**MCQs Our Environment**

Our Environment Class 10 MCQ Question 1. Which of the following is biodegradable?  
(a) Plastic mugs  
(b) Leather belts  
(c) Silver foil  
(d) Iron nails

**Answer**

Answer: b

Our Environment MCQ Question 2. Which of the following is non- biodegradable?  
(a) Wool  
(b) Nylon  
(c) Animal bones  
(d) Tea leaves

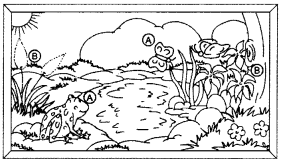
**Answer**

Answer: b

3. Which one of the following will undergo fastest bio-degradation?  
(a) Mango seed  
(b) Wood  
(c) Mango peel  
(d) Mango pulp

**Answer**

Answer: d

Question 4.  
  
An ecosystem is represented in the figure given above. This ecosystem will be self- sustaining if  
(a) the type of organisms represented by B are eliminated.  
(b) materials cycle between the organisms labelled A and the organisms labelled B.  
(c) the organisms labelled A outnumber the organisms labelled B.  
(d) the organisms labelled A are equal in number to the organisms labelled B.

**Answer**

Answer: b

MCQ of Our Environment Class 10 Question 5. In an ecosystem, herbivores represent  
(a) producers  
(b) primary consumers  
(c) secondary consumers  
(d) decomposers

**Answer**

Answer: b

Our Environment Class 10 MCQ Question 6. Trophic level in an ecosystem represents  
(a) oxygen level  
(b) water level  
(c) energy level  
(d) salt level

**Answer**

Answer: c

7. A food chain comprising birds, green plants, fish and man.  
The concentration of harmful chemical entering the food chain will be maximum in  
(a) green plants  
(b) man  
(c) birds  
(d) fish

**Answer**

Answer: b

8. First link in any food chain is usually green plants because  
(a) they are widely distributed  
(b) they are fixed at one place in the soil  
(c) they alone have the capacity to synthesise food using sunlight  
(d) there are more herbivores than carnivores

**Answer**

Answer: c

MCQ on Our Environment Question 9. Which of the following statements about food chain and energy flow through ecosystem is false?  
(a) Food webs include two or more food chains.  
(b) All organisms that are not producers are consumers.  
(c) A single organism can feed at several trophic levels.  
(d) Detritivores feed at all trophic levels except the producer level.  
(e) The lower the trophic level at which an organism feeds, the more energy available.

**Answer**

Answer: d

10. Which of the following is a logical sequence of food chain  
(a) producer → consumer → decomposer  
(b) producer → decomposer → consumer  
(c) consumer → producer → decomposer  
(d) decomposerproducer → consumer

**Answer**

Answer: a

MCQ on Our Environment Class 10 Question 11. Which of the following is an autotroph?  
(a) Lion  
(b) Insect  
(c) Tree  
(d) Mushroom

**Answer**

Answer: c

12. In the garden ecosystem, which of the following are producers?  
(a) Insects  
(b) Snakes  
(c) Grasses  
(d) Rabbits

**Answer**

Answer: c

MCQ of Chapter Our Environment Class 10 Question 13. Which one of the following is an artificial ecosystem? [NCERT Exemplar Problems]  
(a) Pond  
(b) Crop field  
(c) Lake  
(d) Forest

**Answer**

Answer: b

14. An ecosystem includes [NCERT Exemplar Problems]  
(a) all living organisms  
(b) non-living objects  
(c) both living organisms and non-living objects  
(d) sometimes living organisms and sometimes nonliving objects

**Answer**

Answer: c

15. Excessive exposure of humans to UV-ray s results in [NCERT Exemplar Problems]  
(i) damage to immune system  
(ii) damage to lungs  
(iii) skin cancer  
(iv) peptic ulcer  
(a) (i) and (ii)  
(b) (ii) and (iv)  
(c) (i) and (iii)  
(d) (iii) and (iv)

