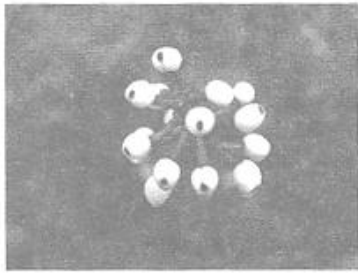


## Plants and Animals

1. Symbiosis refers to close interactions between two or more different species. In mycorrhiza, higher absorptive capacity for water and mineral nutrients is provided by plant, showing symbiotic relationship with
  - (a) Fungi
  - (b) Bacteria
  - (c) Bryophytes
  - (d) Algae
2. Not all animals reproduce sexually. When food is plentiful the Hydra reproduces asexually, sometimes as often as once in 2 days, by which of the following processes?
  - (a) Binary fission
  - (b) Parthenogenesis
  - (c) Budding
  - (d) Laying eggs
3. Found mainly in the Congo basin, this ape was referred to formerly as 'pygmy chimpanzee'. It resembles humans the most in that it shares more than 98% of its DNA with humans. Which ape are we talking about?
  - (a) Gorilla
  - (b) Barbary ape
  - (c) Bonobo
  - (d) Orangutan
4. A flagellum (plural: flagella) is a lash-like appendage that protrudes from the cell body of certain cells. What is its function in a unicellular organism like the Helicobacter pylori, a bacterium that causes ulcers?
  - (a) Locomotion
  - (b) Excretion
  - (c) Respiration
  - (d) Osmoregulation
5. This 18th century Swedish scientist first developed a binomial nomenclatural system of scientific classification and nomenclature based on common characteristics of living beings. Who was he?
  - (a) Carolus Linnaeus
  - (b) Charles Darwin
  - (c) Benjamin Franklin
  - (d) Jacques Cousteau
6. The scientific names of all living creatures consist of two parts. Thus, human beings are Homo sapiens. What do the two parts denote?
  - (a) Class and Kingdom
  - (b) Genus and Species
  - (c) Genus and Class
  - (d) Family and Phylum
7. An anti-coagulant is a substance that prevents the clotting of blood. From which animal is the anti-coagulant called Hirudin used in modern medicine extracted?
  - (a) Wasp
  - (b) Spider
  - (c) Scorpion
  - (d) Leech
8. The male of this whale species can easily be recognised by its single, protruding spiral tusk. Which animal are we talking about?
  - (a) Narwhal
  - (b) Livyatan
  - (c) Baiji
  - (d) Minke whale
9. This fish although poisonous, is a much sought after Japanese delicacy. Chefs undergo rigorous training before they are allowed to prepare it. Its local name is 'Fugu'. What is its English name?
  - (a) Pufferfish
  - (b) Alumahan
  - (c) Barracuda
  - (d) Gambusia

