AI Junior Executive (Electronics)
Junior Executive (Electronics) Engineering Degree in Electronics / Tele Communication / Electrical with specialization in Electronics with Ist class (60%) OR M.Sc Degree or its equivalent with wireless communication,Electronics, Radio Physics or Radio Engg. as a special Subject. OR Equivalent with 1st Class (50% for SC/ST).

exam for both posts are of objective type and after written exam there are interview for both post but there is an additional voice test for the post of Junior Executive ATC.

exam paper of both examination is of two hours and exam paper consists two sections technical section and non technical section. however there are no fixed number of questions in exam some times total number of question may be 100 oir some time it may be 150. technical section contains 55% to 60% (questions from electronics / communication / microwave / digital electronics / control system / computer / information technology) non technical questions contains 40% to 40 % questions (from general knowledge, English language, reasoning and general mathematics).

1. In a communication system, noise is most likely to affect the signal
(a) at the destination
(b) In the channel
(c) in the information source
(d) at the transmitter
2. Indicate the false statement. Fourier analysis shows that the saw tooth wave consist of
(a) fundamental and subharmonic sine waves
(b) a fundamental sine wave and an infinite number of harmonics
(c) fundamental and harmonic sine waves whose amplitude decreases with the harmonic number
(d) sinusoidal voltages, some of which are small enough to ignore in practice
3. One of the following types of noise becomes a great importance at high frequencies. Is the
(a) random noise
(b) shot noise
(c) impulse noise
(d) transit-time noise
4.Indicate the false statement. The square of the thermal noise voltage generated by a resistor is proportional to
(a) its temperature
(b) Its resistance
(c) Boltzmann’s Constant
(d) the bandwidth over which it is measured
5.If the plate supply voltage for a plate modulated class C amplifier is V, the maximum plate-cathode voltage could be almost as high as
(a)4v
(b)3v
(c)2v
(d)1v
6. Which one will be stable if characteristics equation is
(a) AS^2+BS+C
(b) AS^2-BS-C
(c) AS^4+BS^2+CS+D
(d) -AS^2+BS-C
7.When microwave follows curvature of the earth, this I know as
(a) fading
(b) Ducting
(c) troposphere scatter

(d) ionosphere reflection
8. Broadband long distance communications are originally made possible by the advent of
(a) telegraph cables
(b) repeater amplifiers
(c) HF radio
(d) Geostationary satellites
9. Switching systems
(a) Improve the efficiency of data transfer
(b) are not used in data system
(c) require additional lines
(d) are limited to small data networks
10. Basic group B
(a) occupies the frequency range from 60 to 108 k hz
(b) consist of erect channels only
(c) is formed at the group translating equipment
(d) consist of five super group
11. In differential amplifiers, the common emitter current is made constant
(a) To make Ad (differential gain) very small
(b) To make Ac (common mode gain) very small
(c) To make the amplifier symmetrical
(d) To keep CMRR constant
12. Given BCD number 1001 0011, its decimal equivalent is
(a) 147
(b) 143
(c) 93
(d) 39
13. An amplifier has voltage gain of 50. this gain in db will be
(a) 17 db
(b) 31 db
(c) 34 db
(d) 68 db
14. In a E plane Tee, the output of the two rams are
(a) 180 degree out of phase
(b) In the same phase
(c) 90 degree out of phase
(d) none of these
15. waveguide are generally made of
(a) Aluminium
(b) Bronze
(c) Both (a) and (b)
(d) none of these

Answers
1.(b) 2.(a) 3.(d) 4.(a) 5.(a) 6.(a) 7.(b) 8.(b) 9.(a) 10.(a) 11.(b) 12.(c) 13.(c) 14.(a) 15.(c)

The AAI written Question paper dwells of two sections first: – Non Technical, second Technical, The first section has 4 types of questions

1. GK (General Knowledge questions)
2. General EnglishThe general english test questions are fill in the blanks type and errors
3. Reasoning
4. Other (puzzles, etc.)

Section 2:
The subjects for the section 2 are Microwave & Radar, Communication, Linear – Digital Devices,

Networking (CN)
Important sample technical questions for AAI Placement Test:
Electronics (engineering), Communication, Electrical, B.Tech
What is a radar used for?
Which frequency do we use in MTI radar (COHO)?
What do you mean by CMRR of an amplifier?
Conversion related questions (binary to hexadecimal, decimal to hex)
Numericals (peak power)
What do you mean by FPGA?
In which OSI layer do we use the bridge?
Various other questions based on OSI Layer (Computer networking questions), TCP/IP protocols (multiple choice type)
Why do we use a delayed AGC?
What is VCO?
Why do we use firewalls?
What is mirroring, RAID, etc.
Relation between transmitted power & range If we increase power by 16, range increases by?
Where do we use an AGC in a circuit?