

HKIA / ARB Professional Assessment 2016
Paper 1: Statutory Controls in Building Works
Examiners' Report

STRUCTURE OF PAPER

Paper 1 is an open-book examination comprising multiple-choice and essay questions.

The MC section had 40 multiple-choice questions. Each MC question carries 2 marks. The passing mark was set at 65%.

Candidates needed 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 each carried 15 marks. The passing mark was set at 50%.

Questions on all topics, as detailed in the syllabus of PA Handbook, included:

- (a) Buildings Ordinance
- (b) Submission of plans to the Building Authority
- (c) Other related Ordinances and Codes of Practice

The questions were set to test candidates' knowledge, skills and maturity to handle their day-to-day work as an Architect.

ASSESSMENT OBSERVATIONS

FOR WHOLE PAPER

401 candidates took Paper 1. 197 candidates (49.12%) passed.

FOR MULTIPLE CHOICE QUESTIONS

More than half of the candidates passed the multiple choice question part. The result is comparable to that in the past years and has improved slightly from last year, which reflects that candidates in general had a better understanding of the topics tested in the questions.

231 candidates passed (57.61%); the mean is 65.6 marks out of 100.

FOR ESSAY QUESTIONS

167 candidates passed (41.65%). Passing rates of the essay questions are as follows:

- Q1 – 60.50% (242 out of 400 candidates)
- Q2 – 8.80% (16 out of 182 candidates)
- Q3 – 50.56% (179 out of 354 candidates)
- Q4 – 40.25% (95 out of 236 candidates)

Question 1 (Compulsory)

The question covers similar domains of statutory controls as in previous years. It is based on an urban site, consisting of two lots separated by a 3m wide service lane. The lots are sandwiched between two streets: one, a through road and the other, a cul-de-sac; and flanked by a 4m alleyway at one end.

The question is subdivided into 4 parts, requiring candidates to elaborate on 4 different aspects of potential redevelopment of the combined site:

(a) Net area of combined site

Two scenarios are assumed for the section of service lane in between the two lots: already surrendered to government or still held by the owner. Candidates are asked to assess their possible effects on the combined site area available for redevelopment. As a general rule, any portion of a service land already surrendered to government shall not be counted as site area, and whether or not it has been surrendered, combining the two lots would require diversion of the service to maintain through traffic.

This is actually a relatively open question, as it depends on the decision of the Lands Department whether amalgamating the two lots would be in the interest of the public. Apart from this particular aspect concerning land policy, most of the candidates managed to address the issue of lane diversion and proposed a net site area after due deduction, with various interpretations but still based on reasonable assumptions.

(b) Town-planning and Land Matters

This is a straightforward question and most candidates correctly dealt with issues of application under Section 16 of the Town Planning Ordinance to permit a composite development on the lots and modification of the lease conditions, with payment of premium, to lift height restrictions.

(c) Proposal for a totally commercial (non-domestic) development

This is another straightforward exercise in which candidates are expected to do quite well. However, many still quoted the incorrect site classification, as 'Class B' or even 'C,' instead of 'A.' The question of site classification was actually discussed during a session of the 'foundation course' offered by the HKIA and this could have helped some of the candidates to arrive at the correct deduction.

There were still candidates who failed to discern the difference between controls under the Outline Zoning Plan and under Building (Planning) Regulations, and that the former should always be taken to prevail.

(d) Proposal for a composite development

A familiar topic that most practising architects are confronted with almost daily, this turned out to be unexpectedly difficult for the majority of candidates. There was a general lack of competence in working out gross floor areas, based on *pro-rata* plot ratios and percentage site coverages for composite buildings: a surprise after similar questions have been asked repeatedly in previous years and dealt with in Paper 1 workshops. This is certainly an area in which future candidates will need more intensive training.

Question 2

This question tests candidates' understanding of PNAP APP-152: Sustainable Building Design Guidelines. Their performance was very poor.

Despite that candidates could refer to the worked examples in the PNAP in answering this question during the 'open-book' examination, many of them still made the following mistakes in calculating the Continuous Projected Façade Length (L), Separating Distance (S) and Permeability (P) of the hypothetical building in the question: -

(a) The Mean Width of Street Canyon (U) was mistakenly taken as the mean width of

- street, instead of the mean width between the external wall of the subject building and the boundary of the other site on the opposite side of the street;
- (b) For a building abutting two streets of different U, different U was mistakenly used in calculating the L_p of the two façades, instead of using the lower U for both calculations;
 - (c) Only the L_p in the low zone was checked for compliance, instead of the low zone and the middle zone;
 - (d) The S requirement was only checked for compliance for either (i) between end of the building façade and the site boundary or (ii) between end of the building façade and the centerline of adjoining street, but not both;
 - (e) In checking compliance of the P requirement, no differentiation was made between the calculations of low zone and middle zone;
 - (f) The area of Intervening Space (IS) in the adjoining street was not included the assessment for P; and
 - (g) IS between end of projected façades shall be $\geq 15\text{m}$.