**Answer**

Answer: c

Our Environment MCQ Class 10 Question 16. Which group of organisms are not constituents of a food chain? [NCERT Exemplar Problems]  
(a) Grass, lion, rabbit  
(b) Plankton, man, fish, grasshopper  
(c) Wolf, grass, snake, tiger  
(d) Frog, snake, eagle, grass, grasshopper

**Answer**

Answer: c

17. If a grasshopper is eaten by a frog, then the energy transfer will be from [NCERT Exemplar Problems]  
(a) producer to decomposer  
(b) producer to primary consumer  
(c) primary consumer to secondary consumer  
(d) secondary consumer to primary consumer

**Answer**

Answer: c

18. Excessive exposure to ultraviolet radiation causes  
(a) inflammation of liver  
(b) cancer of skin  
(c) damage to the lungs  
(d) jaundice

**Answer**

Answer: b

19. Which one of the following is an artificial ecosystem?  
(a) Lake  
(b) Forest  
(c) Pond  
(d) Crop field

**Answer**

Answer: d

20. Acid rain is caused by the oxides of  
(a) carbon  
(b) nitrogen only  
(c) sulphur only  
(d) sulphur and nitrogen

**Answer**

Answer: d

21. Which of the following is biodegradable?  
(a) Aluminium can  
(b) Polythene bag  
(c) Cowdung  
(d) DDT

**Answer**

Answer: c

22. Which of the following is an abiotic component of an ecosystem?  
(a) Humus  
(b) Bacteria  
(c) Plants  
(d) Fungi

**Answer**

Answer: a

23. Which one of the following pairs belong to the category of primary consumers?  
(a) Eagle and snake  
(b) Grasshoppers & cattle  
(c) Snake and frog  
(d) Water beetles & fish

**Answer**

Answer: b

24. Which of the following chemicals causes depletion of the ozone layer?  
(a) Carbon tetrachloride  
(b) Methane  
(c) Chloro fluoro carbon  
(d) Carbon monoxide

**Answer**

Answer: c

25. In a food chain, the third trophic level is always occupied by  
(a) herbivore  
(b) carnivore  
(c) decomposer  
(d) producer

**Answer**

Answer: b

26. The depletion of the ozone layer causes  
(a) global wanning  
(b) earthquakes  
(c) increased UV radiations  
(d) acid rain

**Answer**

Answer: c

27. In the given foodchain if the amount of energy at the fourth trophic level is 4 kJ, what will be the energy available at the producer level?  
Grass → Grasshopper → Frog → Snake  
(a) 4 kJ  
(b) 40 kJ  
(c) 400 kJ  
(d) 4000 kJ

**Answer**

Answer: d

28. What will happen if all the deer are killed in the given food chain?  
Grass → Deer → Lion  
(a) The population of grass decreases.  
(b) The population of lions increases.  
(c) The population of lions remains unchanged.  
(d) The population of lions decreases and grass increases.

**Answer**

Answer: d

29. Which of the two in the following sets belong to the same trophic level?  
(a) Grass; Grasshopper  
(b) Goat; Spider  
(c) Hawk ; Rat  
(d) Frog ; Lizard

**Answer**

Answer: d

Direction (Q30 to Q34): In the following Questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following:  
(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.  
(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.  
(c) Assertion is true but the Reason is false.  
(d) The statement of the Assertion is false but the Reason is true.  
30. Assertion: Vegetarian food habit is more beneficial to organisms.  
Reason: Only 10% energy is available as food from one trophic level to next.

**Answer/Explanation**

Answer: a  
Explanation:  
(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

31. Assertion: Accumulation of harmful chemicals is maximum in case of organisms at higher trophic level.  
Reason: Food chain normally do not go beyond 3 or 4 trophic level.

**Answer/Explanation**

Answer: b  
Explanation:  
(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

32. Assertion: Ozone layer is getting depleted at upper atmosphere which is a cause of concern.  
Reason: CFC reacts with ozone and breaks it.

