, structural system and disposition of building services spaces.
- g) Sensibility in functional relationship between changing rooms and pools facilities.
- h) Sensibility in servicing to back of house facilities.

ASSESSMENT OBSERVATIONS

The design panel is generally pleased with variety of solutions formulated from different understanding of the design problem. Some of the key observations are listed as follows:-

- Being familiarized with similar requirements in the Papers of the past years, most of the candidates managed to incorporate the segregations of entrances and circulations between the elderly exclusive and public shared facilities as required under the brief;
- General improvement in draftsmanship and legibility of the drawings are recognized. Nevertheless, there is still issue of drawing scale in building components, e.g. unproportionate lift or staircases or grossly oversized corridor or undesignated spaces.
- Future candidates are encouraged for more extensive practice on their hand drawing skills, and attention to be paid to proper line weight and established drawing conventions to improve the drawings' clarity with minimal coloring

ISSUES TO IMPROVE

- Time Management

It is not uncommon to observe there are answer scripts that started with a well-planned and detailly drawn Ground Floor Plan, but being incomplete with missing upper floor plans or sections, and failed to demonstrate a solution with all design requirements under the brief. The phenomenon appears to the Panel that is mainly caused by the candidates' poor time management during the examination and thus fail to complete all the required drawings. The future candidates are encouraged to practice more on the past papers, have a clear planning on the work sequence and properly allocate time for steps such as understanding of the brief, sketching on bubble diagrams, working on preliminary layout, drafting of final drawings, and finally, proof checking.

- Circulation and Means of Escape Planning

It is observed that, in some solutions, escape staircases are over provided due to complicated circulation pattern within the building. This becomes a design issue that shows poor efficiency and application of building elements. A comprehensive planning of the building profile with the allocation of escape staircases at the most appropriate and efficient locations, instead of an ad-hoc afterthought, would benefit subsequent detailed planning of the functional space. Candidates are encouraged to study more on real life examples in terms of an effective planning.

- Structural Integration and Functional Planning

Structural grids should be clear and integrated with functional space. Large spaces such as Multipurpose Hall or Swimming Pools are expected to be column free. The vertical arrangement of Long Span and Short span functions between floors also demands a greater sensibility for a more cost-effective solution to minimize structural transfer. This has been a consistent issue through many years that the candidates are encouraged by attempt their best understanding of structural integration accordingly.

- Back of House and Serving Route Planning

In most past Papers, apart from the principal functional uses, there would be requirements in the design brief to incorporate various back of house ancillary area as well as loading / unloading facilities. A clear understanding and demonstration on the back of house routing starting from the loading vehicle to services lift, from services corridor to respective functional spaces etc. are equally important to the planning of front-of-house circulation in a sensible design.

**HKIA / ARB Professional Assessment 2018
Papers 8 Case Study
Examiners' Report**

STRUCTURE OF PAPER

Candidate has to provide a one-page synopsis and go on to complete a 20+20-page report. The Professional Assessment Handbook details the topics requirement and report format. The passing mark is set at 50%.

ASSESSMENT OBSERVATIONS

135 out of 163 candidates passed the Paper this year. The passing rate is 83%. Four candidates received zero mark due to plagiarism and will not be allowed to take PA2019 – Paper 8.

Although the same project may be studied the special topic has to be different from the one used in previous assessments.

It is generally agreed that the case study remains a useful tool through which candidates can learn about the essential elements of project administration, even though the projects they are handling in the office may not give them sufficient exposure to the entire range of practical issues. Passing rates are usually high and it is not seen as a major source of anxiety for candidates.

RECOMMENDATIONS TO CANDIDATES

Carefully study and analyze available information on the project and talk to the project team for a thorough understanding, then write the report in your own words to cover what has been learned. High emphasis is put on candidate's own appraisal of the various issues and problems relating to the project. Special topic study gives candidates opportunity to research in depth a topic of interest. Candidate may continue to use previous reports as format and contents template but have to refrain from copying multiple sentences and paragraphs, which will be readily detected by the plagiarism software.

Paper 8 Subject Panel Chair

STRUCTURE OF PAPER

This paper is a 30-minute interview conducted primarily in English and each candidate is interviewed by a panel consists of three interviewers. This is the seventh year that the new policy on using Cantonese for technical terms and for supplementary purpose with the permission of the Chairperson of the Panel of Interviewers is implemented.

This is also the seventh year to test candidates on their Case Study reports in the Professional Interview. Interviewers reminded the candidates that their case study reports were also used as a referencing material in the interview. Candidates may choose projects not handled by themselves and Interviewers were reminded to cross reference with the candidates' logbooks.

Interviewers were advised to make sure the candidates have digested the followings in doing their Case Study reports:

- Statutory Control
- Cost Control
- Time Control
- Safety
- Quality Control
- Design Quality Control
- Building Contracts

Candidates' professional maturity and adequacy of the practical experience as recorded in the Logbook were assessed by the interviewers. Questions may cover topics related to Buildings Ordinance, Building Regulations, other related ordinances and Codes of Practice, construction knowledge, Building Contract and Contract Administration and Professional Ethics. Candidates' confidence in answering questions was also looked for by interviewers.

ASSESSMENT OBSERVATIONS

Among 153 candidates, 122 candidates (representing 80%) passed the paper in this March 2019 attempt (for PA2018), which is comparatively higher than the attempt in March 2018 (73%).

From the report of Interviewers on failed candidates, most candidates were lacking knowledge in Building Contract and Building Ordinance and failed to demonstrate to the interviewers their competency to work as an Architect. The candidates were also lacking confidence and general knowledge; and were not well prepared for the Interview. The weaknesses may be attributed to their lack of practical experience in local projects.

RECOMMENDATIONS TO CANDIDATES

- To reinforce his/her understanding of a project selected for case study, a candidate is recommended to discuss regularly with the advisor of what he/she has observed in the case study and to consult the advisor the rationale behind certain solutions to various problems, instead of just reporting to his/her advisor what have been done during the period of review.
- As reflected in the summary, main reasons of failure of some candidates in the examination attribute to the lack of practical construction and contract administration experience, which may be a result of the reducing number of local projects. Candidates are advised to look at their job exposure in particular the chance of getting involved in local projects before they commit or engage to the practice during their internship period.

Professional Interview Subject Panel Chair