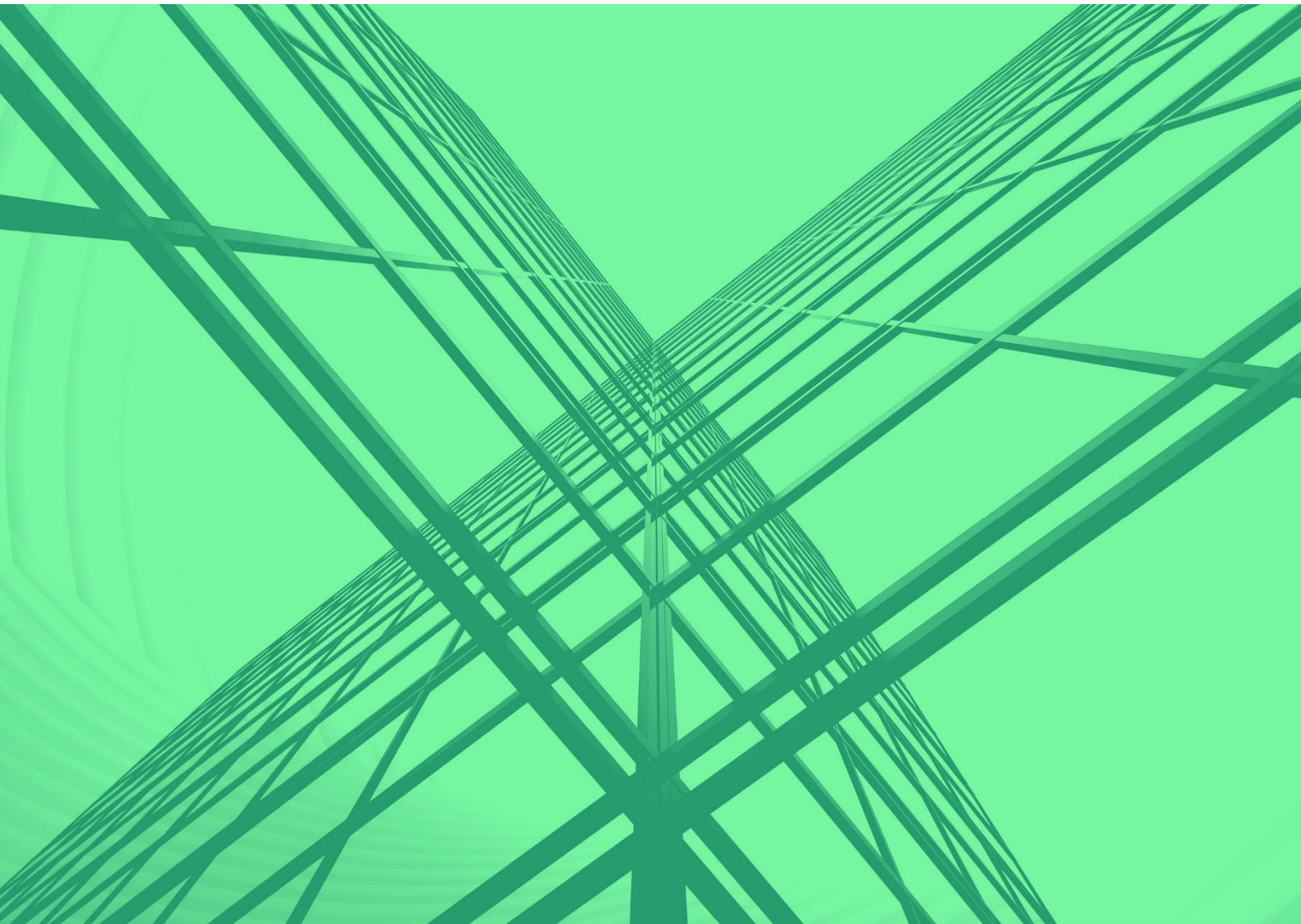


Exam guidance and instructions

Associate-Membership Exams
Version: 1.5



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Instructions for exam candidates

