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SURVEY (EXAMINATION AND LICENSING OF SURVEYORS) REGULATIONS

[L.N. 87 of 1970.]

under section 21 of the Act

[1st January, 1971]

[Commencement.]

1. Duties and powers of Board as to control and examination of pupil surveyors

[L.N. 87 of 1970.]

(1) The Surveyors Licensing Board (in these Regulations hereafter referred to as "the Board")-

- (a) shall prepare a syllabus of training for examination of pupil surveyors enrolled under these Regulations and thereafter conduct examinations at such times and places as may from time to time be published in the Federal *Gazette* of pupil surveyors so enrolled, for admission to the profession of land surveyor; and
- (b) may for the purposes aforesaid from time to time appoint unpaid staff consisting of a secretary and such other officers as may be necessary for the more effectual discharge by the board, as continued in being by the Survey Act 1970, of its function under these Regulations.

(2) For the purposes of sub-paragraph (a) of this regulation, the syllabus set out in the First Schedule to these Regulations shall be the syllabus of training until otherwise

amended or replaced by the Board so however that the provisions of the Second Schedule to these Regulations shall have effect and, in addition to any other regulation entitling exemption, a candidate claiming thereunder shall in proper case be granted exemption from particular parts of the examination for surveyors.

[First and Second Schedule.]

2. Enrolment as pupil surveyors

(1) Any fit person who is a pupil of a licensed surveyor or is engaged in practical work in circumstances hereinafter mentioned, may apply in the form in the Third Schedule to these Regulations to be enrolled as a pupil surveyor on payment of an enrolment fee of N4.20k, and that person shall thereafter be so enrolled if-

[Third Schedule.]

- (a) being a pupil of a licensed surveyor; or
- (b) being a person ordinarily engaged in practical survey work under the supervision of a licensed surveyor; or
- (c) being an officer of the Survey Department of the Government, Federal or State in Nigeria engaged in practical survey work under the authority of the surveyor head of the officer's department,

he produces to the board with his application, satisfactory evidence that he has attained the age of eighteen years at least, has passed the West African School Certificate (or an equivalent examination acceptable to the Board) with at least a credit pass in mathematics, and is a person of good character.

(2) Any person enrolled as a pupil surveyor under this regulation shall upon enrolment receive from the Board a certificate in the Form 2 in the Third Schedule to these Regulations:

Provided that anyone who has previously taken the examination before the commencement of the Survey (Examination and Licensing of Surveyors) Regulations 1971 shall be deemed to have fulfilled the conditions for enrolment and shall qualify to take any examination after the commencement thereof upon payment of the fees prescribed under the foregoing provisions, and he may repeat same, subject as aforesaid, until 31 December 1972.

[L.N. 56 of 1971.]

3. Application and fee for examination

(1) Any duly enrolled pupil surveyor who is desirous of being examined under these Regulations may, if qualified so to do, lodge an application in the Form 3 in the Third Schedule to these Regulations with the Board not later than one month prior to the date fixed for the commencement of the particular examination and shall forward with his application the fee herein prescribed for the examination to be taken by him.

[Third Schedule.]

(2) If the Board is of the opinion that the applicant is not ready to take the examination, or for other good and sufficient reason the Board is satisfied that the applicant has otherwise not complied with these Regulations, it may in any such event reject an application and the amount of the fee paid shall thereafter be dealt with or be refunded by the Board, as it thinks fit.

4. Persons entitled to be examined for a licence

No person shall be qualified for examination under these Regulations so as to enable

him to be licensed to practise surveying unless-

- (a) he has attained the age of 21 years;
- (b) he has been registered as a pupil surveyor for not less than three years and during that time has acquired practical experience in field survey duties;
- (c) he furnishes a certificate of satisfactory practical experience prescribed by Form 4 of the Third Schedule to these Regulations or other satisfactory evidence acceptable to the Board of his practical experience as evidence of character;
[Third Schedule.]
- (d) not being otherwise exempted or liable only for reduced fees under these Regulations, he pays to the board a fee of N LO.50k in respect of each part of the examination; and
- (e) he shall remain in Nigeria continuously for the period of three years specified in sub-paragraph (b) of this paragraph except for a period not exceeding three months or such longer period as the Board may approve.

[L.N. 56 of 1971.]

5. Publication of notice of exemption in certain cases

The Board may, if it thinks fit, at any time give public notice of the qualifications recognised by the board as entitling exemption under the Second Schedule to these Regulations, and of the fact that in respect of the thesis or the practical task, or both, the Board may exempt candidates who in its opinion have acquired sufficient practical experience; and if the form of application for examination is duly completed in that behalf a candidate shall in proper case be granted exemption accordingly.

