

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX EXAMINATION

MAY 2015

Environmental Studies Paper I

Time: 40 minutes Marks: 30

INSTRUCTIONS

1. Read each question carefully.
2. Answer the questions on the separate answer sheet provided. DO NOT write your answers on the question paper.
3. There are 100 answer numbers on the answer sheet. Use answer numbers 1 to 30 only.
4. In each question there are four choices A, B, C, D. Choose ONE. On the answer grid black out the circle for your choice with a pencil as shown below.

Correct Way					Incorrect Ways				
1	(A)	(B)	●	(D)	1	(A)	(B)	✓	(D)
					2	(A)	(B)	■	(D)
					3	(A)	(B)	✗	(D)
					4	(A)	(B)	⌢	(D)

Candidate's Signature

5. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.
6. DO NOT write anything in the answer grid. The computer only records what is in the circles.

1. Which of the following is the most likely career choice for an environmentalist?
 - A. Oceanographer
 - B. Choreographer
 - C. School principal
 - D. Flight attendant
2. An environmentalist assists in conservation of the natural environment in all of the following ways EXCEPT by attempting to
 - A. increase literacy rate of the society.
 - B. reduce the number of early marriages.
 - C. make family planning more socially acceptable.
 - D. promote the rapid use of non-renewable resources.
3. The Montreal Protocol was initially signed by 46 countries in the year 1987 to protect the ozone layer. This treaty now has nearly 200 signatories and it aims to reduce the production and emission of
 - A. methane.
 - B. carbon dioxide.
 - C. sulphur dioxide.
 - D. chlorofluorocarbons.
4. Which of the following is a characteristic of the lithosphere?
 - A. It is a source of minerals and fuels.
 - B. It is a shield against solar radiation.
 - C. It is comprised of plants, animals and microorganisms.
 - D. It is a collective mass of oceans and fresh water bodies.
5. The sun sustains life on earth in all of the following ways EXCEPT that
 - A. it lights and warms the planet.
 - B. it powers the cycling of matter.
 - C. it drives the climate and weather systems.
 - D. it gives off gases that cause greenhouse effect.
6. Which of the following atmospheric layers lies near the surface of the earth?
 - A. Ionosphere
 - B. Mesosphere
 - C. Troposphere
 - D. Stratosphere
7. The number of apple trees growing in an orchid is an example of
 - A. a population.
 - B. a community.
 - C. an ecosystem.
 - D. a biome.

8. In the nitrogen cycle, the nitrification step involves all of the following EXCEPT the conversion of
- A. gaseous nitrogen to ammonia.
 - B. ammonia to nitrite ion.
 - C. nitrite ion to nitrate ion.
 - D. ammonium ion to nitrite ion.
9. Phytoplanktons, a sub-group of planktons which is found in lakes, includes
- A. protozoa and tiny crustaceans.
 - B. bacteria and protozoa.
 - C. protozoa and algae.
 - D. bacteria and algae.
10. Which of the following happens at each trophic level in a food chain?
- A. 90% energy is stored as biomass.
 - B. 10% energy is stored in the organism.
 - C. 10% energy is liberated in the form of heat.
 - D. 90% energy is transferred to the next trophic level.
11. What would be the effect on the given food chain if 90% of the birds migrate to another country because of a change in climate?

Seeds → snails → birds → foxes

	Increase	Decrease
A.	Seeds	Snails
B.	Foxes	Seeds
C.	Foxes	Snails
D.	Snails	Foxes

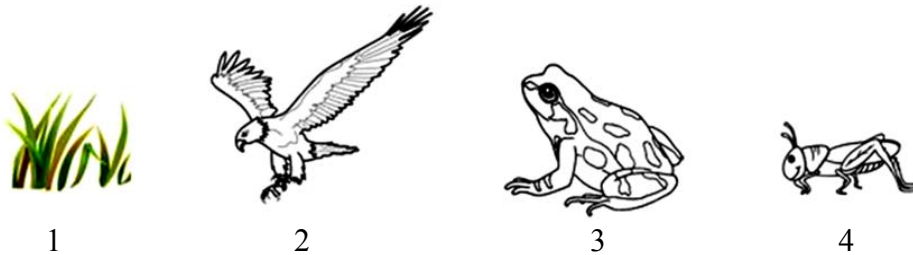
12. Bacteria are decomposers that maintain a balance in the ecosystem. They help in the decay of material, thus returning the nutrients to the food cycle.

