SATISH SCIENCE ACADEMY

DHANORI PUNE-411015

SCIENCE-2

Class 10 - Science & Technology - II

Time Allowed: 2 hours **Maximum Marks: 40**

General Instructions:

1. All questions are compulsory.
2. Use of a calculator is not allowed.
3. The numbers to the right of the questions indicate full marks.
4. In case of MCQs (Q. No. 1(A)), only the first attempt will be evaluated and given credit.
5. For each MCQ, the correct alternative (a), (b), (c) or (d) with subquestion number is to be written as an answer.
   For e.g. (i) (a), (ii) (b), (iii) (c)
6. Scientifically correct, labelled diagrams should be drawn wherever necessary.

1. **[10]**

(a) **Write the correct alternative:**

i. We get _____ of energy from one gram of lipid. **[1]**

a) 9 cal b) 4 kcal

c) 9 kcal d) 4 cal

ii. The apex consumer is _____. **[1]**

a) Snake b) Grasshopper

c) Eagle d) Frog

iii. Human being belongs to _____ class. **[1]**

a) Amphibia b) Reptilia

c) Mammalia d) Cyclostomata

iv. Protein like interleukin produced by biotechnology is used against _____ disease. **[1]**

a) haemophilia b) anemia

c) cancer d) diabetes

v. Volcano is a _____ disaster. **[1]**

a) Geological b) Political

c) Biological d) Social

(b) **Answer the following questions as per the given instructions:**

i. Earthquake, Flooding, Tsunami, War **[1]**

ii. Oxidation of proteins is carried out in aerobic respiration. **[1]**

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iii. To which class does bat belong? **[1]**

iv. Which type of fuel is used in thermal power plant? **[1]**

v. Write full form of WHO. **[1]**

2. **[10]**

(a) **Give scientific reasons. (Any 2)**

i. We feel exhausted after exercising. **[2]**

ii. It is absolutely necessary to control the fission reaction in nuclear power plants. **[2]**

iii. Indians should follow family planning for controlling the population. **[2]**

(b) **Answer the following questions (Any 3)**

i. Write any two objections that were raised against Darwin's Theory of Natural Selection. **[2]**

ii. What do we learn from the story of Jadav Molai Payeng? **[2]**

iii. Despite of various diagnostic tests, a couple could not have a child. In this situation, which remedies will you suggest? **[2]**

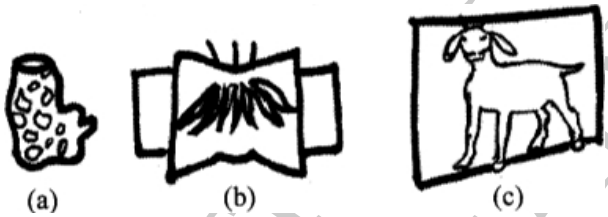
iv. How is Balanoglossus connecting link between chordates and non-chordates? **[2]**

v. What are vitamins? Write two types of vitamins. **[2]**

3. **Answer the following questions (Any 5): [15]**

(a) What are the meanings of following symbols? Write your role accordingly? **[3]**

(b) Observe the given figures and answer the following: **[3]**



Identify the types of body symmetry and give one example of each apart from the given figure.

(c) i. Which substance is used to produce cheese? **[3]**

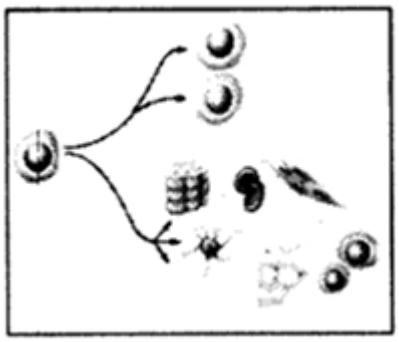
ii. Which enzyme was used earlier for cheese production?

iii. Which enzyme is used to produce vegetarian cheese?

(d) i. Which process is shown in the given diagram? **[3]**

ii. What is the importance of this process?

iii. Which organs can be transplanted by this process?



(e) Cockroach, Frog, Sparrow, Star fish, from .these animals which can regenerate its broken body part? **[3]**

(f) Observe the following figure and answer the questions: **[3]**

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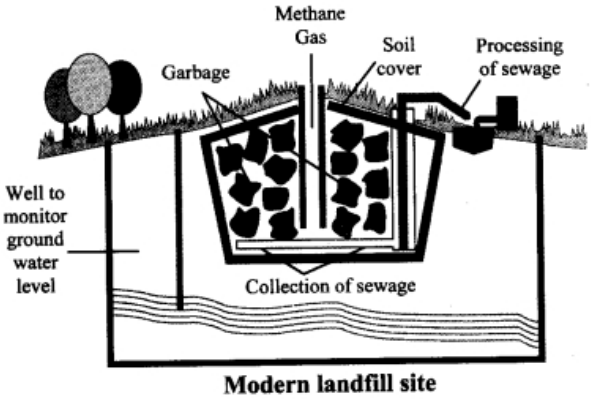


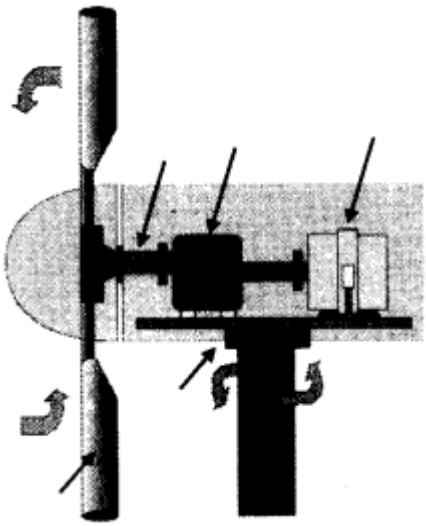
Modern landfill site

i. Identify the process shown in the figure.

ii. Explain the process in short.

(g) Explain with suitable examples importance of anatomical evidences in evolution. **[3]**

(h) Observe the given picture and answer the questions. **[3]**



Questions:

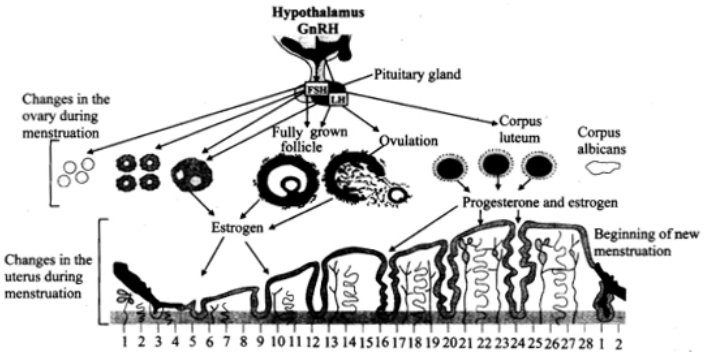
i. Identify the given diagram.

ii. What is the source of energy in this project?

iii. Why this source is supposed to be ecofriendly?

4. **Answer any one of the following questions:** **[5]**

(a) Answer the following questions by observing the diagram of menstrual cycle: **[5]**



i. What is the period of menstruation?

ii. On which day does ovulation occur during menstrual cycle?

iii. In menstrual cycle which reproductive organs undergo changes?

iv. Which period is said to be period of regeneration of endometrium?

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v. Which period is said to be period of secretions of glands in endometrium?

(b) i. Identify the following symbols and state their significance: **[5]**

(a)

(b)

ii. How the biodiversity can be conserved?

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