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GOVERNMENT NOTICE.

DEPARTMENT OF POSTS AND TELEGRAPHS

No. R. 2133.]

[28 December 1962.]

The State President has been pleased in terms of section eighteen of the Radio Act (Act No. 3 of 1952), to approve that the Radio Regulations, promulgated under Government Notice No. R. 611 of the 29th April, 1960, as amended, be further amended as follows with effect from 1st January, 1963:—

AMENDMENTS TO THE RADIO REGULATIONS.

The existing Radio Regulations, promulgated under Government Notice No. R. 611 of the 29th April, 1960, as amended, are hereby further amended as follows:—

Regulation 12.—By the deletion in Regulation 12 of everything up to the end of sub-regulation (1) and the substitution thereof of the following:—

“12. *Conditions of issue of an Amateur Station Licence*—

1. The Postmaster-General may, within his discretion, issue to any person approved by him a licence to operate an amateur radio station if such a person—

- (a) has attained the age of eighteen years;
- (b) is able fluently to speak Afrikaans or English;
- (c) has demonstrated his ability to send and receive the morse code at a speed of not less than 12 words (five characters to the word) per minute; and

(d) is in possession of an Amateur Radio Operator's Certificate issued by the Postmaster-General in terms of Part XIV of these Regulations.”

Regulation 13.—By the deletion in paragraph (a) of “(a), (c) or (d)” and the substitution thereof of “(b) or (c)” and by the insertion after the words “station equipment” of the words “by transmissions in morse code only.”

Regulation 21.—By the amendment of Regulation 21 (2) to read “fully loaded and/or fully modulated.”

Regulation 30.—By the deletion in Regulation 30 of the words “and also any application for the renewal of any such licence” and amendment of the word “approved” to read “approved.”

Regulation 45.—By deletion of Regulation 45 and the substitution thereof of the following:—

“45. *Inspection of Apparatus.*—The radio apparatus installed aboard any vessel which is registered in the Republic of South Africa shall be subject to inspection and approval by the Postmaster-General at any time.”

GOEWERMENSKENNISGEWING.

DEPARTEMENT VAN POS-EN-TELEGRAAFWESE

No. R. 2133.]

[28 Desember 1962.]

Dit het die Staatspresident behaag om kragtens artikel agtien van die Radiowet (Wet No. 3 van 1952) sy goedkeuring daaraan te heg dat die Radioregulasies, afgekondig by Goewermenskennisgewing No. R. 611 van 29 April 1960, soos gewysig, met ingang van 1 Januarie 1963, soos volg verder gewysig word:—

WYSIGINGS IN DIE RADIOREGULASIES.

Die bestaande Radioregulasies, afgekondig by Goewermenskennisgewing No. R. 611 van 29 April 1960, soos gewysig, word hierby soos volg verder gewysig:—

Regulasie 12.—Deur in Regulasie 12 alles tot aan die einde van subregulasie (1) te skrap en dit deur die volgende te vervang:—

„12. *Voorwaardes vir die uitreiking van 'n amateurstasielisensie.*

(1) Die Posmeester-generaal kan na goedgekeurde 'n lisensie om 'n amateurradiostasie te bedien, uitreik aan enige persoon wat deur hom goedgekeur is, indien so 'n persoon—

- (a) die ouderdom van agtien jaar bereik het;
- (b) Afrikaans of Engels vlot kan praat;
- (c) bewys gelewer het dat hy die morsekode teen 'n snelheid van minstens twaalf woorde (vyf tekens per woord) per minuut kan send en ontvang; en

(d) in besit is van 'n amateurradio-operateursertifikaat wat deur die Posmeester-generaal kragtens Deel XIV van hierdie Regulasies uitgereik is.”

Regulasie 13.—Deur in paragraaf (a) „(a), (c) of (d)” deur „(b) of (c)” te vervang en na die woord „stasie-uitrusting” die woorde „deur uitsendings alleen in morsekode” in te voeg.

