

Code No.

V – 2348

**Entrance Examination for Admission to the P.G. Courses in the
Teaching Departments, 2025**

CSS

CLIMATE CHANGE AND DISASTER MANAGEMENT

For office use only

General Instructions

1. The Question Paper is having 100 Objective Questions, each carrying one mark.
2. The answers are to be (✓) 'tick marked' **only** in the "**Response Sheet**" provided.
3. **Negative marking : 0.25 marks** will be deducted for each wrong answer .

Time : 2 Hours

Max. Marks : 100

To be filled in by the Candidate

Register Number	in Figures								
	in words								

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Choose appropriate answer from the options in the questions.

(100 × 1 = 100 marks)

1. The term "carbon footprint" refers to
 - A. Amount of carbon in soil
 - B. Total greenhouse gas emissions of an entity
 - C. Amount of carbon stored in forests
 - D. Size of carbon particles in air

DO NOT WRITE HERE

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2. ENSO stands for
- A. Equatorial North Sea Oscillation
 - B. Earth Natural Solar Output
 - C. Environmental Natural Seasonal Order
 - D. El Niño Southern Oscillation
3. The albedo effect is related to:
- A. Chemical weathering
 - B. CO₂ absorption
 - C. Reflectivity of Earth's surface
 - D. Ozone depletion

4. The triple bottom line approach includes:
- A. Planet, Policy, People
 - B. People, Profit, Planet
 - C. Politics, Pollution, Peace
 - D. Planet, Programs, Practice
5. The Keeling Curve represents:
- A. CO₂ concentration in the atmosphere
 - B. Global temperature rise
 - C. Deforestation rate
 - D. Ozone hole extent
6. Cap and Trade is a
- A. Carbon offset project
 - B. Waste treatment technology
 - C. Regulatory emissions control method
 - D. Renewable energy subsidy
7. Which of the following is a negative feedback loop in climate systems?
- A. Melting ice reduces albedo
 - B. More CO₂ → more plant growth → more CO₂ uptake
 - C. Ocean warming releases methane
 - D. Permafrost melting releasing methane
8. The world's first climate-resilient mangrove project supported by the GCF was launched in:
- A. Vietnam
 - B. Bangladesh
 - C. India
 - D. Philippines

9. The precautionary principle in environmental law implies:
- A. Delaying action until proof is available
 - B. Acting when there's scientific certainty
 - C. Waiting for policy guidelines
 - D. Acting to prevent harm even with incomplete evidence
10. India's INDC under the Paris Agreement focuses on:
- A. Emissions trading
 - B. 100% renewable electricity by 2030
 - C. Reducing emission intensity relative to GDP
 - D. Nuclear energy expansion
11. The Clean Development Mechanism (CDM) is associated with:
- A. Kyoto Protocol
 - B. Paris Agreement
 - C. Rio+20
 - D. Montreal Protocol
12. The Green Hydrogen Mission in India focuses on:
- A. Natural gas reforming
 - B. Fossil-based hydrogen
 - C. Hydrogen from coal gasification
 - D. Electrolysis using renewable energy
13. Which of the following is considered a climate-smart agriculture technique?
- A. Slash and burn
 - B. Monoculture
 - C. Agroforestry
 - D. Tillage farming
14. The principle of climate justice emphasizes:
- A. Fair treatment of vulnerable communities
 - B. Technological neutrality
 - C. Economic efficiency
 - D. Equal carbon shares

15. The term tipping point in climate science refers to
- A. Climate neutrality
 - B. Maximum CO₂ concentration
 - C. When climate change becomes visible
 - D. Sudden and irreversible change
16. Name of the fund announced at COP28 to help vulnerable nations deal with climate loss and damage
- A. The Green Climate Fund
 - B. The Resilience Fund
 - C. The Loss and Damage Fund
 - D. The Climate Recovery Fund
17. Which of the following international frameworks supports climate education as a core component?
- A. Paris Agreement Article 12
 - B. Geneva Convention
 - C. WTO Trade Agreement
 - D. Kyoto Protocol
18. The principle of inter-generational equity means:
- A. Prioritizing the needs of current policymakers
 - B. Limiting decision-making to those over 40
 - C. Ensuring future generations have access to a liveable environment
 - D. Transferring financial debt to future governments
19. Which of the following is considered a positive feedback loop in climate change?
- A. Increased vegetation absorbing more CO₂
 - B. Reduction in fossil fuel consumption
 - C. Ocean acidification decreasing CO₂ absorption
 - D. Melting permafrost releasing methane

