

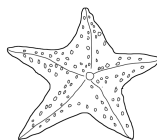
**Time: 2 hours****Activity Sheet – December 2020****Marks: 40**

**Q.1. (A) Choose the *correct* alternative from the given options. [5]**

- i. Water reservoir possesses \_\_\_\_\_ energy.
  - a. nuclear
  - b. thermal
  - c. kinetic
  - d. potential
- ii. In mitotic division, nuclear membrane completely disappears in \_\_\_\_\_.
  - a. telophase
  - b. prophase
  - c. metaphase
  - d. anaphase
- iii. Genetic changes occur due to \_\_\_\_\_ pollution.
  - a. radioactive
  - b. air
  - c. water
  - d. soil
- iv. In humans, sperm production occurs in the \_\_\_\_\_.
  - a. seminal vesicle
  - b. testes
  - c. prostate gland
  - d. Cowper's gland
- v. Which sanctuary of Assam is under threat due to dams and indiscriminate use of water?
  - a. Tadoba
  - b. Kaziranga
  - c. Manas
  - d. Sundarbans

**(B) Answer the following sub-questions as per the given instructions. [5]**

- i. Name the locomotory organ of the animal shown in the adjacent figure.



- ii. Write the correct correlation.

*Spirogyra* : Fragmentation : : *Planaria* : \_\_\_\_\_

- iii. Write whether the following statement is True *or* False.  
DNA fingerprinting is mainly useful in forensic sciences.
- iv. Write the molecular formula.  
4% acetic acid (Vinegar)
- v. Which molecules are necessary for the formation of plasma membrane?

**Q.2. (A) Give scientific reasons. (Any two) [4]**

- i. We feel tired after exercising.
- ii. Hydroelectric energy, solar energy, and wind energy are called renewable energies.
- iii. Microbial enzymes are used instead of chemical catalysts in chemical industry.

**(B) Answer the following questions. (Any three) [6]**

- i. Distinguish between Aerobic respiration and Anaerobic respiration (any *two* points).
- ii. Write a short note on Sacred groves.
- iii. Explain the term.  
Modern technology of reproduction - IVF.
- iv. How is *Balanoglossus* connecting link between chordates and non-chordates?
- v. Explain Darwin's theory of natural selection.

**Q.3. Answer the following questions. (Any five) [15]**

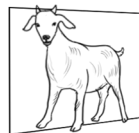
i.



(a)



(b)



(c)

Identify and explain the above different types of symmetry.

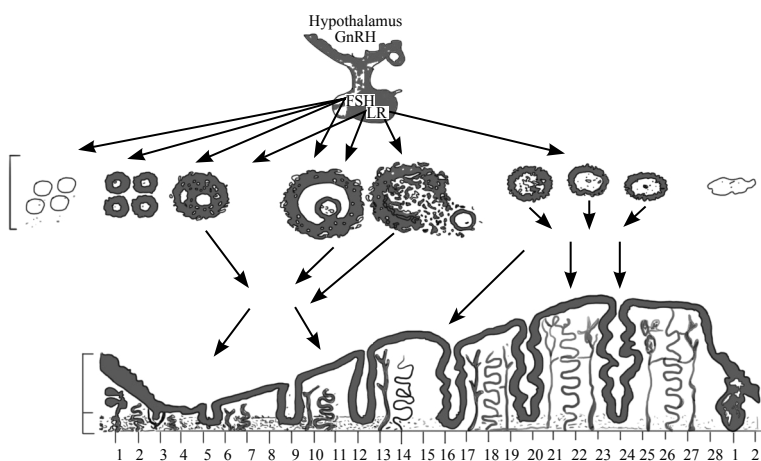
- ii. Write any *six* factors affecting social health.

iii. Complete the following chart:

	Substance obtained by microbial processing	Roles
a.	Citric acid	.....
b.	Ascorbic acid	.....
c.	Beta carotene	.....
d.	Glycolipids	.....
e.	Vanillin	.....
f.	Xylitol	.....

iv. Explain the *three* different levels of Biodiversity.

v. Observe the following figure and answer the questions.



a. Identify the process in the above figure. After how many days will it repeat again?

b. Write the names of hormones involved in this process.

vi. What are the advantages of hydroelectric power generation?

vii. a. Define vestigial organs.

b. Write names of any *two* vestigial organs in human body.

c. Explain how one human vestigial organ is functional in another animal.

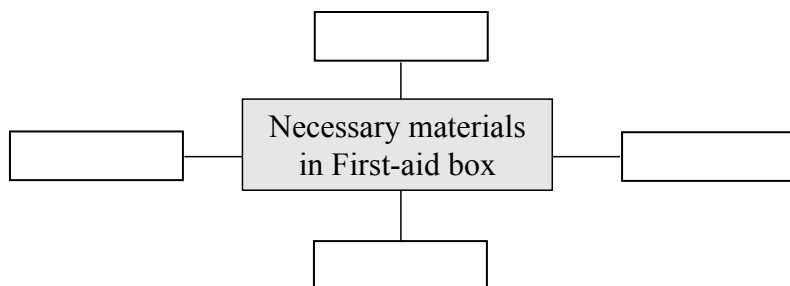
viii. What will you do in the following cases and why?

- Child of your neighbour is addicted to tobacco chewing.
- You have to use free space around your home for good purpose.
- Your friend has developed the hobby of snapping selfies.

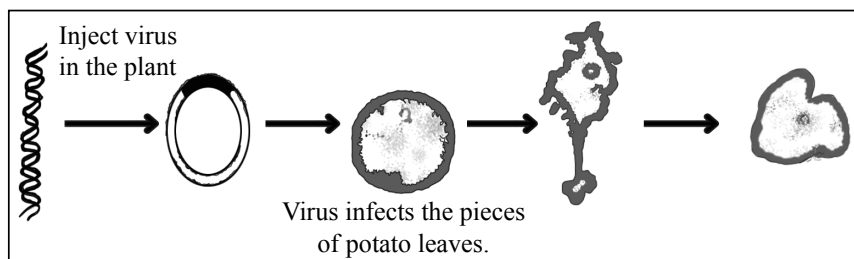
**Q.4. Solve the following. (Any one)**

**[5]**

- What is meant by disaster management? 1
  - Classify the following activities into pre-disaster management and post-disaster management. 2
    - Identifying the pro-disaster areas
    - Quick establishment of help centre
    - Participation of preferably local people saved from the disaster in arranging the help to victims
    - Getting special training for disaster management
- Complete the diagram. 2



- Observe the figure and answer the following questions.



- Identify the process given in the above figure. 1
- Write the importance of the above process. 2
- Write any two benefits of Biotechnology. 2

