

2013 September UGC NET Solved Question Paper in Environmental Sciences, Paper II

1. National Land Reform Policy stresses on

- (A) Restoration of ecological balance
- (B) Natural regeneration
- (C) Tenancy reforms
- (D) Watershed approach

Answer: (C)

2. Nalgonda technique of fluoride removal involves the use of

- (A) Aluminium salts
- (B) Sodium salts
- (C) Potassium salts
- (D) Magnesium salts

Answer: (A)

3. In which years the Ramsar Convention on Wetlands was held and came into force?

- (A) 1951, 1955
- (B) 1961, 1965
- (C) 1971, 1975
- (D) 1981, 1985

Answer: (C)

4. The Stockholm Convention is a global treaty to protect humans from

- (A) Toxic gases

(B) Hospital acquired infections

(C) Persistent organic pollutants

(D) Carbon monoxide

Answer: (C)

5. Which of the following is not a Millennium Development Goal?

(A) Ensuring environmental sustainability

(B) Eradicating extreme poverty and hunger

(C) Developing global partnership for development

(D) Achieving universal energy security

Answer: (D)

6. In turbidity analysis, formazin is used

(A) To stabilize the samples

(B) To preserve the samples

(C) To make turbidity standards

(D) To remove colour interferences

Answer: (C)

7. p^E values in water range from approximately

(A) – 1 to 14

(B) – 12 to 25

(C) 1 to 12

(D) 0 to 14

Answer: (B)

8. Point out the right match concerning the toxic metal and associated adverse impact.

(A) Zn – Brain tissue damage

(B) Ni – Keratosis

(C) Ar – Renal poisoning

(D) Hg – Pulmonary disease

Answer: (A)

9. Amount of 8-hydroxyquinoline (M.W. 145.16) required for preparing 1000 ml of 5 ppm solution is

(A) 1.45 mg

(B) 5 mg

(C) 7.25 mg

(D) 14.5 mg

Answer: (B)

10. What is OH^- ion concentration of HCl whose pH is 3?

(A) -3

(B) 3

(C) 10^{-3}

(D) 10^{-11}

Answer: (D)

11. Radioactive waste management in our country is governed under:___

(A) Hazardous Waste (Management, Handling and Trans-boundary Movement)

(B) Atomic Energy Act, 1962

(C) Environment (Protection) Act, 1986

(D) Biomedical Waste (Management & Handling) Rules 1998

Answer: (C)

12. Which of the following parameters is not an indicator of water vapour present in a certain quantity of air?

(A) Virtual temperature

(B) Potential temperature

(C) Wet bulb temperature

(D) Dew point

Answer: (B)

13. The background noise level in an area is represented by which of the following noise indices?

(A) L_{10}

(B) L_{50}

(C) L_{90}

(D) TNI

Answer: (C)

14. The chemical formula for CFC-11 is

(A) CF_2Cl_2

(B) CFCl_3

(C) CHFCl_2

(D) CHCl_3

Answer: (B)

15. Match the List – I with List – II and choose the correct answer from the codes given below:

List – I

List – II

a. Mollisol

1. Tundra

b. Oxisol

2. Tropical rain forest

c. Soils of high altitude

3. Prairie soil

d. Soils of low altitude

4. Rich in iron oxide

Codes:

	a	b	c	d
(A)	3	4	1	2
(B)	3	4	2	1
(C)	1	2	3	4
(D)	2	3	4	1

Answer: (A)

16. Particles which have maximum ability to attract and hold K^+ , Ca^{++} and NH_4^+ ions on their surface are

(A) Clay

(B) Sand

(C) Loam

(D) Loamy sand

Answer: (A)

17. Compared to CO_2 , methane has global warming potential of

(A) 5 – 10 times more

(B) 20 – 25 times more

(C) 40 – 45 times more

(D) 60 – 65 times more

Answer: (B)

18. Laterite soil contains more of

(A) Iron and Aluminium

(B) Magnesium and Boron

(C) Manganese and Silicate

(D) Potassium and Lead

Answer: (A)

19. Universally accepted method for isolating semivolatile organic compounds from their matrices is

(A) Double infiltration

(B) Solvent extraction

(C) Sedimentation technique

(D) Permeation

Answer: (B)

20. The relationship between two organisms in which one receives benefit at the cost of other is known as

(A) Predation

(B) Parasitism

(C) Scavenging

(D) Symbiosis

Answer: (B)

21. Species diversity increases as one proceeds from

- (A) Higher to lower altitude and higher to lower latitude
- (B) Lower to higher altitude and higher to lower latitude
- (C) Lower to higher altitude and lower to higher latitude
- (D) Higher to lower altitude and lower to higher latitude

Answer: (A)

22. Which of the following is not an IUCN-designated threatened species found in India?

- (A) Asiatic Lion
- (B) Bengal Tiger
- (C) Indian White rumped vulture
- (D) Mountain gorilla

Answer: (D)

23. Which of the following ecosystems has the lowest net primary production per square metre?

- (A) A grassland
- (B) A coral reef
- (C) An open ocean
- (D) A tropical rain forest

Answer: (C)

24. The rate of energy at consumer's level is called

- (A) Primary productivity
- (B) Gross primary productivity
- (C) Net primary productivity

(D) Secondary productivity

Answer: (C)

