Assignment 2

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1) The power transmitted by a broadband FM tower antenna is:  
   - 100 – 1000 KW  
   - 10 – 100 KW  
   - 1 – 10 KW  
   - 100 W – 1 KW  

   No, the answer is incorrect.  
   Score: 0  
   Accepted Answers:  
   10 – 100 KW

2) The body temperature of a person is around 37°C. After use of cell phone for approx. 20 – 30 minutes continuously on side of one ear, the approximate temperature of the ear lobe will be:  
   - 40°C  
   - 39°C  
   - 38°C  
   - 37°C

   No, the answer is incorrect.  
   Score: 0  
   Accepted Answers:  
   37°C

3) People living within _____ meter in the main beam of cell tower antenna are considered to be in extremely high radiation zone.  

No, the answer is incorrect.

The body temperature of a person is around 37°C. After use of cell phone for approx. 20 – 30 minutes continuously on side of one ear, the approximate temperature of the ear lobe will be:  

Score: 0  
Accepted Answers:  
37°C
No, the answer is incorrect.
Score: 0
Accepted Answers: 

50

Common Data for Questions 4-6: A printed dipole antenna is designed at 900 MHz on FR4 substrate having $\varepsilon_r = 4.4$, $h = 1.6$ mm and $\tan\delta = 0.02$. The width of the dipole is 5 mm.

4) The approximate resonant length of the dipole is:
   - 184 mm
   - 148 mm
   - 92 mm
   - 74 mm

No, the answer is incorrect.
Score: 0
Accepted Answers: 

148 mm

5) Approximate gain of the antenna is:
   - 5.0 dBi
   - 4.0 dBi
   - 2.0 dBi
   - 1.0 dBi

No, the answer is incorrect.
Score: 0
Accepted Answers: 

2.0 dBi

6) The radiation pattern of the dipole antenna is:

E-plane

H-plane

-
7) The input resistance $R_{\text{in}}$ of a 2-fold half wavelength dipole antenna is approximately:

- 68 $\Omega$
- 136 $\Omega$
- 272 $\Omega$
- 1088 $\Omega$

No, the answer is incorrect.
Score: 0
Accepted Answers: 272 $\Omega$

8) The length and diameter of a dipole antenna are 28 cm and 8 mm, respectively. Its approximate resonance frequency is:

- 250 MHz
- 500 MHz
- 750 MHz
- 1 GHz

No, the answer is incorrect.
Score: 0
Accepted Answers: 500 MHz

9) A $\lambda/2$ dipole antenna is designed at 2.45 GHz. If a metallic plate is placed behind the antenna at a distance of $\lambda/4$, then:

- Frequency doubles
- Bandwidth doubles
- Gain doubles
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: Gain doubles
Bandwidth of a dipole antenna can be increased by:

- Increasing the diameter of the dipole
- Using printed bow-tie configuration
- Using bi-conical configuration
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above