



South African Council  
for the Architectural Profession

51 Wessel Road, Right Wing,  
Rivonia, Sandton, 2128

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## South African Council for the Architectural Profession

### PROFESSIONAL PRACTICE EXAMINATION OCTOBER 2024

#### PAPER 1 – MEMORANDUM

- Candidates are required to answer **ALL** the questions.
- Questions must be answered in **SEQUENCE**. Ensure that your answers are clearly **NUMBERED**.
- This is a **CLOSED BOOK** paper. No notes, supplementary documents or online referencing is permitted.
- All answers must be **in your OWN words** where appropriate.
- Candidates must take note of the mark allocation of each question in order to provide enough information in their answer.
- Where answers are duplicated between candidates, plagiarised, or copied, **ZERO** marks will be granted.
- Take note that duplicated, plagiarised and/or copied answers may be subject to further investigation, penalties and/or disciplinary action.
- Total marks for paper one – **150 marks**
- Pass mark – **a minimum of 50%** in each of the two papers.
- Time allocation – **3 hours**

#### QUESTION 1 – Definitions

10 marks

1.1	With reference to the Architectural Profession Act 44 of 2000, provide the definition of the following terms:	
1.1.1	“this Act”	(2)
	<b>1.1.1 “this Act” - includes any notice, order or rule issued or made under the Architectural Profession Act 44 of 2000;</b>	
	<i>Discretion to be used. Answer should indicate that the term this ‘Act’ is with reference to the Architectural Professional Act and any part thereof associated within the contents of it</i>	
1.1.2	“actively practice”	(2)
	<b>1.1.2 ‘actively practice’ - means to practise on an ongoing basis in one of the categories contemplated in section 18, and includes a person qualified in the architectural profession who is employed by any sphere of government or an educational institution</b>	

Council President: Mr C Nduku. Council Vice President: Ms L Shongwe.

Council Members: Mr R Vuzane; Ms M Pepeta; Mr K Bingham; Dr J Mirembe; Mr V Phailane; Ms S Cupido; Ms S Bongela; Mr L Nematswerani; Mr D Basdew.

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1.1.3	“CBE”	(2)
	1.1.3 ‘CBE’ - means the Council for the Built Environment Act No 43 of 2000;	
1.1.4	“council”	(2)
	1.1.4 “council”- means the South African Council for the Architectural Profession established by section 2;	
1.1.5	“voluntary association”	(2)
	1.1.5 “voluntary association” - means any voluntary association recognised by the council in terms of section 25.	
Reference : Architectural Profession Act No. 44 of 2000		

## QUESTION 2 – Multiple Choice

21 mark

2.1	For which of the following two reasons could the council (SACAP) cancel the registration of a registered professional?	(4)
	<b>Select TWO (2) from the following list (2 mark each)</b>	
	A Providing false information on your registration form	
	B Being registered at another council	
	C Failure to pay annual fees within 30 days from invoice	
	D Under review for professional misconduct	
	E Being declared insolvent for not performing your duties as an architectural professional with skill	
	<i>answer: A &amp; E</i>	
	<i>Act 44 of 2000</i>	
2.2	True or False: The council can only launch an investigation of improper conduct if someone has lodged a complaint against an architectural professional	(2)
	<b>Select ONE (1) from the following list (2 marks)</b>	
	A True	
	B False	
	<i>answer: B</i>	
	<i>Act 44 of 2000 – Also if “the council has reasonable grounds to suspect that a registered person has committed an act which may render him or her guilty of improper conduct...”</i>	
2.3	Which of the following is NOT required to form part of the written agreement that all registered persons must enter into with their client before undertaking professional work according to the Code of Conduct for Registered Persons – Board Notice 7 of 2021	(3)
	<b>Select ONE (1) from the following list (2 marks)</b>	
	A Method of fee calculation	
	B Allocation of limitation of responsibilities	
	C Scope of services to be provided	
	D Method of payment	
	E Terms for termination of the agreement	
	<i>answer: D</i>	
	<i>Code of Conduct for Registered Persons – Board Notice 7 of 2021</i>	

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2.4	Which of the following institutes are not Architecture related:		(2)
	<b>Select ONE (1) from the following list (2 marks)</b>		
	A	SAID	
	B	CESA	
	C	SAIAT	
	D	SAIBD	
	E	FACE	
	<i>answer: B</i>		
2.5	According to the latest South African Council for the Architectural Profession (SACAP) Guideline Professional Fees – Board Notice 307 of 2022, which TWO of the following statements does NOT apply to a project that consists of several repeated buildings built on the same site.		(4)
	<b>Select ONE (2) from the following list (4 marks)</b>		
	A	If the same design is repeated, the full fee will apply to the prototype building's design	
	B	The reduced fee is only applicable to the repeat buildings, not floors that repeat within the same building	
	C	Where the same design is repeated on a site the fee can be reduced by 35%	
	D	The fees for stages 1 to 4 will be reduced by 35% for all of the buildings	
	E	Full fees apply to stages 5 and 6 on all repeat buildings	
	<i>answer: C &amp; D</i>		
	<i>South African Council for the Architectural Profession (SACAP) Guideline Professional Fees – Board Notice 307 of 2022</i>		
2.6	According to the latest South African Council for the Architectural Profession (SACAP) Guideline Professional Fees – Board Notice 307 of 2022, what percentage fee should you be charging for architectural services provided with respect to the following instances:		
2.6.1	<u>alterations</u> to an existing building?		(2)
	<b>Select ONE (1) from the following list (2 marks)</b>		
	A	100%	
	B	120%	
	C	130%	
	D	140%	
	E	150%	
	<i>answer: C</i>		
	<i>South African Council for the Architectural Profession (SACAP) Guideline Professional Fees – Board Notice 307 of 2022</i>		
2.6.2	<u>addition</u> to an existing building?		(2)
	<b>Select ONE (1) from the following list (2 marks)</b>		
	A	100%	
	B	120%	
	C	130%	
	D	140%	
	E	150%	
	<i>answer: C</i>		
	<i>South African Council for the Architectural Profession (SACAP) Guideline Professional Fees – Board Notice 307 of 2022</i>		



