Attachment 4

Method and program of personal preparation assessment test

The admission test consists of a multiple choice test comprising 36 questions; for each question the candidate must indicate only one solution among 3 possibilities. One and only one of the answers suggested is correct. The test is passed if at least 24 correct answers are given. Test duration will be communicated by the Commission.
The subject areas of the questions are defined by the following list of topics.

Electromagnetic fields and circuits (8 questions):

1. Electric circuits fundamentals

2. Phasors and circuits in sinusoidal regime

3. Frequency response of linear circuits

4. Transmission lines

5. Constitutive relations

6. Plane waves; reflection and refraction laws

7. Basic principles of antennas

Electronics (16 questions):

1. The junction diode: basic circuits with diodes

2. MOS and bipolar transistors: operation regions and amplification stages

3. Operational amplifiers and their linear applications

4. Nonlinear applications of operational amplifiers

5. Circuits with feedback and stability criteria

6. Logic gates and families

Electrical communications (12 questions):

1. Fourier series and transform

2. Analog modulations: AM and FM

3. Sampling theorem

4. Switching

5. Time and frequency multiplexing

6. TLC systems and networks

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