

**Note:**

- i. All questions are compulsory.
  - ii. Use of calculators is not allowed.
  - iii. Figures to the right indicate full marks.
  - iv. Start writing each main question on new page.
  - v. For each MCQ (i.e. Q. No. 1-A) evaluation would be done for first attempt only.
  - vi. For each MCQ correct answer must be written along with its alphabet.
- Eg.:** (i) (A)....., (ii) (B) ....., (iii) (C) .....
- vi. Draw scientifically correct labelled diagrams wherever necessary.

**1. (A) Choose the correct alternative and rewrite the statements:****5**

- i. Salts which can be used as supplement of calcium and iron are obtained from \_\_\_\_\_  
(A) gluconic acid (B) amino acid  
(C) acetic acid (D) citric acid
- ii. Which of the following is a man-made disaster?  
(A) Earthquake (B) Flood  
(C) Meteoric (D) Leakage of toxic gases
- iii. In a food chain autotrophic plants are present at the \_\_\_\_\_ level.  
(A) Tertiary nutrition (B) Secondary nutrition  
(C) Producer (D) Apex
- iv. \_\_\_\_\_ is a cold blooded animal.  
(A) Bat (B) Snake  
(C) Rabbit (D) Elephant
- v. Maximum effect of alcohol occurs on \_\_\_\_\_ system.  
a) nervous b) excretory c) respiratory d) muscular

**(B) Solve the following questions :** [5]

i) Select the two options in the 'B' group related to 'A' group. (1)

'A' Group

'B' Group

a) Salaam Mumbai Foundation

d) Work against alcoholism

e) Freedom from Tobacco

f) Laughter Club

g) Help to improve student's lifestyle

ii. Rewrite the food-chain given below with correct sequence. (1)

Grasshopper – Snake – Paddy field – Eagle – Frog

iii. Wisdom teeth : Vestigial organs :: Lungfish : .....

iv. Write function of testes.

v. Find out the correlation: (1)

White revolution : Increase in dairy production :: Green revolution : \_\_\_\_\_.

**2. (A) Give Scientific reasons:** (any two) 4

(i) Study of fossils is an important aspect of study of evolution.

(ii) All vertebrates are chordates but all chordates are not vertebrates.

(iii) Microbial enzymes are used instead of chemical catalysts in chemical industry.

**(B) Solve the following questions:** (any three) 6

i. "Solving the problem of pollution is an effective way of environmental management"

Justify the statement.

ii. Which precautions will you take during spraying of pesticides?

iii. Distinguish between mitosis and meiosis.

iv. What is menstrual cycle? Describe it in brief.

v. Explain: Saving energy is the need of the hour.

(i) Write short note on Darwin's theory of natural selection.

(ii) Explain the following concepts in short.

- a. Surrogacy
- b. In Vitro Fertilization (IVF)
- c. Sperm Bank

(iii) If frog population in paddy fields declines all of a sudden,

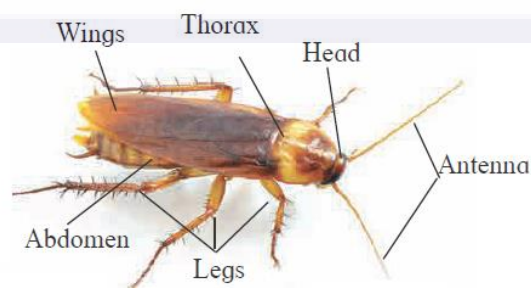
- a) What will be the effect on paddy crop?
- b) Number of which consumers will decline and which will increase?
- c) Name the Indian states where paddy is cultivated on a large scale.

(iv) Read the information given below and solve the questions based on it.

Electric energy is produced in various ways like hydroelectric, wind power, Solar energy, bio-fuel, etc. These energy sources are inexhaustible, sustainable. Besides, it does not cause any environmental problem.

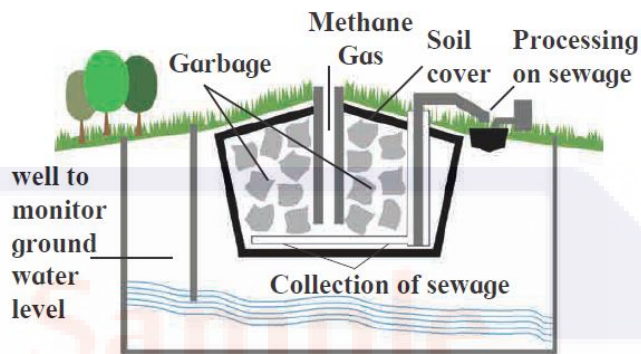
- i. Above information is about which type of energy?
- ii. Whether the fossil fuel is an example of this energy?
- iii. Draw the flow chart of production of electric energy.

(v) Observe the following diagram and write the answer of the following question.



- a. To which phylum does the animal included in the diagram belong?
- b. What is exoskeleton made up?
- c. What is symmetry?

(vi). Observe the following figure and answer the questions:



- Identify the process shown in the figure.
- Explain the process in short

(vii) What will you do? Why?

- You are spending more time in internet/mobile games, phone, etc.
- You have to use free space around your home for good purpose.
- Your brother studying in XII has developed the stress.

(viii) Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



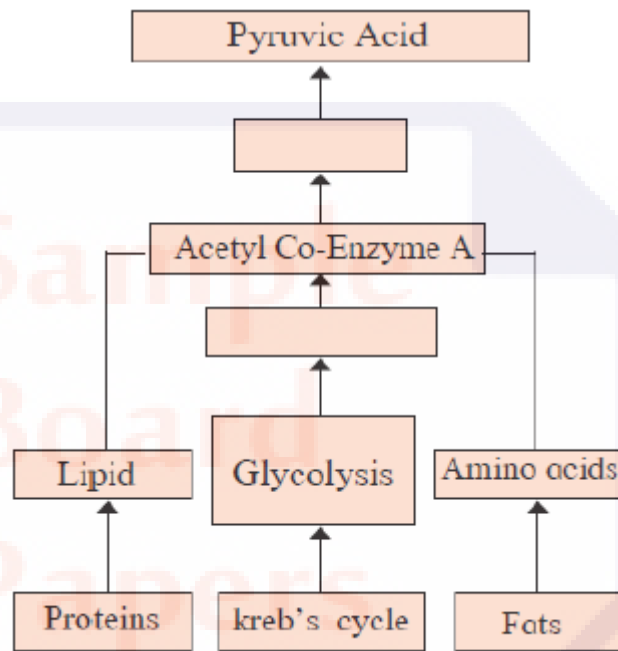
**4. Solve any one of the following questions:**

**(any one)**

**5**

- What is biotechnology?
  - Give one use of biotechnology.
  - Give one commercial use of biotechnology.
  - Write two bacterial examples of biofertilizer.
  - Write two names of crops genetically developed.

ii. Redraw the flow-chart with corrections. Explain in brief the process of obtaining energy through oxidation of carbohydrates, lipids & proteins.



Chapter wise weightage *		
Chp No	Chapter Name	Marks
1	Heredity and Evolution	6
2	Life Processes in living organisms Part -1	7
3	Life Processes in Living Organisms Part - 2	6
4	Environmental management	7
5	Towards Green Energy	6
6	Animal Classification	6
7	Introduction to Microbiology	6
8	Cell Biology and Biotechnology	7
9	Social health	5
10	Disaster Management	4
	<b>Total Marks</b>	<b>60</b>

\*Note: Complete paper is made as per reduced syllabus 2020 – 2021

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