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2.6.3	<u>restoration of a heritage building?</u>		(2)
	Select ONE (1) from the following list (2 marks)		
A	100%		
B	120%		
C	130%		
D	140%		
E	150%		
<i>answer: D</i>			
<i>South African Council for the Architectural Profession (SACAP) Guideline Professional Fees – Board Notice 307 of 2022</i>			

### QUESTION 3 - Case Study + Fee Calculation

25 marks

#### **Scenario 1: 7 marks in total**

3.1 Mr Jones has recently bought a guest house in Johannesburg. He has asked you to prepare an architectural fee proposal. Note the following:

He plans to build three new loose standing guest suites with their own en-suite bathroom and kitchenette, the construction budget for this is R3 800 000.00 excluding VAT and professional fees. He also plans to extend the existing building by adding a new dining and entertainment area. The construction budget for the addition is also R3 800 000.00 excluding VAT and professional fees. The total budget for construction currently stands at R7 600 000.00 excluding VAT and professional fees.

Using the SACAP Guideline for Professional Fees 2022, calculate the proposed fees for this project, showing your calculations. An extract from the SACAP Guideline is provided. Present your calculations and provide the total fee for the project including VAT. (7 Marks)

***(Note that 50% of the fee will be for the alterations & additions, and 50% of the fee is for new work)***

SACAP guideline fees – 2022 MEDIUM COMPLEXITY					
Cost Bracket	Value of Works		Primary Fee	Plus, secondary fee	
	From	To		Add %	On Balance over
	A	B	C	D	E
1	1	200 000	12 240,00	18,91%	1
2	200 001	650 000	50 067,17	18,18%	200 001
3	650 001	2 000 000	131 870,39	13,41%	650 001
4	2 000 001	4 000 000	312 886,84	11,69%	2 000 001
5	4 000 001	6 500 000	546 673,74	11,38%	4 000 001
6	6 500 001	13 000 000	831 246,74	9,88%	6 500 001
7	13 000 001	40 000 000	1 473 440,14	9,56%	13 000 001
8	40 000 001	130 000 000	4 052 809,42	9,55%	40 000 001
9	130 000 001	260 000 000	12 645 330,47	8,94%	130 000 001
10	260 000 001	520 000 000	24 255 571,57	8,73%	260 000 001
11	520 000 001	1 040 000 000	46 946 267,55	8,51%	520 000 001
12	1 040 000 001	and above	91 173 895,32	7,86%	1 040 000 001

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PROJECT COST-BASED FEES FOR YOUR ARCHITECTURAL SERVICE		mark
PROJECT FEES (excl. VAT)		(1)
FEES FOR ADDITION (excl. VAT)		(1)
FEES FOR NEW WORK (excl. VAT)		(1)
<b>YOUR TOTAL FEES</b>		<b>(2)</b>
VAT		(1)
<b>TOTAL FEES (incl. VAT)</b>		<b>(1)</b>

PROJECT COST-BASED FEES FOR YOUR ARCHITECTURAL SERVICE		mark
PROJECT FEES (excl. VAT)	939926.64	(1)
FEES FOR ADDITION (excl. VAT)	610952.32	(1)
FEES FOR NEW WORK (excl. VAT)	469963.32	(1)
<b>YOUR TOTAL FEES</b>	<b>1080915.64</b>	<b>(2)</b>
VAT	162137.35	(1)
<b>TOTAL FEES (incl. VAT)</b>	<b>1243052.95</b>	<b>(1)</b>

### Scenario 2: 18 marks in total

3.2 Mr Mpele has contact you to design a new 11 000m<sup>2</sup> neighbourhood supermarket in East London. His current budget is R135 500 000.00 excluding VAT and professional services.

You have calculated the proposed fees for this project using the SACAP Guideline for Professional Fees 2022. See the calculations below:

SACAP guideline fees – 2022 MEDIUM COMPLEXITY					
Cost Bracket	Value of Works		Primary Fee	Plus, secondary fee	
	From	To		Add %	On Balance over
	A	B	C	D	E
1	1	200 000	12 240,00	18,91%	1
2	200 001	650 000	50 067,17	18,18%	200 001
3	650 001	2 000 000	131 870,39	13,41%	650 001
4	2 000 001	4 000 000	312 886,84	11,69%	2 000 001
5	4 000 001	6 500 000	546 673,74	11,38%	4 000 001
6	6 500 001	13 000 000	831 246,74	9,88%	6 500 001
7	13 000 001	40 000 000	1 473 440,14	9,56%	13 000 001
8	40 000 001	130 000 000	4 052 809,42	9,55%	40 000 001
9	130 000 001	260 000 000	12 645 330,47	8,94%	130 000 001
10	260 000 001	520 000 000	24 255 571,57	8,73%	260 000 001
11	520 000 001	1 040 000 000	46 946 267,55	8,51%	520 000 001
12	1 040 000 001	and above	91 173 895,32	7,86%	1 040 000 001

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PROJECT COST-BASED FEES FOR YOUR ARCHITECTURAL SERVICE	
YOUR TOTAL FEES	R13 137 030.38
VAT	R1 970 554.54
TOTAL FEES (incl. VAT)	R15 107 584.94

3.2.1 Mr Mpele has requested that you provide a breakdown of the fees, indicating the applicable fee for each of the standard six work stages. Provide the fee per work stage as well as the fee per stage including VAT. (0.5 marks for fee per stage, 0.5 marks VAT inclusive per stage) (7 Marks)

APPORTIONMENT OF PROJECT COST-BASED FEES FOR ARCHITECTURAL SERVICES PER WORK STAGE				
STAGE	FEE (excl. VAT)	mark	FEE (incl. VAT)	mark
1.		(0.5)		(0.5)
2.		(0.5)		(0.5)
3.		(0.5)		(0.5)
4.1.		(0.5)		(0.5)
4.2.		(0.5)		(0.5)
5.		(0.5)		(0.5)
6.		(0.5)		(0.5)