Before entering the examination, please note the following:

- ▶ Closing date for exam entry:
The online exam booking and payment of the entry fee must be received before the listed closing date. Exam bookings attempted after this date will not be accepted.
- ▶ Candidate number and examination venue information
You will be sent your candidate number and final venue details shortly after the final payment deadline.
- ▶ Withdrawal and deferment
A refund or deferment of the examination fee will only be guaranteed if notification of withdrawal/deferment is made 28 days prior to the examination. In the event of exceptional circumstances occurring immediately before the examination e.g., serious illness, family bereavement etc. where candidates feel their performance will be adversely affected, the Institution will consider deferring exam entry subject to provision of supporting documentation (e.g., doctor's note dated within three working days of the exam) and an administration charge.

If a deferment is agreed by the Institution, the candidate must sit the next available exam. Candidates may not defer more than once, otherwise the examination fee will be forfeited.

You are advised to contact the Institution's Examinations Manager, and each case will be considered on an individual basis.

If you become ill during the exam please notify an invigilator, who will report this to us. After the exam, please provide a doctor's note dated within 3 working days of the date of the exam to the Examinations Manager.

Any other candidate sitting the exam will be assumed to be in good health and an appeal will not be accepted for a subsequent declaration of illness.

- ▶ Exam centre transfer
It is not possible to change exam centre after the payment deadline.
- ▶ Candidates requesting reasonable adjustments
If you have a disability that may affect your performance in the exam, please notify us on the exam entry form. You should also provide a note from a medical professional confirming the nature of the disability (e.g., results from a dyslexia test) and where possible advice on any reasonable adjustments that should be made. You are welcome to submit material from your employer or university which may assist in making an informed decision on the adjustments to be made. Any information provided will be treated as confidential.
- ▶ Proof of identity
You must provide photographic ID to the invigilator on the day of the examinations. Failure to produce ID will result in you not being permitted to sit the exam.
- ▶ Mobile phones
You must ensure your phone is switched off and handed in to an invigilator before the examination begins. If you are found using a mobile phone at any time in the exam, including lunch time, the matter will be reported to the Examinations Panel with the recommendation that you are disqualified from the exam.
- ▶ Use of electronic equipment
Most electronic devices are prohibited in the exam – the exception is for battery operated calculators

(these may be programmable) providing they are not Wi-Fi capable. Prohibited devices include but are not limited to:

- Mobile phones
- Laptops, notebooks or portable computers and similar devices
- iPads, tablets, and similar devices
- E-readers (e.g., Kindle) and similar devices
- Cameras, optical scanners, and similar devices
- Drawing/tracing light boxes
- Smart watches

▶ Clocks

The institution will try to ensure that there is a visible clock in all exam centres, however it is recommended that you bring a watch with you to the examination in case the clock provided is not in clear sight.

▶ Exam centre selection

Exam centres that have already been booked can be selected via the dropdown box on the application form. If there is no centre available near you the Institution will aim to set one up in any large town or city near you. Please note this town/city on the exam entry form.

▶ Exam preparation

You are strongly advised to thoroughly prepare for the examination by either taking a preparation course or by practising with past exam papers. Many Regional Groups run [preparation courses](#) during the year that are worth attending.

On receipt of payment for the exam an interactive preparation course will be sent to you in order to assist you with your preparation. Past exam papers, reports, and candidate “top tips” can all be found on the [website](#).

▶ Exam results

Your results will be issued in [My Account](#) and will be followed by an exam result letter or email. Feedback for candidates failing the exam must be requested online.

▶ Lapsed membership

Exam results will not be issued to lapsed members until full payment of outstanding fees has been received.

Instructions for the day of the exam

▶ Proof of identity

You must provide photographic ID to the invigilator on the day of the exam. If you do not produce ID, you will not be allowed to sit the exam.

