



**SOUTH AFRICAN COUNCIL FOR PROFESSIONAL AND
TECHNICAL SURVEYORS**

**SUID-AFRIKAANSE RAAD VIR PROFESSIONELE EN
TEGNIËSE OPMETERS**

INGESTEL INGEVOLGE WET 40 VAN 1984

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Dear Sir/Madam

**TO PERSONS WHO HAVE APPLIED TO REGISTER AS A SURVEYOR OR
SURVEY TECHNICIAN IN THE ENGINEERING CATEGORY IN TERMS OF THE
PROFESSIONAL AND TECHNICAL SURVEYOR'S ACT 40 OF 1984.**

Your application for registration refers.

Enclosed please find the following documents:

1. Notes for Guidance.
2. Schedule of training form. Please make sufficient copies of this form to enable your practical experience to be set out in detail.
3. Certificate of Employment form. One form must be completed in respect of each employer under whom you worked.
4. Certificate of Competency form.

Kindly peruse the attached "Notes for Guidance" carefully and confirm whether you would like to continue with your application and that all documents submitted comply fully with the requirements stated therein. A copy of Act 40 of 1984 and the Rules will then be forwarded to you.

An application fee has been established to cover the cost of examinations, interviews and scrutinising. The fee will not be refundable in the case of a failed application and **must be included with your application**. For current fee pricing see 'Council Fees'.

- Cost for prospective Engineering Survey Technicians – see Council Fees code 33
- Cost for prospective Engineering Surveyor – see Council Fees code 31

If you so wish the money can be paid directly into our bank account :-

ABSA Bank - Alberton Branch Current Account
Branch Code : 631142 Bank A/c Number : 210-168-583

Please ensure that your name is clearly printed in the reference section on the deposit slip. Kindly attach a copy of your deposit slip with your application as well as faxing a copy to this office. Providing a correct reference number will enable us to accurately allocate the deposit to your account.

You will then be informed of the Council's decision in due course.

J E VERMAAK (Mrs)
REGISTRAR

THE SOUTH AFRICAN COUNCIL FOR PROFESSIONAL AND TECHNICAL SURVEYORS

GENERAL INFORMATION AND PROCEDURE FOR THE REGISTRATION OF TECHNICAL SURVEYORS IN THE ENGINEERING CATEGORY

These notes provide details on HOW to apply for registration and WHAT happens once an application has been lodged. Candidates can also obtain advice and assistance from the PLATO Registrar, their university supervisor and representatives from SAGI.

Information on registration with PLATO, including relative application forms, fees and details for Trial Surveys, will usually be given to students at first registration at a University of Technology

The importance of maintaining a continuous log book of ALL surveying activities, up to registration as a Surveyor, cannot be over emphasised.

1. ENGINEERING SURVEY TECHNICIAN-IN-TRAINING

1.1 *General*

- 1.1.1 There are no academic or technical requirements for registration as an Engineering Survey Technician-in-Training.
- 1.1.2 It is normal to register as an Engineering Survey Technician-in-Training when commencing studies at a UoT and this form of registration is necessary before an Engineering Surveyor or a Professional Surveyor can employ a candidate in order to provide practical experience.

1.2 *Requirements*

- 1.2.1 The relevant application form completed before a Commissioner of Oaths.

1.3 *Procedure*

- 1.3.1 Submit the application form to the Registrar with the prescribed registration fee.
- 1.3.2 The Registrar will notify the candidate when he or she has been registered.

2.REGISTRATION AS AN ENGINEERING SURVEY TECHNICIAN

2.1 General

- 2.1.1 After passing a recognised examination (usually the National Diploma : Surveying) and completing a suitable period of training, a trial survey and a law examination, a candidate may apply to be registered as an Engineering Survey Technician.
- 2.1.2 An Survey Technician (Engineering) may describe himself or herself as such, use the appropriate letters ST after his or her name BUT may only work under the personal supervision of a suitably qualified person.

2.2 Requirements

- 2.2.1 Certified copy of the National Diploma : Surveying or an equivalent recognised by the Education Advisory Committee.
- 2.2.2 Certificate to the effect that the experiential training by the candidate had been approved by the UoT and/or certificates from suitably qualified persons covering the required training.
- 2.2.3 Certificate from a UoT indicating that a trial survey or equivalent practical test has been completed.
- 2.2.4 A law examination as outlined in Section 6.
- 2.2.5 The relevant application form completed before a Commissioner of Oaths.

2.3 Procedure

- 2.3.1 Submit the application form to the Registrar with the prescribed application fee.
- 2.3.2 The Registrar informs the candidate of the date and venue of the law exam.
- 2.3.3 If the application is successful, the Registrar notifies the candidate and sends him or her an Oath/Affirmation form for completion and submission with the relevant registration form noting the fees required.

3.REGISTRATION AS AN ENGINEERING SURVEYOR

3.1 GENERAL

- 3.1.1 After being registered as an Engineering Survey Technician and acquiring a minimum of three (3) years approved practical experience, a candidate may apply to be registered as an Engineering Surveyor.
- 3.1.2 The scrutinising process that follows will involve a personal oral examination and probably a trial survey. This will be followed by a Law examination.