20. Which mechanism under the UNFCCC helps countries with the monitoring, reporting, and verification (MRV) of emissions reductions?
- A. Enhanced Transparency Framework (ETF)
 - B. Carbon Trading Mechanism
 - C. Kyoto Protocol Commitments
 - D. Global Greenhouse Gas Initiative
21. Ocean acidification primarily results from:
- A. Oil spills
 - B. CO₂ absorption
 - C. Plastic pollution
 - D. Eutrophication
22. REDD+ is a global effort to:
- A. Enhance forest carbon stocks
 - B. Manage radioactive waste
 - C. Reduce emissions from urban transport
 - D. Promote desalination
23. Montreal Protocol addresses the emission of
- A. Greenhouse gases
 - B. Nitrogen oxides
 - C. Radioactive particles
 - D. Ozone-depleting substances
24. The Paris Agreement, adopted at COP21 in 2015, introduced which key concept for climate action?
- A. Binding global carbon price
 - B. Nationally Determined Contributions (NDCs)
 - C. Strict penalties for non-compliance
 - D. A fixed global emissions reduction target for all nations

25. The radiative forcing effect refers to:
- A. The process by which greenhouse gases heat the Earth's surface
 - B. The energy released by solar radiation to the Earth
 - C. The amount of heat trapped by greenhouse gases in the atmosphere
 - D. The cooling effect of clouds on Earth's surface temperature
26. What is global warming?
- A. Sudden increase in weather change
 - B. Long-term rise in Earth's average surface temperature
 - C. Increase in volcanic activity
 - D. Ozone layer thickening
27. Which gas is considered the most responsible for the greenhouse effect?
- A. Oxygen
 - B. Methane
 - C. Carbon dioxide
 - D. Nitrogen
28. Which of the following is not a carbon reservoir?
- A. Atmosphere
 - B. Forests
 - C. Oceans
 - D. Mountains
29. What is a major source of anthropogenic carbon emissions?
- A. Solar flares
 - B. Industrial activities
 - C. Ocean currents
 - D. Volcanic eruptions
30. Which sector contributes significantly to global CO₂ emissions?
- A. Education
 - B. Transportation
 - C. Art and culture
 - D. Sports

31. Which of the following is a short-term impact of climate change?
- A. Coastal erosion
 - B. Hurricane intensification
 - C. Ice age formation
 - D. Ocean acidification
32. Long-term impacts of climate change include:
- A. Daily temperature fluctuations
 - B. Disruption of monsoon patterns
 - C. Weekly fog events
 - D. Single-season floods
33. Which ecosystem is most affected by rising sea temperatures?
- A. Desert
 - B. Rainforest
 - C. Coral reefs
 - D. Grasslands
34. Climate change can cause agricultural problems by:
- A. Increasing photosynthesis
 - B. Increasing pest outbreaks
 - C. Stabilizing seasons
 - D. Improving soil fertility
35. A long-term effect of climate change on human health is:
- A. Flu outbreaks
 - B. Respiratory diseases
 - C. Broken bones
 - D. Common cold
36. Which of the following is a natural climate forcing mechanism?
- A. Fossil fuel burning
 - B. Land-use change
 - C. Volcanic eruptions
 - D. Urbanization
37. The most common form of precipitation is:
- A. Sleet
 - B. Snow
 - C. Rain
 - D. Hail
38. Which of the following decreases as elevation increases?
- A. Precipitation
 - B. Latitude
 - C. Temperature
 - D. Clouds

39. Which of the following is not an effect of global warming?

- A. Rise of sea level
- B. Good fungal growth in soil
- C. Pole-ward shifting of organisms
- D. Melting of ice caps

40. The Milankovitch cycle is related to:

- A. Urban temperature changes
- B. Human emissions
- C. Natural orbital variations of Earth
- D. Solar flare activity

41. The urban heat island effect is caused by:

- A. Excess moisture in cities
- B. Open fields in cities
- C. Heat retention by concrete and asphalt
- D. Snow accumulation

42. A major driver of human-induced climate variability is:

- A. Cloud formation
- B. Ocean tides
- C. Deforestation
- D. Lunar cycles

43. El Niño leads to:

- A. Cooler global temperatures
- B. Warmer waters in the central and eastern Pacific
- C. Ice sheet growth
- D. Dry winters in South America

44. La Niña conditions are characterized by:

- A. Warm Pacific surface waters
- B. Unusual cooling of Pacific Ocean surface waters
- C. Increased volcanic eruptions
- D. Acid rain

