



- Candidates are required to answer **ALL** the questions.
- Questions must be answered in **SEQUENCE**. Ensure that your answers are **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.
- Where answers are duplicated between candidates, plagiarised, or copied, **ZERO** marks will be granted
- Total marks for paper one – **150 marks**
- Pass mark – a minimum of **50%** in each of the two papers
- Time allocation – **3 hours**

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**QUESTION 1**

*10 marks*

- 1.1 Provide the full name of the council at which a Construction Health and Safety Agent must be registered? **(3)**
- 1.2 The Council for the Built Environment (CBE) is the overarching body that coordinates six Councils for the Built Environment Professions including: **(4)**
- Architecture
  - Engineering
- Provide the names of FOUR (4) other professions that the Council co-ordinates.
- 1.3 For what purpose was the Construction Industry Development Board (CIDB) established in 2000? **(3)**

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**QUESTION 2**

*10 marks*

- 2.1 What is the minimum dimension of a tread of a step? **(1)**
- 2.2 What is the minimum clear headroom required above a staircase? **(1)**
- 2.3 What is a minimum height of a balustrade? What is the maximum opening within a balustrade? **(2)**
- 2.4 What is the minimum ceiling height for a habitable room, excluding a bedroom for a residential property? **(1)**
- 2.5.1 What is the purpose of the SANS 10400 Part XA document? **(2)**
- 2.5.2 When taking the SANS 10400 Part XA requirements into consideration, provide THREE (3) methods that can be used to prove that a design complies with the “deemed to satisfy” rule. **(3)**

**QUESTION 3**

18 marks

- 3.1 List the NINE (9) categories of registration at SACAP as specified in the Act (9)
- 3.2 In your own words, explain the role the Council for the Built Environment (CBE) plays in determining the Guideline Professional Fees, as described in the Architectural Profession Act (no. 44 of 2000) (2 marks per answer, for a total of 4 marks) (4)
- 3.3 Under normal conditions, what is the maximum period, in months or years, that a person may be registered as a Candidate? (2)
- 3.4 Provide THREE (3) mandatory functions of SACAP (1 mark each, for a total of 3 marks) (3)

**QUESTION 4**

19 marks

Mr Jonathan Mbata has approached Mr Peter Peterson, a professional architectural technologist, to provide architectural services on a new retail warehouse project. Based on a verbal confirmation to proceed with the project for a time-based fee, Peter commenced providing architectural services on the project, without there being a written agreement or contract between the parties as is required by the SACAP Code of Conduct for Registered Persons.

- 4.1 Provide the full name of the document that specifies that the architectural professional must enter into a written agreement with the client before undertaking professional work. (3)
- 4.2 List FIVE (5) items that must be included in a written agreement between the client and the architectural professional in terms of this document (1 mark each). (5)

The client, Mr Mbata, made several changes to the scope of the project until the completion of work stage three. Peter accommodated these changes by amending the design. Despite receiving invoices for the time that Peter spent on the project, Mr Mbata did not pay him for any of the work carried out thus far. Mr Mbata has insisted that payment would only be made once the project is completed.

- 4.3 Describe THREE (3) ways in which a written agreement would serve to avoid this situation? (6)  
(2 marks each)

Mr Mbata was unhappy with the progress of the project and feels that Peter is taking far too long to finalise the local authority submission documentation. Mr Mbata then informed Peter that their arrangement was terminated and registered a complaint of improper conduct with SACAP regarding Peter's performance.

- 4.4 What would be the most likely outcome of this situation? (2)

Mr Jochaim Habimana has decided to immigrate to South Africa from Rwanda and Mr Mbata has requested him to provide the remaining architectural services on the project. Mr Habimana has practised as a registered professional architect in Rwanda after qualification for the past 9 years.

- 4.5 What steps must Mr Habimana follow to be able to practice in South Africa? (2)

Peter's cousin would like to study to become an architectural professional at a new college and is concerned as to whether she will be able to register with SACAP.

- 4.6 How should Peter advise his cousin about her concern regarding the choice of institution in line with SACAP registration? (1)

**QUESTION 5**

35 marks

You have established an architectural practice and have received queries from Ms Irene Govender regarding the process of appointing you on a new project. Ms Govender has also requested a more detailed explanation of the nature of professional architectural service throughout the building delivery process. As part of your response to Ms Govender, provide an answer to each of the following questions in your own words:5

- 5.1 What information should a client provide to the architectural professional to successfully initiate a new project? Identify THREE (3) items (2 marks each) **(6)**
- 5.2 What services can the architectural professional provide to assist the client in successfully initiating a new project? **(4)**
- 5.3 Why is it not advisable for the client to appoint the architectural professional only to provide services until work stage 4.1? Provide TWO (2) reasons (2 marks each) **(4)**
- 5.4 How does one evaluate the level of professional services provided by the architectural professional? **(5)**
- 5.5 Under which circumstances would professional architectural fees be calculated based on each of the following:
- 5.5.1. Project cost-based fees: **(2)**
  - 5.5.2. Deliverable-based fees: **(2)**
  - 5.5.3. Time-based fees: **(2)**
- 5.6 What steps would an architectural professional take if the local authorities are unwilling to approve the drawings and documentation submitted for the erection of a building? **(2)**
- 5.7 Does the architectural professional assume responsibility for the performance of the contractor employed by the client? Provide reasons for your answer. **(4)**
- 5.8 Is it possible for the architectural professional to guarantee that the final project cost will not be greater than the initial budget? Provide reasons for your answer. **(4)**

