APEAS

ARCHITECTS' PROFESSIONAL EXAMINATION AUTHORITY IN SCOTLAND Ltd.

THE EXAMINATION IN PROFESSIONAL PRACTICE & MANAGEMENT: PART 3, 2017/18

QUESTIONS for CANDIDATES

All questions should be attempted

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Write up to 200 words on each of the following questions:

- 1.1 What is the role of a Clerk of Works and how does this differ from the Architect's role as contract administrator?
- 1.2 What are the pros and cons of the architect taking on the role of Principal Designer?
- 1.3 What are the implications of a client assignation for the architect and how is it controlled?

In writing answers to Q.1.1 to Q.1.3 candidates should **not** simply copy and paste information from the Internet, but give answers in their own words. Copying and pasting information may be construed by examiners as plagiarism.

End of QUESTION 1

Memo:

To: Candidate

From: John Young

Dear Candidate,

We have had a number of meetings with Factory Builders Limited regarding the concept flatted dwelling unit they plan to build and roll out throughout the country as a solution to the shortage of affordable accommodation for key workers in cities throughout the UK.

The intention is that while it may be small at around 50m² gross internal area, it will be beautifully designed and fully equipped, including ingenious fixtures and fittings to create an exceptional modern home with unique and clever interiors to maximise the use of space and create innovative storage solutions. It also needs to be attractive, aspirational and importantly not look like a modular building, while at the same time be capable of transportation up and down the motorways of the UK in its modular format for delivery and assembly on site.

The target is to design and manufacture this flatted dwelling unit and have the physical product built as a prototype which they intend to showcase on land adjacent to their factory to potential purchasers. It will require a fully integrated BIM Model and as Lead Consultant we will have a high level of co-ordination and detailing to be responsible for, it is likely that we will have to cover several design solutions to reach the optimum solution that is capable of being repeated and incorporated into a larger development.

Can you please prepare a fee proposal for a full architectural and interior design package including Principal Designer and Lead Consultant roles. The following components need to be addressed:

- What are the issues to be considered by us before we think of preparing a fee proposal?
- What would the fee proposal be for delivering a prototype unit through all the work stages? Include for "type approval" statutory building control permission for the unit.
- What would our percentage architectural only fee be for delivering a flatted development utilising the prototype unit on development sites going forward for notional 10, 20 and 50 Unit Schemes. The fee would include for dealing with the statutory consents and site works and core works such as vertical circulation and perhaps some envelope works. Inevitably there will be options to meet accessible standards. The notional works value is anticipated to be £75,000 per unit.

QUESTION 2 (cont.)

• As a new start-up Factory Builders are trying to keep costs to a minimum and have also asked us if we would accept a license fee of £200 per unit manufactured as an alternative to the fee for designing the prototype. This would be paid for each manufactured unit whether we had anything to do with the site works or not. What do you think we should do here?

Best Regards

John

Memo: To: Candidate From: Paul Moore

Dear Candidate,

This arts centre project is becoming tricky. The project architect Peter Sirorsky, Associate, is off on holiday – he tried to arrange his holidays so that he would be present at practical completion, but then it got delayed yet again – and I am tied up for much of the week. As you have been assisting on the project I would like you to do some investigation and recommend a course of action. The situation is thus:

Various extensions of time have been given, but the contractor is still in culpable delay although he believes passionately that he is due an extension to take the Date for Completion right up to the present (mostly due to client changes which have been more than normal). The delay has led to the client actually moving some staff into the office area of the building as they have nowhere else to work. The contractor seems happy about this, and basically ignores their presence. Tempers are getting frayed.

The contractor is, of course, desperate to complete practical completion and hand the building over.

This is a list of items not yet finished: -

- reception desk being supplied by client through a charity woodwork organisation, but to be fitted by the contractor not supplied yet
- landscaping to rear of building incomplete
- fixings to east gable cladding (to garden area) not to specification
- first floor glazed partition head fixings (overlooking office area) not to specification
- General snagging (an unusually large amount)

On the two items concerning fixings the structural engineer is not prepared to sign off the SER until remedial work is carried out. This all seems messy, so could you have a think and recommend what we should do. Specifically:

- What do we do about the client occupying part of a live site? The contractor seems happy with it, but is it permissible?
- Can we actually accept handover of the building as it is? If we do, what do we do about all the incomplete work?
- The contractor has submitted a claim for extension of time a week ago. What do we need to do about that?



Email from John Young:

Subject:W. WALKER: NEW HOUSEDate:21/11/1708:47:52 GMTTo:candidate@gfy-arch.co.ukFrom:jyoung@gfy-arch.co.ukCC:

Good Morning Candidate,

1422: NEW HOUSE FOR MR & MRS W. WALKER

With completion on site just a few weeks away and the replacement Contractor doing a good job, I thought that our problems on this project were behind us. I have received an email from Mr Walker, see below.

