



Family name:

Name:

ID:

QUESTION	a	b	c
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All the items have been prepared thinking of the field of Industrial Electronic Equipment.

Correct answer: +1 Wrong answer: -1/3 No answer: 0

1.- What is the most appropriate material to shield low-frequency H-fields?

- c) Copper
- b) Ferrite
- c) Graphite

2.- Select the correct statement:

- a) Isolators CANNOT store charges
- b) Conductors CANNOT store charges
- c) Both conductors and isolators can store charges

3.- Select the correct statement:

- a) In far field all waves become plane waves.
- b) In far field all waves become electric waves.
- c) In far field all waves become magnetic waves.

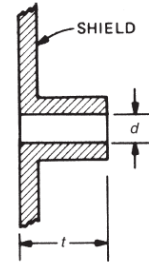
4.-To improve the magnetic shielding at low frequency

- a) It is recommended to use a material with large magnetic permeability
- b) It is recommended to use a material with large conductivity
- c) It is recommended to use a material with large permittivity

- 5.- We can assume that an electronic system is working in far field if
- a) The length of the cables is lower than $\lambda/(2\pi)$
 - b) The distance to the electromagnetic source is higher than $\lambda/(2\pi)$.
 - c) The impedance is lower than 377Ω .

- 6.-Increasing the thickness of a shield
- a) The absorption losses are increased
 - b) The reflective losses are increased
 - c) do not modify the attenuation

- 7.- If the cutoff frequency of a circular waveguide (see fig.) is 1GHz to increase the effectiveness of the shielding we can
- a) Increase the diameter “d”
 - b) Reduce the diameter “d”
 - c) Reduce the length of the hole “t”



- 8.- The shielding effectiveness increases
- a) When the thickness of the shield is reduced
 - b) When the conductivity of the material is high
 - c) When the permittivity of the material is low

- 9.-Absorption losses
- a) Increase with the material thickness
 - b) Increase with resistivity
 - c) Decrease with the frequency

- 10.-Reflective losses
- a) Increase with the material thickness
 - b) Increase with resistivity
 - c) Decrease with the frequency