APPORTIONMENT OF PROJECT COST-BASED FEES FOR ARCHITECTURAL SERVICES PER WORK STAGE				
STAGE	FEE (excl. VAT)	mark	FEE (incl. VAT)	mark
1.	262 740,61	(0.5)	302 151,70	(0.5)
2.	197 0554,56	(0.5)	2 266 137,74	(0.5)
3.	262 7406,08	(0.5)	3021 516,99	(0.5)
4.1.	1313 703,04	(0.5)	1510 758,49	(0.5)
4.2.	2627 406,08	(0.5)	3021 516,99	(0.5)
5.	3941 109,11	(0.5)	4532 275,48	(0.5)
6.	394 110,91	(0.5)	453 227,55	(0.5)

After reviewing the fee proposal for the standard six work stages, Mr Mpele has requested that you prepare an alternative breakdown with project cost-based fees for stages 1-4.2 only and hourly rate fees for stages 5 and 6.

3.2.2 Provide the total fee that would apply if you were only appointed on cost-based fees for stages 1-4.2 (3 Marks)

PROJECT COST-BASED FEES FOR YOUR ARCHITECTURAL SERVICE		mark
YOUR TOTAL FEES		(1)
VAT		(1)
TOTAL FEES (incl. VAT)		(1)

YOUR TOTAL FEES	8 801 810,35	(1)
VAT	1 320 271,55	(1)
TOTAL FEES (incl. VAT)	10 122 081,91	(1)



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3.2.3 Mr Mpele has requested that you provide an estimate of how much it would cost if he appointed you on a time-based agreement. The current estimate is that the construction will take 18 months. You estimate that:

- Partner - A partner with more than 10 years of experience will spend approximately 35 hours on giving their input on the project.
- Architectural Draughtsperson - A registered architectural professional performing work under direction and control of senior staff member will spend approximately 200 hours generating additional details and drawings during construction.





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Principal / Staff Category	Experience/ Work Context	Rate Per Hour (excluding VAT)	Rate Per Hour (excluding VAT)	Rate Per Hour (excluding VAT)
		Method 1 - Gross Annual Remuneration	Method 2 - Guideline Rate Calculated by SACAP	Method 3 - DPSA Hourly Fee Rates for
1. Principal; Partners & Equity Holders	Specialist	22.5% per R100.00 or part thereof of total annual cost of employment	R2 695	Commensurate with Level 14, 15 and 16 salary bands
	>10 years' experience	20% per R 100.00 or part thereof of total annual cost of employment	R2 166	Commensurate with Level 14 and 15 salary bands
	<10 years' experience	18.5% per R100.00 or part thereof of total annual cost of employment	R 1 620	Commensurate with Level 12, 13, 14 salary bands.
2a. Salaried Staff	Associates and managers	17.5% per R100.00 or part thereof of total annual cost of employment	R 1 155	Commensurate with Level 11, 12, 13 salary bands
2b. Salaried Staff	Registered architectural professionals performing work of an architectural nature and carrying direct responsibilities for activities related to a project	16.5% per R100.00 or part thereof of total annual cost of employment	R 781	Commensurate with Level 9, 10, 11, 12 salary bands
2c. Salaried Staff	Registered architectural professionals performing work of an architectural nature under direction and control.	15% per R 100.00 or part thereof of total annual cost of employment	R 465	Commensurate with Level 7, 8, 9, 10 salary bands
2d. Salaried Staff	Staff performing work under direction and control to support architectural work outputs	12.5% per R100.00 or part thereof of total annual cost of employment	R 332	Commensurate with Level 6, 7, 8 salary bands

Provide the client with an estimated hourly rate, broken down according to the various employees that will be involved. Use method 2 from the Hourly Rates Table as provided in the SACAP fee guideline table provided above. The estimate fee should be shown inclusive of VAT. (5 Marks)

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TIME-BASED FEES FOR ARCHITECTURAL SERVICES					
Employee	Hourly Rate		Total Fee	Total Fee (incl. VAT)	Mark
Partner		(0.5)			(1)
Project Architect		(0.5)			(1)
Architectural Draughtsperson		(0.5)			(1)
Administrative Staff		(0.5)			(1)
Total Fees					(2)
Total Fees (incl. VAT)					(2)

TIME-BASED FEES FOR ARCHITECTURAL SERVICES					
Employee	Hourly Rate		Total Fee	Total Fee (incl. VAT)	Mark
Partner	R2166	(0.5)	75810	87181,5	(1)
Architectural Draughtsperson	R465	(0.5)	93000	106950	(1)
Total Fees	R168 810.00				(1)
Total Fees (incl. VAT)	R362 941.50				(1)

3.2.4. Mr Mphele is looking to maximise his profits. As a budding professional recently made aware of the concept of 'upselling', you take this opportunity to pitch to him an additional service: adding retail design for each tenant. Mr Mphele responds positively to this. He asks what else do you have to offer?

Name 3 other upselling strategies which could increase your revenue stream: (3 marks)

Landscaping design  
Interior layout  
3-D Walkthrough videos of retail layouts

#### QUESTION 4 - Case Study

34 marks

You were appointed by Mrs Sarabi Sinclair to design a twelve-bedroom lodge in a private game reserve just outside the Kruger National Park.		
You have completed stages 1 to 4a and have set a meeting with Mrs Sinclair to get her signature on the relevant council submission drawings and documents. During the meeting, the client claims that they did not sign off on the design development drawings, and that she still wanted to make changes to the design.		
4.1	Mrs Sinclair threatens to lay a complaint against you for continuing with council submission drawings without her approval. Based on the SACAP Code of Professional Conduct – Board Notice 7 of 2021, do you believe she has a valid claim? (3 marks)	(3)