Part (b) of the question asks candidates to suggest how the current sustainability building design policy of Buildings Department should be enhanced in order to further foster a quality and sustainable built environment in Hong Kong. This is an open-ended question and has not appeared before in past examinations. Marks will be given for any proposal with reasonable arguments. It seems that candidates were not prepared to answer this type of question. Some candidates misread the question and copied a large chunk of text from the PNAP to answer how the Sustainable Design Guidelines helped to achieve sustainable building design. Those who managed to score a few marks in this part mostly suggested measures based on existing sustainable building design policy and BEAM Plus New Buildings. Only a few thoughtful candidates could come up with innovative suggestions or point out the shortcomings of the current policy.

Question 3

This question mainly tests candidates' understanding of the requirements under the four fundamental issues in a General Building Plans submission and how these could be complied with for the issuance of an occupation permit.

Part (a) of the question required candidates to discuss the information to be included in a GBP submission. Most of the candidates could manage to quote the items, which included site coverage, plot ratio, means of escape (MOE), means of access, fire rated construction, prescribed window and open space. However, detail information should be further elaborated to demonstrate the compliance of the four fundamental issues. Only certain number of the candidates could provide the detail information required in a GBP submission, such as gross floor area and site coverage diagrams (for accountable, non-accountable and exempted areas) under "Density" and MOE table showing occupancy factor and the required/provided number and width of the exit doors and exit routes under "Safety". The candidates should be familiar with the information to be included in the GBP submission.

Part (a) also asked about other major issues under Allied Legislation. Some candidates could focus on several key issues, while the other stated some non-statutory items.

In part (b), the candidates were asked to list out the documents required for the application of the occupation permit and discuss how to demonstrate the four fundamental issues have been complied with. Most of the candidates only listed out the required documents without discussing how the requirements under the four fundamental issues were complied with.

Many candidates could show certain understanding regarding the GBP and OP submissions.

Instead of listing out all the points, some candidates presented better by categorizing the GBP information/ OP submission document into 4 aspects.

More legal and formal terms were expected from some candidates. Phrase like "AP FEEL that...." or informal short forms should be avoided.

Most candidates could identify that S.C. and P.R. determined the development potential, while missing out the site classification .

Candidates usually could discuss the prescribed window issues. But they might miss out that "Open Space" was also one of the fundamental checking item under the health & environment aspect.

Question 4

The performance of candidates in this question is generally satisfactory.

Part (a) of the question asks the candidates about the feasibility of converting the ground floor shops in a composite building built in the 1970s into a supermarket. Part (b) asks the candidates about the feasibility of converting the ground floor shops and first floor car park into a shopping arcade and the second floor car park into a restaurant.

For part (b), most candidates were aware that feasibility of the proposal would hinge on issues related to the Outline Zoning Plan, lease conditions, discharge value of existing staircases, gross floor area calculation of the car park, loading capacity of the car park floor slabs etc. Some candidates, however, quoted issues such as fire resisting construction of structural elements and increase in the number of sanitary fittings, which were not likely to pose critical problems in the conversion.

2 marks are allocated for Part (a) and a short answer is expected. But some candidates spent long time on this part and produced a lengthy answer similar to that of Part (b). This reflects their poor time management skills in taking examinations.

Part (c) asks the candidates to name the approvals required from Government Departments in order to proceed with the conversion proposal. Most candidates performed well in this part, though a few candidates mistakenly answered that planning approval was given by Planning Department, instead of Town Planning Board.

RECOMMENDATIONS TO CANDIDATES

- (a) Attend the lecture series, seminars, conferences and workshops arranged by HKIA and other tertiary institutes or professional institutes. Be familiar with the materials and topics covered.
- (b) Get on-job experience in particular areas of interest.
- (c) It will always be, in the best interest of a candidate, for him/her to go through a project from the inception to completion stage, including Town Planning submission; BD submissions, lease modification and other lease related matters, as well as issues in connection with OP inspection.
- (d) Get as much site experience as possible.
- (e) If the candidates do not have on-job exposures as mentioned in (b) and (c) above, reading or discussion on what other colleagues have done would help.
- (f) Keep abreast of the times and reflect on the impact of government policies on the built environment.