25. Peaty soil is found more in

(A) Kerala

(B) Uttar Pradesh

(C) Maharashtra

(D) Gujarat

Answer: (A)

26. Brown forest soil is also known as

(A) Entisols

(B) Altisols

(C) Spodosols

(D) Mollisols

Answer: (A)___

27. Establishment of a species in a new area is referred to as

(A) Stabilization

(B) Aggregation

(C) Ecesis

(D) Migration

Answer: (C)

28. The Zooplankton of continental shelf is generally the same as in

- (A) Neritic region
- (B) Pelagic region
- (C) Estuary region
- (D) Benthic region

Answer: (B)

29. 'Mesothelioma' is caused by toxicity of

- (A) Mercury
- (B) Lead
- (C) Arsenic
- (D) Carbon monoxide

Answer: (C)

30. Algal biofertilizer consists of

- (A) Blue green algae and earthworm
- (B) Algal biomass and Mycorrhiza
- (C) Blue green algae and Azolla
- (D) Green algae and Rhizobia

Answer: (C)

31. A volcanic eruption will be violent if there is

- (A) High silica and low volatiles
- (B) High silica and high volatiles
- (C) Low silica and low volatiles
- (D) Low silica and high volatiles

Answer: (A)

32. Which of the following is the satellite for measuring precipitation?

(A) GRACE

(B) TRMM

(C) ASTER

(D) SPOT

Answer: (B)

33. Clay minerals are

(A) Tectosilicates

(B) Sorosilicates

(C) Inosilicates

(D) Phyllosilicates

Answer: (D)

34. Vertical dimensions can be obtained from

(A) DEM

(B) SRTM

(C) Topographic Sheets

(D) All the above

Answer: (D)

35. In biogeochemical cycle, a chemical element or molecule moves through

(A) Biosphere and lithosphere

- (B) Biosphere, lithosphere and atmosphere
- (C) Biosphere, lithosphere, atmosphere and hydrosphere
- (D) Lithosphere and atmosphere

Answer: (C)

36. Which of the following is not considered as a major type of seashore?

- (A) Rocky shore
- (B) Sandy shore
- (C) Muddy shore
- (D) Clayey shore

Answer: (D)

37. Low-high tides are called

- (A) Spring tide
- (B) Neap tide
- (C) Perigean tide
- (D) Apogean tide

Answer: (B)

38. Consider an ideal wind mill. For following parameters: Vane cross-sectional area = 30 m^2 ; wind speed = 10 m/s ; density of air = 1.29 kg/m^3 and conversion efficiency = 0.4

What is the power output of the wind mill?

- (A) $\sim 5.24 \text{ kW}$
- (B) $\sim 8.21 \text{ kW}$
- (C) $\sim 10.25 \text{ kW}$
- (D) $\sim 7.74 \text{ kW}$

Answer: (D)

39. Biogas produced by anaerobic bacterial activity is a mixture of

(A) CH_3OH , CO_2 , NH_3 and H_2O

(B) CH_4 , CO_2 , NH_3 , H_2S and H_2O

(C) H_2S , CO_2 , CO , CH_4 and LPG

(D) CO_2 , SO_2 , NO_2 , CH_4 and H_2O

Answer: (B)

40. At present, what is the share of renewable energy in the total energy production of India?

(A) ~ 11 – 12%

(B) ~ 2 – 3%

(C) ~ 20%

(D) ~ 25 – 30%

Answer: (A)

41. If all of the atmosphere were at standard temperature and pressure, then present day CO_2 concentration of 392 ppm would correspond to how much carbon in the atmosphere?

(A) ~ 415 Gt

(B) ~ 831 Gt

(C) ~ 1245 Gt

(D) ~ 1620 Gt

Answer: (B)

42. Risk assessment is different from Environmental Impact Assessment in terms of

(A) Hazard identification

- (B) Disaster management
- (C) Probability expression
- (D) Consideration of human environment

Answer: (C)

43. Reliable, quantitative and verifiable data used in Environmental Impact Assessment study are called

- (A) Hard data
- (B) Soft data
- (C) Continuous data
- (D) Discrete data

Answer: (A)

44. Which category of projects does not require Environmental Impact Assessment in accordance with the Indian EIA Notification 2006?

- (A) Category A
- (B) Category B₁
- (C) Category B₂
- (D) None of the above

Answer: (C)

45. Environmental Protection Act was enacted in India during

- (A) 1986
- (B) 1984
- (C) 1994
- (D) 1987

Answer: (A)

46. Minimum Stock height of incinerators should be

(A) 10 m

(B) 15 m

(C) 30 m

(D) 60 m

Answer: (C)

47. Basal convention on trans-boundary movement of hazardous waste was implemented in the year

(A) 1969

(B) 1979

(C) 1989

(D) 1999

Answer: (C)

48. The events A and B are mutually exclusive. If $P(A) = 0.5$ and $P(B) = 0.2$, then what is $P(A \& B)$?__

(A) 0.5

(B) 0.1

(C) 0.7

(D) 0.3

Answer: (B)

49. A population, from where samples are drawn, is called

- (A) Total population
- (B) Target population
- (C) Accessible population
- (D) Universal population

Answer: (C)

50. The rate of variation of population (N) with time (t) represented by equation $dN/dt = \gamma N$, follows

- (A) J-shaped curve
- (B) S-shaped curve
- (C) Z-shaped curve
- (D) Parabolic curve

Answer: (A)