Please can you give me your thoughts on each of Mr Walker's points, then draft a letter to him, addressing each of them.

John Young B.Arch, RIAS, LLM.

GFY Architects

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QUESTION 4 (cont.)

Email from Client:

Subject:NEW HOUSEDate:20/11/1721:03:36 GMTTo:jyoung@gfy-arch.co.ukFrom:w.walker@seaworth-shipping.co.ukCC:

Hello John,

NEW HOUSE, HARDHOME WAY

I have a number of issues which I would like to raise with you:

- 1. I have received your fee invoice no. 1422/1173, requesting payment for, "work in connection with selection and appointment of the replacement Contractor". I have to say that I am taken aback by this unexpected charge. We agreed your fees at the time of your appointment and I would expect these to cover all of your work for me.
- 2. Whilst on the subject of fees, I expect you to reduce your final fee when the time comes. As you know, my Brother-in-Law has provided much of the labour and materials at cost, saving us around £32,000 from the final building cost. You should therefore charge your final fee as 6% of £352,000, not 6% of £384,000.
- 3. Also on fees, you will recall that it took you two attempts before getting Planning Permission. This delayed the project and resulted in us suffering prolonged rental for our temporary accommodation, around 3 months x £1,500. I therefore intend to withhold £4,500 from your fees.
- 4. Now, regarding the new front doors, I note that the leaking glazing gaskets appear to have been fixed. However, I am concerned that the leaks may recur if we get more heavy driven rain from the east. As you specified these doors, I want you to guarantee that you will cover me for the costs of any further repairs, as Tormund has suggested.
- 5. We will, of course, need an electricity connection for the new house. Tormund has said that this is not part of the builder's remit and I wouldn't know where to start with this. I want you to organise the electricity supply for me.
- 6. Finally, Mrs Walker has seen some rather special curtain pelmets by Pelmets-R-Us, advertised in Homes & Interiors. As this is a design thing, I want you to contact Pelmets-R-Us and appoint them for the design, supply & fitting of the curtains and these pelmets.

Please can you confirm to me that you acknowledge all of the above and action as appropriate.

Regards,

W. Walker Capt. RN (Rtd)

End of QUESTION 4

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Dear Candidate,

We have received a notice of delay to the contract from Burly Builders Ltd, for the new passivhaus for Mr and Mrs Hastie. The Contractor is claiming a two week delay due to extremely high winds preventing the pre-fabricated kit panels being lifted into place by the crane and a further two week delay due to the late confirmation of the window colour by the client.

You will remember that the client agonised over the colour for the windows, asking for numerous sample panels to be produced on site. Who would have thought there are so many different shades of dark grey? The client, Mr Hastie, called me to express his dissatisfaction with GFY. He was quite annoyed that we didn't advise them that the decision on the paint colour should have been made earlier.

How do you think we should go about assessing the Contractors claim for an Extension of Time for the delays and when do we need to respond to the contractor on this? If an EoT is due, how do we go about revising the contract completion date?

Might the Contractor be due Loss and Expense for either of these delays?

Can you send me a memo with your thoughts on the points raised.

Regards

Paul

QUESTION 5 (cont.)

Letter from Contractor

Mr Paul Moore, GFY Architects, Geddes House, 1 Union House, 1 Union Street, Cityburgh CB1 9RW

Date: 17 November 2017

Dear Paul,

Re: New Passivhaus for Mr & Mrs Hastie

We are writing to notify you under clause 2.27 that the contract has been delayed by four working weeks due to the following two relevant events, as per clause 2.29.

- 1. Two week delay due to severe high winds, after the passivhaus timber kit was delivered to site, which prevented the crane from lifting the pre-fabricated panels into place.
- 2. Two week delay, due to the late confirmation from the employer of the RAL colour for the factory coated paint finish to the passivhaus windows. This delayed the delivery date for the windows from Germany by two weeks.

We therefore seek an adjustment to the completion date by four weeks to reflect these delays, and the payment by the Employer of the Loss and Expense incurred as per clause 4.23.

Yours sincerely

Mr V Burly Burly Builders Ltd

cc. Mr and Mrs Hastie

Dear Candidate,

I have just taken a phone call from Jimmy at OneStopBuilders. He was updating me on progress on the two houses he is working on over in Orchard Field. The roofs are almost complete and our clients are very happy - so great news!