**Answer/Explanation**

Answer: a  
Explanation:  
(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

33. Assertion: Autotrophs can produce food on its own.  
Reason: Green plants can absorb 1% energy of sunlight that fall on the leaves.

**Answer/Explanation**

Answer: b  
Explanation:  
(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

34. Assertion: Biodegradable waste and non biodegradable waste should be discarded separately,  
Reason: Biodegradable waste are not harmful.

**Answer/Explanation**

Answer: c  
Explanation:  
(c) Assertion is true but the Reason is false.

35. A food chain comprises of frog, snake, grass and grasshopper. The organisms at third trophic level is \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: frog

36. In an ecosystem, various organisms are linked forming interconnections such a condition is termed as \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: Food web

37. Ultraviolet radiation from sunlight causes a reaction which produces \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: O3

38. Burning of waste substances usually at high temperature of over 1000° C to convert them into ashes is called \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: Incineration

39. Animal dung is \_\_\_\_\_\_\_\_\_\_\_ waste.

**Answer/Explanation**

Answer:  
Explanation: Biodegradable

40. Accumulation of non-biodegradable pesticides in the food chain in increasing amount at each higher trophic level is known as \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: biomagnification

41. Depletion of ozone is mainly due to \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: chlorofluorocarbon compounds

42. Organisms which synthesise carbohydrates from inorganic compounds using radiant energy are called \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: producers

43. Flow of energy in an ecosystem is always \_\_\_\_\_\_\_\_\_\_\_ .

**Answer/Explanation**

Answer:  
Explanation: unidirectional

44. Decomposers get their energy directly from autotrophs. [True/False]

**Answer/Explanation**

Answer:  
Explanation: False

45. Ozone layer presents harmful infrared radiation. [True/False]

**Answer/Explanation**

Answer:  
Explanation: False

46. Factors such as light, temperature, pressure and humidity are considered as biotic components. [True/False]

**Answer/Explanation**

Answer:  
Explanation: False

47. Food chains generally consist of three or four organisms. [True/False]

**Answer/Explanation**

Answer:  
Explanation: True

48. Disposal of waste means recycling of wastes. [True/False]

**Answer/Explanation**

Answer:  
Explanation: False

49. The disposal of wastes by putting it in low-lying areas of ground and covering it with earth is called landfill. [True/False]

**Answer/Explanation**

Answer:  
Explanation: True

Direction: Match Column I with Column II.  
50.

|  |  |
| --- | --- |
| Column I | Column II |
| 1. Producers | (i) Suspended |
| 2. Primary consumers | (ii) Group of colours |
| 3. Secondary consumers | (iii) Scattering |
| 4. Decomposers | (iv) Changing |

**Answer/Explanation**

Answer:  
Explanation:  
1 (iii)  
2 (i)  
3 (iv)  
4 (ii).

51. We often use the word environment. What does it mean? [Foreign 2016]

**Answer/Explanation**

Answer:  
Explanation:  
It is the sum total of all external conditions and influences that affect the life and development of an organism, i.e. the environment includes all the physical or abiotic and biological or biotic factors.

52. Why is it necessary to conserve our environment? [AI2011]

**Answer/Explanation**

Answer:  
Explanation:  
It is necessary to conserve our environment to prevent depletion of natural resources and environmental damage, thereby sustaining life.

53. Select two non-biodegradable substances from the following wastes generated in a kitchen: spoilt food, paper bags, milk bags, vegetable peels, tin cans, used tea leaves. [Delhi 2012]

**Answer/Explanation**

Answer:  
Explanation:  
Milk bags and tin cans.

54. Why should biodegradable and non- biodegradable wastes be discarded in two separate dustbins? [AI 2017(C); Delhi 2013, 15]

**Answer/Explanation**

Answer:  
Explanation:  
The biodegradable and non-biodegradable wastes must be discarded in two different dustbins because biodegradable Wastes gets decomposed by the microorganisms whereas non-biodegradable wastes can be recycled and reused.

55. How should we dispose waste?

**Answer/Explanation**

Answer:  
Explanation:  
By segregating biodegradable and non-biodegradable material.

