

Holidays Home Work (Dussehra Break)

CLASS – IX

ENGLISH

Do the following questions:

- Q1. Write the character sketch of Guilliver's friend 'Munodi'.
- Q2. How was Gulliver entertained by the horses?
- Q3. Discuss the differences between the Yahoos and Houyhnhnms.
- Q4. "Swift has interchanged the roles of human beings and horses in the country of Houyhnhnms". What satirical purpose did Jonathan Swift want to achieve through this?
- Q5. Discuss the similarities between the Yahoos and human beings as depicted by Jonathan Swift in his novel.
- Q6. "Jonathan Swift wanted to give a message to the human beings by depicting Houyhnhnms free from all evils". Justify the statement.

हिन्दी

अनुच्छेद - मोबाइल फ़ोन: सुविधा या असुविधा

संवाद - दीवाली के त्योहार पर पटाखों का प्रयोग न करने के लिए पिता - पुत्र की बातचीत संवाद रूप में लिखिए।

पाठ वैज्ञानिक चेतना के वाहक..... के मौखिक व लिखित (क) प्रश्नोत्तर काँपी में करें।

SCIENCE

DNA (Deoxyribonucleic acid) is found in the nucleus of most of the cells. It controls functioning of the cell and also determines how an organism looks like and functions. A segment of DNA that determines a specific trait in an organism is called gene. Gene consists of four types of nucleotides that differ from each other in terms of bases. Four types of bases are Adenine, Thymine, Cytosine and Guanine. It is the unique sequence of these bases (in nucleotides) that codes different information.

Tools of genetic engineering have made it possible to transfer these unique sequences from one organism to another. Genetic engineers use restriction enzymes to remove a gene from a donor organism's DNA and insert it into a molecule of carrier DNA. This process is called recombination. Finally the recombinant DNA is introduced into egg of a multicellular organism at the time of fertilization.

The genes containing nucleotide sequences from other organism are called transgenes. That is why the organisms are also called transgenics. This technology is being used in Plant Science frequently. Transgenes present in a cell multiply with the organism and pass on to the next generation through pollens and egg cells.

Q1:-Genetic engineering manipulates gene structure at the level of the:

- (a)protein (b)amino acids (c)nucleic acid (d)lipid

Q2:-What makes genes unique?

- (a)four types of bases (b)four types of nucleotides (c)sequence of nucleotides  
(d)special chemicals

Q3:-A multicellular organism that carries modified genes in each cell, due to intervention at the time of fertilization is called :

- (a)recombination      (b)transition      (c)transgenic      (d)transformation

Q4:-Consider the following basic steps of genetic engineering.

- S1: Identifying DNA in an organism A
- S2:Transferring to another organism B
- S3: Cutting the DNA segment with enzymes
- S4: Inserting into DNA of carrier

Which of the following is the correct sequence?

- (a)S1-S2-S4-S3      (b)S3-S2-S1-S4      (c)S1-S3-S4-S2      (d)S1-S4-S3-S2

Q5:-Which of the following is not true about transgenics?

- (a) It is frequently used in plants.
- (b) Modified gene passes from generation to generation.
- (c) Chromosome Number of organisms change.
- (d) Sequence of nucleotides may get altered.

Sound is a kind of energy and it needs a medium to travel as it is a kind of longitudinal wave. The speed of sound in different medium is different. Along with the nature of the medium temperature also affects the speed of the sound. At 25°C speed of sound in some medium is given below :

1. Air – 346 m/s
2. Water (Distilled) – 1498 m/s
3. Water (Sea) – 1531 m/s
4. Flint Glass – 3980 m/s
5. Steel – 5960 m/s

Sound energy gets reflected through a suitable reflecting surface. An echo is a reflected sound which is heard separately. The sensation of sound persists in our brain for about 0.1sec. To hear the echo clearly at 22°C, the minimum distance between the source of sound and obstacle should be 17.2 m as the speed of sound in air at that temperature is 344 m/s.

Q1. The speed of sound is more in sea water than in distilled water at the same temperature because of

- (a) taste of sea water is different from distilled water
- (b) density of sea water is more than distilled water
- (c) sea water can conduct electricity
- (d) animals can survive in sea water.

Q2. An echo is returned in 3 sec. at 22°C in a hall. What will be the distance of reflecting surface from the source.

- (a) 1032 m      (b) 516 m      (c) 258 m      (d) 344 m

Q3. The speed of sound in space will be

- (a) 0 m/s      (b) 332 m/s      (c) 596 m/s      (d) 1498 m/s

Q4. In the same medium the speed of sound

- (a) increase with temperature      (b) decreases with temperature
- (c) remains same      (d) first increase then decrease

The phenomenon of change of a liquid into its vapour at any temperature below its boiling point is called evaporation. Wet clothes dry up in air due to the evaporation of water. Rate of evaporation increases with increase in temperature. The particles in a liquid have different kinetic energies. Some particles have lower kinetic energies and other have higher kinetic energies. The particles having higher kinetic energies at the surface of the liquid overcome the forces of attraction of other particles, leave the surface and get converted into vapour. Evaporation is continuous process and particles keep on escaping the surface of the liquid.

Q1. At what temperature evaporation takes place?

- (i) At boiling point
- (ii) Above boiling point
- (iii) At room temperature
- (iv) Below boiling point

Q2. How do wet clothes dry-up?

- (i) Due to condensation
- (ii) Due to evaporation
- (iii) Due to surface tension
- (iv) Due to temperature

Q3. What is the effect of temperature on evaporation?

- (i) Increases with temperature
- (ii) Decreases with temperature
- (iii) No effect of temperature
- (iv) None of these

Q4. What type of energy do the particles have in a liquid?

- (i) Electrical energy
- (ii) Potential energy
- (iii) Kinetic energy
- (iv) Radiation energy