

BOARD ACTIVITY SHEET: MARCH 2023

Science and Technology Part - 2

Time: 2 Hours

Max. Marks: 40

- Note:**
- i. All questions are compulsory.
 - ii. Use of calculator is not allowed.
 - iii. The numbers to the right of the questions indicate full marks.
 - iv. In case of MCQs (Q. No. 1(A)) only the first attempt will be evaluated and will be given credit.
 - v. For every MCQ, the correct alternative (A), (B), (C) or (D) with subquestion number is to be written as an answer.
For Eg.: (i) (A), (ii) (B), (iii) (C)
 - vi. Scientifically correct, labelled diagrams should be drawn wherever necessary.

Q.1. (A) Write the correct alternative: [5]

- i. Vestigial organ _____ present in human body is proof of evolution.
 (A) Human hand (B) Appendix
 (C) Ear muscles (D) Tail-bone

Note: * Above question has three possible answers, [Option (B), (C) and (D)].

Modified Question:

- i. Vestigial organ _____ present in human body is proof of evolution.
 (A) Human hand (B) Appendix
 (C) Ear (D) Tail
- ii. Type of sexual reproduction is _____.
 (A) Fragmentation (B) Regeneration
 (C) Gamete formation (D) Budding

Note: * Gamete formation is a process involved in sexual reproduction. It is not a type of sexual reproduction.

Modified Question:

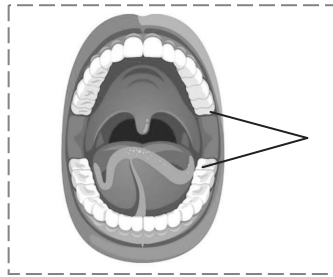
- ii. _____ is not a type of asexual reproduction.
 (A) Fragmentation (B) Regeneration
 (C) Gamete formation (D) Budding
- iii. The apex consumer is _____.
 (A) Eagle (B) Frog
 (C) Snake (D) Grasshopper
- iv. The Hydroelectric capacity of Koyna dam is _____.
 (A) 2400 MW (B) 1960 MW
 (C) 1900 MW (D) 1961 MW
- v. Animal with bilateral symmetry is _____.
 (A) Star fish (B) Human
 (C) *Paramecium* (D) *Amoeba*

(B) Answer the following questions as per the given instructions: [5]

- i. State whether the following statement is true or false:
To take selfie on road is the invitation for accident
- ii. Write the correct co-relation:
Insulin : diabetes : : Interferon : _____
- iii. To which class does bat belong?
- iv. Match the correct pair:

	Column 'A'		Column 'B'
(1)	Forest Conservation Act	(a)	1986
		(b)	1980
		(c)	1970

- v. Write the name of indicated part in diagram:
 Human jaw

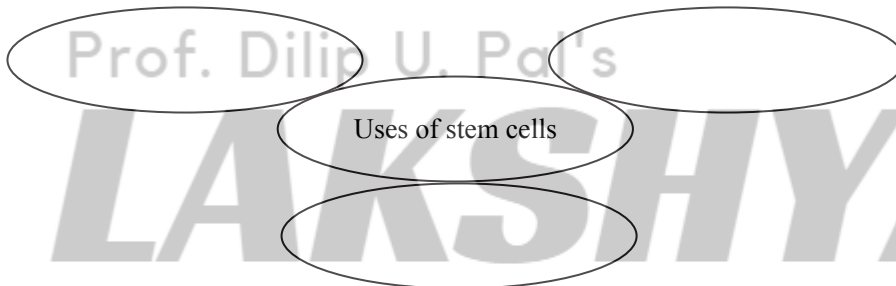


Q.2. (A) Give scientific reasons (any two): [4]

- i. Sometimes higher plants and animals too perform anaerobic respiration.
- ii. It is absolutely necessary to control the fission reaction in nuclear power plant.
- iii. Flower is structural unit of sexual reproduction in plants.

(B) Answer the following questions (any three): [6]

- i. Write a short note on Environmental Conservation.
- ii. Distinguish between Chordates and Non-chordates.
- iii. Write the correct answer in blank circles.