At the end of the conversation he had two questions re the Bamford house project on the adjacent plot to the Hampton House:

- 1. There appears to be a problem with the stair and the head height under the landing. Jimmy kept bumping his head coming down the stairs and he did a quick measurement to check the head height. It is only 1.6m to the underside of the ceiling of the landing above. He wondered if this is compliant with the regulations or if we have to change something.
- 2. He also requested additional information to clarify key details on the interface between the sunroom and the gable abutment and on the relationship between the car port and the bathroom window cill. There appears to be a clash in both instances.

Can you please take a look and prepare the relevant information for Jimmy as soon as possible so that he can complete the job. Has the contractor made an error here? Have we made an error on our warrant drawings re: the stair dimensions? What are the implications/ risks presented here?

I am keen to maintain a good working relationship with OneStopBuilders. They are proving to be a reliable, competent contractor who could prove useful to us as we develop our expertise in one-off houses.

Thanks

Jill Kahn

PS. I have just had a quick look on the council website portal for the Planning Drawings for both projects to remind myself of the design, as it has been some time since I have been involved with this one. I cannot actually see a sun room or a car port on the Bamford House! It would appear that the Hampton House has both, but the Bamford House has neither. Perhaps Jimmy is confusing the two projects and was talking about the Hampton house. Or maybe Mr Bamford has added in a sun room and a car port subsequent to our last discussions. Either way the sun room and car port have been built and the roof is almost complete! I will leave it with you.

End of QUESTION 6

Memo:

To: Candidate

From: John Young

Escape Stairs

We have just received a list of items back from building control that we need to consider. First and foremost, is an "observation" that we have insufficient escape stairs in our development. I have contacted the officer concerned and he was able to persuade me categorically that our reliance on the existing pair of escape stairs within the development is insufficient for the travel distances involved.

We need to add another stair! Thank goodness this is a design and build project! However, for peace of mind can you prepare a memo that sets out the contractual position here. As you know the tender was let under the two-stair scheme prepared for planning permission (and listed building consent), i.e. before we were novated. This has only come to light after novation.

We are OK aren't we? What should we do – if you think we need to inform Johnstone, Johnson & Johnston or Crailing Hotels please let me know, and draft an appropriate letter?

Ridge Height

We may have another issue. As you know we were severely restricted in the height of the new extension. Our planning drawings clearly indicated that the ridge for the new extension was to be 1m below the level of the existing ridge, indicated by a dimension line and a note stating "1m minimum difference". We also placed a level on the new ridge of 13.75m above datum (ground floor level). However, the contractor Eckford has noted that the two levels do not tie up as 13.75m is 1m above the ridge and not below it, clearly, we have made an arithmetic mistake here, oops!

However, now that we are developing the design and have the full design team on board it is clear we will have to increase our floor to floor heights in the extension. Eckford Design & Build appreciates we cannot go higher than the ridge but my current calculations place the roof as 1.2m higher than the adjacent roof, very unlikely to be accepted by the local authority.

Am I right in thinking we have two main options – ask the client to delete the top floor accommodation, reducing the scheme by six bedrooms, or lowering the ground floor of the extension by 2.2m, in effect half a storey, to achieve a compliant ridge height?

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Question Paper

QUESTION 7(cont.)

Just so I understand, are there contractual implications for the contractor/client relationship and our appointment? Where do we stand here and what action should we take?

Cornices

As you know we advised the client regarding the retention of the decorative cornice work to the existing country house. We advised that only the principal rooms on the first floor needed to be considered for retention and consolidation.

However, I have just noticed a condition in the planning and listed building consents which stipulates that all ground floor cornice work should similarly be retained and consolidated. But this was not included in the Employer's Requirements at tender award. However, I note Eckford has, in his list of provisional sums, set aside an amount for "Sundry Works to Historic Fabric".

That being the case can you prepare the wording for an instruction expending this sum and let me have a draft to send to the employer's project manager? I need you to check the appropriate contract clause for this action.

Dear Candidate,

You were involved in our recent project for Green Petrochemicals to create their new office building. As you know they are a global company with huge expansion plans. The CEO of Green Petrochemicals is so pleased with our building that he wants two more; one in Northern Ireland and one in England. The brief for each project will vary in terms of meeting room requirements, catering and size of gymnasium. They want us to stay involved to look after their interests and make sure that the new buildings are as good as the one we have just completed.

It looks as if we will be Lead Consultants on the project up to Stage 3 and then pass the detailed design and delivery over to the contractor; Global Reach. The original project was fully drawn in Revit with our fellow engineering consultants doing their own models. These original consultants will no longer be used. We will be appointed by the contractor who have their own local in-house architect and structural engineers. They will be appointing local M&E Engineers for each site.