45. Changing land use patterns contribute to climate change by:
- A. Enhancing carbon absorption
 - B. Decreasing surface runoff
 - C. Altering energy and moisture balances
 - D. Improving ozone levels
46. What is a major driver of climate vulnerability?
- A. Stable economy
 - B. High literacy rate
 - C. Poverty and lack of infrastructure
 - D. Technological advancement
47. What is the goal of climate change adaptation?
- A. Reduce energy consumption
 - B. Achieve zero emissions
 - C. Adjust to current and expected climate impacts
 - D. Promote industrialization
48. Response capacity refers to:
- A. Speed of internet connectivity
 - B. Ability of a community to respond and recover from climate impacts
 - C. Use of renewable energy
 - D. Availability of natural resources
49. Which of the following best links adaptation with sustainable development?
- A. Isolating rural communities
 - B. Ignoring climate science
 - C. Building systems that reduce risk while enhancing resilience
 - D. Reducing population

50. Which of the following is an example of climate mitigation?
- A. Installing flood barriers
 - B. Switching to solar energy
 - C. Building cyclone shelters
 - D. Developing drought-tolerant crops
51. Which of the following is NOT part of the disaster management cycle?
- A. Mitigation
 - B. Preparedness
 - C. Recovery
 - D. Legislation
52. The primary goal of disaster risk reduction (DRR) is to:
- A. Ensure quick recovery after disasters
 - B. Eliminate all hazards
 - C. Reduce vulnerabilities and disaster risks
 - D. Provide immediate relief
53. A disaster is classified as a 'major' disaster in India under the Disaster Management Act, 2005 when:
- A. It involves more than one state
 - B. It causes loss exceeding ₹1,000 crore
 - C. The central government declares it as such
 - D. The Prime Minister visits the site
54. The Sendai Framework (2015-2030) replaced which earlier framework?
- A. Kyoto Protocol
 - B. Hyogo Framework for Action
 - C. Paris Agreement
 - D. Rio Declaration

55. Which of the following tools is commonly used for risk assessment in disaster management?
- A. SWOT Analysis
 - B. Cost-Benefit Analysis
 - C. Hazard Vulnerability Assessment (HVA)
 - D. PESTLE Analysis
56. Which Indian Act governs disaster management in the country?
- A. Environment Protection Act
 - B. Disaster Management Act, 2005
 - C. Public Safety Act
 - D. Emergency Act, 1984
57. The term "Triage" in disaster response refers to:
- A. Medical stockpiling
 - B. Categorizing patients by severity
 - C. Emergency shelter allocation
 - D. Public announcement
58. Which satellite system helps in disaster monitoring in India?
- A. INSAT
 - B. GPS
 - C. GSAT
 - D. IRNSS
59. What is the role of community-based disaster management (CBDM)?
- A. Dependence on external help
 - B. Ignoring local knowledge
 - C. Empowering local communities
 - D. Avoiding planning

60. Select the correct full form of ISDR?
- A. International Sustainable Development Report
 - B. International Strategy for Disaster Reduction
 - C. International Significant Disaster Resources
 - D. Intergovernmental Strategy for developing Recreation
61. According to the Indian Meteorological Department (IMD), which storm is classified as a "Super cyclone" when the wind blows at whatever speed?
- A. Above 200 km
 - B. Above 110 km
 - C. Above 220 km
 - D. None of the above
62. What is the location of the International Tsunami Information Center?
- A. Honolulu
 - B. Hyderabad
 - C. Goa
 - D. Pondicherry
63. Which wave of an earthquake is produced by a rolling effect along the earth's surface?
- A. L wave
 - B. P wave
 - C. S wave
 - D. None of the above
64. Which GIS-based method is widely used in generating landslide susceptibility maps?
- A. Supervised classification
 - B. Weighted overlay analysis
 - C. NDVI remote sensing
 - D. Relief ratio method
65. Which one of the following ministries is the nodal ministry at the centres for coordinating disaster management activities for all-natural disaster except drought?
- A. Ministry of agriculture
 - B. Ministry of home affairs
 - C. Ministry of civil aviation
 - D. Ministry of Health and family welfare