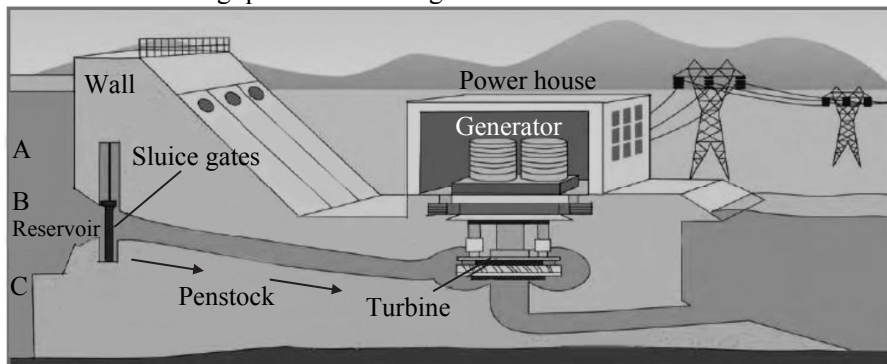
- iv. Write down any two objectives of disaster management.
- v. What are the benefits of mixing ethanol with petrol and diesel?

Q.3. Answer the following questions (any five): [15]

- i. Darwin's theory of natural selection.
- ii. Complete the following chart:

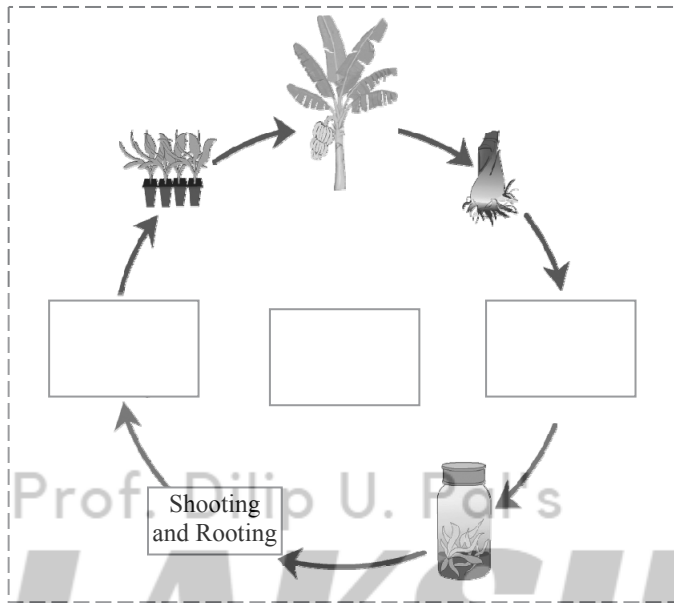
Sr. No.	Proteins	Name of the Organs
1.	Melanin, Keratin	_____
2.	_____	Pancreas
3.	Haemoglobin, antibodies	_____

- iii. Write the factors affecting environment.
- iv. Answer the following questions from figure:



- (a) With reference to point B, potential energy of how much water reservoir in the dam will be converted into kinetic energy?

- (b) What will be the effect on electricity generation, if the channel taking water to turbine starts at point A?
- (c) What will be the effect on electricity generation, if the channel taking water to turbine starts at point C?
- v. Cockroach, Frog, Sparrow, Star fish, from these animals which can regenerate its broken body part?
- vi. Complete the diagram showing various processes in tissue culture.