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	<p>“Shall ensure that at the completion of each milestone the client signs off where the scope of work involves more than one stage”</p> <p><i>SACAP The Code of Professional Conduct – Board Notice 7 of 2021</i></p>	
4.2	<p>In your own words describe what systems you would put in place to ensure that this kind of misunderstanding/conflict does not occur in the future? (2 marks per system – 6 marks total)</p> <ul style="list-style-type: none"> <li>• Ensure that client sign document register to prove that they received the drawings.</li> <li>• Keep electronic records of communication of client approvals and comments.</li> <li>• Have clients physically sign off on the drawings in each stage.</li> </ul>	(4)
4.3	<p>If Mrs Sinclair did sign off on the previous stages and decide to make changes to the design after Stage 3 has been completed and finalized, how would you propose charging for changes to the concept design, Stage 2? (2 marks)</p> <ul style="list-style-type: none"> <li>• Hourly rates</li> <li>• Charge for the relevant stages again</li> </ul>	(2)
<p>Once you have resolved the issues raised by Mrs Sinclair and updated the design as per her request, you go ahead and finalize the plans for submission. You submit all the relevant drawings and documentation to the local authority.</p>		
<p>The local authority takes eight weeks before they give you any feedback. Part of their feedback indicates that further Environmental studies will be required before they can sign off on the proposed design. You are in the process of contacting potential environmental specialists to assist with these studies when Mrs Sinclair calls you. She is upset with the fact that her plans have not yet been approved</p>		
4.4	<p>Mrs Sinclair once again threatens to lay a complaint against you at SACAP for not preforming you work within a reasonable time. According to the SACAP Code of Professional Conduct – Board Notice 7 of 2021, what is your responsibility as the appointed professional once it becomes clear that there are issues that may affect the project. (3 marks)</p> <p>“Shall keep the client informed IN WRITING about the progress on work undertaken on their behalf within reasonable time and of any issue which may significantly affect its quality or cost, and any other considerations which may substantially affect the project”</p> <p><i>SACAP The Code of Professional Conduct – Board Notice 7 of 2021</i></p>	(3)
4.5	<p>Who would be responsible for the appointment of an environmental specialist in this instance? (2 marks)</p> <p>The client</p>	(2)
4.6	<p>Mrs Sinclair indicates that she was under the impression that once the plans are submitted it is a mere formality before she can start construction. In your own words explain the following to her:</p>	
4.6.1	<p>The local authority indicated that other departments need to sign off on the design, e.g., water and sanitation or fire. (3 marks)</p> <p>Own word explanation</p>	(3)
4.6.2	<p>There are some comments and corrections listed by the local authority that needs to be attended to by the architectural professional before the council will approve the plans (3 marks)</p> <p>Own word explanation: The architectural professional should make all the necessary corrections on the building plans and resubmit the building plan application for approval</p>	(3)



4.6.3	<p>Can an Architectural Professional guarantee that a client's building plans will be approved by the local authority? (3 marks)</p> <p>No, an architectural professional cannot guarantee approval of the building plans by the local authority. An architectural professional will prepare building plans with due skill and competence and ensure that building plans comply with building regulations and standards. However, he or she cannot guarantee that the local authority will approve the building plans</p> <p>SACAP FAQ   SACAP The Code of Professional Conduct – Board Notice 7 of 2021</p>	(3)
4.7	<p>Once the plans are approved by the local authority, you prepare the relevant drawings and documents to start the tender process.</p> <p>Mrs Sinclair is unhappy with the fact that her personal information is reflected on the title block of the drawings included in the tender documents, based on the Code of Conduct and POPI Act. What system would you put in place to ensure that the POPI Act is adhered to.</p> <p>Extract: “An architectural professional shall not disclose confidential information obtained from clients except with written permission and in compliance with the Protection of Personal Information Act”</p> <ul style="list-style-type: none"> <li>- Set up a form/document to be signed off by client</li> <li>- Check if client requires extra sensitivity to distribution of their personal information</li> <li>- Informs them of when and where their information will be required (e.g., council submission documents, drawings, forms as per council requirements)</li> <li>- Get the client's permission in writing</li> <li>- Ensure that the client's information is only reflected on relevant documents as agreed</li> </ul> <p>SACAP The Code of Professional Conduct – Board Notice 7 of 2021   POPI Act</p>	(3)
4.8	<p>As part of the tender process, you advise the client that a Health and Safety officer should form part of the professional team during construction.</p>	
4.8.1	<p>Provide two ways in which a health and safety officer could be appointed on a construction project (5 marks)</p> <ol style="list-style-type: none"> <li>1. Client may appoint a Construction Health and Safety Officer directly to compliment the management team. (2)</li> <li>2. Contractors may appoint a Construction Health and Safety Officer directly to monitor and assist on-site health and safety performance and compliance in accordance with the Occupation Health and Safety Act and Regulations. (3)</li> </ol> <p>SACPCMP Registration Rules for Construction Health and Safety Officers in terms of Section 18 (1) (c) of the Project and Construction Management Professions Act, 2000</p>	(5)
4.8.2	<p>Even though you have explained to Mrs Sinclair the importance of appointing a Construction Health and Safety Officer, she refuses comply, as she feels it is a waste of money. According to the SACAP Code of Professional Conduct – Board Notice 7 of 2021, what is your responsibility as architectural professional if a client or employer refuses to listen to your professional advice?</p> <p>“When providing professional advice to a client or employer, and such advice is not accepted, inform them in writing (2) of any consequences which may be detrimental to the health, safety or interest of the public (1)”</p> <p>SACAP Code of Professional Conduct – Board Notice 7 of 2021</p>	(3)

## QUESTION 5 - Case Study

17 marks

A high school student, Ed Cummings is planning to study to become a Professional Architectural Draughtsperson once he finishes high school. He has approached you to discuss how he should go about obtaining the relevant qualifications.