56. Why is plastic called non-biodegradable?

**Answer/Explanation**

Answer:  
Explanation:  
Plastic cannot be broken-down into smaller particles by the action of bacteria and hence it is called non-biodegradable.

57. What is biodegradable plastic?

**Answer/Explanation**

Answer:  
Explanation:  
Plastics that are decomposed by the action of living organisms such as bacteria are called biodegradable plastic.

58. Name few biodegradable substances you generate.

**Answer/Explanation**

Answer:  
Explanation:  
Waste food, paper, cloth, etc.

59. List two natural ecosystems. [Delhi 2016]

**Answer/Explanation**

Answer:  
Explanation:  
Two natural ecosystems are forest and river.

60. List two biotic components of a biosphere. [Delhi 2016]

**Answer/Explanation**

Answer:  
Explanation:  
Two biotic components of a biosphere are plants and animals.

61. Name any two man-made ecosystems. [Foreign 2017]

**Answer/Explanation**

Answer:  
Explanation:  
Agricultural/crop fields, aquaria, gardens. (any two)

62. Why are green plants called producers? [Delhi 2016]

**Answer/Explanation**

Answer:  
Explanation:  
Green plants can produce their own food by photosynthesis from inorganic compounds and hence are called producers.

63. What will be the amount of energy available to the organism of the 2nd trophic level of a food chain, if the energy available at the first trophic level is 10,000 joules? [AI 2015]

**Answer/Explanation**

Answer:  
Explanation:  
100 Joules of energy will be available to the organism of the 2nd trophic level.

64. The first trophic level in a food chain is always a green plant. Why? [AI 2015]

**Answer/Explanation**

Answer:  
Explanation:  
Only green plants can make their own food from sunlight. Green plants therefore, always occupy the 1st trophic level in a food chain.

65. Which of the following are always at the second trophic level of the food chains? [AI 2015]  
Carnivores, Autotrophs, Herbivores

**Answer/Explanation**

Answer:  
Explanation:  
Herbivores are always at the 2nd trophic level.

66. The following organisms form a food chain. Which of these will have the highest concentration of non-biodegradable chemicals? Name the phenomenon associated with it. [Foreign 2015]  
Insects, Hawk, Grass, Snake, Frog.

**Answer/Explanation**

Answer:  
Explanation:  
Hawk will have highest concentration of non-biodegradable chemicals. The phenomenon is called biomagnification.

67. List two criteria of measuring the biodiversity of an area. [Foreign 2014]

**Answer/Explanation**

Answer:  
Explanation:  
One measure of the biodiversity of an area is the number of species found there. Secondly, the range of different life forms is also important.

68. Name two decomposers operating in our cosystem. [AI 2011, Delhi 2012]

**Answer/Explanation**

Answer:  
Explanation: Bacteria and fungi.

69. In a food chain, 10,000 joules of energy is available to the producer. How much energy will be available to the secondary consumer to transfer it to the tertiary consumer? [AI 2012]

**Answer/Explanation**

Answer:  
Explanation:  
10J of energy will be available to the secondary consumer to transfer to the tertiary consumer.

70. Consider the following food chain which occurs in a forest:  
Grass → Deer → Lion  
If 10000 J of solar energy is available to the grass, how much energy would be available to the deer to transfer it to the lion? [Foreign 2012]

**Answer/Explanation**

Answer:  
Explanation:  
1 J energy will be available to deer to transfer it to lion.

71. In the following food chain, 100 J of energy is available to the lion. How much energy was available to the producer? [AI 2017]  
Plants → Deer → Lion

**Answer/Explanation**

Answer:  
Explanation:  
1,000,000 J of energy was available to the producer.

72. Which of the following belong to the first trophic level of a food chain?  
Grass, Grasshopper, Plants, Rat, Tiger [Foreign 2012]

**Answer/Explanation**

Answer:  
Explanation:  
Grass and plants belong to the 1st trophic level of a food chain.