Paper 1 Subject Panel Chair

HKIA / ARB Professional Assessment 2016

Paper 2: Building Contracts, Professional Practice, Professional Conduct, Conditions of Agreements and Scale of Charges 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

225 candidates took Paper 2. 117 candidates (52.00%) passed and 1 candidate was disqualified due to violation of examination rules.

FOR MULTIPLE CHOICE QUESTIONS

146 candidates passed (64.90%); the mean is 67.5 marks out of 100, and standard deviation 10.8%, is commented on by HKEAA that "compared to PA2015, Paper 2 shows a drop in both mean mark and standard deviation."

FOR ESSAY QUESTIONS

88 candidates passed (39.10%). Passing rates of the essay questions are as follows:

SQ Part A - Q1 – 31.39% (70 out of 223 candidates)

SQ Part B - Q2 – 50.82% (62 out of 122 candidates)

SQ Part B - Q3 – 50.88% (87 out of 171 candidates)

SQ Part B - Q4 – 65.03% (93 out of 143 candidates)

Part A Question 1

Question 1a

Most candidates do not have clear picture on what stages of work is the completion of GBP submission and some just quoted the Stage A to D works are in time charge basis. Candidates are weak to state the rights of Architect and Client under HKA Agreement.

Question 1b

Most of the answers are just reproduced the clauses from the Code without applying to the actual situation and without any explaining or reasoning to back up their answer.

Question 1c

This is the most easy question and those attended training class could successfully obtain higher mark. Again, candidates are weak in reasoning and justification to back up their answer.

Part B Question 2

1. There are a few blank answer books. This may be due to the reason that the candidates do not have enough time to finish answering all the questions or they do not have a clue after attempting to answer this question.
2. Quite a few candidates think that tender out without sufficient information can be redressed by multiple addenda. Whilst this happens in real life, there will be consequences like extension of the tender return date, increase chance of collusion for post-tender addenda etc.
3. Most candidates think that design and build is a way to resolve incomplete information at tender stage. However, in their answers, it is not obvious that the candidates understand the essential requirements of/information to be incorporated in a design and build tender.

Part B Question 3

Candidates answered well to the provisions (what) and mechanism (how) such as principles of Extension of Time (EoT) Assessment in dealing with delay under the Conditions of Contract but failed to clearly explain the rationale (why). Most candidates gave good advice to the School Principle before instructing the Contractor to install the signage with clear rationale. However, some failed to draft a reply in letter format for the granting of EoT.

Part B Question 4

1. The lowest mark is 1 while the highest score is 14, out of 15.
2. The average mark (Total marks divided by number of scripts) is 7.8.
3. Out of these 50 who achieved less than 7.5 marks, 31 scripts (62%) were incomplete. Some candidates did not answer all sub-questions or the answers were only two or three sentences, which is considered inadequate.
4. The question presents a real-life scenario requiring the candidates to have a basic conceptual understanding, then to analyze the situation and problem, come up with options and suggestion. In the light of the above, the candidates then recommend what could be done better next time.
5. Sub-question 4(i) simply requested the candidates to explain the advantage of D&B item in construction works.
Most candidates understand the basics and were able to explain.
But there are some who jumped to wrong assumptions like assuming D&B does not require contract administrations.
Some were confused whether the whole works is a D&B or what is the scope of the D&B item and the relationship with the BQ.
Some talked about the disadvantages while the question asked for the advantage.

Some candidates simply could not explain in words what is D&B.

6. Sub-question 4(ii) requested the candidates to discuss who should be responsible for the problem and to come up with a practical suggestion.

Some candidates could answer with confidence.

But there are some who were confused over the relationship between the parties like architect, BS consultant, contractor, sub-contractor, supplier, nominated sub-contractor, specialist, etc.

Some therefore jumped into a conclusion making statement exactly the party responsible for the problem without any analysis of the situation and discussion relating to the statutory, contractual and responsibility issues.

Some candidates made up story and blamed the problem was due to incompetency of a certain party, rather than addressing the statutory, technical and contractual issues which could be revealed by an analysis of the situation.

Very few candidates wrote to address the issue as whether the water tank is or is not included in the green roof contractor's scope, which is the core of the dispute.

