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FOR KUET EXAM PREPARATION

KUET 2021 Question Paper · M.Sc. Environmental Science

EXAM	YEAR	TYPE	SUBJECT
KUET	2021	Question Paper	M.Sc. Environmental Science

Sr. No. 1089

ENTRANCE TEST-2021

SCHOOL OF ENVIRONMENTAL AND EARTH SCIENCES

ENVIRONMENTAL SCIENCE

Total Questions : 60
Time Allowed : 70 Minutes

Question Booklet Series A

Roll No. : | | | | | | |

Instructions for Candidates :

1. Write your Entrance Test Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the spaces provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and a Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.
4. Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.
5. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.
6. Do not darken more than one circle of options for any question. A question with more than one darkened response shall be considered wrong.
7. There will be **'Negative Marking'** for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score of the candidate.
8. Only those candidates who would obtain positive score in Entrance Test Examination shall be eligible for admission.
9. Do not make any stray mark on the OMR sheet.
10. Calculators and mobiles shall not be permitted inside the examination hall.
11. Rough work, if any, should be done on the blank sheets provided with the question booklet.
12. OMR Answer Sheet must be handled carefully and it should not be folded or mutilated in which case it will not be evaluated.
13. Ensure that your OMR Answer Sheet has been signed by the Invigilator and the candidate himself/ herself.
14. At the end of the examination, hand over the OMR Answer Sheet to the invigilator who will first tear off the original OMR sheet in presence of the Candidate and hand over the Candidate's Copy to the candidate.

SS-5458–A

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1. Match List I with List II and select the appropriate combination :

List I	List II
A. Troposphere	1. Contains much of total atmospheric ozone
B. Stratosphere	2. Temperature decrease with increasing height
C. Ionosphere	3. Aurora Borealis and Aurora Australis are produced
D. Exosphere	4. Molecules are almost collisionless

	A	B	C	D
(A)	2	1	3	4
(B)	2	4	1	3
(C)	2	1	4	3
(D)	2	3	4	1

2. The Asthenosphere is characterized by :
   (A) Low velocity zone
   (B) Zone of magma generation
   (C) Both (A) and (B)
   (D) None of the Above

3. The Oceanic Crust is rich in :
   (A) Silica and Magnesium
   (B) Calcium and Magnesium
   (C) Silica and Aluminum
   (D) None of the above

4. Which of the following compartment of hydrological cycle has the highest residence time ?
   (A) Oceans and Seas
   (B) Lakes and reservoirs
   (C) Glaciers and ice caps
   (D) Biospheric water

5. Which one of the following is/are the key attribute/s of an ecosystem :
   (A) Energy flow
   (B) Biotic diversity
   (C) Both (A) and (B)
   (D) (A) is correct but not (B)

6. Identify the wrong match :
   (A) Biosphere — Totality of living things present on earth
   (B) Ecosphere — Zone where life is sustainable
   (C) Gaia — Single Living Entity
   (D) Eduard Suess — Chemical Evolution hypothesis

7. Identify the correct match with regard to ecosystem services :
   (A) Fish production — Cultural
   (B) Nutrient Cycling — Habitat
   (C) Recreation — Regulating
   (D) Scientific knowledge — Informational

8. What is true about heterotrophic succession
   (A) P > R
   (B) P < R
   (C) P = R
   (D) None of the above

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9. Identify which of the following are carbon acids by using the codes given below :