3.1.3 An Engineering Surveyor may describe him or herself as such, use the appropriate letters S after his or her name and work unsupervised. He or she may also supervise and certify the work of Engineering Survey Technicians.

3.2 *REQUIREMENTS.*

3.2.1 A certified copy of the National Diploma : Surveying (or an equivalent).

3.2.2 Full details of experience in the form of two (2) copies of the Survey Log Books and/or Schedules of Experience certified by a Commissioner of Oaths.

3.2.3 A law examination as outlined in Section 6.

3.2.4 The relevant application form completed before a Commissioner of Oaths.

3.3 *PROCEDURE.*

3.3.1 An application form to register as an Engineering Surveyor to be submitted to the Registrar with the prescribed application fee.

3.3.2 The Registrar forwards the application to the Convenor of the Technical Registration Committee who will evaluate the experience.

3.3.3 The candidate will be notified of the date, time and place for an oral examination by the Technical Registration Committee.

3.3.4 This oral examination will test his or her overall grasp of a broad range of surveying knowledge and practice and assess the candidate's ability to recognise, define and solve practical problems. It will also probe the candidate's powers of effective communication and seek an awareness of the role and responsibilities that surveyors have in society.

3.3.5 Once the candidate has passed the oral examination/trial survey, he/she will be advised by the Registrar and he/she may then apply to write the next Law exam.

Candidates are advised to bring a portfolio of current work to the oral examination with statements or references from persons who have supervised the candidates work.

Candidates may offer at the oral examination examples of specific completed projects in lieu of a Trial Survey. A careful perusal of the Notes for Guidance for Technical Surveyors will give an idea of the standard that is expected.

3.3.6 Should there be any doubt with regard to the candidate's ability or level of competence, the Technical Registration Committee will set a **Trial Survey** on any one, or a combination of the following surveying aspects:

- Triangulation network for tunnel alignment
- Three dimensional monitoring of structures
- Metrological surveying (Measurements in an industrial environment)
- Hydrographical surveying
- Photogrammetry
- Cadastral surveying
- Engineering surveying and/or Construction surveying
- GIS and/or Spatial data management.

The candidate will be notified by the Convenor of Technical Registration Committees of the exact task and requirements for a Trial Survey and will be given supporting data and documentation where relevant.

The Trial Survey, which typically takes two weeks to complete, must be finalised within three months and all surveying records, calculations and reports returned to the Convenor for evaluation.

- 3.3.7 If considered necessary, the candidate will be notified of the date, time and place of a second oral examination for re-evaluation by the Technical Registration Committee.
- 3.3.8 When scrutinising is complete the Convenor notifies the Registrar of the decision and returns all documents. The Convenor also issues a certificate certifying that the candidate has passed, failed or been exempted from the Trial Survey.
- 3.3.9 The Registrar notifies the candidate of the outcome of the application and, if successful, sends the relevant registration form and Oath/Affirmation form for completion and submission for registration together with the required fee.
- 3.3.10 If the application is not successful, the candidate may re-apply, but only after the passage of six months. New application fees are then payable.

NOTES FOR GUIDANCE FOR REGISTRATION AS AN ENGINEERING SURVEYOR OR ENGINEERING SURVEY TECHNICIAN

1. INTRODUCTION

These notes which have been approved by the South African Council for Professional and Technical Surveyors, have been compiled with a view to assisting students at UoT who intend qualifying for registration as Engineering surveyors in terms of the Professional and Technical Surveyor's Act, 40/1984. Adherence to the requirements as set out below, will assist materially in avoiding unnecessary delays.

DEFINITION

The "Council" means the South African Council for Professional and Technical Surveyors established in terms of Act 40 of 1984, or such agent acting on its behalf.

2. STATUTORY REQUIREMENTS

- 2.1 A candidate who wishes to register as an Engineering Survey Technician should normally first register in terms of Section 23 of the Act as an Engineering Survey Technician-In-Training, but may, after obtaining a diploma in surveying at a South African UoT, or its equivalent as certified by the Council, apply for registration as an Engineering Survey Technician if he or she has complied with the requirements of Section 22(1)(b)(ii), (iii) and (iv) of the Act.
- 2.2 A candidate who wishes to register as an Engineering Surveyor must normally first register in terms of Section 22(1)(b) of the Act as an Engineering Survey Technician and after completing the training as prescribed in the Rules may apply for registration as an Engineering Surveyor if he or she has complied with the requirements of Section 22(1)(a)(iii) and (iv) of the Act.
- 2.3 A candidate who wishes to qualify for registration as an Engineering Survey Technician and who will be entitled to carry on his calling under the personal supervision of a professional surveyor, engineering surveyor or other suitably qualified person, shall undergo the practical training as set out in Paragraph 3 and carry out an oral examination, trial survey or such practical tests as are determined by the Council.
- 2.4 A candidate who wishes to qualify for registration as an Engineering Surveyor and who will be entitled to carry on his/her calling without supervision, shall undergo the training as set out in Paragraph 4 of these notes and undertake an oral examination and Trial Survey. If successful he or she will then apply to write the Law examination.
- 2.5 A candidate who wishes to qualify for registration as an Engineering Survey Technician or Engineering Surveyor, as the case may be, and who has, prior to the commencement of the Act, undergone training in the form of practical experience contemplated in Paragraphs 3 and 4 must submit an application to the Council in terms of Paragraph 6. Where it is not possible to obtain certificates of employment or submit exact schedules of training and experience an affidavit detailing all such training and experience, may be acceptable.

