

## AAI Sample Questions

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 Broadband long distance communications are originally made possible by the advent of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  $A_d$  (differential gain) very small
- (b) To make  $A_c$  (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 arms 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) Aluminum
- (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)