Regulasie 21.—Deur Regulasie 21 (2) te wysig om te lui: „ten volle belas en/of ten volle gemoduleer is.”

Regulasie 30.—Deur in Regulasie 30 die volgende woorde te skrap: „asook elke aansoek om hernuwing van so 'n lisensie.”

Regulasie 45.—Deur Regulasie 45 te skrap en dit deur die volgende te vervang:—

„45. *Inspeksie van apparaat.*—Die radioapparaat aan boord van enige vaartuig wat in die Republiek van Suid-Afrika geregistreer is, kan te eniger tyd deur die Posmeester-generaal geïnspekteer en goedgekeur word.”

Regulations 68-70.—By deletion of Regulations 68-70 and the substitution thereof of the following:—

“68. No person shall install, use, sell or manufacture apparatus causing or capable of causing harmful interference which exceeds the limits prescribed in the specification, ‘Limits of Interference to Radiocommunication’, which shall be published in the *Government Gazette* by the Postmaster-General and which may be amended by the Postmaster-General from time to time.

69. The Postmaster-General may, at any time, in writing, require the owner, user or any person directing the use, installation, sale or manufacture of apparatus causing or capable of causing harmful interference to discontinue immediately the use, installation, sale or manufacture of such apparatus until such time as the interference has been reduced to its prescribed limit.

Failure to comply with such requirement shall be deemed to be a contravention of this regulation.

70. The Postmaster-General may appoint any person to make an investigation in order that the level of an interference may be measured and the owner, user, or any person directing the use, installation, sale or manufacture of apparatus causing or capable of causing interference shall render all reasonable facilities and assistance to such person in the conduct of the investigation.”

By the addition of the following Part XIV (Regulations 71-76):—

“PART XIV.

AMATEUR RADIO OPERATOR'S CERTIFICATE.

71. In order to obtain an amateur radio operator's certificate which, in terms of paragraph (d) of Regulation 12 (1), is an essential qualification for the grant of an amateur station licence, a person shall pass an examination set by the Postmaster-General on the Syllabus contained in Regulation 76.

72. Any person who has been approved by the Postmaster-General and is not ineligible by virtue of the conditions set out in paragraphs (a) to (c) of Regulation 12 (1) may be permitted to write such an examination on payment of the fee of R3.

73. The Postmaster-General shall arrange for examinations to be held at least once a year at centres selected with due regard to the convenience of the candidates and the Department.

74. Every candidate who passes such an examination shall be issued with an amateur radio operator's certificate which shall not be recognized for any purpose other than as an essential qualification for the issue of an amateur radio station licence. The possession of such a certificate shall not endow the holder with any right or claim to an amateur radio station licence.

75. An amateur radio operator's certificate shall be regarded as null and void when it has been issued to any person who—

- (a) through his own default, fails to take out a licence within two years after the date of issue of such certificate;
- (b) having had at least twelve months experience as an amateur, cancels his amateur station licence and does not apply for the re-issue of an amateur station licence within a period of five years after the date of cancellation of such licence.

76. *Syllabus for the Examination for an Amateur Radio Operator's Certificate.*—The examination paper, consisting of two parts, will be of three hours' duration and candidates must pass each part of the examination paper.

Regulasies 68-70.—Deur Regulasies 68-70 te skrap en hulle deur die volgende te vervang:—

„68. Niemand mag apparaat installeer, gebruik, verkoop of vervaardig nie wat nadelige steuring veroorsaak of kan veroorsaak bo die grense voorgeskryf in die spesifikasie, ‘Radiokommunikasie-steuringsgrense,’ wat die Posmeester-generaal in die *Staatskoerant* publiseer en wat hy van tyd tot tyd mag wysig.

69. Die Posmeester-generaal kan te eniger tyd skriftelik van die eienaar, gebruiker of enige persoon wat die gebruik, installering, verkoop of vervaardiging gelas van apparaat wat nadelige steuring veroorsaak of kan veroorsaak, vereis om die gebruik, installering, verkoop of vervaardiging van sulke apparaat onmiddellik te staak totdat die steuring verminder is tot by die voorgeskrewe grens.

