

Ramakrishna Mission Vivekananda
Educational and Research Institute ,
IRDM Faculty Centre, Narendrapur,
Kolkata-700103, School of Environment
and Disaster Management, M.Sc.
Admission Test (Academic Session:
2021-23), 21.08.2021 (1.00 pm-2:10 pm)

Please read the following instructions carefully:

1. Note that there are 60 questions (in MCQ format) in total and each question carries 1 mark.
2. There is a negative marking for every three FALSE answers.
3. Google forms must be submitted from the registered email only.
4. During the admission test no telephonic enquiry will be entertained.
5. The Link will be closed on completion of the scheduled time.

* Required

1. Email *

2. Name: *

3. Application Id: *

Multiple Choice Questions (MCQ)

Each Question Carrying One mark

4. 1. Which is not a unit of pressure

Mark only one oval.

- a) Milibar
- b) Pascal
- c) Dyne/[sq.cm](#).
- d) Knot

5. 2. Vegetation cover shows maximum reflectance in which of the following regions of the electromagnetic radiation spectrum?

Mark only one oval.

- a) Ultraviolet
- b) Near infrared
- c) Middle infrared
- d) Visible

6. 3. "Hot spots" are areas: (i) extremely rich in species; (ii) with high endemism; (iii) extremely scarce in species; (iv) under constant threat. Choose the correct answer from the codes:

Mark only one oval.

- a) (i) and (ii)
- b) (ii) and (iii)
- c) (ii), (iii) and (iv)
- d) (i), (ii) and (iv)

7. 4. The instrument used for determination of soil water loss by percolation, evapotranspiration and run off is called:

Mark only one oval.

- a) Soil moisture meter
- b) Rain Gauze
- c) Lysimeter
- d) Soil porosity meter

8. 5. Which of the following most realistically represents the flow of energy and material through an ecosystem?

Mark only one oval.

- a) Pyramid of biomass
- b) Food web
- c) Food chain
- d) Pyramid of numbers

9. 6. Which of the following statement is incorrect regarding Earth Summit (1992): (i) The Earth summit was held in Rio de Janerio; (ii) Its most important outcome was Agenda 21

Mark only one oval.

- a) (ii)
- b) (i)
- c) (i) and (ii)
- d) None of these

10. 7. Environmental risk is a phenomenon of

Mark only one oval.

- a) Certainty
- b) Possibility
- c) 50% Likelihood
- d) None of these

11. 8. Population census is conducted through:

Mark only one oval.

- a) Sample survey
- b) Complete enumeration
- c) Accounting
- d) Investigation

12. 9. Which of the following is not a measure of dispersion?

Mark only one oval.

- a) Range
- b) Standard deviation
- c) Mode
- d) Quartile deviation

13. 10. A parameter is a characteristic of:

Mark only one oval.

- a) Sample
- b) Population
- c) Both a & b
- d) None of the above

14. 11. Prolonged heat wave causes

Mark only one oval.

- a) Cardio-vascular disease
- b) Chronic kidney disease
- c) Loss of working capacity
- d) All of the above

15. 12. Principal constituents of atmospheric brown clouds are: (I) Soot; (II) Soil dust; (III) Fly ash; (IV) Sulphates and nitrates. Identify the correct code:

Mark only one oval.

- a) I & II only
- b) I & IV only
- c) II, III and IV only
- d) I, II, III and IV

16. 13. For the analysis of oxides of Nitrogen, which of the following set of reagents are used?

Mark only one oval.

- (a) Sulphanilic acid, NEDA, H₂O₂, HNO₃
- (b) Sulphamic acid, NEDA, H₂O₂, HNO₃
- (c) Sulphamic acid, Nicotine, H₂O, HNO₃
- (d) Sulphomolybdic acid, NEDA, H₂O₂, H₂SO₄

17. 14. Noise exposure limit for 8 hours/ day in India

Mark only one oval.

- a) 90 dBA
- b) 85 dBA
- c) 83 dBA
- d) None of the above

18. 15. Major application of dose-response curve is to obtain _____

Mark only one oval.

- (a) Toxin
- (b) Carcinogens
- (c) Mutagens
- (d) Threshold

19. 16. What is the main objective of risk assessment?

Mark only one oval.

- a) To evaluate hazard and minimize the risks
- b) Remediation of contaminated sites
- c) Hazard management
- d) All of above

20. 17. What is the main purpose of hazard identification?

Mark only one oval.

- a) To minimize the effect of a consequence
- b) For better risk management
- c) To characterize adverse effect of toxins
- d) To reduce probability of occurrence

21. 18. Which of the following substances is generally not considered toxic in the long run?

Mark only one oval.