3. TRAINING FOR REGISTRATION AS AN ENGINEERING SURVEY TECHNICIAN IN THE REGISTER AS PROVIDED FOR BY SECTION 7(4)(B) OF ACT NO. 40 OF 1984.

3.1 Period of Training

- 3.1.1 The period of practical training required in terms of the Rules is 240 working days (2 semesters) and the nature of such training shall be as set out in Paragraph 3.2 and is controlled by the Council. A training certificate issued by the UoT is required.
- 3.1.2 In the case of "other" qualifications, approved by the Council, it may be expected of the candidate to undertake a trial survey and/or undergo a personal oral examination.

3.2 Nature of Training

3.2.1 Training must be varied and can include cadastral, engineering/construction, topographical, control surveys, hydrographic surveys, and photogrammetric surveys. The work must be undertaken under the personal supervision of a professional surveyor or engineering surveyor registered in terms of the Act, or such other person whom the Council considers suitable.

3.2.2 COMPULSORY TRAINING

80 working days in basic survey which comprises:

	TYPE OF SURVEY	WORKING DAYS
1	TRIANGULATION: By angular measurement; By distance measurement; By GPS, where applicable.	20
2	LEVELLING: Spirit levelling; Precise levelling; Trigonometric levelling; Heighting by GPS where applicable; Adjustment of a levelling network.	15
3	TRAVERSING: Using total stations or EDM equipment; Checked by GPS, if equipment available.	15
4	TOPOGRAPHICAL SURVEYING Detail surveying by total station, GPS or traditional methods.	10
5	COMPUTER DATA PROCESSING	10
6	PRECISE ENGINEERING SURVEYS	5
7	PHOTOGRAMMETRIC FIELD WORK Annotation; Design and identification of photo control.	5
TOTAL		80

NB!! All these surveys are to satisfy the required standards of accuracy as set out in the Land Survey Act No. 8 of 1997 and Regulations, or as otherwise specified.

3.2.3 Additional Training

Not less than 160 working days in the following types of survey of which not **less** than 10 days nor **more** than 120 days will be acceptable in any four (4) of the following options:

- 3.2.3.1 **Cadastral Surveys** with a Professional Land Surveyor, government department or an organisation doing such work.
 - 3.2.3.2 **Control Surveys** with a Professional Surveyor, Engineering Surveyor, a government department or an organisation doing such work.
 - 3.2.3.3 **Topographical Surveys** with an aerial survey firm, Professional Surveyor, Engineering Surveyor, government department or a firm doing similar work.
 - 3.2.3.4 **Engineering/Construction Surveys** with a Professional Surveyor or Professional Engineer, or Engineering Surveyor, with an engineering or construction company, or local authority, or an organisation doing such work.
 - 3.2.3.5 **Hydrographic Surveys** with a government department, the Hydrographic Survey of the Navy or any other operation or firm undertaking such work.
- 3.2.4 The following should be noted:
- 3.2.4.1 The number of working days quoted in Paragraphs 3.2.2 and 3.2.3 includes both office and field work and will be recorded on the official diary form.
 - 3.2.4.2 The ratio of office to field work should not exceed 2:1 and should include calculations, draughting and normal administrative operations.
 - 3.2.4.3 A detailed day to day diary of all survey work undertaken during the training period shall be kept and must be submitted with each application.
 - 3.2.4.4 Experience in the various fields of survey shall not be one-sided and must include adequate training in levelling, triangulation and traverse work.
- 3.3 Where training in the form of practical experience has been undertaken prior to the commencement of the Act the provisions of Paragraphs 3.2.2 and 3.2.3 shall be used to assess the practical survey work performed in terms of Section 22(1) (b)(ii) of the Act by a candidate whose diploma or equivalent qualification has been recognised.

4. TRAINING IN THE FORM OF PRACTICAL EXPERIENCE FOR REGISTRATION AS AN ENGINEERING SURVEYOR IN THE REGISTER PROVIDED FOR BY SECTION 7(4)(B) OF ACT NO. 40 OF 1984.

- 4.1 The period of training in the form of practical experience as prescribed in the Rules is three (3) years after completion of the diploma or degree and including a mandatory period of 30 days in Geomatics. The nature of such training and experience is as set out in Paragraphs 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 and 4.8 and is controlled by the Council.

Any candidate wishing to register as an Engineering Surveyor would normally be registered as an Engineering Survey Technician during most of his or her years of practical training.

On completion of the three years practical training it will be expected of the candidate to write an examination on the laws that are related to surveying and undertake an oral Examination/Trial Survey to the satisfaction of the Council.