Interestingly, there are people who said the E&M consultant is responsible while there are also many candidates who said the contractor is responsible for the problem. One candidate even said no one is responsible.

Some just repeated the question, flow in the standard procedures as memorized, and just could not relate to circumstances as suggested in the scenario.

The key therefore is to see whether the candidate could substantiate an answer – very much in real-life situation.

7. Sub-question 4(iii) is a follow up of 4 (ii) requesting the candidates to recommend what could be done better to avoid the dispute in the first place.

This is a rather open question and the answers from the candidates equally are wide in their approach.

Most candidates could not focus to answer relating to the scenario as put forward.

Some made suggestions for the appointment of a landscape architect, or specialist designer, or a nominated supplier, which are not directly related to the statutory, technical and contractual issues involved.

Similarly, some made recommendations that the dispute could be avoided by issuing an VO, direct contract, lump sum contract, EOT, making NSC arrangement, mock-up, maintenance staff, and even everything in D&B, etc.

Some candidates suggested mediation and went all the way to list the procedures for dispute settlement, which is not relevant.

Some candidates quoted that the architect is not responsible for the detailed design of the sub-consultants while some mixed up with those of the contractor in terms of design duties and responsibilities.

This illustrates that the candidates have some basic understanding but not a coherent concept.

8. Very few candidates were able to use contractual keywords like duty of care, diligently, unforeseen, responsibility, reasonable, etc in their argument. Those who are not familiar with these contractual or legal keywords had difficulty in writing their argument.

9. Some of the answers, like only three sentences, are far too short to adequately address the issues.

10. Some candidates could not write in clear and simple English while there are some with very poor handwriting making it very difficult to read.

RECOMMENDATIONS TO CANDIDATES

- (a) Candidates are advised to fully understand the rationale behind the contract terms for fully utilize the knowledge acquired at works as Architect in future.
- (b) Lack of relevant experience on contract / condition on engagement of the majority of candidates was noticed as from their answers.

Paper 2 Subject Panel Chair

HKIA/ARB Professional Assessment 2016
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%.

This was the fifth year in which three assessments were carried out for Paper 3 in March, June and September respectively. The paper for each of the 3 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 three assessments were 76.43%, 51.58% and 18.03%, which were higher than the overall passing rates in PA2015, apart from the 3rd quarter assessment in which there was an exceptionally low passing rate, probably because the more capable candidates have already passed the assessment in the 1st or 2nd quarter, while the candidates in the 3rd quarter assessment were the less able candidates who re-attempt after failing the preceding assessments.

The “mean mark” for the three assessments this year was 71.7%, 61.9% and 54.8% respectively, with a “standard deviation” ranging from 11.5% to 12.15%.

The “mean mark” of the 1st and 2nd quarter assessment is close to passing mark of 65%, which indicates that the average candidates' performance was generally up to the required standard; while the lower “mean mark” of the 3rd quarter assessment indicates that the candidates had a lower general performance, which corresponds to the low passing rate in the 3rd quarter assessment. 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 organized 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 2016
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 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 hygiene, human comfort and acoustics;
3. Matters related to sustainable design and environmental issues that have gained 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

This was the fourth consecutive year in which Paper 4 was conducted three times annually, in March, June and September. 'Mean marks' were 56.5%, 49.6% and 55.1%, respectively, with corresponding 'standard deviations' at 9.96%, 8.7% and 10.9%, and passing rates were 29.70%, 22.78% and 30.53% respectively. The overall passing rate in 2016 (45.94%) dropped significantly, compared to 2015 (53.97%), even though there was no substantial change in the paper format. The seminar series was organised with particular focus on environmental issues, as in previous years, and the recommended reading list was revised to include the latest editions of codes and guidelines 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 at university or through reading relevant literature, but were generally less competent in answering job-based questions, such as those related to architectural practice and real-life applications.

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, other professional bodies, colleges and universities;
- (b) Getting on-the-job experience and working in closer coordination with building services and environmental consultants;
- (c) Getting hands-on experience in complying with OTTV, IAQ, BEAM Plus or other environmental assessment criteria;
- (d) Reading documents and records kept by other members of the project team if on-the-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 impression of how things work, even though technical details are normally handled by building services engineers.

Paper 4 Subject Panel Chair

**HKIA / ARB Professional Assessment 2016
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 consists of 60 multiple choice questions. The passing mark is set as 65%. The questions are set at a very similar format and variety in each examination. This is the fifth year that the paper was set for three assessments in March, June and September.

