



SAIRAJ TEST SERIES

1st Preliminary Examination

Red 1

Time : 2 Hrs.

Science and Technology (Part 2)

Marks : 40

- Note:**
- (i) All questions are compulsory.
 - (ii) Use of a 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:

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1. Asexual reproduction in Hydra is referred to as
 - (a) vegetative propagation
 - (b) budding
 - (c) multiple fission
 - (d) regeneration
2. has the capacity to decompose rubber from garbage.
 - (a) *Streptomyces*
 - (b) *Lactobacillus*
 - (c) *Saccharomyces cerevisiae*
 - (d) *Clostridium*
3. Transcription uses as template strand.
 - (a) Antisense DNA strand
 - (b) RNA strand
 - (c) tRNA
 - (d) Codon
4. Which of the following has geographical limitations?
 - (a) Hydro power
 - (b) Wind power
 - (c) Natural gas power
 - (d) Steam power
5. Bat is included in which class?
 - (a) Reptilia
 - (b) Aves
 - (c) Mammalia
 - (d) Amphibia

Q.1. (B) Answer the following question:

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1. **Complete the analogy.**
Wisdom teeth : Vestigial organs : : Lungfish :
2. **Find the odd man out.**
Vitamin - A, Vitamin - B, Vitamin - D, Vitamin - E.
3. **True or False.**
Biotechnology is used in agricultural field to improve yield and variety.

4. Match the following.

A	B
1. Chipko centre	a. Trivandrum
	b. Tehri Garhwal

5. Complete the following.

Continuous consumption of alcohol and tobacco material

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

4

1. *Balanoglossus* is connecting link between Non-chordates and chordates.
2. It is absolutely necessary to control the fission reaction in nuclear power plants.
3. Cell division is one of the important property of cells and organisms.

Q.2 (B) Answer the following questions: (any three)

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1. Complete the chart.



2. What will you do? Why?

Your friend has developed the hobby of snapping selfies.

3. Identify the type of disaster.

- | | |
|--------------|-----------------|
| a. Terrorism | b. Soil erosion |
| c. Hepatitis | d. Forest fire |

4. Which fuels can be obtained by microbial processes?

Why is it necessary to increase the use of such fuels?

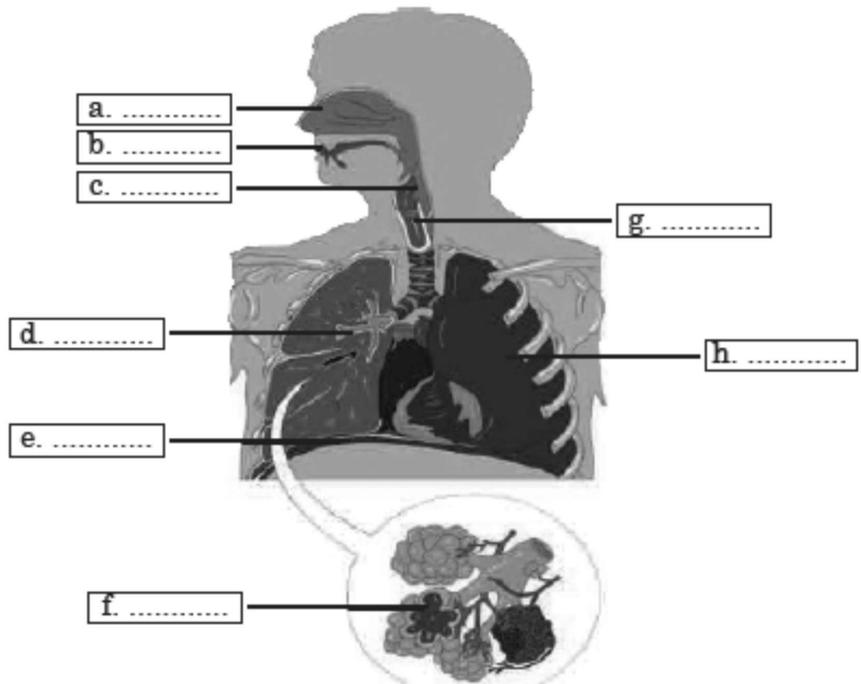
5. Give difference between.