- 4.2 The major proportion of work undertaken during this period must be in at least three of the types of surveys listed in Paragraph 3.2.3 and must include experience in each of the options in Paragraphs 3.2.3.3 and 3.2.3.4. The experience must be varied and be obtained working with or for the individuals or organisation mentioned in Paragraph 3.2.3. The results of these surveys will not be readily available to the Council, and the candidate will have to submit a detailed report on each major undertaking, together with his Schedule of Work as required in Paragraph 5.
- 4.3 For the purpose of Paragraph 3.2.3.1, Cadastral Surveys include all office work normally undertaken prior to the approval of survey records by the Surveyor-General.
- 4.4 The work undertaken for Topographical Surveys should, in addition to ground surveys, include Aerial Surveys that involve planning of aerial photography, identification and fixing of photo control, annotation, compilation and final checking.
- 4.5 For Engineering/Construction Surveys the work should include structural deflection determinations, setting out works for road, railways, sewer, bridge and other construction works, the monitoring of excavations for large buildings and the subsequent control of the building operations; three-dimensional surveys of buildings; surveys of quarries; determination of quantities and volumes; and all other extensive engineering works. It should be noted that levelling and contour surveys of an elementary nature will not be accepted as adequate training and experience.
- 4.6 For Hydrographic Surveys the work should cover a reasonable amount of ship to shore activities and include electronic measurements using primary and secondary radar techniques; profiling by means of three dimensional fixing; establishment of tide gauges; systematic recording of tidal movements and wave action; as well as coastal and sedimentation surveys. The candidate must have a basic knowledge of underwater acoustics, be familiar with echo sounding and be capable of calibrating an echo sounder.
- 4.7 It is recognised that for any Cadastral, Topographical, Engineering or Hydrographic Survey a certain amount of Control Survey is required, and this sort of survey work can be included under Control Surveys in the schedule, provided the standard of accuracy of such work is equal to or better than Class A as defined in Regulation 11(1) of the Survey Regulations framed in terms of the Land Survey Act, No 8 of 1997.
- 4.8 A minimum of 30 days of training is required in the area of Geomatics with specific reference to spatial data management. This may include the use and application of Geographical or Land Information Systems as well as the capture, display, manipulation and delivery of spatial information in a digital form. The training may be with a Professional Surveyor, Professional Engineer, Engineering Surveyor, company, government department, local authority, or an organisation doing such work.
- 4.9 When training in the form of practical experience has been undertaken prior to the commencement of the Act, the provisions of Paragraph 4.2 shall not necessarily apply but shall be used to assess the practical survey work performed in terms of Section 22(1)(a)(ii) of the Act by a candidate who has completed more than six (6) years of training in the form of practical experience and whose diploma or equivalent qualification has been recognised.

5. TRAINING AND/OR EXPERIENCE SCHEDULE FOR CANDIDATES WISHING

TO QUALIFY AS ENGINEERING SURVEY TECHNICIANS AND ENGINEERING SURVEYORS.

When applying to the Council for registration, the candidate shall supply a Training Diary and/or Experience Schedule as an extract from the diary and prepared in the form of the attached specimen. This schedule must be compiled in chronological order and each page must be signed by the supervisor, with whom the candidate has trained, as well as the candidate.

6.LAW EXAMINATION FOR SURVEY TECHNICIANS AND ENGINEERING SURVEYORS

- 6.1 A candidate who wishes to register as Survey Technician or Engineering Surveyor must apply to the Registrar to write a Law examination after he/she has completed the oral examination / trial survey.
- 6.2 Law examinations are scheduled to take place twice annually, usually **in March and November**, at the offices of the Surveyors-General.
- 6.3 The candidate will be expected to have a comprehensive knowledge of the laws relating to registration of surveyors and the survey and registration of land. He or she should also be acquainted with certain aspects of related legislation as set out in the list below.
- 6.4 The law examination consists of one or two written papers as outlined below. The pass mark is 65%.

The papers will consist of questions on the Acts outlined in the following schedule.

- 6.5 The Registrar will notify the candidate of a pass or failure.

PLATO LAW EXAM

1. Professional and Technical Surveyors Act 40 of 1984 Exam A,	All applicants who have not previously written this exam.
2. Rules i.t.o. Act No. 40 of 1984, as amended (PLATO Rules) Exam A,	All applicants who have not previously written this exam.

	PLS	SURV	GISc
1. Land Survey Act No. 8/1997	Yes	Yes	Yes
2. Engineering Professions of SA Act No. 114/1990 Provide for an Engineering Council, registration of prof. engineers, technologists and technicians.		Yes	
	PLS	SURV	GISc

3. Sea Shore Act 21/1935 President is owner of seashore, territorial waters, rights of the sea-shore and the sea.	Yes	Yes	
4. National Water Act 36/1998 Protection of water resources and management of use of water.	Yes	Yes	
5. SA National Roads Agency Act 7/1998 Create a national roads agency and policies on national roads.	Yes	Yes	
6. Subdivision of Agricultural Land 70/1970 To control the subdivision and use of agricultural land.	Yes		
7. Provision of Certain Land for Settlement Act 126/1993 Designation of certain land, subdivision and settlement of persons.	Yes		
8. Distribution and transfer of Certain state Land Act 119/1993 Regulate the distribution and transfer of certain state land.	Yes		
9. Land Reform (Labour Tenants) Act 3/1996 Rights of farm labourers to live on, or cultivate a farm.	Yes		
10. Extension of Security of Tenure Act 62/1997 Rights and duties of owners and occupiers of land.	Yes		
11. Prescription Act 68/1969 Acquisition (or loss) of ownership by prescription.	Yes		
12. Expropriation Act 63/1975 Expropriation of land for public purposes.	Yes	Yes	
13. Fencing Act 31/1963 Fencing of farms and boundaries along fences.	Yes		
14. Black Communities Development Act 4/1984 Leasehold ownership.	Yes		
15. Development Facilitation Act 67/1995 Measures to accelerate the pace of land development.	Yes	Yes	Yes
16. Upgrading of Land Tenure Rights Act 112/1991 To convert land ownership rights into full ownership.	Yes	Yes	Yes
17. Advertising on Roads and Ribbon Development Act 21/1940 Set building restrictions.	Yes	Yes	
18. Less Formal Townships Establishment Act 113/1991 Makes provision for a shortened township establishment procedure.	Yes	Yes	
	PLS	SURV	GISc