[Second Schedule.]

6. Conduct of examination

(1) When arranging for the conduct of an examination under these Regulations, the syllabus of training may be modified and the Board may, if it thinks fit, set test questions on any modern instrument survey technique with which, in its opinion, pupil surveyors as candidates for examination should be familiar.

(2) The examination shall be conducted in parts, so however that unless otherwise allowed in circumstances as are hereinafter mentioned, Parts I and II of the examination may not be taken together. Accordingly, a candidate shall not be admitted to take Part II of the examination unless he has passed Part I or is exempted therefrom; and subject thereto, candidates taking Part II of the examination shall, unless exempted under these Regulations, submit a thesis on some advanced standard of surveying, and a practical task; and-

- (a) in respect of the thesis, candidates shall, not later than the end of January in the year in which they propose to be examined, submit to the Board for its approval the title and a synopsis of the proposed subject matter; and

- (b) in respect of the practical task, it shall be submitted to the Board together with a completed declaration in the Form 5 in the Third Schedule to these Regulations not later than one calendar month before the date fixed for the examination.

7. Effect of partial failure in thesis or practical task

(1) The thesis shall be written in a critical manner and in technical language, and it and the practical task shall be regarded as separate parts of the examination under these Regulations; and when they are or either of them is submitted by the candidate, the marks obtained shall not be aggregated with the marks obtained for the remaining papers in Part **II** of the examination, but a pass in either the thesis or the practical task shall stand in favour of the candidate.

(2) A candidate who attains the requisite standard and aggregate in the written papers but fails in either his thesis or the practical task, may sit the examination again in either the thesis or the practical task, as circumstances may require.

8. Restriction on taking examinations

The Board may, in its sole discretion, permit a candidate with only one paper outstanding in Part **I** of the examination to take it and Part **II** together; but otherwise a candidate may not take Parts I and II of the examination together, and he shall not be admitted to take Part II of the examination unless he has passed in Part I or is otherwise exempted therefrom under these Regulations.

9. Pass marks and re-examination

(1) The following percentages of marks are required to secure a pass-

- (a) for the examination in Part **I**, 50 per cent of the aggregate marks and not less than 40 per cent in each paper;
- (b) for the examination in Part **II**, 60 per cent of the total possible marks in the subjects specified in Paper V, and not less than 50 per cent of the total possible marks in each of the other written papers.

(2) If a candidate fails to obtain a pass in anyone paper in Part **I**, the provisions of regulation 8 of these Regulations shall apply in proper case, and if he fails in Part II of the examination, he may be re-examined in that one paper without being required to be re-examined in the remaining papers. In respect of any re-examination in the one paper as aforesaid, the fee shall be N4.20k, but otherwise the fee shall be NI 0.50k.

10. Licence to practise

A candidate who completes the examination under these Regulations to the satisfaction of the Board shall be granted a licence in the Form 6 in the Third Schedule to these Regulations entitling him to practise surveying; and the Board shall as soon as may be thereafter, issue the licence accordingly.

[Third Schedule.]

11. Short title

These Regulations may be cited as the Survey (Examination and Licensing of Surveyors) Regulations.

FIRST SCHEDULE

Syllabus for the examinations

PART I

Paper I (Mathematics) - Time: 3 Hours

Quadratic functions; binomial theorem for a positive integral index, and the use of the binomial expansion for other indices; logarithms; simple power series; Taylor's and Maclaurin's expansions; determinants, and matrices.

Trigonometrical ratios, circular functions of any magnitude, addition, and products formulae, simple problems in identities, properties and solution of triangles and rectilinear figures, heights and distances, circular measures including calculation of small angles.

Properties of lines and planes. Analytical Geometry of the straight line, circle, and ellipse. Common sections of a plane and a sphere. Calculation of areas from co-ordinates.

Differentiation and integration of algebraic, circular, logarithmic and exponential functions, gradient and rates of growth, maxima and minima. Representative of a displacement in two or three dimensions as a vector, magnitude of a vector. Addition of vectors in a plane.

Paper II (Spherical Trigonometry, Astronomy and Geodesy) - Time: 3 Hours

Elements of a spherical triangle, solution of spherical triangles including Napier's rules of circular parts, Spherical excess, Legendre's Theorem.

Apparent, mean and sidereal time, observation and computation of time, azimuth, latitude and longitude from the sun or stars by simple field methods, including methods of equal altitude, meridian transits for time and position lines; the effect of small errors in time, altitude and latitude on the computed results. Star identification and the use of star charts and star almanac for land surveyors; best conditions for astronomical observations.