1. Acetylene
2. Ethyl aceto acetate
3. Phenol
4. Benzoic acid
5. Benzene Suplhonoic acid

(A) 1 & 2 only
(B) 2, 3, and 5
(C) 1 & 5 only
(D) 2 & 5 only

10. The usual vertical sequence of horizons in a soil from the surface downward is :

(A) O, A, B, C, E
(B) A, B, C, E, O
(C) O, A, E, B, C
(D) A, E, B, C, O

11. Which one of the following is the most prominent interfering agent in Chemical Oxygen Demand (COD) estimation ?

(A) Chloride
(B) Ammonia
(C) Nitrite
(D) None of the above

12. Compared to CO_2, methane has more global warming potential of :

(A) 5-10 times
(B) 20-25 times
(C) 40-45 times
(D) 60-65 times

13. Marusudar river which is an important tributary of Chenab originates from :

(A) Kishtiwar
(B) Himachal Pradesh
(C) Doda
(D) Rambandh

14. Risk is comprised of which of the following two factors ?

(A) Alert and alarm
(B) Hazard and vulnerability
(C) Vulnerability and susceptibility
(D) Hazards and threats

15. Identify the correct match :

(A) Chernobyl disaster-1984
(B) Bhopal gas tragedy-1986
(C) Fukushima disaster-2012
(D) Three Mile Island Accident-1979

16. Which one of the following era is considered as age of mammals ?

(A) Paleozoic
(B) Cenozoic
(C) Mesozoic
(D) None of the above

17. Sunderlal Bahuguna started Chipko movement in which of the following areas ?

(A) Narmada Valley
(B) Rajasthan desert
(C) Western Ghats
(D) Garhwal Himalayas

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18. Sardar Sarovar Dam is built on :

(A) Sabarmati river

(B) Narmada river

(C) Tapti river

(D) Chambal river

19. Narmada River flows through which of the following state/s of India ?

(A) Gujarat

(B) Maharashtra

(C) Madhya Pradesh

(D) All the above

20. Who among the following has coined the term Deep ecology ?

(A) Arne Naess

(B) Ernst Haeckel

(C) Frederick Clements

(D) Charles Elton

21. Which of the following parameters are not measured while calculating the National Air Quality index ?

(A) PM10

(B) PM2.5

(C) Carbon dioxide

(D) Ammonia

22. Lichens are often used as biological indicator of :

(A) Global warming

(B) Air quality

(C) Soil pollution

(D) Water pollution

23. A safe level of noise depends on :

(A) Level of noise and exposure to noise

(B) Area

(C) Pitch

(D) Frequency

24. Apart from hearing loss, effects produced b excessive noise/noise pollution are :

1. Migraine headaches
2. Heart Palpitation
3. Dizziness
4. Nausea
5. Gastric Ulcers

(A) Only 1, 2 and 3

(B) Only 1, 2, 3 and 4

(C) Only 4 and 5

(D) All of the above

25. Match the following Lists I and II and select correct answer using the code given below lists :

List I	List II
a. Typhoid fever	i. Giardia intestinalis
b. Salmonellosis	ii. Salomonella typhi
c. Diarrhea	iii. Shigella species
d. Dysentery	iv. Salomonella specie
e. Giardiasis	v. Cryptosporidium pa

Codes :

	a	b	c	d	e
(A)	ii	iv	v	iii	i
(B)	ii	iii	i	v	iv
(C)	ii	iii	i	v	iv
(D)	ii	iv	v	i	iii

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26. Match Lists I and II and select the correct answer using the codes given below the lists :

List I	List II
1. Aquifer	a. Saturated and permeable that can transfer some amount of water
2. Aquitard	b. Saturated and permeable that can transfer significant amount of water
3. Aquiclude	c. Saturated zone below the water table
4. Phreatic zone	d. Saturated but permeability so low as to be unable to transmit water

Codes :

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

27. Which of the following is not a correct match ?

(A) Cadmium — Itai Itai

(B) Mercury — Minimata

(C) Lead — Ouch Ouch

(D) Arsenic — Arsenicosis

28. Which one of the following diseases is not due to contamination of water ?

(A) Hepatitis-B

(B) Jaundice

(C) Cholera

(D) Typhoid

29. The major forest product in India is :

(A) Fuel wood

(B) Resins

(C) Timber

(D) Oils

30. Which of the following crop is the largest consumer of irrigation waters in India ?

(A) Wheat

(B) Sugarcane

(C) Rice

(D) Soyabean

31. Identify the correct sequence (highest to lowest) in the order of their contribution (percentage) in forest resources of India :