19. Physical Planning Act 125/1991 Regulates planning at macro-level. Makes provision for development plans and regional structure plans.	Yes	Yes	Yes
20. Removal of Restrictions Act 84/1967 To remove restrictions on land in a province.	Yes		
21. Communal Land Rights Act 11/2004	Yes	Yes	
22. Alienation of Land Act 68/1981 To provide for the alienation of land and contract of sale.	Yes		
23. Sectional Titles Act 95/1986 Provide for ownership of a portion of a building.	Yes	Yes	Yes
24. Deeds Registries Act 47/1937 Registration of deeds.	Yes	Yes	Yes
25. The Communal Property Association Act 28/1996 A community who has been dispossessed of land, can collectively acquire, hold and manage land.	Yes		
26. Spatial Data Infrastructure Act 54/2003 Facilitate the sharing of spatial information and metadata.		Yes	Yes
27. Regulations in terms of Act 54 of 2003 once these are published.			Yes
28. Maritime Zones Act 15/1994	Yes	Yes	
29. Copyright Act 98/1978			Yes
30. Legal Deposit Act 54/1997 Ensure the preservation of, and access to published documents.			
31. National Archives of South Africa Act 43/1996 Management and care of the records of government bodies and the preservation of a national archival heritage.			
32. Promotion of Access to Information Act 2/2000 Right of access to any information held by the state.			Yes
33. SA Geographical Names Council Act 118/1998 Advise the minister on the transformation and standardisation of geographical names in SA.			Yes
34. Statistics Act 6/1999 Provide for the collection, production and dissemination of official statistics and the conducting of a census.			Yes

	PLS	SURV	GISc
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35. Electronic Communications and Transactions Act 25/2002 To promote electronic communications and transactions. Sect. 1, 2, 11-14, 20, 42-46, 50-56.			Yes
36. Constitution of the Republic of S.A. 108/1996 Bill of Rights: Sect. 7 - 39.	Yes	Yes	Yes
LABOUR LEGISLATION			
37. Basic Conditions of Employment Act 75/1997 Establishes and enforces basic conditions of employment and forms part of every contract of employment, unless they have been replaced, varied or excluded in accordance with the Act.	Yes	Yes	Yes
38. Labour Relations Act 66/1995 Generally gives effect to the fundamental right of fair labour practices as enshrined by the Constitution, amongst others membership of trade unions, collective negotiations and job security.	Yes	Yes	Yes
39. Occupational Health and Safety Act 85/1993 Provide for the safety and health of persons at work. Ensures that no party can agree that work will be conducted in unsafe conditions.	Yes	Yes	Yes

N.B. Most of the relevant legislation can be down-loaded from the Internet Web-site:
www.polity.org.za/govdocs/legislation
 Or can be obtained from : **LexisNexis** on Johannesburg 011-784-8009, Durban 031-2683111 or Cape Town 021-5558900.

The law exam consist of the following parts:

Exam A

PLATO Act and rules : 2 hours open book.

Written by candidates for professional land surveyors and technicians. Also written by applicants for registration as surveyor and professional engineering surveyor who have not previously written this exam.

Exam B

Land Survey Act and Deeds Registries Act : 3 hours open book.

Written by candidates for registration as professional land surveyors.

Exam C

Other acts and court cases as marked for PLS on the previous pages : 3 hours closed book.
 In most cases only an overview of the act is required. Completion of trial survey.

Written by candidates for registration as professional land surveyors.

Exam D

Other acts as marked for Surveyors on the previous pages : 3 hours closed book.
In most cases only an overview of the act is required.

Written by candidates for registration as surveyors. Also written by applicants for registration as professional engineering surveyor who have not previously written this exam.

Exam E

5 Mining related acts : 3 hours closed book.

Written by candidates for registration as Mine surveyors and Prof. Mine surveyors.

Exam F

Other acts as marked for GISc on the previous pages : 3 hours closed book.

In most cases only an overview of the act is required.

Written by candidates for registration as GISc professional and technologist.

