



Applied Remote Sensing Training (ARSET) Program

Monitoring Tropical Storms for Emergency Preparedness

Part 2 Homework

Homework Questions

Select a past cyclone of interest, in a region of interest for you. You will use that cyclone and observe it using satellite data. If you need help finding a cyclone, below are cyclone report archives:

- <https://www.nhc.noaa.gov/data/tcr/>
- <http://www.prh.noaa.gov/cphc/summaries/>
- <http://www.metoc.navy.mil/jtwc/jtwc.html?cyclone>

Question 1

Typhoons and hurricanes are different types of storms.

Answers: (bold correct)

- a. True
- b. False**

Question 2

Hurricane categories are decided by:

Answers: (bold correct)

- a. Ocean surface temperature
- b. Wind scale**
- c. Precipitation

Question 3

Most deaths associated with tropical storms in the U.S. result from:

Answers: (bold correct)

- a. Strong winds and tornados
- b. Storm surge and coastal flooding**
- c. Precipitation and lightning

Question 4

This satellite and sensor is useful for monitoring power outages after a storm:

Answers: (bold correct)

- a. SNPP (VIIRS)**
- b. Terra (MODIS)
- c. Aqua (MODIS)

Question 5

This can “see” through clouds and detect surface inundation.

Answers: (bold correct)

- a. SRTM
- b. MODIS
- c. SAR**

Question 6

This flood monitoring tool can provide information about river flooding during a storm:

Answers: (bold correct)

- a. MODIS NRT Flood Mapping
- b. Global Flood Monitoring System (GFMS)**
- c. GDACS

Question 7

This would be a useful site to monitor a storm surge related to a cyclone in coastal Bangladesh.

Answers: (bold correct)

- a. NHC
- b. GDACS**
- c. NASA Worldview

Question 8

This NASA data provides near real-time data and forecasts of wind speed.

Answers: (bold correct)

- a. IMERG
- b. MODIS true color images
- c. GEOS-5**

Question 9

Once you learn to access NASA remote sensing data you will not need any other information for emergency preparedness.

Answers: (bold correct)

- a. True
- b. False**

Question 10

Tropical cyclone Ava dropped extremely heavy rainfall over Madagascar as it passed over the island country from January 5 to 7, 2018.

Go to GFMS (<http://flood.umd.edu>) and enter the Start Time (00Z05Jan2018) and End Date (21Z07Jan2018) for the storm.

Click on 'Animate' and watch flood detection and intensity during this period.

Which of the following dates and times match with when flooding covered the largest area of the island?

Answers: (bold correct)

- a. 03ZZ05Jan2018
- b. 03ZZ06Jan2018
- c. **03ZZ07Jan2018**