

## **GENERAL SCIENCE, Paper - II**

*(English version)*

### **Parts A and B**

**Time : 2 Hours 45 min.**

**[Maximum Marks : 40**

**Instructions :**

1. In the time duration of 2 Hours 45 minutes, 15 minutes of time is allotted to read and understand the Question paper.
2. Answer the Questions under **Part-A** on separate answer book.
3. Write the answers to the Questions under **Part-B** on the Question paper itself and attach it to the answer book of **Part-A**.

### **Part - A**

**Time : 2.15 Hours**

**Marks : 35**

**Instructions :**

1. **Part - A** comprises of **three** sections I, II and III.
2. **All the questions are compulsory.**
3. **There is no overall choice. However there is internal choice to the Questions under section-III.**

### **SECTION - I**

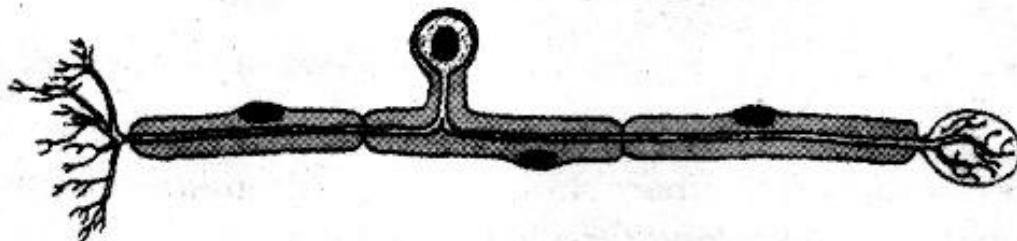
**7×1=7**

**NOTE :** 1. Answer **all** the following questions.

2. Each question carries **1** mark.
3. Write answers in 1-2 sentences for each question.

1. What happens if the forest area decreases rapidly ?
2. One student takes high caloric food. Another student takes less caloric food. But both are affected with diseases. Name the diseases by which they are affected.
3. Mention the two chemicals which you have used in a experiment to test the presence of starch in the leaf.
4. We can't expect the world without sparrows. So how should be our concern towards their conservation ?

5. What happens if there is no mucus in the Oesophagus ?
6. Write two activities which you are performing to save the electricity.
7. Write the name of the nerve given in the following diagram and write its function.



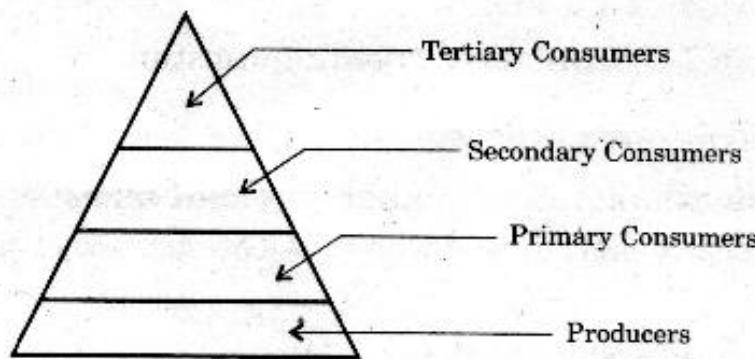
## SECTION - II

6×2=12

**NOTE :**

1. Answer **all** the questions.
2. Each question carries **TWO** marks.
3. Answer the questions in 4-5 sentences.

8. Where are the valves located in human heart ? Write their names.
9. How we will get the desired useful triats with the help of two selected triats by using grafting method ?
10. Draw the labelled diagram of Embryo-sac.
11. What questions you will ask a paleantologist about fossils ?
12. Write two suggestions to create awareness on groundwater conservation.
13. Observe the pyramid of number which is given below and answer the questions.



- (i) As per the number of organisms in the tropic level, which group of organisms are more in number and which are less in number ?
- (ii) What happens if Secondary consumers disappear ?

**SECTION - III** **$4 \times 4 = 16$** 

**NOTE :**

1. Answer all the questions.
2. Each question carries 4 marks.
3. There is internal choice for each question.  
Only one option from each question is to be attempted.
4. Answer each question in 8-10 sentences.

**14.** Mention the stages of Mitosis with the help of diagrams. Explain the changes that takes place in Prophase.

**OR**

Explain sex determination in humans with the help of flow-chart.

**15.** Explain the different types of adaptations in plants with suitable examples.

**OR**

What are the different stages in Urine formation ? Explain what happens in those stages.

**16.** Write the procedure involved in the acid and leaf experiment to understand the concept "how the stomach gets protected from its own acid secretions". Compare the observations with the changes that takes place in human digestive system.

**OR**

Explain the procedure you have adopted in your school to prove that heat is liberated during respiration. What result we will get, if you perform this experiment with dry seeds ?

**17.** Analyse the following information and answer the questions.

<i>Alkaloid</i>	<i>Part of the plant</i>	<i>Uses</i>
Quinine	bark	Anti malarial drug.
Nicotine	leaves	Insecticide
Morphine	fruits	Pain killer, sedative.
Caffeine	seeds	Central Nervous System stimulant.
Pyrethroids	flowers	Insecticides
Scopolamine	fruits, flowers	Sedative

- Which parts of the plants are used as alkaloids ?
- What are the alkaloids which are used to control the diseases that occur in plants ?

