



Applied Remote Sensing Training (ARSET) Program

Earth Observations for Disaster Risk Assessment & Resilience

Homework Questions

Question 1

Which of the following is not a characteristic of Disaster Risk Assessment?

Answers: (bold correct)

- a. A process to determine the nature and extent of risks
- b. Eliminates all risk from future hazards and disasters**
- c. Focuses on potential harm to people, property, environment, etc.
- d. Requires analysis of hazards and existing conditions of exposure and vulnerability

Question 2

Based on UN data, what was the most common global hazard to occur from 1998 - 2017?

Answers: (bold correct)

- a. Flood**
- b. Earthquake
- c. Landslide
- d. Wildfire

Question 3

Based on UN data, what type of disaster caused the most number of deaths from 1998 - 2017?

Answers: (bold correct)

- a. Drought
- b. Earthquake**
- c. Flood
- d. Landslide

Question 4

For past hazard assessment data (>18 years), which data source has the longest temporal information for extreme heat?

Answers: (bold correct)

- a. MODIS
- b. GLDAS
- c. MERRA-2**
- d. TRMM

Question 5

What does SEDAC stand for?

Answers: (bold correct)

- a. Socioeconomic Data Adacemy at Columbia
- b. Scientific Enterprise for Data Applications
- c. Socioeconomic Data and Aeronautics Consortium
- d. Socioeconomic Data and Applications Center**

Question 6

SEDAC's Gridded Population of the World (GPW), v4 is a raster dataset with an output resolution of 30 arc-seconds (approximately 1 km at the equator).

Answers: (bold correct)

- a. True**
- b. False

Question 7

Which SEDAC data collection can be used for both exposure and vulnerability assessment?

Answers: (bold correct)

- a. **Gridded Population of the World (GPW), v4**
- b. Global Reservoir and Dam (GRanD), v1
- c. Global Roads Open Access Data Set (gROADS), v1

Question 8

Based on the climatological rainfall demonstration, which part of Mozambique receives maximum rain (>10 mm/day) in January and February?

Answers: (bold correct)

- a. Entire country
- b. South
- c. **North**
- d. Only coastal regions

Question 9

Based on the rainfall time series demonstration, which month and year had the maximum rain over Houston?

Answers: (bold correct)

- a. June 2002
- b. January 2005
- c. **August 2017**
- d. May 2015

Question 10

Go to [NOAA's webpage](#). Scroll down to "Number of Tropical Cyclones per 100 Years." For the Atlantic Basin, when is the peak hurricane season?

Answers: (bold correct)

- a. Mid-June to late July
- b. Mid-July to late August
- c. Mid-August to late October**
- d. Mid-September to mid-November

Question 11

Which NASA data are useful for cyclone intensity assessment?

Answers: (bold correct)

- a. Tropical Rainfall Measuring Mission (TRMM) Multi-satellite Precipitation Analysis (TMPA)
- b. Moderate Resolution Imaging Spectroradiometer (MODIS)
- c. MERRA-2: Modern-Era Retrospective Analysis for Research and Applications, Version 2
- d. Both A & C**

Question 12

Which of the following are useful for near real-time and future disaster risk assessment?

Answers: (bold correct)

- a. Integrated Multi-satellite Retrievals for GPM (Global Precipitation Measurement) (IMERG)
- b. Goddard Earth Observing System Version 5 (GEOS-5)
- c. Joint Typhoon Warning Center
- d. All of the above**