Week 5 Assignment

Due on 2020-10-21, 23:59 IST

1. The nearest seismological station to a town is in a distance of 60 km. The distance to the nearest station was 120 km. If the earthquake is of magnitude 5.5, what is the distance to the nearest station?

   - True
   - False

2. A seismograph is a device used to measure ground motion. Which of the following is not a component of a seismograph?

   - Force transducer
   - Amplifier
   - Recorder
   - Force meter

3. A seismograph needs to be installed in the Himalayan region to study earthquakes. Which of the following locations would be ideal for such a seismograph?

   - True
   - False

4. What is the ratio of the Earth's surface velocity to the surface wave velocity?

   - Greatest Than 1
   - Less than 1
   - Depends on the polar ratio
   - Cannot be determined

5. The dynamic range of a digital seismograph is 1005 and it has a sensitivity of 2546 m/s. In a survey, amplitudes are observed to saturate at 154 kHz. What is the least count of the instrument?

   - True
   - False

6. True or False: When you have limited seismic stations, it's better to use less seismic stations on one site to estimate the true magnitude of an earthquake.

   - True
   - False

7. True or False: Regional seismic networks are tuned to the higher frequency part of the seismic spectrum to see regional seismic waves.

   - True
   - False

8. A seismograph is:

   - Force transducer
   - Force meter
   - Recorder
   - Force detector

9. It is observed that in a seismic system, when the angular frequency of ground displacement equals the natural frequency of the seismograph, the displacement requirement becomes 1.0. What is the damping ratio of the seismograph?

   - True
   - False

10. If the sensitivity to strong ground motion is needed, ________ (seismograph, seismocronograph) is preferred.

    - True
    - False

11. True or False: Intrinsically low noise data acquisition is used by the record with the trigger instance as zero time.

    - True
    - False

12. True or False: Surplus waves in seismogram can be enhanced by high-pass filters.

    - True
    - False

13. A seismograph station is to be installed in a region of area 200 sq. km with a maximum spacing between stations at 10 km. What would be the minimum number of stations in the region?

    - True
    - False