**The City School**

North Nazimabad Boys Campus

# Subject: biology

# Comprehensive Test (1 hour)

# Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class9/Sec: \_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_

CHOOSE THE BEST ANSWERS:

1) Which type of blood vessels carries blood away from the heart?

a) Veins b) Arteries c) Capillaries d) Arteries and veins

2) What part of the blood carries minerals, vitamins, sugar and other foods to the body’s cells?

a) Plasma b) Platelets c) Red cells d) White cells

3) Which of the following can best be compared to soldiers?

a) Capillaries b) Red blood cells c) White blood cells d) Platelets

4) Oxygen moves from the lungs into the blood stream through,

a) A nerve fiber b) A large artery in the heart

c) A small blood vessels in the lungs d) A tube in the lung

5) What body structure protects the lungs from physical injury?

a) Cartilage b) Tiny sac c) The rib cage d) Diaphragm

6) Which of the following disease is unlikely to be caused by smoking?

a) Lung cancer b) tuberculosis c) bronchitis d) heart attack

7) Inhaled air contains about 78 % nitrogen. What is the approximate percentage concentration of nitrogen in exhaled air?

a) 8% b) 10% c) 78% d) 16%

8) When we inhale

a) Our intercostal muscles contract and our ribs move down

b) Our diaphragm muscles contract and the ribs move up

c) Our diaphragm muscles contract and the ribs move down

d) Our intercostal muscles contract and the diaphragm muscles relax.

9) Inhalation and exhalation of air is called

a) Breathing b) diffusion c) respiration d) gaseous exchange

10) Which statement is not correct when comparing respiration and burning a fuel?

a) Respiration is fast and not controlled, burning is rapid and controlled

b) Both respiration and burning produce water and carbon dioxide

c) Both respiration and burning use up oxygen

d) Both respiration and burning release heat energy, but only burning gives out light. Answer D

11) Raw materials for photosynthesis include

1. light
2. organic substances
3. nutrients
4. all of these

Answer D

12) Guard cells of stoma are

1. irregular in shape
2. convex in shape
3. long and cylindrical in shape
4. kidney-shaped

Answer D

13) Chlorophyll is found in oval-shaped structures called as

1. stomata
2. stoma
3. chloroplast
4. centrioles

Answer C

14) Light dependent stage can not be carried out without

1. oxygen
2. carbon dioxide
3. water
4. all of these

Answer C

15) Plant can be destarched in

1. 14 hours
2. 24 hours
3. 42 hours
4. 48 hours

Q .2. An artificial cell containing an aqueous solution of [0.02 M sucrose, 0.01 M glucose, and 0.06 M fructose] enclosed in a selectively permeable membrane has ***just been immersed*** in a beaker containing a different aqueous solution [0.05 M sucrose, 0.03 M glucose, 0.01 M fructose]:

**“Environment” (beaker solution)**

**“Cell”**



0.06 *M* fructose

0.01 M glucose

0.01 *M* fructose

0.05 M sucrose

0.03 M glucose

0.02 M sucrose

The membrane is permeable to water and to the simple sugars glucose and fructose, but is completely impermeable to the disaccharide sucrose. Now answer questions 1-4, below.

1. Which solute(s) will exhibit a net diffusion into the cell?

A. Glucose and fructose B. Glucose and sucrose

C. Fructose

D. Glucose

2. Which solute(s) will exhibit a net diffusion out of the cell

A. Glucose and fructose

B. Glucose and sucrose

C. Fructose

D. Glucose

3. In which direction will there be a net osmotic movement of water?

A. From the cell into the environment (outside solution).

B. From the environment (outside solution) into the cell.

C. From the top of the beaker to the bottom of the beaker

D. From the bottom of the beaker to the top of the beaker

4. After the cell is placed into the beaker, which of the following changes would occur?

A. The artificial cell would become more flaccid (“*shriveled”; ie, would shrink)*.

B. The artificial cell would become more turgid *(“stiff; hard”; ie, would expand)*.

C. The entropy of the system (cell plus surrounding solution) would decrease.

D. The overall free energy stored in the system would increase.

|  |  |
| --- | --- |
| .5. | Stores the liver's digestive juices until they are needed by the intestines. |

|  |  |
| --- | --- |
| A. | Pancreas |

|  |  |
| --- | --- |
| B. | Gall bladder |

|  |  |
| --- | --- |
| C. | Villi |

|  |  |
| --- | --- |
| 6. | This organ stores swallowed food and liquid, mixes up digestive juices with the food and liquid and sends it to the small intestine. |