Candidates will therefore write the following exams:

- | | |
|---------------------------------------------|------------------------------------------------|
| 1. Professional Land surveyors: | A, B, C |
| 2. Professional Engineering surveyors: | A, D (if they have not previously written it.) |
| 3. Surveyors: | A, D |
| 4. Survey technicians and GISc technicians: | A |
| 5. Mine surveyors and Prof. Mine surveyors: | A, E |
| 6. GISc Technologists and Professionals: | A, F (if they have not previously written it.) |

Dec. 2007

7. APPLICATION FOR TRIAL SURVEY FOR CANDIDATES WISHING TO QUALIFY AS ENGINEERING SURVEYORS.

- 7.1 When the candidate is of opinion that he or she has met the requirements set out in Paragraph 3 or 4, he or she should apply to the Registrar for registration in the relevant category.
- 7.2 The application must be accompanied by:
- An application form and the relevant fee,
 - The Schedule of Training and/or Experience referred to in Paragraph 5,
 - A certified copy of his or her degree, diploma, school leaving certificate or other certificate of equivalence, and
 - A Certificate of Employment as prescribed in the Rules. A separate Certificate of Employment is required in respect of each supervisor with whom the candidate has served.
 - A Certificate of Competency.

"Certified" means certified to be a true copy by a Commissioner of Oaths or a Justice of the Peace.

- 7.3 The Convenor of the Technical Registration Committees will advise the candidate of the date and time for an oral examination. Immediately after the oral examination the candidate will be advised whether further practical tests or a Trial Survey will be required.

8. DETAILS OF TRIAL SURVEYS FOR ENGINEERING SURVEY TECHNICIANS

- 8.1 This section is for candidates who wish to register in terms of Section 22(1)(b) of Act No. 40 of 1984.**
- 8.2 This Trial Survey will normally have been completed at a UoT by persons who have qualified with the National Diploma: Surveying and are registered as Engineering Survey Technician In Training. The UoT will have issued a certificate to this effect.
- 8.3 The trial survey should consist of :
- 8.2.1 The reconnaissance, observation and computations for a breakdown from tertiary or secondary triangulation to establish three suitably situated control points by methods as stipulated in Paragraph 3.2.2.
- 8.2.2 A traverse with a minimum of 5 legs between any two of the trigonometric stations or control points in Paragraph 8.2.1 above, by methods as stipulated in Paragraph 3.2.2.
- 8.2.3 The determination of the heights by trigonometric levelling or GPS heightening, of the control points determined in Paragraphs 8.2.1 and 8.2.2.
- 8.2.4 The determination by spirit levelling of heights of at least three points based on two known heights at least 3 kilometres apart to a closure of $0,009/K$ metres, where K is the distance in kilometres between the two known points.
- 8.2.5 Computation of a levelling network to obtain final heights.
- 8.2.6 Annotation of at least one photogrammetric model, and identification of the photo control points for this model.
- 8.2.7 A full report dealing with all the aspects of the survey and other relevant information must be submitted.

9. DETAILS OF TRIAL SURVEYS FOR ENGINEERING SURVEYORS

- 9.1 This section is for candidates who wish to register in terms of Section 22(1)(a) of Act No. 40 of 1984.**
- 9.2 Each candidate will be invited to an oral examination by the Technical Registration Committee followed by a Trial Survey if necessary.

9.3 The Trial Survey consists of the completion of a task or tasks to the satisfaction of a Technical Registration Committee. A detailed requirement to this effect will be drawn up and provided to each trial survey candidate on an individual basis arising from the findings of the Technical Registration Committee at the oral examination.

9.4 Two tasks that might constitute a typical Trial Survey are listed :-

9.4.1 A task in Topographical Surveying which may comprise a detailed proposal for the survey of a small dam basin together with the volumetric computations and an optimised capacity proposal in relation to wall height.

The candidate will be expected to submit a typewritten report to a theoretical client for a proposed earth dam at a location that will be chosen by the Technical Registration Committee.

He or she will be provided with topographical plans of the area and theoretical costs relating to water and earthworks. The report should be a comprehensive analysis for the client and exhibit an appreciation of features such as land and servitude rights, the provision or removal of services, basic geological and subsoil features, runoff, storm effect, etc. It should contain a motivated recommendation for wall position and height.

The report will also include a technical addendum giving preliminary volume calculations and a description of a more detailed survey that will be undertaken should the project proceed. This should include the proposed breakdown from trigonometric stations, contour survey (by tachometric or photogrammetric methods), site control beacons, cost implications and timing.

A full report dealing with all aspects of the survey, and showing a comprehensive analysis of the situation with motivated recommendations to the client, must be submitted.

9.4.2 A task in Engineering Surveying which may comprise the determination of movement or deviation from the theoretical position of a tall or large structure. Access and engineering drawings will be provided for a suitable structure such as a bridge, conveyor line, radio tower, storage tank or large building.

The candidate will be required to undertake field measurements to determine the deviation (in three dimensions) from the theoretical position of a certain portion of the structure. This may be under either static (as built) or dynamic (wind or gravitation load) conditions.

He or she will be expected to undertake the survey by whatever means he or she sees fit to submit his/her observations, calculations and a typewritten report. The report should be directed to a civil or mechanical engineer as the case may be. It should demonstrate to the examiner that the candidate is aware of the limitations of the equipment he or she has used on the task, that he or she is able to correctly interpret the engineering drawings and that he or she is familiar with engineering terminology. While a detailed analysis of the problem by least squares, linear regression or similar methods is not contemplated, the candidate should nonetheless exhibit a thorough understanding of basic applied error theory. A visit to the site would be essential for this task.

