Multimedia Pilot Post-Test Questions

Test 1 (based on the energy harvesting video – energy01)

1. What is energy harvesting? _____

   _____

2. According to the lesson from the video, which types of communication devices are targeted? _____

   _____

3. According to the video, what limitation of the devices is intended to be addressed? _____

   _____

4. Radio frequency energy is emitted by sources that generate high electromagnetic field. True or False? ___

5. TV signals are not examples of electromagnetic field. True or False? _____

Test 2 (based on the energy harvesting video – energy02)

1. What type of energy source can be found by spinning the devices? _____

   _____

2. According to the video lesson, a mobile device may be charged using the vibration inside a vehicle. True or False? _____

3. What energy transformation is needed when charging a mobile device using the vibration inside a vehicle? _____

   _____

4. According to the video, wind energy is not appropriate for mobile charging. True or False? ___

5. Wind energy can be used in the context of vehicular networks for powering road-side units. True or False? ___

Test 3 (based on the energy harvesting video – energy03)

1. What energy conversion can be performed using photovoltaic power station?

   _____

   _____

2. Smaller scale solar panels can be attached to the mobile devices instead of mobile phone chargers. True or False? _____

3. What types of mobile/wireless devices can be powered by hydro-based energy? _____

   _____

4. How do sea water batteries work? _____

   _____

5. According to the video, new energy harvesting technologies will eventually result in the extinction of mechanical sources of energy. True or False? ___

Test 4 (based on the football video – football01)

1. What technology provides the highest video quality? _____

   _____

2. When he tries to continue watching the match without reducing its quality, he was frustrated because the connection freezes. Why? _____

   _____

3. David continues watching the match, without significantly reducing the video quality, benefiting from adaptation. True or False? _____

4. How did adaptation work for David? _____

   _____

5. What additional benefits does the adaptation provide? _____

   _____

Test 5 (based on the coffee house video)

1. What technology is most suitable for video calling on the move? _____

   _____

2. What happens when network bandwidth cannot cope with the required video quality? _____

   _____

3. Wi-Fi networks are protected from unauthorized access in public spaces through a data vault – True or False? __

4. How can multimedia video be best adapted when moving from outdoor to an indoor environment? _____

   _____

5. No matter what technology is used, you can still have acceptable quality. True or False? ___

Test 6 (based on the car video)

1. When is the mobile network connection able to provide best connection parameters? _____

   _____

2. Which part of a multimedia stream takes most of the data bandwidth? ____

   _____

3. When watching a concert, audio is less important than video. True or False?

   _____

4. How can data be best adapted when watching a concert? _____

   _____

5. Adaptation enables uninterrupted viewing of live concert streaming. True or False? _____

Answer to Post-Test questions

Test 1 (based on the energy harvesting video – energy01)

1. Energy harvesting is about harnessing energy from sources in our environment
2. Mobile and Wireless
3. Battery limitation
4. True
5. True

Test 2 (based on the energy harvesting video – energy02)

1. Kinetic energy
2. True
3. Converts mechanical energy to electrical
4. False
5. True

Test 3 (based on the energy harvesting video – energy03)

1. Solar energy to electrical energy
2. True
3. Under-water and floating wireless sensor networks
4. Under hydro dynamic conditions
5. False

Test 4 (based on the football video – football01)

1. Optical fiber
2. Bandwidth limitation of mobile data
3. True
4. The server discovered that he can no longer receive high quality video and starts to transmit lower resolution and sound quality which enables him to watch the live football match event.
5. Reduced mobile data usage, implying reduced cost

Test 5 (based on the coffee house video)

1. LTE
2. Video and audio freezing
3. False
4. By switching from 4G/LTE to Wi-Fi
5. True

Test 6 (based on the car video)

1. When you are stationary
2. Video
3. False
4. Reducing video frame rate
5. True