5.1	<p>Ed is worried that he might not be able to qualify for a bursary to assist in the payment of his tuition fees. He asks that you explain what the process would be if he was to register as an apprentice once he finishes high school. (6 marks)</p> <p>1) Apprentice must perform architectural work in an architectural practice, under the direction, control, and supervision of a registered professional.</p> <p>2) The period of apprenticeship shall commence only after a contract is in place between the apprentice and mentor.</p> <p>3) Persons registered as apprentices shall submit monthly training reports to show how they have gained experience in the 10 competencies set out by SACAP, and the progress they have made.</p> <p>4) The duration of apprenticeship shall be for a period of 3 years.</p> <p>5) The apprentice who has met all the requirements, shall be required to write, and pass paper 1 of the PPE, before upgrading to a Prof Arch draughtsperson</p> <p><i>2022 SACAP Presentation – apprenticeship programme</i></p>	(6)						
5.2	<p>How many months of practical training and monthly training records is required from a Candidate Architectural Draughtsperson for them to register to write the SACAP Professional Practice Exam? (2 marks)</p> <ul style="list-style-type: none"> <li>• 36 Months from date of registration</li> </ul> <p><i>2022 SACAP Presentation – apprenticeship programme</i></p>	(2)						
5.3	<p>If you are struggling to get a mentor to sign off on your monthly training records, what alternative is SACAP offering to the standard 2-year monthly training record method in order to qualify to write the Professional practice exams? (2 marks)</p> <ul style="list-style-type: none"> <li>• Waiving of MTR</li> </ul> <p><i>Application Process for the waiving of candidate MTRs</i></p>	(2)						
5.4	<p>Ed asks what category of registration you will be and what your title will be according to the Architectural Profession Act No. 44 of 2000 and SACAP Code of Conduct for Registered Persons Board Notice 7 of 2021, once you pass your PPE exams and upgrade your registration.</p> <table border="1"> <tr> <td>6.4.1</td> <td> <p>Category of Professional Registration (2 marks)</p> <p>Any of the following could be taken as correct: Professional Architectural Draughtsperson Professional Architectural Technologist Professional Senior Architectural Technologist Professional Architect</p> </td> </tr> <tr> <td>6.4.1</td> <td> <p>Title (1 mark)</p> <p>Any of the following could be taken as correct: PrArchDraught PrArchT PrSArchT PrArch</p> </td> </tr> <tr> <td colspan="2"> <p>Categories: Architectural Profession Act No.44 of 2000 Titles: Code of Conduct for Registered Persons Board Notice 7 of 2021</p> </td> </tr> </table>	6.4.1	<p>Category of Professional Registration (2 marks)</p> <p>Any of the following could be taken as correct: Professional Architectural Draughtsperson Professional Architectural Technologist Professional Senior Architectural Technologist Professional Architect</p>	6.4.1	<p>Title (1 mark)</p> <p>Any of the following could be taken as correct: PrArchDraught PrArchT PrSArchT PrArch</p>	<p>Categories: Architectural Profession Act No.44 of 2000 Titles: Code of Conduct for Registered Persons Board Notice 7 of 2021</p>		(3)
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<p>Categories: Architectural Profession Act No.44 of 2000 Titles: Code of Conduct for Registered Persons Board Notice 7 of 2021</p>								
5.5	<p>Explain to Ed what the Canberra Accord is and how it could potentially open doors for him in the future. (2 marks explanation, 2 marks own words explanation of benefit)</p> <p>The Canberra Accord is a document by accreditation/validation agencies in architectural education. It is intended to facilitate the portability of education credentials between countries whose accreditation/validation agencies signed the Accord. It does not address matters related to professional registration or licensure. (2)</p> <p>Own words benefit to students of the Canberra Accord. (2)</p>	(4)						



**QUESTION 6 – Diagrams and Drawings**

25 marks

The same high school student, Ed Cummings attempted to understand how architectural drawings work but was confused by the various types of drawings available. He decided approach you to explain some architectural terms, drawings, and concepts to him.

Ed asks that you explain the difference between the following drawings and what each of their purposes are when preparing drawings for local authority submissions (for 2 marks), also provide 4 items that must always be indicated on each of the relevant drawings (4 marks):

6.1	6.1.1	<p>Site development plan (SDP) (2 marks explanation, 4 marks check list)</p> <p><b>Own word answers</b> SDP is a legislative requirement and is legally binding upon the owner and his/her successors in title. In essence the purpose of an SDP is to determine at an early stage (pre-development) whether a proposed development complies with relevant legislative requirements and control measures.</p> <p>Aspects such as built form, design and aesthetic are considered, and the council also has an obligation to ensure that environmentally sensitive features are protected.</p> <p>Furthermore, the efficiency and effectiveness of the overall layout, with regard to access, connection to engineering services, overlooking, privacy, etc. is considered. Should amendments to the proposed development be required it can be affected prior to the drafting of costly building plans and thus save the developer time and money.</p> <ol style="list-style-type: none"> <li>I. Property description</li> <li>II. Zoning</li> <li>III. Development control measures</li> <li>IV. Parking requirements and provisions</li> <li>V. Development layout, building details, engineering services, connection points &amp; servitudes, physical features, landscaping, and adjoining property details.</li> <li>VI. Scale, north point, locality map</li> </ol>	(6)
	6.1.2	<p>Site plan (2 marks explanation, 4 marks check list)</p> <p><b>Own word answers</b> A site plan is a plan that indicates the size and features of a site and locates the positions of buildings in relation to them. It also contains other information required by the authority concerned, e.g., building lines, etc.</p> <ol style="list-style-type: none"> <li>I. Stand boundaries, dimensions.</li> <li>II. Stand number and adjacent stand numbers.</li> <li>III. Servitudes across the site, set-backs, road widening servitudes, etc.</li> <li>IV. Services (if any) across the site, e.g., power lines, sewer, etc.</li> <li>V. Service connections and invert depths, positioned.</li> <li>VI. Road names and widths</li> <li>VII. Vehicle access</li> <li>VIII. Levels (natural and finished)</li> <li>IX. Datum, references, described.</li> <li>X. Building lines, with distances from fixed reference points</li> <li>XI. Building position on site with adequate dimensions for setting out</li> <li>XII. Building entrances, positioned</li> <li>XIII. Sewerage drainage and disposal</li> <li>XIV. Stormwater drainage and disposal</li> </ol>	(6)