9.5 If weather conditions are good the average candidate will need no more than two to three weeks for completing his or her trial survey. Continuity of the work is essential and a break will only be condoned in exceptional circumstances due to factors beyond the control of the candidate.

- 9.6 Any specific project undertaken by the candidate during his period of training in the form of practical experience which might demonstrate his ability to perform some of the tasks set out in item 3.3.6 of the General Information and Procedure notes, may be submitted to the Technical Registration Committee for a decision as to whether it would be accepted as part of the Trial Survey.

10. COMPLETION OF REGISTRATION PROCEDURE

- 10.1 Evaluation of the oral examination and/or Trial Survey will take place as soon as possible after completion of the work. The candidate will be informed of the time, date and place of a second oral examination if required. The Convenor of Technical Registration Committees will then issue a Trial Survey certificate and forward his decision to the Registrar in regard to the acceptance, or otherwise, of the application. If successful the candidate will be required to write the Law Exam.
- 10.2 The Registrar will notify the candidate that he or she complies with either the requirements of Section 22(1)(a)(i), (ii) and (iii) or Section 22(1)(b)(i), (ii) and (iii) of Act No. 40 for 1984 and will request him or her to make (in terms of Section 22(1)(a)(iv) or Section 22(1)(b)(iv) of the Act) an oath or affirmation in relation to his or her calling. The relevant registration fees will also be required.
- 10.3 When these formalities have been completed the candidate will be registered as an Engineering Surveyor or Engineering Survey Technician, as the case may be, with the Council.

NOVEMBER 2006

APPLICATION FOR REGISTRATION AS AN
ENGINEERING SURVEYOR
IN TERMS OF SECTION 22(1)(a) OF THE
PROFESSIONAL AND TECHNICAL SURVEYORS' ACT, 1984
(ACT 40 OF 1984)

The Registrar

The South African Council for Professional and Technical Surveyors

I the undersigned, (Full Names)

of (Address)

.....

hereby apply for registration as *an Engineering Surveyor*.

I swear/make affirmation* and declare that the contents of this application, as presented by this form and the accompanying **Form TES2**, are true, and further :

- (a) That I am the person mentioned in the accompanying letter signed by representatives of PLATO and on the certified copies of qualifications which I wish to be entered in the Register and which are hereby submitted in support of my application;
- (b) That I am not according to law detained as a mentally ill person;
- (c) That I have never been convicted of an offence and sentenced in respect thereof to imprisonment without the option of a fine;
- (d) That I have never been removed from an office of trust on account of improper conduct;
- (e) That I am/am not* insolvent and that I have/have not* assigned my estate for the benefit of creditors, and that I have/have not* compounded with my creditors.

.....
Place

.....
Date

.....
Signature

NOTE : This must be signed before a Commissioner of Oaths.

I certify that before the despondent made the oath/affirmation* I asked him/her* the following questions and wrote down his/her* answers in his/her* presence:

(i) Do you know and understand the contents of this declaration?

Answer:

(ii) Do you have any objection to taking the prescribed oath/making the prescribed affirmation*?

Answer: _____

(iii) Do you consider the prescribed oath/affirmation* to be binding on your conscience?

Answer: _____

I certify that the despondent has acknowledged that he/she* knows and understands the contents of this declaration, which was sworn to/affirmed* before me, and that the respondent's signature was placed thereon in my presence.

Commissioner of Oaths: _____

Designation (Rank): _____

Date: _____

* Delete whichever is not applicable.

APPLICATION FOR REGISTRATION AS AN
ENGINEERING SURVEYOR
IN TERMS OF SECTION 22(1)(a) OF THE
PROFESSIONAL AND TECHNICAL SURVEYORS' ACT,
ACT 40 OF 1984

PERSONAL INFORMATION

1 Full Name(s) of Applicant _____

2 Postal Address _____

3 Telephone (W) ; _____ Fax ; _____

4 Cell _____ -e-mail _____

5 Date of Birth _____

6 Identity Number◆

◆ Please include certified copies of your identification document and degree certificate.

7 Current Employer _____

8 Present Position _____

9 Date Appointed _____

10 Previous Employer(s) _____

11 Tertiary Academic Qualifications: ◆

◆ Please include certified copies of your identification document and degree certificate.

Qualification	Institute	Date Completed

12 Summary of Surveying Experience : _____

(A detailed and certified Schedule of Experience with regard to all surveying work undertaken since obtaining the National Diploma: Surveying or the old National Higher Diploma: Surveying should be submitted with this application).

13 Signature of Applicant: _____ Date: _____

CERTIFICATE OF EXPERIENTIAL TRAINING

Issued in favour of :

for registration as a Technical Survey Technician as contemplated in Section 22 of Act 40 of 1984.

I, in my capacity as

At (UoT) hereby declare that :

.....

has had the necessary training to carry out triangulation breakdowns, traversing, calculations and levelling to the required standards as set out in paragraph 2.2 of the Notes for Guidance of Technical Surveyors and Trial Survey candidates.