73. What are the various steps in a food chain called? [Delhi 2011]

**Answer/Explanation**

Answer:  
Explanation:  
The various steps in a food chain are called trophic levels.

74. Give an example to illustrate that indiscriminate use of pesticides may result in the degradation of the environment. [AI 2011]

**Answer/Explanation**

Answer:  
Explanation:  
The pesticides used in crop field are washed down into the water bodies. From water bodies, these are absorbed by the aquatic plants and animals of a food chain and thereby degrades the environment.

75. When plants are eaten by primary consumers, a great deal of energy is lost as heat to the environment and some amount goes in carrying out various life processes. State the average percentage of energy lost in this manner. [HOTS]

**Answer/Explanation**

Answer:  
Explanation:  
The average percentage of energy lost when plants are eaten by primary consumers is 90%.

76. Write the full name of the group of compounds mainly responsible for the depletion of ozone layer. [Foreign 2015]

**Answer/Explanation**

Answer:  
Explanation: CFC → Chlorofluorocarbon

77. What is a consumer?

**Answer/Explanation**

Answer:  
Explanation:  
Organisms which depend upon producers for food.

78. What happens to Sun’s energy that fall on green plants?

**Answer/Explanation**

Answer:  
Explanation:  
Green plants absorb 1% of Sun’s energy that falls on their leaves.

79. How much energy one trophic level gets from another?

**Answer/Explanation**

Answer:  
Explanation:  
Each trophic level makes 10% energy available to next trophic level.

80. What happens when a harmful chemical enters a food chain?

**Answer/Explanation**

Answer:  
Explanation:  
Its concentration increases with increase in trophic level.

81. Why does energy available at each trophic level diminish progressively?

**Answer/Explanation**

Answer:  
Explanation:  
Energy available at each trophic level diminishes progressively due to loss of energy at each level.

82. Define Ozone hole. [DoE]

**Answer/Explanation**

Answer:  
Explanation:  
Decline in the thickness of ozone layer in Antartica is termed as ozone hole.

83. Write the name and formula of a molecule made up of three atoms of oxygen. [AI 2012]

**Answer/Explanation**

Answer:  
Explanation:  
Ozone and its chemical formula is O3.

84. Why did United Nations act to control the production of chlorofluorocarbons (CFCs) used in refrigerators? [Delhi 2011]

**Answer/Explanation**

Answer:  
Explanation:  
CFCs depletes the ozone layer around the earth, hence its production is controlled by United Nations.

85. Which disease is caused in human beings due to depletion of ozone layer in the atmosphere? [HOTS]

**Answer/Explanation**

Answer:  
Explanation:  
Skin cancer is caused in human beings due to a depletion of ozone layer in the atmosphere.

86. What is the full form of CFC and UNEP? [DoE]

**Answer/Explanation**

Answer:  
Explanation:  
CFC: Chlorofloro carbon.  
UNEP: United Nation Environmental Programmes.

87. Some time back, Kulhadas, that is disposable cups made up of clay, were suggested as an alternative. Why Kulhads are not being used in trains now? [HOTS]

**Answer/Explanation**

Answer:  
Explanation:  
Manufacturing Kulhads on large scale would result in the depletion of fertile top soil making the land inadequate for the cultivation of crops.

Fill in the Blanks

1. Those waste materials which can be broken down to non-poisonous susbtances in nature in due course of time by the action of micro-organisms are called …….. wastes.  
2. The waste materials which can not be broken down into harmless substances in nature are called …….. .  
3. …….. is the ultimate source of energy.  
4. In 1987 …….. succeeded in forging an agreement to freeze CFC production at 1986 levels.  
5. Ozone at the higher levels of atmosphere is a product of UV radiation acting on …….. molecule.  
6. …….. can be classified as herbivores, carnivores, omnivores and parasites.

Answers

1. biodegradable  
2. non-biodegradable wastes  
3. Sun  
4. United Nations Environment Programme (UNEP)  
5. oxygen (O2)  
6. Consumers