

**QUESTIONS AND OUTLINE ANSWERS ON THE PROFESSIONAL PRACTICE  
EXAMINATION  
MARCH 2007  
PAPER 1 & PAPER 2**

---

**PAPER 1**

**Question 1**

The plaster on some of the external walls of a building that you, as principle agent, are supervising, has crazed badly. The builder is about to start plastering other external walls. In making routine inspections what would you particularly look for and check to ensure that future plastering is more successful? What instructions, if any, would you give to the contractor to ensure satisfactory work.

**(Total marks: 10)**

**Answer 1**

Some of the things to look for: sand no too fine nor containing earth, clay or vegetable matter - correct proportions of sand: cement - old plaster mix that has begun to set not being revived by the addition of water - plaster surfaces being kept damp for 3-4 days after application - V-joints being ruled in plastered surfaces where nature of backing material changes.

Instruction: to keep newly-plastered surfaces damp by sprinkling with hose at least twice per day (more often if weather hot and/or windy).

**Question 2**

Discuss the principal characteristics of each of the following types of building contract, state their respective advantages and disadvantages of each, and indicate in what circumstances you would recommend each to a prospective employer

- |            |  |                  |
|------------|--|------------------|
| <b>2.1</b> | <b>Contract with Bills of Quantities</b>                           | <b>(9 Marks)</b> |
| <b>2.2</b> | <b>Cost-plus Contract</b>  | <b>(8 Marks)</b> |
| <b>2.3</b> | <b>Packaged Contract (also known as Design-and-Build Contract)</b> | <b>(8 Marks)</b> |

**(Total marks: 25)**

**Answer 2**

2.1 Contract with bills of quantities: one in which the work is described and measured in bills of quantities on which tenderers calculate their tenders.

**Advantages:** drawings need to be complete permitting accurate pricing and therefore keen tendering, basis for valuing variations and certificates.

**Disadvantages:** preparation is time-consuming, delaying tendering process – introduces another consultant whose fees must be paid by the client.

To be recommended for all large and medium-size projects.

2.2 Cost-plus contract: one in which the contractor is paid for the actual cost of materials (including wastage) and labour plus an amount to cover administrative costs, overheads and profit (which may be negotiated as a lump sum but is more often a percentage of the cost of labour and materials).

**Advantage:** permits a very early start on site (as soon as plans have been approved by the local authority).

**Disadvantages:** competitive element of tendering lost – final cost not known until work complete – no incentive on the contractor to work economically particularly if his profit is geared to the cost of labour and materials.- very difficult to deal with the cost of rectifying errors in construction.

To be recommended only where the employer has great confidence and trust in the contractor and cost is not a serious consideration.

2.3 Packaged contract: contractor provides, for a negotiated lump-sum amount, all the necessary professional design services in addition to the construction of the building.

**Advantage:** gives the client "one-point" responsibility - simplified process for client, especially in small projects, particularly houses.

**Disadvantages:** client usually lacks technical expertise and/or advice to ensure that work is of suitable quality – difficult to cater for variations – no basis for securing competitive tenders – scope for contractor to cut corners to ensure profitable outcome – contract documents prepared by contractor protect interests of the contractor rather than those of the client.

To be recommended only where the client is sure of the competence and trustworthiness of the contractor and who has not the time or inclination to engage his own team of specialist consultants to safeguard his interests.

### Question 3

**You are approached by a doctor who has an option to purchase a large elderly house in a well-established residential area of a large city which he would like to enlarge and convert into a day clinic for his oncology (cancer treatment) practice. He would like to know if this form of redevelopment would be permissible and practicable in terms of any legislative controls that might apply. List the various legislative controls that you would need to consider in advising him and state briefly the possible effect of each on the project.**

**(Total marks: 14)**

### Answer 3

Town planning: does the town-planning scheme permit this form of development on the site –if yes, what extent of coverage and bulk, height and parking requirements - if not, could the local authority's consent be obtained or would it be necessary to rezone the property? To what extent is development restricted by building lines and servitudes – to what extent (if at all) can these restrictions be relaxed?

Title deeds: do the conditions in the title deeds permit this type of development? If not, can the conditions be amended or set aside? (Town Planning Department would advise whether they would support such application).

Heritage and National Monuments Regulations – is the building subject to control in terms of these regulations – if so, to what extent will alterations be permitted?

Department of Health: compliance with planning requirements for this type of clinic, especially in respect of provision and equipment of treatment and recovery facilities, sluice rooms, toilets, staff facilities, storage and disposal of medical waste.

Traffic and parking requirements – Traffic Department will be concerned about points of access to and egress from the site and provision of parking and adequate access for ambulance.