66. Who among the following is the first to respond when a disaster strikes?
- NGO
 - Local administration
 - Affected community members
 - Local community members
67. Which among the following statements about India's NDMA are correct?
- It was constituted under the disaster management act-2005
 - it is chaired by Prime Minister of India
 - It directly conducts rescue operations
 - it is responsible for national disaster policy formation
- 1, 2 and 4 Only
 - 1, 3 and 4 Only
 - 1 and 4 Only
 - All of them
68. Which type of failure is least probable in slope stability during earthquakes?
- Rotational slip
 - Translational slip
 - Toppling
 - Swelling of clay minerals
69. Expansion of INCOIS
- Indian National Council for Ozone Information Services
 - Indian National Centre for Ocean Information Services
 - Indian National Council for Orographic Information Services
 - Indian National Centre for Occupational Safety and Information System
70. Preparedness are the measures taken before a disaster event that is aimed to minimize
- Loss of life
 - Disruption of critical services
 - Damage when the disaster occurs
- Choose the correct option.
- 1 and 3 only
 - 1, 2 and 3
 - 1 and 2 only
 - 2 and 3 only

71. Arrange activities of disaster management cycle

1. Emergency response activities
2. Response and recovery activities
3. Mitigation and preparedness

Choose the correct cycle

- | | |
|------------|------------|
| A. 3, 2, 1 | B. 1, 3, 2 |
| C. 1, 2, 3 | D. 2, 3, 1 |

72. What is Ring of Fire?

- A. Belt of volcanoes in the Circum Pacific region
- B. Belt of volcanoes in the mid-continental region
- C. Belt of volcanoes in the mid-atlantic region
- D. None of the above

73. The level of risk of a disaster depends on

- A. Nature of the hazard
- B. Vulnerability of the elements which are affected
- C. Economic value of the elements which are affected
- D. All of the above

74. What is the primary function of National Crisis Management Committee (NCMC)?

- A. Handling external aggression
- B. Coordinating disaster response and relief efforts during large scale disasters
- C. Managing fiscal crises
- D. Ensuring water resources management

75. The Kerala floods of 2018 were exacerbated by which of the following human activities?
- A. Deforestation
 - B. Poor dam management
 - C. Unplanned urbanization
 - D. All of the above
76. What is the primary role of the State Disaster Management Authority (SDMA)?
- A. Coordinate between central and local authorities
 - B. Handle international disaster management plans
 - C. Implement state-level disaster management plans
 - D. Oversee defence operations during calamities
77. The shape of the Earth is best described as:
- A. Perfect sphere
 - B. Cone
 - C. Oblate spheroid
 - D. Flat circle
78. Which process explains the spreading of the ocean floor?
- A. Coastal erosion
 - B. Seafloor spreading
 - C. Tidal movement
 - D. Sediment deposition
79. The continental shelf is:
- A. A deep ocean trench
 - B. A flat, shallow extension of the continent into the ocean
 - C. The Earth's magnetic core
 - D. A high mountain underwater

80. Which of the following is a tectonic force?
- A. Soil erosion
 - B. Windstorm
 - C. Earthquake
 - D. Rainfall
81. Diastrophic forces primarily result in:
- A. Surface water pollution
 - B. Earthquake and mountain building
 - C. Ocean currents
 - D. Forest growth
82. Ocean tides are mainly caused by:
- A. Solar flares
 - B. Wind speed
 - C. Gravitational pull of the Moon and Sun
 - D. Coastal currents
83. Which is not a factor influencing ocean processes?
- A. Salinity
 - B. Sediment transport
 - C. Magnetic field
 - D. Temperature
84. Coastal erosion leads to:
- A. Expansion of beaches
 - B. Stabilization of cliffs
 - C. Loss of land and property near the shore
 - D. Increase in groundwater level

85. The geological time scale helps to:
- A. Predict tides
 - B. Classify rock types
 - C. Understand the evolution and age of the Earth
 - D. Forecast cyclones
86. Which feature results from tectonic plate collisions?
- A. Ocean trenches
 - B. Coral reefs
 - C. Coastal dunes
 - D. River valleys
87. A disaster becomes severe when:
- A. It occurs in remote areas
 - B. Community resources are overwhelmed
 - C. It is covered by media
 - D. It lasts less than an hour
88. Risk in disaster management is defined as:
- A. Total deaths
 - B. Potential losses from a hazard
 - C. Amount of rainfall
 - D. Duration of an event
89. Vulnerability increases with
- A. Strong infrastructure
 - B. Lack of preparedness
 - C. Early warning systems
 - D. Proper land use planning

90. Which of the following is a sudden-onset disaster?
- A. Climate change
 - B. Drought
 - C. Earthquake
 - D. Desertification
91. The classification of disasters based on origin includes:
- A. Social and political
 - B. Natural and man-made
 - C. Simple and complex
 - D. Short and long
92. Landslides are usually triggered by:
- A. High altitude
 - B. Earthquakes or heavy rainfall
 - C. Temperature rise
 - D. Desert winds
93. Which is a key characteristic of disasters?
- A. Predictability
 - B. Sudden occurrence and widespread damage
 - C. Isolation to one location
 - D. Always human-induced
94. A cyclone is classified as a:
- A. Technological disaster
 - B. Biological disaster
 - C. Hydro-meteorological disaster
 - D. Nuclear disaster