|  |  |
| --- | --- |
| A. | Small intestine |

|  |  |
| --- | --- |
| B. | Large intestine |

|  |  |
| --- | --- |
| C. | Stomach |

|  |  |
| --- | --- |
| 7. | This part of the digestive system removes solid wastes such as feces from the body. |

|  |  |
| --- | --- |
| A. | Large intestine |

|  |  |
| --- | --- |
| B. | Small intestine |

|  |  |
| --- | --- |
| C. | Esophagus |

|  |  |
| --- | --- |
| 8. | This organ produces a digestive juice that contains a wide array of enzymes to break down fat, carbohydrate and protein in food. |

|  |  |
| --- | --- |
| A. | Pancreas |

|  |  |
| --- | --- |
| B. | Liver |

|  |  |
| --- | --- |
| C. | Large intestine |

|  |  |
| --- | --- |
| 9. | An organ that produces a bodily juice called bile. |

|  |  |
| --- | --- |
| A. | Liver |

|  |  |
| --- | --- |
| B. | Pancreas |

|  |  |
| --- | --- |
| C. | Gallbladder |

|  |  |
| --- | --- |
| 10. | Tiny fingerlike projections in the small intestine. |

|  |  |
| --- | --- |
| A. | Villi |

|  |  |
| --- | --- |
| B. | Anus |

|  |  |
| --- | --- |
| C. | Rectum |

|  |  |
| --- | --- |
| 11. | A long tube that carries food from the mouth to the stomach. |

|  |  |
| --- | --- |
| A. | Trachea |

|  |  |
| --- | --- |
| B. | Esophagus |

|  |  |
| --- | --- |
| C. | Urethra |

|  |  |
| --- | --- |
| 12. | The final portion of the large intestine. |

|  |  |
| --- | --- |
| A. | Esophagus |

|  |  |
| --- | --- |
| B. | Rectum |

|  |  |
| --- | --- |
| C. | Gallbladder |

|  |  |
| --- | --- |
| 13. | This contains tiny glands that produce juices to digest food, found in the mouth, stomach and small intestine. |

|  |  |
| --- | --- |
| A. | Villi |

|  |  |
| --- | --- |
| B. | Mucosa |

|  |  |
| --- | --- |
| C. | Anus |
| 14. | The place where digested molecules of food, water and minerals are absorbed. |

|  |  |
| --- | --- |
| A. | Small intestine |

|  |  |
| --- | --- |
| B. | Large intesine |

|  |  |
| --- | --- |
| C. | Mouth |

|  |  |
| --- | --- |
| 15. | This is the job of the digestive system. |

|  |  |
| --- | --- |
| A. | To give the body shape |

|  |  |
| --- | --- |
| B. | To take in and break down food for use by the body |

|  |  |
| --- | --- |
| C. | To take in oxygen and give off carbon dioxide |

|  |  |
| --- | --- |
| 16. | The opening at the end of the digestive tract in which solid wastes are eliminated. |

|  |  |
| --- | --- |
| A. | Anus |

|  |  |
| --- | --- |
| B. | Mucosa |

|  |  |
| --- | --- |
| C. | Liver |

|  |  |
| --- | --- |
| 17. | Composed of the teeth, tongue, salivary glands and muscles, this part takes in food to begin the process of digestion. |

|  |  |
| --- | --- |
| A. | Anus |

|  |  |
| --- | --- |
| B. | Esophagus |

|  |  |
| --- | --- |
| C. | Mouth |

**18. Digestion begins in the mouth. Which of the following statement is INCORRECT?**

A. The tongue aids in the digestion of the food.

B. The saliva changes some of the starches in the food to sugar.

C. The tongue keeps the food in place in the mouth while the food is being chewed

D. the digestive juices can react more easily with the food when chewed.

**19. Where is the digestive enzyme amylase found?**

A. Stomach

B. Mouth

C. Chest

D. Brain

**20.The protease specifically breaks down proteins into**

A. amino acids

B. hydrochloric acids

C. a & b

D. none of the above

Q.3. Explain why?

1. Cigarette smoking is one of the major causes of lung cancer.
2. After exercise we have a short breath.
3. Digestion of carbohydrate starts in mouth.
4. Alveoli have big surface area.
5. Plants need magnesium for growth.
6. Heart has thick muscular wall.
7. Energy in oil came from sun.
8. Green plants are known as autotrophs.
9. People having blood group O-ve are universal donor.
10. Active transport takes place only in living things.