**QUESTION 6**

12 marks

- 6.1 Thabo Hlatswayo and Aubrey Patel are close friends who plan to jointly establish a new architectural practice called Amandla Architects based in Ekurhuleni. Describe THREE (3) factors that Thabo and Aubrey should consider when selecting the most suitable type of business entity for this new venture (1 mark each). **(3)**
- 6.2 Describe FIVE (5) founding principles for Thabo and Aubrey to consider as part of establishing Amandla Architects (1 mark each). **(5)**
- 6.3 Kamvalethu is a talented young designer and most architectural firms would like to employ her. Amandla Architects wants to sign her on as their employee. Advise the Human Resources Manager to include a "Restraint of trade" clause into the contract. What does this clause prescribe? ( 4 marks) **(4)**

Mr Mandla Ndlovu has approached you to provide architectural services for a project in Johannesburg that entails altering an existing hotel building into an affordable housing block with retail on the ground floor level. The budget for the project is R 215,000,000.00 (*excluding VAT and professional fees*)

Mr Ndlovu has asked you to provide a fee proposal for the standard (full) scope of professional services for the project. The fees for your services will be project cost-based and will be in line with the latest SACAP Guideline for Professional Fees (Board Notice 172 of 2021).

- 7.1 Calculate the proposed professional fees for this project. An extract from the SACAP **(17)** Guideline for the appropriate level of complexity is provided. Present your calculation by providing the NAME, relevant PERCENTAGE and FEE for each work stage (*including VAT*), showing the VAT that will apply to each and must be reflected in the template below. Indicate the TOTAL FEE for your services (*including VAT*).

extract from Board Notice 172 of 2021: TABLE 3: HIGH COMPLEXITY					
Cost Bracket	Value of works		Primary Fee	Plus, a secondary fee	
	From	To		Add %	On balance over
	A	B	C	D	E
1	1.00	200 000.00	13 970,41	21,59%	1.00
2	200 001.00	650 000.00	57 145,33	20,75%	200 001.00
3	650 001.00	2 000 000.00	150 513,36	15,30%	650 001.00
4	2 000 001.00	4 000 000.00	357 120,69	13,34%	2 000 001.00
5	4 000 001.00	6 500 000.00	623 958,89	12,99%	4 000 001.00
6	6 500 001.00	13 000 000.00	948 762,87	11,28%	6 500 001.00
7	13 000 001.00	40 000 000.00	1 681 745,30	10,90%	13 000 001.00
8	40 000 001.00	130 000 000.00	4 625 768,63	10,90%	40 000 001.00
9	130 000 001.00	260 000 000.00	14 433 043,09	10,19%	130 000 001.00
10	260 000 001.00	520 000 000.00	27 684 662,76	9,96%	260 000 001.00
11	520 000 001.00	1 040 000 000.00	53 583 218,25	9,71%	520 000 001.00
12	1 040 000 001.00		104 063 453,52	8,98%	1 040 000 001.00

WORK STAGE	WORK STAGE NAME	%	FEE excl. VAT	VAT @ 15%	FEE incl. VAT
1.					
2.					
3.					
4.1					
4.2					
5.					
6.					

- 7.2 Mr Ndlovu is unable to provide the previously approved plans for the hotel. Based on the SACAP Guideline, how would you calculate your fees to survey and prepare documentation of the existing building? **(2)**
- 7.3 7.3.1. In your own words, explain how architectural fees would be calculated following the termination of this project. **(4)**
- 7.3.2. Assuming that your fees were duly paid in full until the time of termination, calculate the remainder of fees due for your architectural services (*including VAT*). Assume the project was terminated at 80% completion of work stage 4.1. **(4)**

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**QUESTION 8***10 marks*

- 8.1 In your own words, describe TWO (2) characteristics of the option of settlement in resolving a dispute (*2 marks each*). **(4)**
- 8.2 Under which circumstances would adjudication be a suitable option for resolving a dispute? **(1)**
- 8.3 How would one ensure that an arbitrator's decision regarding a dispute is implemented? **(2)**
- 8.4 Identify THREE (3) methods or procedures that an architectural professional may implement to avoid or minimise potential disputes (*1 mark each*). **(3)**

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**QUESTION 9***9 marks*

- 9.1 Identify ONE (1) SOURCE of the following concepts followed by a DESCRIPTION of each as they apply to the practice of architecture (*1marks for the source; 1 mark for description*)
- 9.1.1. Legal requirements **(2)**
- 9.1.2. Ethical obligations **(2)**
- 9.2 Board Notice 7 of 2021 Code of Conduct for Registered Persons, prescribes the overriding objectives to strive for excellence in the Architectural Profession, protect the environment against unsound architectural practices and deliver services to the public with due care, skill, diligence and integrity, applying all relevant knowledge in the process. Consider the following statements relating to the Code of Conduct, and indicate if the statement is TRUE or FALSE (1 Mark for each answer) **(5)**
- 9.2.1 A Registered Person can receive, directly or indirectly, any commission or remuneration for recommending a particular supplier to a client for work on a building project, as long as he informs the client in writing. (1)
- 9.2.2 A Registered Person may use the architectural work prepared by another Registered Professional if written approval is received from the originating Registered Professional. (1)
- 9.2.3 Registered Professionals must enter into a written agreement with a client that includes proof of professional registration. (1)
- 9.2.4 When establishing a new practice, the Registered Professional must inform the Council (SACAP) (1)
- 9.2.5 Multidisciplinary practices can describe their practice as an architectural practice as long as ONE (1) of the partners is a registered architect. (1)

**TOTAL 150**