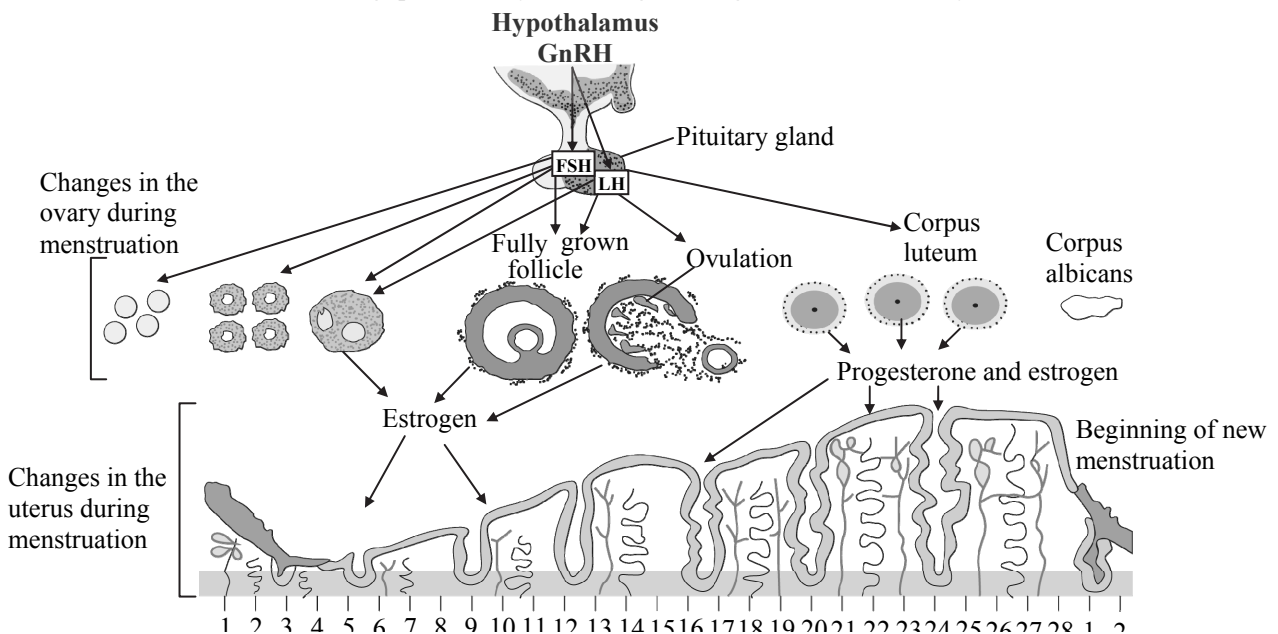
- vii. Which fuels are obtained from biomass?
- viii. Complete the following passage by using appropriate words given in brackets:
 (Delhi, 12, 2005, army, National Disaster, rescue work, State Reserve Police, 2015)

National Disaster Response Force has been established as per the Disaster Management Act, _____ Divisions of this force are working in army. Overall, _____ divisions are working in the country. Its headquarter is in _____ and it is in action all over the country with the help of _____. In Maharashtra, _____ Response Force is in action through State Reserve Police Force. Personnel of this force have substantial contribution in _____ in disasters like cyclones, cliff-sliding, building collapse, etc.

Q.4. Answer any one of the following questions:

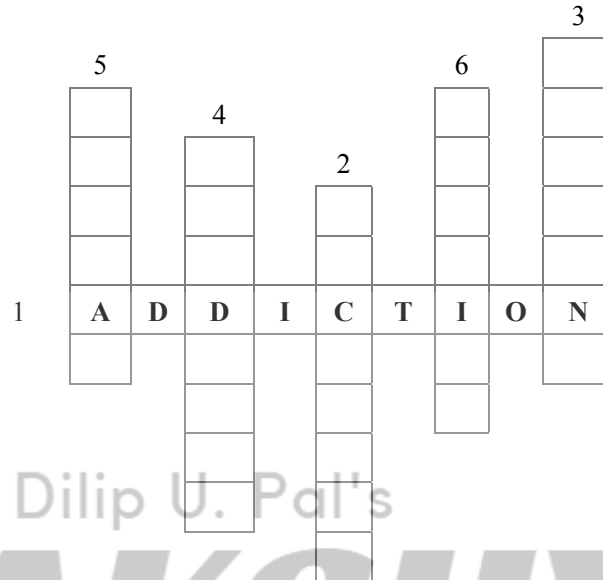
[5]

- i. Answer the following questions by observing the diagram of menstrual cycle:



- What is the period of menstruation?
- On which day does ovulation occur during menstrual cycle?
- In menstrual cycle which reproductive organs undergo changes?
- Which period is said to be period of regeneration of endometrium ?
- Which period is said to be period of secretions of glands in endometrium?

ii. Solve the following cross word:



- Continuous consumption of alcoholic and tobacco materials.
- This app may cause the cyber crimes.
- A remedy to resolve stress.
- Requirement for stress free life.
- Various factors affect _____ health.
- Art of preparing food items.