- (a) Carbonic acid
- (b) Carbon monoxide
- (c) Acetaldehyde
- (d) Benzene

22. 19. Groundwater movement depends on the following characteristics of rock materials: (i) Porosity; (ii) Permeability; (iii) Specific yield; (iv) Specific retention capacity. Choose the correct code:

Mark only one oval.

- a) (i) only
- b) (i) and (ii) only
- c) (i), (ii) and (iii) only
- d) (i), (ii), (iii) and (iv)

23. 20. In a biogas digester having biomass and animal wastes as feed, for optimum methane production, the value of pH should be such that initially

Mark only one oval.

- (a) pH is in the range 6.6 to 7
- (b) pH < 6.2
- (c) pH is in the range 7 to 7.2
- (d) pH is in the range 7.6 to 8

24. 21. The Global Warming Potential (GWP) of a substance depends on: (a) the spectral band of its absorbing wavelengths; (b) its residence time in atmosphere; (c) its number of carbon molecules; (d) concentration of the substance. Choose the correct answer:

Mark only one oval.

- (i) a, b and c only
- (ii) b, c and d only
- (iii) a, c and d only
- (iv) b, d and a only

25. 22. Which of the following statements is wrong?

Mark only one oval.

- a) Ozone is not responsible for greenhouse effect.
- b) Ozone can oxidise sulphur dioxide present in the atmosphere to sulphur trioxide.
- c) Ozone hole is thinning of ozone layer present in stratosphere.
- d) Ozone is produced in upper stratosphere by the action of UV rays on oxygen.

26. 23. Phosgene is a compound of

Mark only one oval.

- a) Red phosphorus and oxygen
- b) White phosphorus and oxygen
- c) Carbon monoxide and chlorine
- d) Carbon dioxide and chlorine

27. 24. MJO is related to

Mark only one oval.

- a) Upper atmospheric vertical circulation
- b) Surface atmospheric vertical circulation
- c) Upper atmospheric horizontal circulation
- d) Surface atmospheric horizontal circulation

28. 25. In EMS, wave length is

Mark only one oval.

- a) Distance between the crest of two wave
- b) More frequency longer wavelength
- c) Less frequency shorter wavelength
- d) All of the above

29. 26. "Cs" climate type is found in

Mark only one oval.

- a) Lybia
- b) Spain
- c) Estonia
- d) Brazil

30. 27. Change of temperature with the upward or downward movement due to expansion of air, refers to –

Mark only one oval.

- a) Adiabatic process
- b) Diabatic process
- c) Inversion of temperature
- d) Atmospheric instability

31. 28. Emissivity from surface can be properly recognized by –

Mark only one oval.

- a) Airphoto
- b) Satellite image
- c) Thermal image
- d) Hyper spectral image

32. 29. CFC contributes% of the total global warming

Mark only one oval.

- a) 49
- b) 18
- c) 13
- d) 14

33. 30. Which image will be better with respect to the spatial resolution

Mark only one oval.

- a) 0.5mx0.5m
- b) 1mx1m
- c) 13.6mx13.6m
- d) 30mx30m

34. 31. Sound produced at a point is heard by a person after 5 second, while the same sound is heard by another person after 6 seconds. If the speed of sound is 300 m/s, what could be the maximum and minimum distances between the two persons?

Mark only one oval.

- a) 1.8 km, 0.15 km
- b) 2.2 km, 0.20 km
- c) 2.8 km, 0.25 km
- d) 3.3 km, 0.30 km

35. 32. Which of the following is a critically endangered species

Mark only one oval.

- a) Blue Whale
- b) Red Panda
- c) Black Rhino
- d) Black Spider Monkey

36. 33. If mean=70, mode=55; then the value of median is

Mark only one oval.

- a) 63
- b) 38
- c) 43
- d) 65

37. 34. Standard deviation is

Mark only one oval.

- a) Square root of mean deviation
- b) Square root of variance
- c) Both (a) and (b)
- d) None of the above

38. 35. 50th percentile is generally known as

Mark only one oval.

- a) Mean
- b) 2nd quartile
- c) Median
- d) Both (b) and (c)

39. 36. The standard deviation of age of students in your class is 2.5 years. After 2 years it will be

Mark only one oval.

- a) 2.5 years.
- b) 4.5 years.
- c) 5 years.
- d) 10 years.

40. 37. The measure of central tendency that can graphically be estimated from an ogive is

Mark only one oval.

- a) Arithmetic mean.
 b) Median.
 c) Mode.
 d) None of the above

41. 38. Environment impact assessment is an objective analysis of the probable changes in

Mark only one oval.

- a) Physical characteristics of the environment
 b) Biophysical characteristics of the environment
 c) Socioeconomic characteristics of the environment
 d) All of above

42. 39. Smog is a combination of

Mark only one oval.

- a) Air and water vapor
 b) Water and smoke
 c) Smoke and fog
 d) Fire and water

43. 40. LEED certification is related to

Mark only one oval.