#### **Question 4**

**Excel Architects, a partnership of three professional architects, is offered the appointment to provide full architectural services in respect of the design and construction of a pharmaceutical laboratory. The project will require a number of consultants and instead of appointing these consultants himself to work with the architects, the client wants the architects themselves to engage them and to quote a single fee for all the necessary professional services – in other words, a "package deal".**

**What are the advantages and disadvantages of the proposal from the point of view of**

**4.1) the client (5 Marks)**

**4.2) the architects? (10 Marks)**

**(Total marks: 15)**

#### **Answer 4**

4.1 From the client's point of view, he has only one person (or practice) with whom to communicate and to hold responsible for any error, omission or negligence on the part of any professional consultant, and one fee to pay (he may expect that such fee to be less than the total of the fees of the consultants if separately appointed). He expects to get a better service than he would with separate appointments.

4.2 From the architects' point of view (provided they are the lead consultants) they can expect to have better control over the other consultants – they have the power to fire another consultant who does not perform adequately – as team leaders and co-ordinators they can claim a portion of the joint fee for fulfilling this function – high degree of co-ordination possible if the consortium opens a joint office for the project.

4.3 Disadvantages to the architects: greater responsibility and greater risk of liability if any consultants is negligent – special professional indemnity insurance policy would need to be negotiated, probably at a high premium – responsible for paying fees to the consultants even when not paid by the client (unless they negotiate a "pay when paid" agreement with the other consultants) – more directly responsible where delays are due to the failure of another consultant to perform his professional services timeously – the architects, in providing the client with professional services in fields other than architecture may be held to be transgressing the "reservation of work" regulations of the other professions.

### Question 5

The architectural professional, having prepared drawings and specifications for alterations and additions to the house that his client has just bought but not yet occupied, asks a builder to quote a lump sum price for carrying out the work. Nothing is said about the form of building contract to be used. His price is acceptable to the client and, on his client's instructions, the architectural professional writes to the builder accepting his price, and the builder takes occupation of the site and house and starts work. No contract is signed.

What are the rights and obligations of the parties in each of the following situations?

5.1 The architectural professional instructs the builder to lay additional brick paving to the driveway. The builder, who wants to move on to his next contract, refuses to do so.

(4 Marks)

5.2 Over the weekend thieves break down the garage door and steal a quantity of ceramic tiles that had been supplied and paid for by the client, and also some door locks that had been purchased on credit by the builder but not yet paid for. Who is responsible for the cost of replacing the tiles and locks and for repairing or replacing the damaged door?

(10 Marks)

5.3 After working for a fortnight, the builder submits a claim for payment for work done to date. The client says he is not prepared to pay until the work is completed. Angrily the builder walks off the site.

(4 Marks)

5.4 The work was carried out and completed during the dry months. Six weeks after completion there is heavy rain and the roof over the new bedroom leaks. The builder says he is not liable for latent defects and refuses to return to site to carry out repairs.

(6 Marks)

(Total marks: 24)

### Answer 5

*Answer not supplied by examiner.*

### Question 6

The contractor, working under a building contract, disputes the principal agent's ruling on his claim for a revision of the date for practical completion and wants the dispute referred to mediation. The employer, having had no previous experience of it, wants to know what mediation is, how it works, who pays the costs of the mediation, and what the advantages and disadvantages of mediation are as a means of resolving disputes. Answer him.

(Total marks: 12)

## **Answer 6**

Mediation is a process in which two or more parties who are in dispute engage a neutral outside person to act as mediator to assist them to reach a settlement of their dispute. The mediator may meet with the parties either together or separately to discuss their respective positions in the dispute and, by the use of diplomacy and tact, he will attempt to persuade each party to make concessions that will narrow and close the gap between them. When agreement is reached, either on the dispute as a whole or any aspect of the dispute, the agreement is recorded in writing and signed by the parties, and this agreement then becomes binding on the parties.

In some mediations, the mediator does not express a personal opinion, but merely seeks to persuade the parties to come to an agreement. In other mediations the parties will wish the mediator to express his own opinion of the dispute, and they may then agree to accept his opinion. In some instances they will agree that his opinion shall be final and binding on them unless one of the parties advises the other within a defined space of time that he does not accept the mediator's opinion.

Everything said or done in the mediation proceedings, other than any agreement of settlement that the parties may reach, shall be confidential and may not be repeated to any outside person without the consent of the other party. The mediator is also required to treat the mediation proceedings as confidential, and he cannot subsequently be called as a witness to state in court proceedings what was said and done in the mediation proceedings.

## **Question 7**

**You are the principal agent in a building contract for a large house. Draft the agenda for the first site meeting at which the site is to be handed over to the contractor. Who would you request to attend this meeting?**

**(Total marks: 10)**

## **Answer 7**

There are many items that may be included in the agenda, and only the most important are listed here:

- Pointing out of corner pegs of the site boundaries and the datum level to the contractor by an agent (land surveyor) and the formal handing over of the site to the contractor – JBCC site hand-over certificate to be completed.
- Identification of the principal agent and any other agents.
- Identification of the contractor's site representative in terms of clause 6.0 of JBCC PBA.
- Confirmation that works insurance and third party liability insurance has been effected by the responsible party.
- Confirmation that the contractor's security in terms of clause 14.0 has been provided.
- Delivery to the contractor of required number of copies of all drawings and schedules and bills of quantities (if applicable).