Versuim om sodanige vereiste na te kom, sal as 'n oortreding van hierdie regulasie beskou word.

70. Die Posmeester-generaal kan enigeen aanstel om ondersoek in te stel sodat die peil van 'n steuring gemeet kan word, en die eienaar, gebruiker of enige persoon wat die gebruik, installering, verkoop of vervaardiging gelas van apparaat wat nadelige steuring veroorsaak of kan veroorsaak, moet alle redelike fasiliteite en hulp aan dié persoon verleen in die uitvoering van die ondersoek.”

Deur die volgende Deel XIV (Regulasies 71-76) by te voeg:—

„DEEL XIV.

AMATEURRADIO-OPERATEURSERTIFFIKAAT.

71. Om 'n amateurradio-operateursertifikaat te kan bekom, wat ooreenkomstig paragraaf (d) van Regulasie 12 (1) 'n noodsaaklike vereiste is vir die bestaan van 'n amateurstasielisensie, moet 'n persoon 'n eksamen aflê wat deur die Posmeester-generaal afgeneem word oor die leerplan vervat in Regulasie 76.

72. Enige persoon wat deur die Posmeester-generaal goedgekeur is en wat nie uit hoofde van die voorwaardes vervat in paragrawe (a) tot (c) van Regulasie 12 (1) verhinder word om in aanmerking te kom nie, kan toegelaat word om by betaling van die bedrag van R3 die eksamen af te lê.

73. Die Posmeester-generaal reël dat eksamens minstens een keer per jaar afgeneem word by sentrums wat met behoorlike inagneming van die gerief van die kandidate en die Departement gekies is.

74. 'n Amateurradio-operateursertifikaat word uitgereik aan elke kandidaat wat in die eksamen slaag, en dié sertifikaat word vir geen ander doel as die uitreiking van 'n amateurradiostasielisensie erken nie. Die besit van so 'n sertifikaat verleen aan die houer daarvan geen reg of aanspraak op 'n amateurradiostasielisensie nie.

75. 'n Amateurradio-operateursertifikaat word van nul en gener waarde geag as dit uitgereik is aan 'n persoon wat—

- (a) deur eie toedoen versuim om 'n lisensie uit te neem binne twee jaar na die datum van uitreiking van die sertifikaat;
- (b) na minstens twaalf maande ondervinding as amateur, sy amateurstasielisensie kanselleer en nie binne 'n tydperk van vyf jaar na die datum van kansellering daarvan om die heruitreiking van 'n amateurstasielisensie aansoek doen nie.

76. *Leerplan vir die eksamen vir 'n amateurradio-operateursertifikaat.*—Drie uur word toegelaat vir die eksamenvraestel, wat uit twee dele bestaan. Kandidate moet in elke deel van die vraestel slaag.

PART I.

Radio Regulations.

Knowledge of Parts V and VII and Regulations 49-55 and 60-66 of the Radio Regulations.

PART II.