95. The difference between a slow and sudden disaster is mainly
- A. Duration of the impact
 - B. Geographic spread
 - C. Weather patterns
 - D. Cause of the event
96. Which one of the following is a man-made disaster?
- A. Volcanic eruption
 - B. Flood
 - C. Industrial chemical spill
 - D. Landslide
97. What does EMR stand for in remote sensing?
- A. Earth Magnetic Reflection
 - B. Electromagnetic Radiation
 - C. Emission Monitoring Radar
 - D. Environmental Measurement and Recording
98. Which atmospheric window allows maximum transmission of EMR to Earth's surface?
- A. Gamma rays
 - B. Visible and infrared spectrum
 - C. Ultraviolet light
 - D. X-rays
99. Remote sensing applications in disaster management include:
- A. Forest inventory
 - B. Satellite meteorology and cyclone tracking
 - C. Population census
 - D. Mining exploration
100. In remote sensing, absorption refers to:
- A. Bouncing back of radiation
 - B. Loss of energy due to interaction with particles
 - C. Passing through the object
 - D. Signal amplification

RESPONSE SHEET

1	A	B	C	D	E	26	A	B	C	D	E	51	A	B	C	D	E	76	A	B	C	D	E
2	A	B	C	D	E	27	A	B	C	D	E	52	A	B	C	D	E	77	A	B	C	D	E
3	A	B	C	D	E	28	A	B	C	D	E	53	A	B	C	D	E	78	A	B	C	D	E
4	A	B	C	D	E	29	A	B	C	D	E	54	A	B	C	D	E	79	A	B	C	D	E
5	A	B	C	D	E	30	A	B	C	D	E	55	A	B	C	D	E	80	A	B	C	D	E
6	A	B	C	D	E	31	A	B	C	D	E	56	A	B	C	D	E	81	A	B	C	D	E
7	A	B	C	D	E	32	A	B	C	D	E	57	A	B	C	D	E	82	A	B	C	D	E
8	A	B	C	D	E	33	A	B	C	D	E	58	A	B	C	D	E	83	A	B	C	D	E
9	A	B	C	D	E	34	A	B	C	D	E	59	A	B	C	D	E	84	A	B	C	D	E
10	A	B	C	D	E	35	A	B	C	D	E	60	A	B	C	D	E	85	A	B	C	D	E
11	A	B	C	D	E	36	A	B	C	D	E	61	A	B	C	D	E	86	A	B	C	D	E
12	A	B	C	D	E	37	A	B	C	D	E	62	A	B	C	D	E	87	A	B	C	D	E
13	A	B	C	D	E	38	A	B	C	D	E	63	A	B	C	D	E	88	A	B	C	D	E
14	A	B	C	D	E	39	A	B	C	D	E	64	A	B	C	D	E	89	A	B	C	D	E
15	A	B	C	D	E	40	A	B	C	D	E	65	A	B	C	D	E	90	A	B	C	D	E
16	A	B	C	D	E	41	A	B	C	D	E	66	A	B	C	D	E	91	A	B	C	D	E
17	A	B	C	D	E	42	A	B	C	D	E	67	A	B	C	D	E	92	A	B	C	D	E
18	A	B	C	D	E	43	A	B	C	D	E	68	A	B	C	D	E	93	A	B	C	D	E
19	A	B	C	D	E	44	A	B	C	D	E	69	A	B	C	D	E	94	A	B	C	D	E
20	A	B	C	D	E	45	A	B	C	D	E	70	A	B	C	D	E	95	A	B	C	D	E
21	A	B	C	D	E	46	A	B	C	D	E	71	A	B	C	D	E	96	A	B	C	D	E
22	A	B	C	D	E	47	A	B	C	D	E	72	A	B	C	D	E	97	A	B	C	D	E
23	A	B	C	D	E	48	A	B	C	D	E	73	A	B	C	D	E	98	A	B	C	D	E
24	A	B	C	D	E	49	A	B	C	D	E	74	A	B	C	D	E	99	A	B	C	D	E
25	A	B	C	D	E	50	A	B	C	D	E	75	A	B	C	D	E	100	A	B	C	D	E

ROUGH WORK

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