▶ Candidate numbers and page numbering

Your full candidate number should be written on the front cover of the exam answer pack, the last five digits of your candidate number should be recorded on each answer sheet. A3 graph paper will be moved to the back on the pack for scanning, please number these D1, D2 etc. so that the whole answer pack remains in order.

Candidates should not use their institution membership number or name anywhere on the script.

▶ Lunch arrangements and refreshments

You must bring your own lunch and refreshments. You are not permitted to leave the exam venue or have access to your mobile phone or other electronic devices during the lunch break. You may not have access to any documents (including your own reference materials) during the lunch break – your script should be turned over.

▶ Timetable for the day

09:15	15 minutes reading time
09:30	Exam begins
13:00	Break for lunch (30 minutes) – candidates sitting Specialist Diplomas and the AM to CM Supplementary exam leave at this time.
13:30	Exam resumes
17:00	Exam ends – please be mindful of candidates with extra time

▶ Open book policy

The exams are “open book”, so you are permitted to take reference books or a folder with notes and frequently used references into the exam with you.

▶ Mobile phones

Candidates bringing their phone to the exam hall will need to ensure that it is handed in to an invigilator and that it is switched off. The invigilator may provide you with a label for ease of identification and distribution after the exam. You should write your name, candidate number, and Hong Kong identity card number (if applicable) on this label.

▶ Codes of practice

Any design code or standard may be used to answer the questions in the paper, as long as reference to that code is consistent throughout and any assumptions or design data adopted (including loadings other than those specified in the question) are stated at the beginning of the answer.

▶ Reading time

You should not make any marks on the paper during reading time, this includes marks on the question paper.

▶ Retention of exam papers

To maintain the security of the exams you may not take the question paper away with you. The question paper will be uploaded to the website once all scripts have been received by IStructE HQ.

- ▶ **Previously prepared information**
You may not include any previously prepared calculations, notes, drawings etc. Any previously prepared information submitted will be ignored by the examiners.
- ▶ **Using pencils/colour in the answer scripts**
You may write in pencil and use colour throughout your answer pack, provided these are dark enough to be scanned (it is advisable to scan a sample page to ensure pencils/colours are clear enough for the markers to read).

Any queries regarding the exam should be sent to the Examinations Manager, [Michael Lewis](#).

Guidance for Associate-Membership exam candidates

The following short guide has been compiled to clarify the requirements of each section of the Associate-Membership examination and to help candidates to understand what issues examiners are expecting candidates to address in their answers and to what level of detail. These notes are merely a brief overview and it is recommended candidates attend an exam preparation course for a more in-depth brief wherever possible.

Part 1a

Part 1a asks candidates to prepare '*a distinct and viable solution for the proposed structure*' and then to justify the reasons for your solution.

For the building structure questions, the chosen scheme should include the functional framing, basic grid layout, load paths, foundations, and stability provision etc. For the bridge question, the chosen scheme should include the bridge structure with the proposed spans, abutments, load paths to the foundations and the foundations. Sketches may be used alongside text to describe the proposed scheme. These may be free-hand and are not required to be to scale but they must clearly convey the design principles being proposed. Calculations are not expected in this part of the question and members may be sized using engineering judgement or rule of thumb, e.g., span to depth ratio.

The examiner is looking for candidates to identify and address the main structural challenges in the question and marks will not be awarded for generic answers.

Part 1b

This part of the question asks candidates to write a letter to the client, usually in response to an event which would affect the design such as a change to the brief. Candidates are expected to understand the impact of the change on the design solution they have proposed and, whilst clarity is important, the examiner will focus more on candidates' grasp of the technical issues than on the quality of their written English. Candidates may reference sketches if they wish.

Part 2c

The question asks the candidate to '*prepare sufficient design calculations to establish the form and size of all the principal structural elements including the foundations*'. This requires candidates to decide which members are 'principal structural elements' and as such requires the preparation of full scheme design calculations.