	<p>XV. All site works, embankments, retaining walls, boundary walls, gates, fences, roads etc.</p> <p>XVI. Unique and Natural features of the site which are to be retained, e.g., existing trees should be shown and suitably annotated.</p> <p>XVII. North point &amp; scale</p>	
6.1.3	<p>Roof plan (2 marks explanation, 4 marks check list)</p> <p>Own word answers:</p> <p>I. Top-down look of the building (1)</p> <p>II. Roof finish, and any special waterproofing of or insulation under the roof (1)</p> <p>III. Roof angles and falls (1)</p> <p>IV. Show rainwater gutters, down-pipes, vent-pipes etc., projections through roof, box gutters, concealed gutters, valley gutters, rainwater heads.</p> <p>V. Centre lines of roof trusses</p> <p>SABS 0143 Ed.1   Joburg - Application Form 12 – Site Development Plan</p>	(6)
6.2	<p>Ed felt embarrassed to ask you more questions and decided to turn to ArchitectGPT instead. He asked the AI Chatbot to explain what “Coverage” and “F.A.R.” or “Floor Area Ratio” on the area schedule of council submission drawings refer to.</p> <p>It said that coverage is means water over a surface and FAR is a word which measures distance. He does not think this is correct. Help him correct these misinterpretations by providing the correct definitions. Explain in your own words.</p>	
6.2.1	<p>Coverage (3 marks)</p> <p>Means the percentage area of a property including any servitude area covered by the roofed area of all buildings as seen vertically from above but does not include a structure or building that has no roof.</p> <p>Note different local authorities include different areas (e.g., exclude garage or include carport)</p>	(3)
6.2.2	<p>Floor Area Ratio (FAR) (3 marks)</p> <p>Means the ratio of the Gross Floor Area of a building to the total area of the property, including any servitudes, on which such building is erected or is to be erected, i.e.</p> <p>FAR = Gross Floor Area divided by Area of Property</p> <p>Note different local authorities have different Gross Floor Area calculation methods (e.g., include internal wall or exclude)</p> <p>Tshwane town-planning scheme, 2008</p>	(3)
6.2.3.	<p>Ed tries to figure out what went wrong with the AI Chatbot. He discovers he did not provide context, hence its inaccurate answers. Explain in your own words why how in this instance using AI will help him learn how to better ask questions which he will learn from the guidance of a professional.</p>	(1)
	<p>AI works on context, similar to how one would explain to a human. Being able to ask better questions to get the correct answers will refine his understanding of the field</p>	

## QUESTION 7 – Diagrams and Drawings

18 marks

Pick the correct answer pertaining to each of the diagrams or sketches below:

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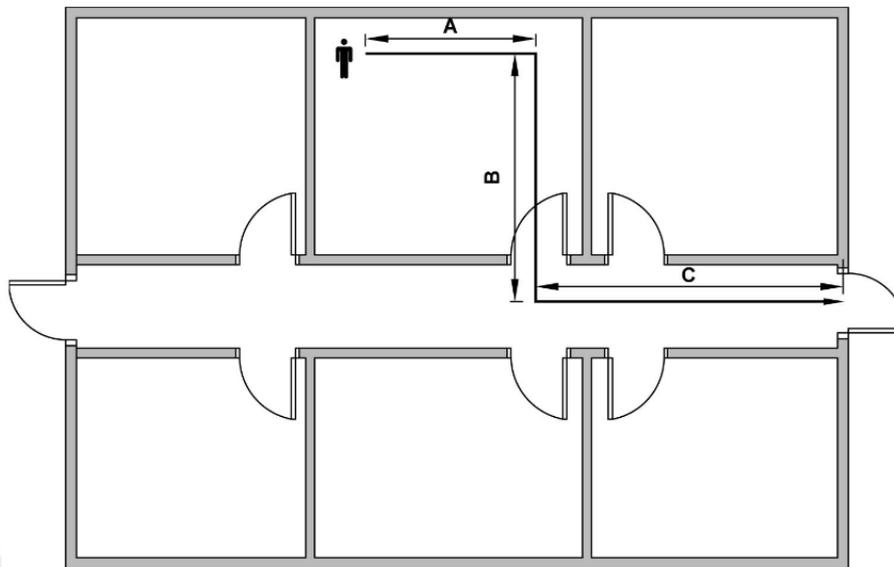
51 Wessel Road, Right Wing,  
Rivonia, Sandton, 2128

P.O. Box 1500, Rivonia, 2128

Tel: 011 475 5000 | Fax: 011 479 5100

Email: info@sacapsa.com  
Web: www.sacapsa.com

7.1



$A + B + C = \text{Travel Distance}$

What is the total maximum travel distance a person is allowed to have to run to reach an exit in case of an emergency in a three-storey building?

Select ONE (1) from the following list (2 marks)

A	30m
B	45m
C	50m
D	75m
E	100m

answer: B

SANS 1400-T:2020 Edition 4

(2)



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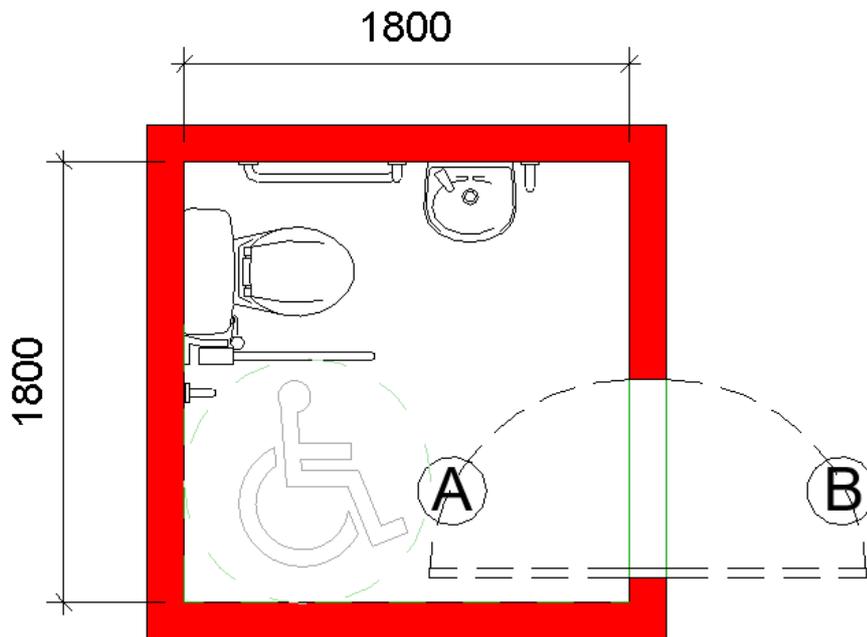
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7.2



(2)

In which direction should the door open at a toilet facility for persons with disabilities?