(iii) Name the parts of the plant from which we get alkaloids used as sedative.

(iv) Name the alkaloid which is used to prevent malaria.

**OR**

Vitamins	Resources	Deficiency symptoms
Thiamine	Cereals, oil seeds, vegetables, milk, meat, fish, eggs	Vomitings, fits, loss of appetite, difficulty in breathing, paralysis.
Ascorbic acid	Green leafy vegetables, Citrus fruits, sprouts, carrot	Delay in healing of wounds, fractures of bones.
Retinol	Leafy vegetables, carrot, tomato, pumpkin, papaya, mango, meat, fish, egg, liver, milk, cod liver oil, Shark liver oil.	Night blindness, Xerophthalmia, Cornea failure, scaly skin.
Calciferol	Liver, egg, cod liver oil, Shark liver oil	Improper formation of bones, knock-knees, swollen wrists, delayed dentition, weak bones.
Tocoferol	Fruits, vegetables, sprouts, sunflower oil	Sterility in males, abortions in females.
Phylloquinone	Green leafy vegetables, milk, meat, eggs	Delay in blood clotting, over-bleeding.

(i) Which vitamins deficiency causes diseases related to bones ?

(ii) Which vitamins we get by eating fruits ?

(iii) Which vitamin deficiency causes Paralysis ? To prevent it, what type of food we have to eat ?

(iv) To avoid vitamin deficiency diseases, what type of food we have to eat ?

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**20E(B)**

**GENERAL SCIENCE, Paper-II**

*(English version)*

**Parts A and B**

**Time : 2 hrs. 45 min.**

**Maximum Marks : 40**

**Instructions :** Write the answers to the questions in this **Part-B** on the Question paper itself and attach it to the answer book of **Part-A**.

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**Part - B**

**Time : 30 minutes**

**Marks : 5**

**Instructions :**

- (i) Answer **all** the questions.
- (ii) Each question carries  $\frac{1}{2}$  mark.
- (iii) Answers are to be written in question paper only.
- (iv) Marks will **not** be awarded in any case of over-writing, rewriting or erased answers.

I. Write the **CAPITAL LETTER** (A, B, C, D) showing the correct answer for the following questions in the brackets provided against them.

1. Iodine test is used to confirm the presence of .... [ ]

- (A) Fats
- (B) Proteins
- (C) Vitamins
- (D) Carbohydrates

2. In plants, the fusion of male gamete with secondary nucleus results in .... [ ]

- (A) Embryo-sac
- (B) Endosperm
- (C) Cotyledons
- (D) Spores

3. Example for the reflexes in stomach is ..... [ ]

- (A) Peristaltic movement.
- (B) Assimilation
- (C) Vomiting
- (D) Digestion

4. Name the body part which have division-less cells . [ ]

- (A) Brain
- (B) Lungs
- (C) Kidney
- (D) Stomach

5. The diseases caused by using mosquito repellants are ..... [ ]

- (A) blood related diseases.
- (B) fits.
- (C) branchial diseases.
- (D) Kidney related diseases.

6. In plants, following is responsible for transport of water is .... [ ]

- (A) Xylem
- (B) Epithelium
- (C) Phloem
- (D) Columnal epithelium.

7. The hormone released during hunger is .... [ ]

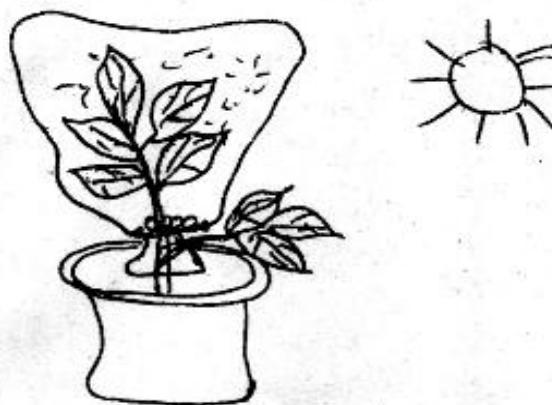
- (A) Adrenalin
- (B) Thyroxin
- (C) Leptin
- (D) Ghrelin

8. The solution used to identify the presence of Oxygen in Anaerobic respiration experiment is .... [ ]

- (A) Diazene green.
- (B) Potassium hydroxide.
- (C) Betadin.
- (D) the rod containing Sulphur.

9. This experiment is conducted to prove .....

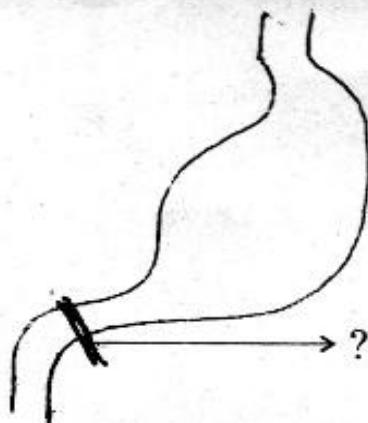
[ ]



- (A) Root pressure.
- (B) Photosynthesis.
- (C) Respiration.
- (D) Transpiration.

10. Name the valve indicated in the picture.

[ ]



- (A) Bicuspid valve.
- (B) Pyloric valve.
- (C) Villi.
- (D) Tricuspid valve.