The question states that candidates must 'establish the form and size' of the element, therefore they are expected to use their judgement and experience to decide on the extent of the design checks required for each individual element. For most members checks of bending and shear alongside a span/depth deflection check will be adequate; however, candidates will gain extra marks for recognizing when additional checks are appropriate; for example, web buckling of a steel beam under a concentrated load. The design calculations can be prepared in accordance with any current recognized national code of practice of the candidates choosing. The use of design guides is not considered appropriate for the design of principal elements; however, they may be used to estimate other member sizes for Part 2d (see below). Candidates should assess and check worst case load combinations. There is no requirement to include multiple load cases and repetitive and simple calculations are not required.

All calculations should be clear and easy to follow.

The principal structural elements will vary depending on the chosen scheme, but as a guide the following gives an indication of the likely elements.

For building structures:

- ▶ Main members in trusses, portal frames, arches etc.
- ▶ Transition members / transfer structures, members with high point loads
- ▶ Cantilever members.
- ▶ Vertical structures where there is a high concentration of load and/or significant out of balance moments.
- ▶ Members of stability systems.
- ▶ Foundations including piles and pile caps, reinforced rafts and pads, balancing beams within the foundation system.
- ▶ Retaining walls
- ▶ Any special structural elements unique to the scheme.

For bridge structures:

- ▶ Bridge deck
- ▶ Main deck support structure
- ▶ Vertical structure
- ▶ Stability system
- ▶ Foundations including piles and pile caps, reinforced pads etc.

Clearly most schemes will not include all of the above and, as a guide, candidates would be expected to design between five and seven elements depending on the question.

Part 2d

This part of the question requires candidates to prepare drawings and predefined critical details. Drawings do not need to be to scale but should generally be in proportion and should be dimensioned. The drawings should include appropriate plans and sections including foundations. Elevations would usually be expected for bridges and should be included for building structures if they are considered necessary to convey the scheme. It may be appropriate to draw part plans where the structure is symmetrical, or to draw a single plan to represent a number of identical floors in a building. Members that are not considered principal structural elements by the candidate can be sized for estimating purposes using engineering judgement, span/depth ratios, or design guides such as 'Tata Steel Blue Book', 'Concrete Centre Design Guides'. The candidate should develop, prior to the examination, knowledge and experience of methods of element sizing by approximation and by the use of established design guides.

Part 2e

This requires the preparation of a construction program and the examiner is looking for candidates to demonstrate a degree of practical knowledge. The answer should be tailored to the candidate's proposed scheme and should not be a generic response.

The programme must again include all critical activities and their respective timescales. The presentation should preferably be in the form of a bar chart, or similar graphical representation.

Professional Review Rules

The Professional Review is a two-stage process, comprising the Professional Review Interview (PRI) and the membership exam.

You may sit either the PRI or the exam first but should bear in mind the following rules.

1. Three-year interview rule

If a candidate postpones taking the examination for three consecutive years after the completion of the interview, they will still be allowed to sit the examination. However, this is on condition that should the candidate pass the examination they will submit application [form PRI](#), a two-page experience report, IPD final report forms for each of the 13 core objectives, and the interview fee before sitting a Professional Review Interview. If successful in this interview candidates will then be eligible to be elected as a Chartered Member/Associate-Member.

2. Five-year examination rule

Candidates must pass the examination within five years of their first attempt (applicable from 2018 onwards). Candidates taking longer than five years to pass the exam will still be allowed to sit the examination. However, this is on condition that should the candidate pass the examination they will have to submit application [form PRI](#), a two-page experience report, IPD final report forms for each of the 13 core objectives, and the interview fee before sitting a Professional Review Interview. If successful in this interview candidates will then be eligible to be elected as a Chartered Member/Associate-Member. Note that candidates may not leave a gap of longer than 3 years between exam attempts.

To check when you last sat an examination, please refer to the 'My Account' area of the IStructE website.

Any queries regarding exam eligibility should be sent to exams@istructe.org

Windspeed Conversion Chart

The following chart is to be used for IStructE exams only and is intended as a guide for candidates who are using codes which provide a 10-minute averaging period.