(A) Tropical wet evergreen forest, Tropical moist deciduous forest and Tropical dry deciduous forest

(B) Tropical dry evergreen forests, Tropical moist deciduous forest and Tropical dry deciduous forest

(C) Tropical dry deciduous forest, Tropical moist deciduous forest and Tropical thorn forest

(D) Tropical moist deciduous forest, Tropical dry deciduous forest and Himalayan dry temperate forests

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32. Koderma, in Jharkhand is the leading producer of which one of the following minerals ?

(A) Bauxite

(B) Mica

(C) Iron ore

(D) Copper

33. Match the following Lists I and II and select the most appropriate answer using the code given below the lists :

List I	List II
a. In-situ Conservation	i. Reduction approach
b. Ex-situ Conservation	ii. Nonuse approach
c. Preservation	iii. National park
d. Conservation	iv. Zoo

Codes :

	a	b	c	d
(A)	iii	iv	ii	i
(B)	iii	iv	i	ii
(C)	ii	iv	iii	i
(D)	iv	iii	ii	i

34. Which one of the following is correctly matched ?

(A) Jim Corbett National Park—Rajasthan

(B) Keoladeo National Park—Himachal Pradesh

(C) Hemis High Altitude National Park—Ladakh

(D) Kaziranga National Park—Uttar Pradesh

35. Which one of the following is a qualifying criteria for biodiversity hot spots ?

(A) 1500 species of vascular plants as endemics

(B) 70% habitat loss to its original habitat

(C) Both (A) and (B)

(D) (A) is correct but not (B)

36. The one-horned rhinoceros in India is specifi to which of the following ?

(A) Periyar National Park

(B) Jim Corbett National Park

(C) Kazinag National Park

(D) None of the above

37. The most common three R's to save th environmental resources are :

(A) Reserve, Reduce, Replenish

(B) Reuse, Reverse, Reduce

(C) Reserve, Reuse, Recirculate

(D) Reduce, Recycle, Reuse

38. LEED (Leadership in Energy and Environmen Design) for India covers which of the followin

(A) Sustainable sites and Water Efficiency

(B) Energy, Atmosphere, materials and resour

(C) Indoor Environmental quality and des in innovation

(D) All of the above

39. Which of following pollutants is released the environment by disposal of comp fluorescent lights (CFLs) ?

(A) Mercury

(B) Tungsten

(C) Boron

(D) None of the above

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40. ECOMARK label of India is represented by :
(A) A blue bird
(B) An earthen pot
(C) Red rose
(D) White rabbit

41. Which of the following products is not suitable for its application in vermicomposting ?
(A) Plant wastes
(B) Animal Wastes
(C) Cow dung
(D) Kitchen waste

42. Waste to energy recovery can be obtained from which of the following methods/ process ?
(A) Heat
(B) Electricity
(C) Cogeneration
(D) All the above

43. Biomass can be converted into which of the following gases ?
(A) Biodiesel
(B) Ethanol
(C) Methane
(D) All the above

44. Which one of the following is not correctly matched ?
(A) Sanitary landfill-Groundwater pollution
(B) Pyrolysis-Sulphur dioxide
(C) Incinerator-Dioxins
(D) Shredding and Pulverization-Volume reduction

45. Which is currently the world's largest oil-producing country (including Crude Oil, NGLs, Biofuel, and Other Hydrocarbons) in the World ?
(A) USA
(B) Canada
(C) Saudi Arabia
(D) Russia

46. Which of the following countries is not among top five Coal producing countries of the world ?
(A) China
(B) Indonesia
(C) India
(D) Russia