- 10.** This plant disease caused by fungi results in black/brown lesions on leaves, stem and death of plant tissue. Tomato and potato are plants affected by this disease. Name the disease.  
(a) Late Blight  
(b) Scabies  
(c) Brown rot  
(d) Crown Gall
- 11.** Many animals such as bats and primates indulge in geophagia, or the ingestion of soil. Which type of soil do these animals prefer?  
(a) Gravel  
(b) Sand  
(c) Silt  
(d) Clay
- 12.** It is an organ located at the base of the nasal cavity of some animals. Snakes use this organ to hunt and track their prey. They stick their tongue out to gather scents and touch it to the opening of the organ when the tongue is retracted. Name the organ.  
(a) Jacobson's organ  
(b) Blowhole  
(c) Peyer's patches  
(d) Islet of Langerhans
- 13.** Autotomy is the behaviour wherein an animal sheds or discards one or more of its own appendages, for example tails, usually as a self-defense mechanism to distract or escape from a predator. The lost body part may be regenerated later. Which of these animals exhibits this kind of behaviour?  
(a) Garden lizard  
(b) Fruit bat  
(c) Star tortoise  
(d) Slender loris
- 14.** In which of the following countries would you find the aye-aye?  
(a) New Zealand  
(b) Madagascar  
(c) Kenya  
(d) Norway
- 15.** Nacre is a hard, iridescent, crystalline substance secreted by some animals in response to an irritant. Which of these precious substances contains nacre?  
(a) Coral  
(b) Amethyst  
(c) Pearl  
(d) Aquamarine
- 16.** Hermaphrodite organisms are animals that have -both male and female reproductive organs. Which of the following organisms is a hermaphrodite?  
(a) Earthworm  
(b) Snail  
(c) Hamlet fish  
(d) All of these
- 17.** Studies have shown that the leaves and pods of this tree are very rich in iron, calcium, vitamins A and C; and other nutrients. It is highly recommended by scientists for those who suffer from malnutrition, including infants. Name the tree.  
(a) Drumstick tree  
(b) Tamarind tree  
(c) Neem tree  
(d) Gulmohur tree
- 18.** Not all snakes kill by poisoning their victim through venom. Some kill by suffocating their prey by constriction. Which of the following is a constrictor?  
(a) Rat snake  
(b) King cobra  
(c) Rock python  
(d) Russell's viper
- 19.** This plant given in the picture is known as doll's eye for its peculiar berries that crop up once a year. These small white berries have small marks that appear like pupils, giving the plant an interesting appearance. To which family does it belong?



- (a) Asteraceae
- (b) Ranunculaceae
- (c) Potamogetonaceae
- (d) Fabaceae

- 20.** The animal given in the picture is a long necked antelope found in some parts of African region. It stands on its hind legs to feed, allowing itself to reach branches and vegetation. Identify it.



- (a) Gerenuk
- (b) Umbonia Spinosa
- (c) Chevrotain
- (d) Babirusa

- 21.** Why plants are killed in winter by frost?
- (a) No transpiration occurs at such low temperature.
  - (b) No photosynthesis takes place at such low temperature.
  - (c) There is desiccation and mechanical damage to the tissues.
  - (d) Respiration ceases at such low temperature.

- 22.** This wax comes from the leaves of the palm *Copernicia prunifera*, a plant that is native to,

and grown only in parts of north-eastern Brazil. The wax is obtained by collecting and drying the leaves and then beating them in order to loosen the wax. This wax is used in automobile waxes, shoe polishes, dental floss, food products and cosmetics. Which wax is this?

- (a) Carnauba wax
- (b) Candelilla wax
- (c) Ouricury wax
- (d) Lanolin wax

- 23.** It is a translucent colourless, brittle (when dry), flavour less food produced by partial hydrolysis of collagen extracted from the skin, bones, and connective tissues of animals. Which substance is this?

- (a) Isinglass
- (b) Shellac
- (c) Gelatin
- (d) Lard

- 24.** It is a meat-based product used as a food additive to ground beef and beef-based processed meats, as a filler or to reduce the overall fat content of ground beef. In 2001, USDA approved the product for limited human consumption. It is banned for human consumption in the European Union. Which product are we talking about?

- (a) Tallow
- (b) Castoreum
- (c) Whey
- (d) Pink slime

- 25.** Carmine, a powder used as an all-encompassing dye in red foods like candy, ice cream and yogurt is derived from

- (a) Red cochineal beetle
- (b) Red spider
- (c) Red sea star
- (d) Red Humboldt squid

### Answer Key

<b>1.</b> A	<b>2.</b> C	<b>3.</b> C	<b>4.</b> A	<b>5.</b> A
<b>6.</b> B	<b>7.</b> D	<b>8.</b> A	<b>9.</b> A	<b>10.</b> A
<b>11.</b> D	<b>12.</b> A	<b>13.</b> A	<b>14.</b> B	<b>15.</b> C
<b>16.</b> D	<b>17.</b> A	<b>18.</b> C	<b>19.</b> B	<b>20.</b> A
<b>21.</b> C	<b>22.</b> A	<b>23.</b> C	<b>24.</b> D	<b>25.</b> A