All of the following materials can be decomposed by bacteria EXCEPT

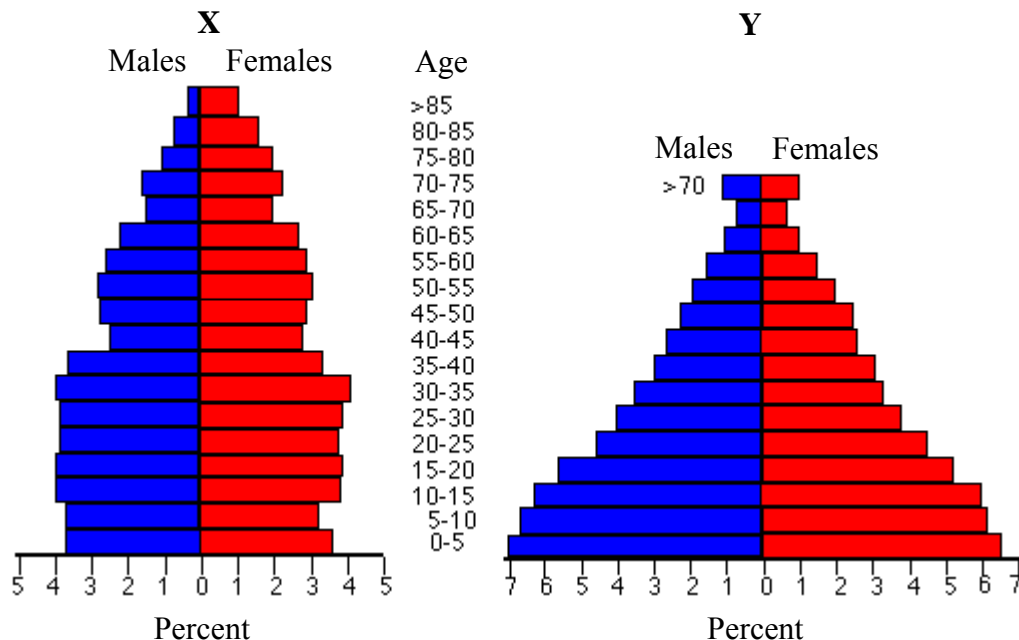
- A. dead animals.
 - B. sewage sludge.
 - C. polythene bags.
 - D. kitchen garbage.
13. Which of the following is an abiotic component of the ecosystem?
- A. Trees
 - B. Water
 - C. Rabbit
 - D. Bacteria

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14. Given below are four organisms which are part of a food chain. Which option organizes them to show the CORRECT flow of energy between them?



- A. 2 → 3 → 1 → 4
 B. 1 → 4 → 3 → 2
 C. 2 → 1 → 3 → 4
 D. 4 → 3 → 1 → 2
15. Which of the following caused a rise in population of Pakistan within the last 50 years particularly from 1960 to 1995?
- A. Decline in food productivity
 B. Decline in fertility and medical facilities
 C. Increase in migration from rural to urban areas
 D. Increase in agricultural productivity and medical facilities
16. Which of the following identifies the pattern of the given age structures for a population of X and Y countries?



	X	Y
A	Pyramid shaped	Bell shaped
B	Bell shaped	Pyramid shaped
C	Urn shaped	Pyramid shaped
D	Bell shaped	Urn shaped

17. If a nation has an annual growth rate of 5%, its population will double in
- A. 14 years.
 - B. 45 years.
 - C. 65 years.
 - D. 74 years.
18. The carrying capacity of human population is determined by the
- A. availability of sufficient resources.
 - B. susceptibility to different diseases.
 - C. qualification of women and children.
 - D. emigration of people to different countries.
19. To bring a balance in the ratio of boys and girls in a population, one should stop
- A. child labour.
 - B. women empowerment.
 - C. gender-based abortions.
 - D. the use of birth control pills.
20. If the human population of an area is not increasing, there is a chance that the members of that population have
- A. low literacy rate.
 - B. low fertility rate.
 - C. poor sanitation conditions.
 - D. poor living conditions.
21. Which disease is caused in humans by pollutants that are found in drinking water?
- A. Scurvy
 - B. Malaria
 - C. Typhoid
 - D. Anaemia
22. Which of the following does NOT cause air pollution?
- A. Burning of fossil fuels in cars
 - B. Spilling of oil from ships
 - C. Emission of gases from industries
 - D. Use of pesticides in farming
23. Years of smoking and exposure to air pollutants may cause one to develop an allergic reaction causing sudden episodes of muscle spasms in the bronchial walls, resulting in acute shortness of breath. This respiratory disease is called
- A. asthma.
 - B. typhoid.
 - C. lung cancer.
 - D. tuberculosis.

24. Which of the following materials obtained from a sewage water treatment plant is used in fertilizers?
- A. Grit
 - B. Stone
 - C. Sludge
 - D. Methane
25. The air of which of these will be the most polluted?
- A. Rural areas
 - B. Farming areas
 - C. Industrial areas
 - D. Residential areas
26. Which of the following intensities of sound is comfortable for human ears to hear?
- A. 0 – 20 db
 - B. 45 – 60 db
 - C. 95 – 120 db
 - D. 120 – 140 db
27. Which of the following is a man-made source of radiation?
- A. Glass crockery
 - B. Colour television
 - C. Wooden furniture
 - D. Artificial jewellery
28. Which instrument is used to measure the intensity of noise that a person is exposed to?
- A. Barometer
 - B. Ammeter
 - C. Dosimeter
 - D. Voltmeter
29. If one is exposed to harmful radiations, its delayed genetic effects can be visible in one's off-springs in the form of
- A. ulcers.
 - B. cancer.
 - C. HIV aids.
 - D. enlarged heart.
30. Which of the following is NOT an adverse effect of noise pollution?
- A. Asthma
 - B. Deafness
 - C. Aggression
 - D. Hypertension

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