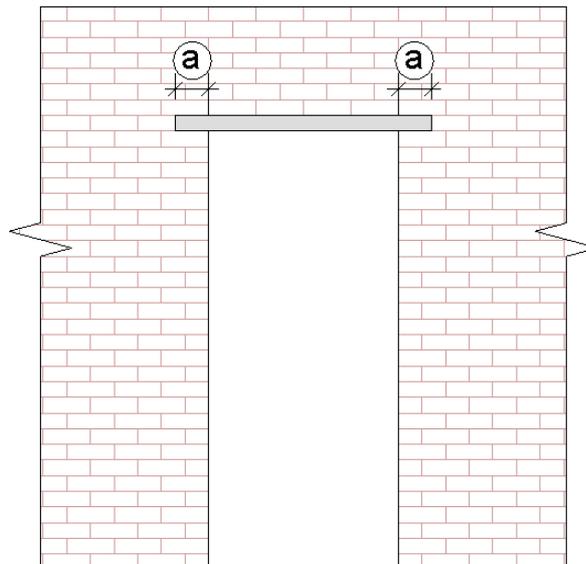
Select ONE (1) from the following list (2 marks)

A	Inward
B	Outward

answer: B

SANS 10400-S:2011 Edition 3

7.3



(2)

Select the minimum overhang (a) for a pre-stressed lintel built into a masonry wall from the measurements below:

Select ONE (1) from the following list (2 marks)



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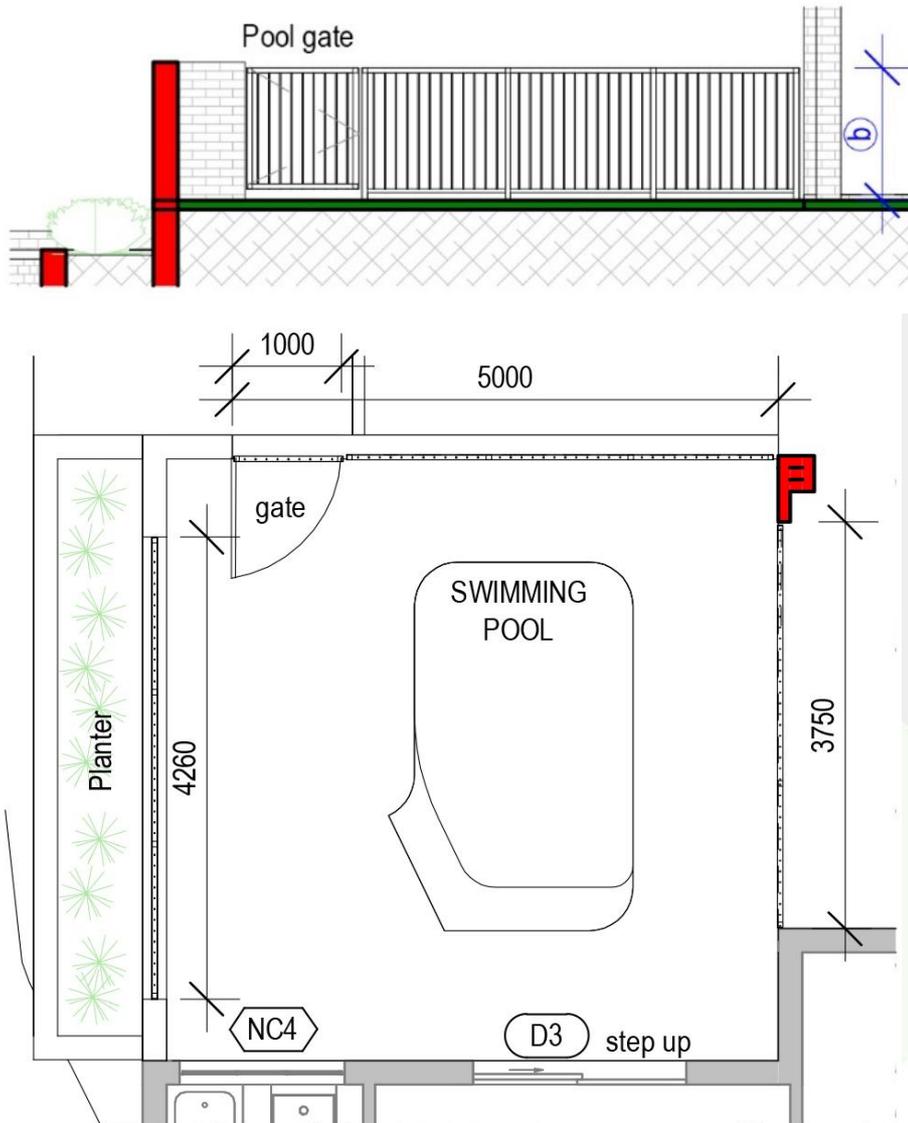
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A	150mm
B	250mm
C	150mm
D	110mm
E	100mm
<i>answer: A</i>	
<i>SANS 10400-K: 2015 Edition 3.1</i>	

7.4



7.4.1	What is the minimum height (b) for a swimming pool fence? <b>Select ONE (1) from the following list (2 marks)</b>	(2)
A	900 mm	
B	1000 mm	
C	1100 mm	
D	1200 mm	
E	1250 mm	
<i>answer: D</i>		
<i>SANS 10400-D: 2022 Edition 4.1</i>		

Council President: Mr C Nduku. Council Vice President: Ms L Shongwe.

