सत्यं विधेमानम्

# WEST BENGAL STATE UNIVERSITY

B.A./B.Sc. Honours 6th Semester Examination, 2023

## GEOACOR14T-GEOGRAPHY (CC14)

Time Allotted: 2 Hours | Full Marks: 40

*The figures in the margin indicate full marks.*
*Candidates should answer in their own words and adhere to the word limit as practicable.*

### FOR REGULAR SYLLABUS

### DISASTER MANAGEMENT

### CATEGORY-A

**Answer any *one* question from the following (within 600 words)** 10×1 = 10

1. Highlight the responses to hazards with reference to preparedness, trauma and aftermath. Explain resilience and capacity building as responses to hazards. 6+4

2. What are the major causes of occurring landslide in North-Western Himalayan region? How can we reduce the worse effect of landslide by proper management? 6+4

### CATEGORY-B

**Answer any *four* questions from the following (within 150 words each)** 5×4 = 20

3. What are the consequences of radio-active hazard?

4. What is the meaning of hazard mapping and how important is it for disaster preparedness? 2+3

5. Briefly discuss the key features of the National Disaster Management Act, 2005.

6. Briefly discuss the community-based risk assessment model.

7. Distinguish between 'quasi natural' and 'man made' hazards with examples.

8. Describe the factors favouring the development of tropical cyclone.

9. Briefly discuss the impact of storm surge in the coastal region during a tropical cyclone.

### CATEGORY-C

**Answer any *five* questions from the following** 2×5 = 10

10. Give the names of data sources for preparing hazard maps.

11. State the difference between risk and vulnerability.

12. What is Richter scale?

13. Define resilience in hazard management.

14. Mention how α particles and β particles (Alpha and Beta) damage the human body.

15. Define seismic gap.
16. What is meant by vulnerability assessment?
17. Define meteorological hazard with example.
18. What is capacity building in hazard management?

## FOR TRUNCATED SYLLABUS

## REMOTE SENSING AND GIS

### CATEGORY-A

**Answer any *one* question from the following within 600 words** $10\times1 = 10$

1. What do you mean by visible spectrum? How do you prepare a Standard False Colour Composite (FCC)? Describe the processes of Land use and Land cover classification using multispectral (MSS) images. 3+3+4
2. What are the different segments of GNSS? Describe each segment in brief. 2+8

### CATEGORY-B

**Answer any *four* questions from the following within 150 words each** $5\times4 = 20$

3. Distinguish between spatial and non-spatial data with examples.
4. What is passive remote sensing?
5. Mention the types of sensors and their resolutions used in Indian Remote Sensing (IRS) satellites.
6. State the role of colour, tone and texture in image interpretation.
7. Differentiate between raster and vector data format.
8. Distinguish between geo-coding and geo-referencing.
9. What is the importance of GNSS as a tool for surveying?

### CATEGORY-C

**Answer any *five* questions from the following within 50 words each** $2\times5 = 10$

10. Define Swath.
11. What is pixel?
12. What is thermal remote sensing?
13. Define atmospheric window.
14. Compare Landsat TM and OLI data.
15. What do you mean by overlay analysis in GIS?
16. Mention different types of vector layers.
17. Why attribute table is required in GIS?
18. How many satellites are needed for a GPS device to start navigating?

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