The contents of the paper include the different 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 are quite straight forward and all based on Hong Kong local practices and experience. A major proportion of questions (~2/3) are past paper questions.

ASSESSMENT OBSERVATIONS

The respectively passing rates for the three assessments are: 66.4%, 60.9% and 59.3%. The passing rates and degree of difficulties had been consistent with papers 3 and 4 but had dropped compared to the results in PA2015. Though more past paper questions have been adopted compared with PA2015, yet the standard of questions were consistent with the immediate three years.

OUTLOOK FOR COMING YEAR 2017

Despite the decrease in the passing rates, the panel will still maintain its standard of setting questions and insist on preparing new questions for the year 2017. 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 references.
4. Learn the procedure of construction for various trades.
5. Read about the specification of materials.
6. Attend all lectures given by the panel.

Paper 5 Subject Panel Chair

1. THE QUESTION

The test case is a Communal Farming Resort in a flat, irregularly shaped site that is bounded by two roads on the north and west, and a stream on the south.

The task is to produce a preliminary master layout plan of 2 nos. dormitory and vertical farm blocks (total 2,500m²), 12 cottages (3,240m²), a green house and restaurant (3,000m²), and a covered / basement car park (for 50 motor vehicles). A prototype of dormitory and vertical farm and another of L-shaped cottage are given for the candidates to develop the site layout.

The height restriction is 100m PD. A number of special design feature requirements are required, which include the following:

- (a) providing a 3m wide canal from the stream for irrigation purpose, especially for the cottages, with minimum crossing with any internal roads proposed;
- (b) conveniently locating the green house for the best view to the farmland and stream;
- (c) providing minimum 500m² farmland with good relation with the canal; and
- (d) providing composting facilities of 200m², which shall be suitably located for good ventilation and away from the habitable areas.

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

Given the ample site area, a considerable number of layout variations are possible. The panel appreciates a wide range of design approach in response to the design brief and the site.

The panel is generally satisfied with the performance standard this year. The majority of the candidates managed to satisfy the relevant statutory requirements and the brief requirements, and handle sensibly the new building typology of dormitory and vertical farm.

2.2 Fundamental Non-compliances

Despite the reminders in the lectures in previous years, there were still a few cases of grossly under-development (mostly due to incorrect calculation of the number of blocks from the required floor areas), which were not acceptable.

3. 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, revealing the competence of the candidates in their sensibility, level of technical knowledge, understanding of statutory control, and skill of implementation:

- (a) General compliance with development parameters – maximising development potential, compliance with building height limit and SBD requirements.
- (b) General compliance with the special design feature requirements – provision of canal (from the stream), farmland, and compositing facilities.
- (c) General compliance with major statutory requirements – prescribed windows, EVA, ingress / egress points, etc.
- (d) General compliance with traffic and circulation requirements, including the provision of car parking spaces and loading / unloading bays as required, and minimum crossing with the canal.
- (e) Sensibility in disposition of blocking to exploit views to the farmland and stream, to avoid major overlooking, and to maximise sunlight to the farmland and vertical farms.
- (f) Sensibility in the arranging 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 the provision of farmland, which could be conveniently enjoyed by the residents and visitors, and the canal, which shall bring water from the stream to the farmland and cottages for irrigation purpose.
- (h) Sensibility in functional relationship among different components in the brief, e.g. grouping of the dormitory and vertical farm blocks, and locating the compositing facilities away from the green house, cottages, and dormitories.

4. WEAKNESSES

In addition to the fundamental non-compliance described in paragraph 2.2, the following major weaknesses are observed:

4.1 Non-compliance with SBD requirements

- (a) Linking the two dormitory and vertical farm blocks by less than 15m so that the Projected Façade Length (LP) exceeds 60m.
- (b) Ignoring the low-rise cottages and green house when considering the LP.
- (c) Provision of above ground carpark building (therefore GFA accountable).

4.2 Non-compliance with prescribed window requirements

- (a) Failure in fulfilling the prescribed window requirements for the dormitories and cottages, particularly in cases of overlooking blocks.
- (b) Blocks abutting right on the common boundary on the south and southeast of the site.