BT Cotton and BT Brinjal

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

1. Complete the following.

Observe and label the diagram given below:



2. Explain the following.

Explain the meaning of vaccination.

3. Complete the table.

Fruits	Microbe used	Role of Microbe	Name of Beverage
Coffea arabica	(a)	(b)	Coffee
Grapes	(c)	Fermentation of Juice	(d)
Apple	(e)	Fermentation of Juice	(f)

4. What is ecosystem? Which are its different components?

5. Give examples of different movements running by Government for making social life healthy.

6. Answer based on figures.

Following are some pictures of disasters. Which precautions would you take during those disasters?



A



B



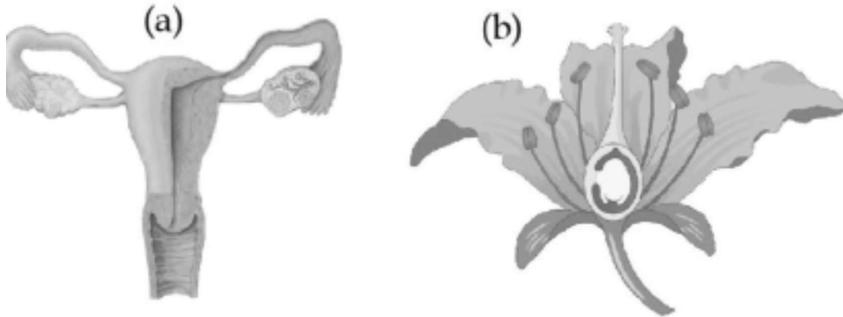
C

7. What do we call the degenerated or partially developed useless organs in living organisms? Enlist such organs in human body. How the same organs are useful in other animals?
8. **Give difference between.**
Write the differences and similarities between Platyhelminthes and Aschelminthes.

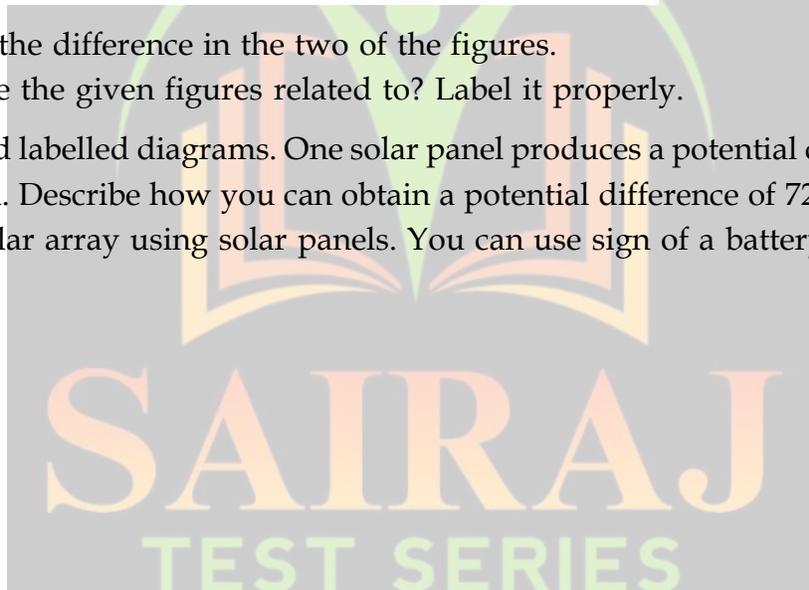
Q.4 Answer the following questions: (any one)

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1. **Observe the image and answer the following questions.**



- i. What is the difference in the two of the figures.
 - ii. What are the given figures related to? Label it properly.
2. Draw neat and labelled diagrams. One solar panel produces a potential difference of 18 V and current of 3 A. Describe how you can obtain a potential difference of 72 Volts and current of 9 A with a solar array using solar panels. You can use sign of a battery for a solar panel.



Best of Luck 🍀