UNIVERSITY STAMP. ;

Dated at on theday of

Signed :

CERTIFICATE OF COMPETENCY

(One copy for each Employer / Supervisor)

Issued in favour of for registration as a
Engineering Surveyor as contemplated in Section 22 of Act 40 of 1984.

I, *Professional Surveyor / Engineer /
Plato registered Engineering Surveyor, hereby declare that
is a competent surveyor who can carry out triangulation, traversing, calculations and
levelling to the required standards as set out in [paragraph 7.1.1(a), (b), (c) (d)] section 3.3
on pages 3 and 4 of the General Information and Procedure document for Engineering
Surveyors and Trial Survey candidates.

Signed :

Date :

* Delete which is not applicable.

CERTIFICATE OF EMPLOYMENT

(One copy for each Employer / Supervisor)

I, a *Professional Surveyor / Engineer / Plato registered Engineering Surveyor, practising in the Republic of South Africa, do hereby certify that has been engaged in survey work under my personal supervision for the following periods and performing survey work in the following categories :

Periods :.....	Category : e.g. Engineering Surveys
.....	Topographical Surveys
.....	Control Surveys
.....	Cadastral Surveys
.....	Hydrographic Surveys,

PARTICULARS OF WHICH IN REGARD TO THE TIME AND NATURE OF THE WORK, ARE ANNEXED.

Dated at on theday of

Signed :

Professional Surveyor / Engineering Surveyor / Engineer / etc. *

* Delete which is not applicable.

CONFIRMATION OF EMPLOYMENT
(SURVEY TECHNICIANS)

(Applicant) Full name:.....

Registration Number: (If applicable)

Name of Employer:

Your job description:

Name and Registration number of the Registered person responsible for your training:

.....Registration No.....

Street Address of your usual place of work:

.....

.....

Postal Address:

..... Code

Contact details, (normal working hours.)

Telephone: Fax:

Cell phone: Email:

(Applicant) I, hereby confirm that the above information is correct and that I am in the full time employment of the employer as described above.

Signature:..... Date

DECLARATION BY SUPERVISOR / EMPLOYER

I,Registration number.....

hereby confirm that is employed as described above and that he works under my supervision as required in terms of the Act.

Signature: Date;



I certify that before the despondent made the oath/affirmation* I asked him/her* the following questions and wrote down his/her* answers in his/her* presence:

(i) Do you know and understand the contents of this declaration?

Answer: -----

(ii) Do you have any objection to taking the prescribed oath/making the prescribed affirmation*?

Answer: _____

(iii) Do you consider the prescribed oath/affirmation* to be binding on your conscience?

Answer: _____

I certify that the despondent has acknowledged that he/she* knows and understands the contents of this declaration, which was sworn to/affirmed* before me, and that the respondent's signature was placed thereon in my presence.

Commissioner of Oaths: _____

Designation (Rank): _____

Date: _____

* Delete whichever is not applicable.

B:\TESTFORM.PLA



**APPLICATION FOR REGISTRATION AS AN
ENGINEERING SURVEY TECHNICIAN
IN TERMS OF SECTION 22(1)(b) OF THE
PROFESSIONAL AND TECHNICAL SURVEYORS' ACT,
ACT 40 OF 1984**

PERSONAL INFORMATION

1. Full Name(s) of Applicant _____
2. Postal Address _____

- 3 Telephone (W) ; _____ Fax ; _____
- 4 Cell _____ -e-mail _____
- 5 Date of Birth _____
6. Identity Number◆ _____
◆ **Please include certified copies of your identification document and degree certificate.**
7. Current Employer _____
 - 7.1 Present Position _____
 - 7.2 Date Appointed _____
 - 7.3 I certify that the candidate is in my employment and is not a partner or principal in the firm.
Signature of Employer: _____ Date: _____
Name of Employer: _____ Stamp: _____
8. Previous Employer(s) _____

9. Tertiary Academic Qualifications: ◆

◆ Please include certified copies of your identification document and degree certificate.

Qualification	Institute	Date Completed

10. Attached Certificate of approval of Experiential Training issued by (UoT):

11. Summary of Surveying Experience: _____

(A detailed and certified Schedule of Experience with regard to all survey work undertaken since enrolling for the National Diploma: Surveying should be submitted with this application).

12. Signature of Applicant: _____ Date: _____

TRAINING SCHEDULE (Engineering Surveyor)

TES 5

Name (block letters)

Page of pages

DATE Day/ Month/ Year	TASK DESCRIPTION	COMPULSORY SURVEY TRAINING								ADDITIONAL SURVEY TRAINING												
		TRIANGULATION		SPIRIT LEVELLING		TRIG LEVELLING		TRAVERS-ING		CONTROL SURVEYS		CADASTRAL SURVEYS		ENG/CONSTR SURVEYS		TOPO. SURVEYS		HYDRO. SURVEYS		OTHER (SPECIFY)		
		F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	F I E L D	O F F I C E	
	<i>Brought Forward</i>																					
	TOTAL																					
	REQUIREMENTS																					

CANDIDATE SIGNATURE : _____ FULL NAME (PRINT) & SIGNATURE OF SUPERVISOR : _____

Each page must be signed by the supervisor(s) and the candidate.

Off = Office (which includes Calculations, draughting and normal administrative procedures.) DATE ; _____