- a) Food quality assessment
- b) Environment performance
- c) Green building
- d) Energy conservation

44. 41. Possible exposure of Asbestos through

Mark only one oval.

- a) Skin
- b) Ingestion
- c) Inhalation
- d) Both (b) & (c)

45. 42. Nitrogen present in air nearly 79%, still nitrogen is the most limiting nutrient for plant growth because

Mark only one oval.

- a) Nitrogen cannot be directly utilized by plant
- b) High energy is required to break triple bond in N₂
- c) Nitrogen is almost an inert gas as nitrogen involved reactions requires extreme conditions such as high temperature
- d) All of the above

46. 43. In which of the following fluoride is there

Mark only one oval.

- a) PVC
- b) Teflon
- c) Nylone
- d) Polyester

47. 44. The geothermal energy is:

Mark only one oval.

- a) Energy derived from coal
- b) Energy contained in hot-water deposits within the Earth crust
- c) Energy derived from stream
- d) Energy stored in dams

48. 45. Tides in the oceans are caused by

Mark only one oval.

- a) Gravitational pull of the moon and the sun on the earth's surface including the sea water
- b) Gravitational pull of the moon on the earth's surface including sea water
- c) Gravitational pull of the sun on earth's surface only and not on sea water
- d) None of these

49. 46. Hazards mitigation means

Mark only one oval.

- a) Alleviate the losses of life, injuries and property
- b) Strategy for protection against future animal attacks
- c) Protective action against fire
- d) Temporary planning to overcome the destruction caused by natural disasters

50. 47. Accumulation of dangerous radioactive materials into the bodies of larger animals through the process of food-chain is called

Mark only one oval.

- a) Eco accumulation
- b) Biodiversity inversion
- c) Ecological inversion
- d) Bioaccumulation

51. 48. Acid rain causes

Mark only one oval.

- a) Leaching of mineral salts in soil and decolourisation of red stone of Red fort
- b) Death of the fish due to clogging of their gills by exudation of large amount of mucus caused by solubility and availability of toxic metal like aluminium
- c) Defoliation, chlorosis, necrosis of plant foliage
- d) all of above

52. 49. The contour lines drawn in mapping earth's surface are:

Mark only one oval.

- a) Lines through points of equal distance from the sea
- b) Lines through points of equal intensity of the solar light
- c) Lines through points of equal rainfall
- d) Lines through points of equal height above the sea level

53. 50. Secondary pollutants (e.g. ozone, PAN, HNO₃, H₂SO₄) formed from primary pollutants are more toxic than primary pollutants. This phenomenon of increased toxicity in pollutants is called

Mark only one oval.

- a) Biomagnification
- b) Eutrophication
- c) Synergism
- d) Green house effect

54. 51. The cloudy nights are warmer compared to clear nights (without clouds) during winter day. This is because:

Mark only one oval.

- a) Clouds radiate heat towards the earth
- b) Clouds prevent cold wave from the sky, descend on earth
- c) Clouds prevent escaping of the heat radiation from the earth
- d) Clouds being at great height from earth absorb heat from the sun and send towards the earth

55. 52. The circulation of ocean water occurs

Mark only one oval.

- a) Only vertically
- b) Only laterally
- c) Both laterally and vertically
- d) Neither laterally nor vertically

56. 53. Ecological footprint represents

Mark only one oval.

- a) Area of productive land and water to meet the resources requirement
- b) Energy consumption
- c) CO2 emission per Person
- d) Forest cover

57. 54. Chemical smog is

Mark only one oval.

- a) Smog with secondary pollutants
- b) Yellow brown
- c) Dark brown
- d) Los Angeles smog

58. 55. Which of the following cannot be considered as manmade disaster

Mark only one oval.

- a) Gulf war oil spill 1991
- b) Chernobyl Nuclear Accident 1986
- c) Nepal earthquake 2015
- d) Kerala flood 2018

59. 56. Proactive approach in disaster management refers to

Mark only one oval.

- a) Response and recovery activities
- b) Mitigation activities
- c) Preparedness activities
- d) Mitigation and preparedness activities

60. 57. Which of the following is based on Energy Conservation Act, 2001

Mark only one oval.

- a) National Mission for Enhanced Energy Efficiency
- b) National Mission for A Green India
- c) National Solar Mission
- d) All of the above

61. 58. Draught is a

Mark only one oval.

- a) Hydrological disaster
- b) Meteorological disaster
- c) Geophysical disaster
- d) Both a and b

62. 59. Empty containers of pesticide

Mark only one oval.

- a) Can be used after cleaning
- b) Should be buried under ground or burnt
- c) Can be used to store food items
- d) None of the above

63. 60. Air pollution guidelines applicable in India

Mark only one oval.

- a) NAQI
- b) ACGIH
- c) EPA-NAAUS
- d) MAK

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