



BOARD ACTIVITY SHEET: July 2025

Science and Technology Part - 2

Time: 2 Hours

Max. Marks: 40

Note:

- i. All questions are compulsory.
- ii. The numbers to the right of the questions indicate full marks.
- iii. In case of MCQs [Q. No. 1(A)] only the first attempt will be evaluated and will be given credit.
- iv. Scientifically and technically correct, labelled diagrams should be drawn wherever necessary.
- v. Each new question should be started on the new page.

Q.1. (A) Choose the correct alternatives:

[5]

- i. Our muscle cells perform _____ type of respiration during exercise.
(A) Aerobic (B) Anaerobic (C) Fermentation (D) Krebs Cycle

ii. Which of the following animals can regenerate its broken body part?
(A) Cockroach (B) Frog (C) Sparrow (D) Starfish

iii. Government of India has encouraged the _____ for improving the productivity by launching NKM-16.
(A) Apiculture (B) Cultivation of medicinal plants
(C) Pisciculture (D) Fruit processing

iv. At the district level _____ is responsible for disaster management and implementation of rehabilitation schemes.
(A) Collector (B) Tahsildar
(C) Education Officer (D) Chief Executive Officer

v. _____ of West Bengal is reserved for tigers.
(A) Manas National Park (B) Western Ghat
(C) Molai Jungle (D) Sundarban National Park

(B) Answer the following questions:

[5]

- i. State whether the following statement is True or False:
Evolution is the gradual change occurring in living organisms over a long duration.
 - ii. Write the name of any *one* sexual disease.
 - iii. Select odd man out:
Gutkha, Yoga, Alcoholic drinks, Cigarette.
 - iv. Fill in the box with proper word:



- v. Match the correct pair:

	Column A		Column B
i.	Xylitol	a.	To impart acidity
		b.	To impart sweetness
		c.	Pigment

Q.2. (A) Give scientific reasons (any two):

[4]

- i. Some of the organs in the human body are most valuable.
 - ii. Hydroelectric energy, solar energy and wind energy are called renewable energies.
 - iii. Fibres are one of the important nutrients.





(B) Answer the following questions (any three):

- i. Observe the given animals and answer the questions:



Fig. A

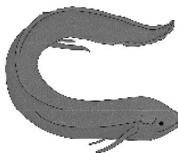
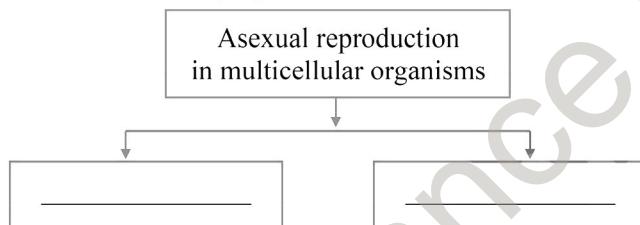


Fig. B

- a. Identify the animals shown in above figure.
b. State the type of evidence of evolution related to above animals.
- ii. Complete the table:

Sr. No.	Microbe used	Name of beverage
1.	<i>Lactobacillus brevis</i>	Coffee
2.	<i>Candida, Hansenula, Pichia, Saccharomyces</i>	_____
3.	<i>Saccharomyces cerevisiae</i>	Wine
4.	<i>Saccharomyces cerevisiae</i>	_____

- iii. Fill in the box with proper word:

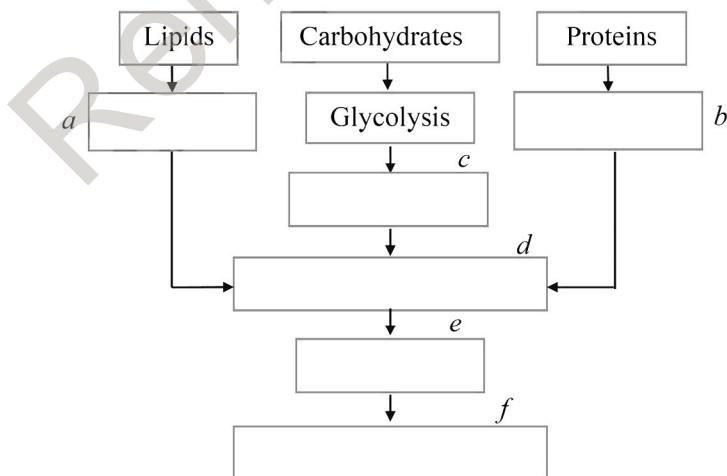


- iv. Give two examples of each:
a. Physical problems arising due to excessive use of mobile phones.
b. Activities under the jurisdiction of cyber crime laws.
v. Write any two objectives of disaster management.

Q.3. Answer the following questions (any five):

[15]

- i. Distinguish between Sexual reproduction and Asexual reproduction.
ii. Complete the chart :

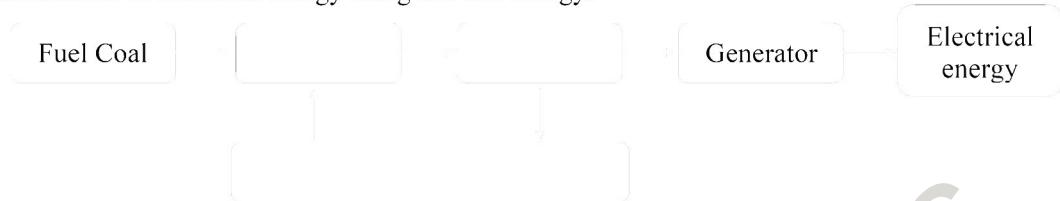


- iii. Answer the following questions:
a. Define vestigial organs.
b. Write names of any two vestigial organs in human body.





- c. Write the names of any *two* vestigial organs which are non-functional in human beings but functional in other organisms.
- iv. Complete the following flow chart:
- a. Generation of electrical energy using thermal energy:



- b. Energy transformation in thermal power plant:
-
- ```
graph LR; CE[Chemical energy in coal] --> B4[]; B4 --> B5[]; B5 --> B6[]; B6 --> G[Generator]; G --> EE[Electrical energy];
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- v. Complete the paragraph with the help of words given in the bracket:  
(Lactobacillus cremoris, Protease, Cow, Vegetarian, microbiological rennet, Geobacter, Saccharomyces)

Cheese is produced on large scale from the abundantly available \_\_\_\_\_ milk all over the world. First chemical and \_\_\_\_\_ tests of milk are performed. Some colours and microbes like Lactobacillus lactis, \_\_\_\_\_ and Streptococcus thermophilus are mixed with milk. It imparts sourness to the milk. After this, to impart the dense texture, whey needs to be removed.

An enzyme \_\_\_\_\_ obtained from alimentary canal of cattle was being traditionally used earlier. However an enzyme \_\_\_\_\_ obtained from fungi is used at present to produce \_\_\_\_\_ cheese.

- vi. Write a short note on the importance of medicinal plants.
- vii. Explain the importance of good communication with others.
- viii. Identify the type of disaster and write its effect:
- a. Terrorism      b. Forest fire      c. Theft

**Q.4. Answer the following questions (any one):**

[5]

- i. Complete the following flow chart explaining my role in environmental conservation:



- ii. Observe the following picture. Write the answers of the following questions:



Fig. A

Fig. B

- a. Identify the class of animals shown in above picture.  
b. Which similarities are shown in above animals from the adaptation point of view?  
c. Why these animals are included in different classes inspite of their similarities?