The conception of the geoid and a reference spheroid, geodetic and astronomical latitudes and longitudes and principal radii of curvature; mid-latitude formula. Reconnaissance, beaconing and observation for geodetic triangulations, base line and precise traverses; layout of precise levelling nets, construction of permanent benchmarks and the crossing of wide rivers.

General principles of map projection, the Transverse Mercator's Projector.

The classification of nature of errors of observations, the normal (Gaussian) frequency distribution, standard error; probability error of a single observation and of the arithmetic mean of several observations; rules for the combination of independent errors.

Paper III (Topographical Survey and Photogrammetry) - Time: 3 Hours

Minor triangulation, intersection and resection by direct and semi-graphic methods, trigonometrical heighting, plane table triangulation, and traversing, detail surveying and contour plotting.

General principles of photogrammetry, comparison with ground methods, topographical interpretation of aerial photographs, identification of ground controls on aerial photographs, geometrical basis of radial-line method: distortion due to tilt and small variation of ground height parallaxes and relation to ground heights, stereoscopy, simple stereoscopes, parallax bars, slotted template equipment; the graphical and slotted template radial line methods, simple rectifiers, revision of topographical maps.

Paper IV (Large Scale and Cadastral Surveys) - Time: 3 Hours

Optical and mechanical principles and design of modern instruments, adjustment and employment of theodolites and levels.

The principles of traversing, taping in catenary, precautions against gross errors; the principle and practice of simple tacheometry, accurate attainable and limitation of the method, subtense bar traversing. Calculation of areas and volumes, rectangular layouts, setting out of circular curves, sub-division of areas, establishment and re-establishment of beacons and boundaries detail survey.

Practical examination

- (a) Adjustment of instruments;
- (b) Observation of time, azimuth, and latitude and longitude;
- (c) Property and mining surveys, layouts, re-establishment of lost beacons, detail surveys, building and natural features, and drawing of plan;
- (d) Levelling and contouring and drawing of plan.

PART II

The syllabus for Part I of the Examination together with the following:

Paper I- (Astronomy and Geodesy) - Time: 3 Hours

Precise methods of determining latitude, longitude and azimuth. Laplace corrections, deviation of the vertical, determination of the figure of the earth. Observation and adjustments of precise triangulation, traverse and levelling networks, trilateration and electromagnetic distance measurement.

Paper II- (Photogrammetry) - Time: 3 Hours

The use and limitation of air photographs for large scale surveys, analytical--orientation and rectification of photographs, principles of stereoplotters instruments, aero-triangulation, methods of map revision from air photographs.

Paper III- (Large Scale and Cadastral Surveys) - Time: 3 Hours

Complex problems in the demarcation and survey of property boundaries, the principles and use of self-reducing and other forms of tacheometers, setting out of road and railway curves including transition and vertical curves, layout of plots, preparation of survey and description of boundaries.

Paper IV - (Survey Computation) - Time: 3 Hours

Survey computations for property surveys, field astronomy, traversing, triangulation, levelling including knowledge of the theory and practice of adjustments of observations.

Paper V - (Survey Laws) - Time: 3 Hours

The Survey Act, related Regulations and other relevant legislation.

Such portions of the following enactments and regulations made thereunder as the Board may direct, and in so far as they have effect in Nigeria-

- (i) the Mines and Minerals Act; .
- (ii) the Registration of Titles Act;
- (iii) the Land Development (provision for Roads) Act.

SECOND SCHEDULE

Exemptions
[Regulation 5.]

*Qualifications giving exemption to candidates for the Licensed
Surveyors' Examination*

<i>Qualifications</i>	<i>Subject in which exemption may be granted</i>
<p>1. (1) General Certificate of Education (Advanced Level) in Mathematics (or equivalent qualification).</p> <p>(2) A degree which must include Mathematics, from a recognised University.</p>	<p>Part I, paper I (Mathematics).</p>
<p>2. (1) A degree in subjects cognate to surveying from a recognised University together with either-</p> <p>(a) the Army Survey Course Part I of the School of Military Surveys, Newbury, England; or</p> <p>(b) a diploma in surveying, University College, London or equivalent qualifications.</p> <p style="text-align: center;">or</p> <p>(2) An honours degree in Geography Part II Geographical Tripos, Cambridge University, including geodetic and topographical surveying.</p> <p style="text-align: center;">or</p> <p>(3) a degree in subjects cognate to surveying or engineering science from an approved University together with an approved course of instruction in land surveying.</p>	<p>The whole of Part I</p>
<p>3. (1) A degree in subjects cognate to surveying from a recognised University together with either-</p> <p>(1) the Army Survey Courses Parts I and II of the School of Military Surveys, Newbury, England;</p> <p style="text-align: center;">or</p>	<p>The whole of Part I and papers J, II, 1II and IV of Part II</p>