The persons who should be requested to attend the meeting would be: the employer, the contractor, any other agents including land surveyor.

## Paper 2

### Question 1

**You are the principal agent in a JBCC Principal Building Agreement lump sum contract (without bills of quantities) for a large house. Part-way through the contract your client decides that he wants a billiard room added on to the house. This addition can easily be effected and will not cause the contractor any serious disruption to his programme. You prepare the necessary drawings and ask the contractor to quote a price for this extra. The price he quotes seems excessively high, and a friendly quantity surveyor whom your client consults confirms that it is disproportionate to the pricing structure of the contract. The contractor, however, refuses to budge; that is his price, take it or leave it. Your client is very upset, and feels that you have not acted in his best interests. Is he justified in this attitude? Is there another way in which you could have handled the matter that would have ensured that he pays a fair price for this extra? At this stage, is there anything you can do to ensure that he gets his billiard room without having to pay an excessive amount for this extra?**

**(Total marks: 15)**

### Answer 1

Your client is justified in feeling that you have not acted in his best interests. By asking the contractor to quote a price for the additional billiard room you are opening the door for a new contract. The contractor is not obliged to quote a price that is compatible with the pricing structure of the original contract and he is at liberty to quote a relatively higher price for this work, which the employer may accept or reject. But the circumstances are such that it would be difficult and inconvenient to ask anyone else to quote a price for this work. The employer has no practical alternative than to accept the contractor's price or abandon the idea of this addition, and a wily contractor will take advantage of the situation and ask as high a price as he dares.

There was no need to ask the contractor to quote for this work. Clause 32 of JBCC PBA provides a practical means whereby the principal agent can determine the cost of this additional work which would be consistent with the pricing structure of the entire contract and would ensure that the employer was not exploited.

At this stage the principal agent should inform the contractor that his price is not acceptable because it is not comparable with the pricing of similar work in the contract, and he should issue a contract instruction to the contractor to carry out the work as additional work in terms of clause 17.1, to be valued in terms of clause 32.1. The contractor would be obliged by clause 17.2 to carry out this work, but he can be expected to be very dissatisfied with the manner in which the principal agent has dealt with this issue.

### Question 2

**The architectural professional called for tenders for alterations and addition to a large house. The tender documents comprised bills of quantities, measured in accordance with the Standard System, and 1:100 scale planes, elevations and sections of the house. The elevations showed hardwood shutters to all windows but there was no mention of such shutters in the bills of quantities. This**

omission is discovered during the construction period. The contractor refuses to supply and fix the shutters because he says they are not part of the contract as they are not mentioned in the bills of quantities. He is prepared to supply them as an “extra” but he will want payment for them. The principal agent rejects his claim, saying that, as the drawings clearly show the shutters, they are part of the contract and it is deemed that the cost of the shutters is included in the contract sum. Who is correct? Who would have to pay for the shutters – the contractor, the employer, the principal agent or the quantity surveyor? (The contract used is the JBSS Principal Building Agreement)

(Total marks: 10)

### Answer 2

The contractor is contractually obliged to supply and install the shutters because they are shown on the drawings and therefore part of the contract. For this reason the principal agent cannot issue an instruction to the contractor to provide and install the shutters as an "extra" because they are not an extra. But the contractor will be entitled to an adjustment of the contract sum in compensation for the omission of the shutters from the bills of quantities – clause 32.15. The employer will therefore pay for them.

### Question 3

What is meant by:

“a member of a closely allied profession (give three examples) (7 marks)

“a voluntary association” (give two examples) (6 marks)

“identification of word” (4 marks)

“Continuing professional development (CPD) (4 marks)

CPAP (4 marks)

(Total marks: 25)

### Question 3

A member of a closely-allied profession is one who is registered in terms of

- Engineering Profession Act No 46 of 2000
- Landscape Architectural Profession Act No 45 of 2000
- Project and Construction Management Professions Act No 47 of 2000

- Quantity Surveying Profession Act No 49 of 2000
- Planning Profession Act No 36 of 2002

All of which are members of the Council for the Built Environment

A Voluntary Association is any association of persons whose interests coincide with those of SACAP and which is recognised as a voluntary association by SACAP in terms of section 25 of the Architectural Professions Act. Examples: the South African Institute of Architects, the Gauteng Institute for Architecture, the South African Institute of Architectural Technologists

Identification of work is the identification by SACAP of various types of architectural project which may be done by members of the various categories of registration under the Architectural Professions Act.