47. Match the List I and List II and select the correct answer from the codes given below the lists :

List I	List II
a. Biomass	1. Indirectly supplies all the energy required for sustaining life on earth
b. Biogas	2. Good means of storing defuse and intermittent solar energy
c. Petroplants	3. An important solution to the present energy crisis in rural areas
d. Solar energy	4. Sources of liquid hydrocarbons

Codes :

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

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32 48. Match the List I (SDG 2015) and List II (Title/ description) and select the correct answer from the codes given below the lists :

List I (SDG Goal No.)	List II (SDG Goal tile/ description)
a. SDG No. 3	1. Clean water and sanitation
33 b. SDG No. 4	2. Sustainable cities and communities
c. SDG No. 6	3. Good Health and well-being
d. SDG No. 11	4. Climate action
e. SDG No. 13	5. Quality education

Codes :

	a	b	c	d	e
(A)	5	3	1	4	2
(B)	1	3	5	4	2
(C)	3	5	1	2	4
(D)	4	3	1	2	5

49. Choose the incorrect statement :

(A) The Montreal protocol is associated with the control of emission of ozone depleting substances

(B) Kyoto Protocol is meant to reduce Green House gas emissions

(C) Dobson units are used to measure oxygen content

(D) Use of incinerators is crucial to disposal of hospital wastes

50. Match the List I (disease type) and List II (description) and select the correct answer from the codes given below the lists :

List I	List II
a. Sporadic disease	1. Worldwide epidemic
b. Endemic disease	2. Disease acquired by many hosts in a given area in a short time
c. Epidemic disease	3. Disease constantly present in a population
d. Pandemic disease	4. Disease that occurs occasionally in a population

Codes :

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

51. Which of the following today is not in top five populous countries of the world ?

(A) China

(B) India

(C) Pakistan

(D) Brazil

52. Which one of the following is largest consumer of the groundwater in world ?

(A) China

(B) USA

(C) India

(D) Brazil

53. Which of the following is correct with Gro Harlem Brundtland ?

(A) Idea of sustainable development

(B) Former Prime Minister of Norway

(C) Both (A) and (B)

(D) (A) is correct but not (B)

54. The headquarters of the Green Peace International are located in which of the following country :

(A) Norway

(B) Netherlands

(C) Switzerland

(D) Paris

55. First UNESCO-UNEP sponsored international conference on Environmental Education was held in which of the following country ?

(A) USA

(B) Georgia

(C) Johannesburg

(D) Italy

56. The fourth international conference on environmental education was held in :

(A) Jaipur in 1987

(B) Tiblisi in 1997

(C) Ahmadabad in 2007

(D) Delhi in 2008

57. Match Lists I and II and select the most appropriate answer using the codes given below the lists :

List I	List II
1. Vermin	A. Vernacular language
2. Proclamation reservation	B. Central Govt.
3. Zoo Authority	C. Chief wildlife warden
4. Declaration of National Park	D. State Govt.
5. Declaration of stock	E. Rodents

Codes :

	1	2	3	4	5
(A)	E	A	B	D	C
(B)	E	A	D	B	C
(C)	A	B	C	D	E
(D)	A	B	D	E	C

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58. Power to give directions under EPA 1986 includes the following :

(A) Closure of industry

(B) Stoppage of electricity

(C) Stoppage of Water Supply

(D) All of the Above

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59. The competency of dereservation of forests lies with :

(A) Central Govt.

(B) State Govt.

(C) State Govt. with prior approval from Central Govt.

(D) All of the Above

60. Match Lists I and II and select the correct answer using the codes given below the lists :

List I	List II
1. Ozone depletion	A. Paris Agreement
2. GHG reduction	B. Kyoto Protocol
3. Article 48A	C. Citizen
4. Article 51 A (g)	D. Montreal Protocol
5. Climate Change	E. State

Codes :

	1	2	3	4	5
(A)	D	B	C	E	A
(B)	D	B	A	C	E
(C)	D	B	E	C	A
(D)	D	B	E	A	C