SECOND SCHEDULE-continued

<i>Qualifications</i>	<i>Subject in which exemption may be granted</i>
<p>(b) a diploma in surveying, University College, London, with passes in the special papers. or (2) An approved degree in surveying or surveying engineering or equivalent qualification from a nised University.</p>	

THIRD SCHEDULE

Forms
[Regulation 5.]

FORM I

Application for enrolment as a pupil surveyor

To the Surveyors Licensing Board, Lagos.

Ihereby apply to be
(name in full of applicant)

registered as a pupil surveyor and submit herewith or attach hereto in support, evidence of-

- (a) having attained the age of not less than 18 years;
 - (b) my educational qualifications;
 - (c) my good character; and
 - (d) my employment.
2. The prescribed fee of ₦4.20K in *cash/postal orders/money order accompanies this my application.

Dated theday of20

Signature of Applicant

- Notes:
- 1. Evidence of age and good character may be in any form acceptable to the Board.
 - 2. Examination qualification is satisfied by production of at least W.A.S.C. with credit pass in mathematics.
 - 3. The name of the Licensed surveyor by whom employed must be shown on the application or in the alternative the name of the survey department in which the applicant is engaged in practical survey work and a note in the handwriting of the licensed surveyor or surveyor head in the department must accompany the application.

*Strike out the ones not applicable.

FORM 2

Certificate of enrolment as pupil surveyor

This is to certify that is
(name in full)

duly enrolled as a pupil surveyor pursuant to the Survey (Examination and Licensing of Surveyors) Regulations 1970.

Dated the day of 20

.....
Secretary to the Surveyors Licensing Board

FORM 3

**Application for examination as a surveyor*

To the Surveyors Licensing Board, Lagos.

I hereby apply to be examined
(name in full of applicant)

**in Part I/Part II to complete my examination under the Survey (Examination and Licensing of Surveyors) Regulations 1970.

- 2. I attach-
 - (a) evidence of my age;
 - (b) evidence of registration as a pupil surveyor;
 - (c) evidence of experience in field survey work.

**3. I submit my thesis/practical task in respect of Part II of the examination with the relevant certificate in support I have already submitted my thesis/practical task in respect of Part II of the examination.

4. I claim exemption from parts of the examination on the following grounds. *(Here set out the parts in respect of which exemption is claimed and the grounds together with evidence of qualification where essential in respect thereof)*

5. I enclose the fee of ** ~~₦10k~~/₦ 4.20K prescribed for the full/balance of the examination in **cash/postal/money order.

Dated the day of 20

.....
Signature of Applicant

*This form may be adopted as indicated for use in completing a partial pass and irrelevant parts may be deleted according to circumstances.

**Strike out the ones not applicable.

FORM 4

Certificate to accompany application for examination as a surveyor

I hereby certify that A.B. a registered pupil surveyor in my employ* performed field survey duties

FORM 4-continued

under my control and to my satisfaction during the periodto
and in my opinion he has been diligent, honest and sober in the performance of the said duties.
Dated theday of20

.....

Licensed Surveyor

* Alter where necessary to meet any individual case.

FORM 5

*Certificate in support of practical survey work submitted to
Surveyors Licensing Board*

To the Surveyors Licensing Board, Lagos.

I, C.D. of etc. licensed surveyor certify that onday of 20,
A.B. a candidate taking Part II of the licensed surveyors examination produced to me certain practical work which he then verbally declared was entirely his own work save to any necessary extent in respect of manual assistance rendered in the field and I am satisfied that the practical work now submitted by him to the Surveyors Licensing Board with this certificate and marked by me on the back thereof is his own work and I so certify accordingly.

Certified atthis day of 20

.....

Licensed Surveyor

FORM 6

Licence as a surveyor

To the Surveyors Licensing Board, Lagos.

This is to certify that A.B. ofetc.

having satisfactorily proved his qualification as a surveyor is hereby licensed for the survey of lands within Nigeria under and subject to the provisions of the Surveyors Registration Council of Nigeria Act.

[Cap. S18.]

Dated atthis day of 20

For and on behalf of the Surveyors Licensing Board

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Chairman

.....

Secretary