Council Members: Mr R Vuzane; Ms M Pepeta; Mr K Bingham; Dr J Mirembe; Mr V Phailane; Ms K Cupido; Ms S Bongela; Mr L Nematswerani; Mr D Basdew.

Registrar: Advocate T Fiduli



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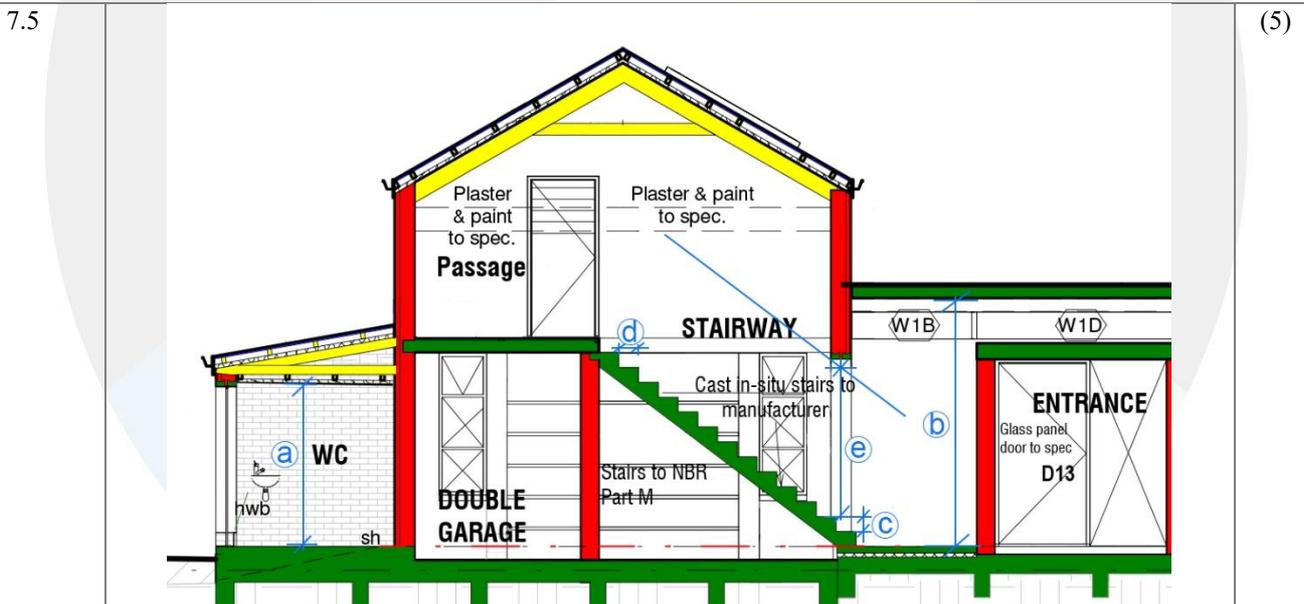
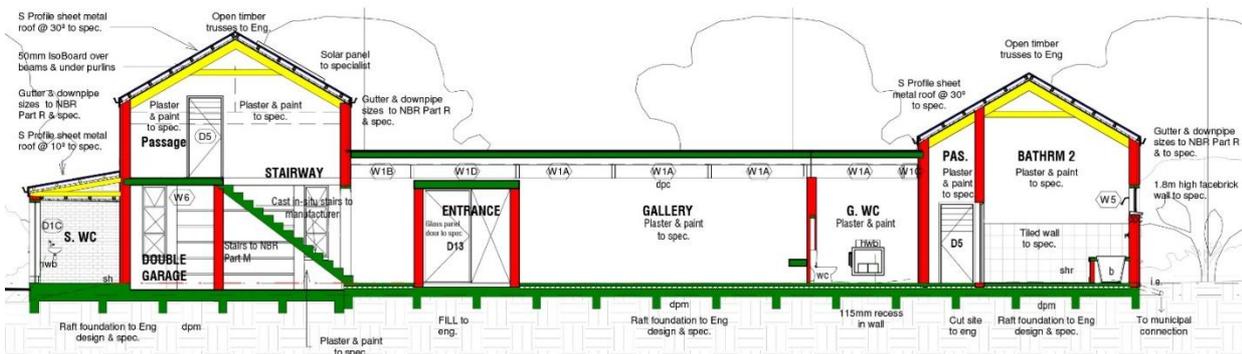
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7.4.2	What is wrong with the swimming pool gate? (2 marks) <i>"The design of the gate shall be such, that after its installation, it shall not be possible to open the gate towards the swimming pool"</i> <i>SANS 10400-D: 2022 Edition 4.1</i>	(2)
7.4.3	Provide the swimming pool gate note required by council <i>Self-closing locking gate as per SANS 1390</i> <i>SANS 10400-D: 2022 Edition 4.1</i>	(2)



Provide answers with regards to the missing measurements as highlighted in blue above:

7.5.1	a	What is the minimum ceiling height for a residential bathroom? <b>2,1m (above any area where a person would normally be standing)</b>
7.5.2	b	What is the minimum ceiling height for a residential living room? <b>2.4m</b>
7.5.3	c	What is the maximum riser height of stairs? <b>Max 200mm</b>
7.5.4	d	What is the minimum tread depth of stairs? <b>Min 250mm</b>
7.5.5	e	What is the minimum head room above a staircase?

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		2,1m	
	<i>SANS 10400-C:2016 Edition 3.1</i>		
7.6	<p>Text Description Instructing AI Image Generator. (Prompt)</p> <p>↓</p> <p><b>A South African architectural pavilion in the style of Brutalism in an urban environment</b></p> <p>AI Generated Image →</p>		(1)
<p>Generative Artificial Intelligence (GenAI) has impacted industries across the world. The image above was generated in an AI Image generator. Based on the example above, which created an image from text prompts, what is a possible value point from being able to produce such imagery?</p>			
7.6.1. Creating unrealistic imagery through inexperience			
7.6.2. <b>Creating photorealistic architectural renders with minor effort</b>			
7.6.3. Creating false expectations through a lack of knowledge			
7.6.4. Creating an unregulated architecture whilst AI is unchecked			