Continuing Professional Development (CPD) is a process, laid down by SACAP, whereby persons registered in terms of the Architectural Professions Act are required to update their knowledge and experience of the practice of architecture in order to qualify themselves to renew their registration every five years in terms of section 23 of the Architectural Professions Act.

CPAP stands for Cost Price Adjustment Provisions which are applicable when adjusting the contract value in terms of clause 32.13 of JBCC PBA for the effect of inflation of costs during the construction period.

#### **Question 4**

**JBCC Minor Works Agreement states, in clause 2.0, that the contractor may elect to provide a JBCC Minor Works Construction Guarantee, or retention**

**9.1 Describe the operation of each of these systems of security (10 marks)**

**9.2 Which offers the employer the greater degree of protection?  
(Give reasons for your answer) (6 marks)**

**(Total marks: 16)**

#### **Answer 4**

The JBCC Minor Works Construction Guarantee is a guarantee in favour of the employer obtained by the contractor from an approved financial institution, in which the guarantor undertakes to compensate the employer for any financial loss that he may incur as a consequence of some breach of contract by the contractor. The maximum amount guaranteed is 8% of the contract sum from the start of the contract to the day after the date for practical completion; thereafter until the date of final completion it reduces to 4% of the contract sum; thereafter until payment of the final certificate it reduces to 2% of the contract sum.

Retention is a fund of money provided to compensate the employer for any financial loss that he may incur as a consequence of some breach of contract by the contractor. The fund is created by the withholding by the employer of 10% of the value of each interim payment certificate until he has withheld 5% of the contract sum.

On practical completion the amount withheld is reduced to 2.5% of the contract sum, and this retained amount is included in the final payment certificate – JBCC MWA clause 13.9.

The construction guarantee provides greater protection for the employer. During the construction period it provides him with cover to the extent of 8% of the contract sum, whereas retention offers him no cover at all at the commencement of the contract and cover increases to a maximum of 5% of the contract sum for the second half of the construction period. After practical completion until final completion, the construction guarantee provides cover of 4% of the contract sum, whereas the amount retained in retention decreases to 2.5% of the contract sum. After final completion until the issue of the final certificate, the construction guarantee provides cover of 2% of the contract sum whereas the amount retained in retention remains at 2.5% of the contract sum

### **Question 5**

**A young architect, who has just started his own practice, has just won a limited architectural competition for the design of a game lodge, and is offered appointment as architect for the project. He is reluctant to ask for client to sign a Client/Architect Agreement as he thinks this may frighten the client away and he will lose the appointment to one of his competitors. Set out, in point form, the various conditions, which you think he should incorporate into the letter that he should send to confirm his appointment, to ensure that he is adequately protected**

**(Total marks: 12)**

### **Answer 5**

In his letter to the client setting out the terms of his appointment he should include the following matters (clause 3.1 of SACAP Code of Professional Conduct):

- The scope of the work – what services he undertakes to render (the five work stages)
- The allocation of responsibilities – for what the employer is responsible (information about the site, etc, the appointment of other consultants) and for what the architect is not responsible (professional work reserved for other professions – eg. quantity surveying, structural engineering.
- Limitation of responsibilities – architect not responsible for work undertaken by other consultants, nor for the performance of the contractor – time limit to claims against the architect for negligence: 5 years after final completion.
- The fee or method of calculating it – e.g. SACAP Recommended Tariff of Fees
- Provisions for termination – either party may terminate on giving due notice to the other – fees due on termination – entitlement of client to copies of all drawings and documents prepared by the architect
- Details of professional indemnity insurance

### **Question 6**

**Robinson has a degree in architecture awarded by a South African University, but two has not registered as a professional architect because he has not completed the prescribed period of practical experience nor has he written and passed the prescribed examination in professional practice. May he carry out the designing, planning, preparation of all the necessary drawings and documentation and supervision of the erection of the following projects? Furnish any explanation for your answers that may be necessary**

- a) An additional hanger of an aggregate floor area of 200 sq metres at small airport outside the boundaries of a Reef Town**

**(4 marks)**

- b) The addition of two bedrooms of a total area are on 250 sq metres to an existing house of a gross floor area of 35 sq metres in an urban area**

**(4 marks)**

- c) Restoration of a dilapidated historical church having a floor area of 700 sq. metres**

**(4 marks)**

### **Answers 6**

The new identification of work proposals have not yet been gazetted, and the reservation of work regulations made under the 1970 Architects' Act still apply.

- a) Yes - As the airport lies outside the jurisdiction of a local authority, this work is not reserved (Paragraph 1 of the Notice). It is also exempt by the Schedule of Exemptions.
- b) No - This work is reserved in terms of paragraph viii(A) of the Notice
- c) Yes - Restoration work is not reserved for architects in terms of the Notice.