4.3 Insensible disposition

- (a) Dormitories and cottages seriously overlooking each other.
- (b) Non-user-friendly / unusable / non-accessible leftover space between blocks.
- (c) Vertical farms facing north, i.e. minimum exposure to sunlight.
- (d) Insensible site utilisation (e.g. squeezing all blocks and other elements required in the brief in only part of the site, but totally ignoring the remaining areas).
- (e) Compositing facilities being too close to the green house, dormitories and cottages, or at a prime location (e.g. at the junction of the two roads).
- (f) Green house and restaurant being too remote from the internal roads, i.e. poor accessibility.
- (g) Canal(s) formed not properly planned, such as running right next to the stream (resulting in merely duplicating the stream), or in other directions without purpose.

4.4 Non-compliance with special design feature requirements

- (a) Substandard provision of canal and farmland.
- (b) Canal not reaching cottages and farmland.
- (c) Canal frequently crossed by internal roads, or with insensible deadends.

4.5 Insensible internal road planning/ carparking

- (a) Grossly over-provided internal roads leading to fragmented open space, excessive pedestrian crossings, and separation of the green house, dormitories, and cottages from the open space.
- (b) Individual buildings surrounded by internal roads on all sides.
- (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 directly along roundabouts, or even accessed from external roads.
- (e) Vehicular access not complying with XYZ points (e.g. provision of additional ingress/egress points beyond the permitted location).
- (f) Missing or grossly insufficient car parking spaces.

4.6 Non-compliance with EVA requirements

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

HKIA / ARB Professional Assessment 2016
Paper 7: Building Design
Examiners' Report

The Paper

This year's Paper aims to examine the candidates' competence in the design of a comprehensive Culinary Arts Academy. Apart from the ability to integrate different functional requirements, the question also aims to test our candidates' sensitivity to provide a reasonable solution to segregate academic and public facilities, e.g. restaurants, in a building.

The design brief calls for a schematic design for a **Culinary Arts Academy**, which comprises the following principal elements:-

1. Academic facilities for culinary arts education; and
2. Restaurant facilities for use by the public.

Vehicular drop-off and carparking spaces within the site are required.

Submission requirements are limited to layout plans and sections. 3-dimensional illustrations and calculations are not required.

The Answer Scripts

The Subject Panel agreed that the design brief involved a variety of academic facilities accommodation which may not be familiar to the general candidates, and therefore posed challenge in integrating different functional academic requirements in a building. As a result it was hard to find an answer script that could be considered free from major flaws.

Key Indicators

The detailed layout of each paper was scrutinized carefully jointly by the assessment panel. The Panel was not looking for brilliant architectural design, but 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 building height and site coverage requirements;
- b) General compliance with major statutory requirements – including fire escape and EVA;
- c) General compliance with specific site constraints – including provision of

separate entrances, and reasonably segregated vehicular and pedestrian accesses;

- d) Sensibility in arrangement for disposition of academic facilities, in relation to public accessible restaurants, and classrooms;
- e) Integration of a long-span structure – auditorium;
- f) Sensibility in arrangement of reasonably segregated vertical circulation to the public and academic facilities;
- g) Sensibility in the design of floor-to-floor height, structural system and disposition of building services spaces.

ASSESSMENT OBSERVATIONS

The Weaknesses

The major weaknesses observed this year include:-

- a) Design and planning
 - Poor integration and accessibility between teaching kitchens, indoor and outdoor dining areas.
 - Poor consideration of ground floor entrances.
 - Poor treatment of segregated entrances and vertical circulation for academic accommodation and public facilities, e.g. restaurants.
 - Unsatisfactory correlation of the outdoor farming field with the other academic facilities.
 - Unsatisfactory disposition of the servicing route from loading bays to kitchen or back of house facilities.
 - Inappropriate circulation and communal spaces arrangement.
 - Inappropriate planning of auditorium and its related facilities.
- b) Building structure
 - Poor consideration of structural implications of the auditorium in relation to the building.
- c) Scale and proportion
 - Inappropriate scale – lifts, stairs, corridors were sometimes grossly oversized or undersized.
- d) Statutory compliance
 - Excessive means of escape.

e) Vehicular access

- Poor planning of servicing vehicles and access to back of house facilities.
- Inappropriate sizing of parking spaces.
- Poor vehicular maneuvering paths / drop-off and integration with pedestrian entrances.

f) Others

- Poor documentation.
- Poor clarity and cleanliness of drawings.

Paper 7 Subject Panel Chair

**HKIA / ARB Professional Assessment 2016
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

173 out of 212 candidates passed the Paper this year. The passing rate is 82%. Four candidates received zero mark due to plagiarism and will not be allowed to take PA2017 – Paper 8.

This is the third year that the same project may be studied without lapse, however, 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