Theoretical knowledge of the following:—

1. *Transmitter Interference.*—Frequency stability. Avoidance of harmonic radiation and of interference by shock excitation; use of key click filters and other means of preventing spurious emissions. Dangers of over-modulation. Devices for reducing interference with nearby radio receivers.
2. *Elementary Electricity and Magnetism.*—Elementary theory of electricity; conductors and insulators; units; Ohm's law; resistances in series and parallel; power, permanent magnets and electromagnets and their use in radio work. Self and mutual inductance; types of inductors used in receiving and transmitting circuits. Capacitance; constructions of various types of capacitors and their arrangement in series and/or parallel.
3. *Radio Principles (Elementary).*—Alternating currents and voltages. Alternating current theory incorporating circuits with inductance, capacitance and resistance. Impedance, resonance, coupled circuits, acceptor and rejector circuits.
4. *Thermionic valves and circuitry.*—Construction of valves; characteristic curves. Diodes, triodes and multi-electrode valves. Use of valves as oscillators, amplifiers, detectors and frequency changers. Power rectification; power packs, stabilisation and smoothing.
5. *Radio receivers.*—Typical receivers; principles and operation of T.R.F. and superheterodyne receivers. C.W. reception. Interference caused by receivers.
6. *Low power transmitters.*—Oscillatory circuits; use of quartz crystals to control oscillators. Frequency multipliers. Power amplifiers. Methods of keying transmitters. Methods of amplitude modulation.
7. *Propagation.*—Wavelength, frequency, velocity. Nature and propagation of radio waves. Ionospheric and tropospheric conditions and their effect on propagation.
8. *Aerials.*—Common types of receiving and transmitting aerials. Transmission lines. Directional systems. Aerial coupling to lines and transmitters.
9. *Measurements.*—Measurements of frequency and simple frequency meters (including crystal controlled types). Use of verniers and other interpolation methods. Artificial aerials and their use for lining up transmitters. Measurement of anode current and voltage and power input to final stage.

DEEL I.

RADIOREGULASIES.

Kennis van Deel V en Deel VII en Regulasies 49-55 en 60-66 van die Radioregulasies.

DEEL II.

Teoretiese kennis van die volgende:—

1. *Sendersteuring.*—Frekwensiestabiliteit. Vermyn- ding van bofrekwensiestraling en van steuring deur skokopwekking; gebruik van sleutelklikfilters en ander metodes om parasietstraling te voorkom. Gevare van oormodulasie. Maniere om steuring op naburige radio- ontvangtoestelle te beperk.
2. *Elementêre elektrisiteit en magnetisme.*—Elemen- têre teorie van elektrisiteit; geleiers en isolators; een- hede; die Wet van Ohm; weerstande in serie en parallel; krag, permanente en elektromagnete en hul gebruik in radiowerk. Self- en wedersydse induk- tansie; tipes induktors wat in ontvang- en sendkringe gebruik word. Kapasitansie, konstruksie van verskeie tipes kapasitors en hulle rangskikking in serie en/of parallel.
3. *Radiobeginsels (Elementêr).*—Wisselstrome en spanning. Wisselstroomteorie met inbegrip van kringe met induktansie, kapasitansie en weerstand. Impedansie, resonansie, gekoppelde kringe, deurlaat- en versterkingskringe.
4. *Termioniese buise en kringe.*—Konstruksie van buise; kenkrommes. Diodes, triodes en meerelektrode- buise. Gebruik van buise as ossillators, versterkers, detektors en frekwensieomsetters. Kraggelykkrigting, kragvoereenhede, stabilisering en afvlakking.
5. *Radio-ontvangtoestelle.*—Tipiese ontvangers, beginsels en werking van ingestemde radiofrekwensie- (T.R.F.) en superheterodine-ontvangers. Gelykglofont- vangs. Steuring veroorsaak deur ontvangtoestelle.
6. *Senders met 'n geringe vermoë.*—Ossilleerkringe; gebruik van kwarskristalle om ossillators te beheer. Frekwensievermenigvuldigers. Kragversterkers. Metodes om senders te sleutel. Metodes van ampli- tudemodulasie.
7. *Voortplanting.*—Golflengte, frekwensie, snelheid. Aard en voortplanting van radiogolwe. Ionosferiese en troposferiese toestande en hulle uitwerking op voort- planting.
8. *Antennes.*—Gewone tipes ontvang- en sendan- tennes. Transmissielyne. Rigstelsels. Antennekoppe- ling aan lyne en senders.
9. *Meting.*—Meet van frekwensie, en eenvoudige frekwensiemeters (met inbegrip van kristalbeheerde tipes). Gebruik van nonius en ander interpolasie- metodes. Kunsantennes en hul gebruik om senders in te stem. Meet van anodestroom en spanning en ingangsvermoë na die eindtrap.

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