

SATISH SCIENCE ACADEMY

**DHANORI PUNE-411015** 

# **SCIENCE-1**

## Class 10 - Science & Technology - II

### **Time Allowed: 2 hours**

**General Instructions:** 

1.

#### Maximum Marks: 40

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.

				[10]
(a)	Writ	te the correct alternative:		
	i.	In mitotic division, the nuclear membrane completely disappears in phase.		[1]
		a) prophase	b) metaphase	
		c) anaphase	d) telophase	
	ii.	Genetic changes occur due to poll	ution.	[1]
		a) Soil	b) Water	
		c) Air	d) Radioactive	
	iii.	Human being belongs to class.		[1]
		a) Amphibia	b) Reptilia	
		c) Mammalia	d) Cyclostomata	
	iv. Organs like can be donated after death.		leath.	[1]
		a) Skin	b) Heart	
		c) Lungs	d) Bones	
	v. Which of the following is a man-made disaster?		ter?	[1]
		a) Flood	b) Earthquake	
		c) Meteoric	d) Leakage of toxic gases	
(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	c respiration.	[1]

- iii. To which class does bat belong?
- iv. Which type of fuel is used in thermal power plant?
- v. Identify the picture and name it.



## 2.

3.

[10]

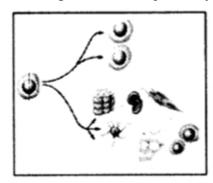
[1]

[1]

[1]

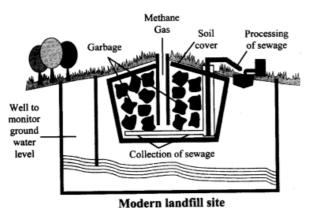
(a)	Give scientific reasons. (Any 2)			
	i. Cell division is one of the important properties of cell and organisms.			
	ii.	Hydroelectric energy, solar energy and wind energy are called renewable energies. Why?	[2]	
	iii.	Flower is structural unit of sexual reproduction in plants.	[2]	
(b)	Answer the following questions (Any 3)			
	i.	Define vestigial organs. Write any two names of vestigial organs in human body.	[2]	
	ii.	Write a short note on sacred groves.	[2]	
	iii.	Despite of various diagnostic tests, a couple could not have a child. In this situation, which	[2]	
		remedies will you suggest?		
	iv.	How is Balanoglossus connecting link between chordates and non-chordates?	[2]	
	v.	What are vitamins? Write two types of vitamins.	[2]	
Answe	r the f	ollowing questions (Any 5):	[15]	
(a)	Write	e the factors affecting environment.	[3]	
(b)			[3]	
	i. Io	dentify the class of the animals shown in the figure.		
	ii. V	Vrite two characteristics of that class.		
(C)	Whic	ch fuels are obtained from biomass?		
(d)	i. V	Vhich process is shown in the given diagram?	[3]	
	ii. V	Vhat is the importance of this process?		

iii. Which organs can be transplanted by this process?



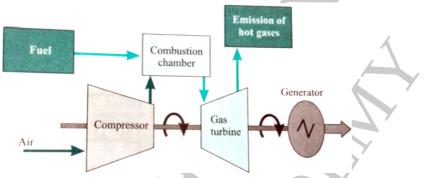
- (e) Cockroach, Frog, Sparrow, Star fish, from .these animals which can regenerate its broken body part? [3]
- (f) Observe the following figure and answer the questions:

[3]

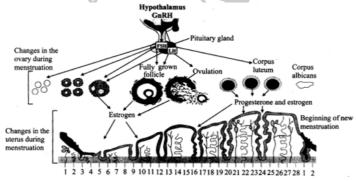


i. Identify the process shown in the figure.

- ii. Explain the process in short.
- (g) i. Define vestigial organs.
  - ii. Write names of any two vestigial organs in the human body.
  - iii. Write name of those animals in which these vestigial organs are functional.
- (h) Observe the diagram and answer the questions:



- i. Which energy is generated from the power plant?
- ii. State its source.
- iii. Which is more eco-friendly power generation from coal or power generation from natural gas? Why?
- 4. Answer any one of the following questions:
  - (a) Answer the following questions by observing the diagram of menstrual cycle:



- 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?
- v. Which period is said to be period of secretions of glands in endometrium?
- (b) Answer the following questions based on environmental conservation and biodiversity:

[5]

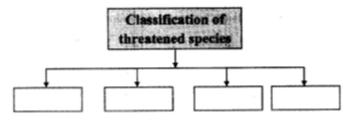
[3]

[3]

[5]

[5]

i. Complete the flow chart:



- ii. How can biodiversity be conserved? Give any four points.
- iii. Complete the flow chart:

Colour of the pages in Red List of Endangered Species