The steel framed building in Cityburgh was adjacent to their refinery and the building including the steel frame had to have a resistance to explosions on the site. The two other buildings have also got to resist explosions but to a greater and lesser degree than Cityburgh.

I am worried that the contractor may muscle in on our client and do any future work without us. How can we protect our design so that this does not happen?

On each project we need to update our BIM Model to Stage 3 for each site. What are the key areas of workload required to be performed by GFY to make the BIM Model applicable and correct for each site?

Green Petrochemicals want us to have a role after Stage 3 to make sure that the design stays faithful to the original. What sort of involvement should GFY have after Stage 3 to protect these client's interests? How could this be achieved?

Regards

Paul

Dear Candidate,

Zainab has been off sick for the last week and as a result we have not issued an Interim certificate following the contractor's valuation which was issued in accordance with the agreed contracted payment schedules.

Yesterday we received the attached contractor's payment notice which is stating that payment in full is due from the employer in 4 days.

I popped into site on my way into work this morning and noted that the curtain walling that has been claimed is not actually on site, I spoke to the site manager and he stated that it was being stored in their yard 50 miles away as they had no available storage space on site. It is valued at £15,000.00, what should we do about this?

I also think that the quality of facing brickwork which is up to cill height is not of the required quality, it seems to have been done by someone with very poor eyesight and without the use of a level. I've condemned this on site and instructed them to take it down to ground level. I think we should knock off £5,000 from his payment notice.

The contractor is generally not happy as apparently the first valuation took five weeks to come through as opposed to the contracted 21 days.

We need to sort this out quickly and I think it is a bit of a pickle, I don't want to over certify the project. Could you find a way through this for me? How should we respond to the issues with the curtain walling and brickwork? Can we issue an Interim Certificate now that takes your answer above into consideration. Could you also draft short letters to the Employer and Contractor explaining our response to this.

Thanks,

John

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QUESTION 9 (cont.)

Big Mac Construction BM House Cityburgh CB1 3EA

20th November 2017

GFY Architects, Geddes House, 1 Union Street, CITYBURGH, CB1 9RW

Dear Sirs,

CityBurgher Drive Thru', Cityburgh Retail Park

In the absence if an Interim Certificate issued in accordance with the contract clause 5.3, we hereby enclose our payment certificate which is due for payment in 4 days' time which is 21 days after the due date.

Please forward this payment notice to the Employer with instruction to settle payment in accordance with the contract.

Please also note that the previous valuation payment was two weeks late and we cannot accept any delay with this payment otherwise we will have to consider suspending works on site in accordance with clause 5.7.

I trust that you find the enclosed to be in order.

Yours Faithfully,

Michael McIntosh Director

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QUESTION 9 (cont.)

Big Mac Construction BM House Cityburgh CB1 3EA

20th November 2017

Burgher Burgher Ltd, CityBurgher Heights, 15 Prospect Street, CITYBURGH, CB2 8XY

Dear Sirs,

CityBurgher Drive Thru', Cityburgh Retail Park

Payment Certificate - 1671 - 02

For works covered in valuation No 2 dated 3rd November 2017.

Valuation 2	£ 290, 144.21
Less Retention (5%)	£ 14, 507.21
Sub Total	£ 275, 636.99
Less Previously Certified	£ 105,000.00
Total	£ 170, 639.99
Vat (20%)	£ 34, 128.00
Total For Payment	<u>£ 204, 767.98</u>

I trust that you find the enclosed to be in order. Under the terms of the contract payment is due by 24th November 2018.

Yours Sincerely,

Michael McIntosh Director Vat Registration No – 13013021

End of QUESTION 9

Question Paper

At our partners meeting Monday morning this week Miriam announced that she is considering an approach from a large practice to take over GFY. Bigville Construction Design Services, BCDS, are a very profitable, large, commercial, multidisciplinary practice, her nephew is one of the Directors. BCDS are keen to extend their client base into refurbishment projects. You will recall we did some work with them a few years ago when we used them as passivhaus consultants on the Williams House.

Miriam has asked that the practice consider this carefully as she thinks it could be a new and exciting opportunity for the practice. We plan to hold a staff meeting for all employees next Friday to set out the proposal and gather staff opinion. I am out of the office most of this week, so I wondered if you could pull together a few briefing notes for me to use at the staff meeting?

The briefing notes should clearly set out the impacts of such a proposal, highlighting both the positives and negatives for GFY. I am keen that all staff are made aware of exactly how such a takeover proposal by BCDS would impact their position and the opportunities that it presents for both them personally and the practice moving forwards. Happy that the briefing notes would also include any unanswered questions that would need to be bottomed out as part of the discussions.

Paul

End of QUESTION 10 END OF PAPER