

GENERAL SCIENCE

Paper - II

(Biological Science)

Time : 2½ Hrs.

Max. Marks : 50

PART - A

TIME : 2 hrs

Marks : 35

SECTION - 1

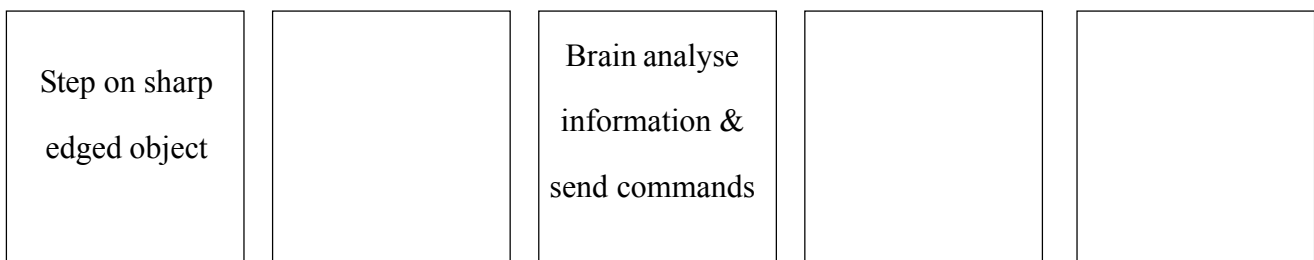
NOTE : 1. Answer any four Questions from the following.

2. Each Question carries One mark.

1. Kidney is an essential excretory organ in our body. Mention the organs and their respective excretory products of man which performs excretion as an additional activity.
2. What is pyramid of number ? what does it indicate ?
3. Satwik travelled from Vijayawada to Tirupathi through out night. He noticed that his two legs were swollen Give reasons ?
4. White latex will ooze out, when you cut off the leaves of Colotropis. Which plants do you observe for this activity ?
5. Write the phenotype and Genotypic ratios by observing the following matrix ?

$Q \backslash \delta$	Y	y
Y	YY	Yy
y	Yy	yy

6. Fill the Flow Chart



SECTION - II

5 x 2 = 10

NOTE:

1. Answer any five questions from the following choosing at least TWO from each Group A and B
2. Each Question Carries TWO marks.

GROUP - A

7. We can't perform the experiment of green plants by keeping them in sunlight and do the respiratory experiment. why?
8. Write the differences between homologous and analogous organs.?
9. What Questions do you ask the doctor to know the Contagious means to get HIV? write them.
10. Write any four Contexts that you save the electrical Consumption at home.

GROUP - B

11. What happens when you keep a potted plant at your window ? write your reasons.
12. Write the differences between Arteries and veins in a format depending upon the Capillary walls, valves, blood flow in capillary, blood pressure over the capillaries.
13. Draw a well labelled diagram of villi of small intestine and write its main function.
14. Prepare four slogans on the need of protection of our environment

SECTION - III

NOTE : 1. Answer any FOUR Questions from the following choosing at last TWO from A group & B Group

2. Each Question carries FOUR marks.

GROUP-A

15. Write the answers by observing the experiment performed at your school.
- Why the potted plant was kept in dark room for week days prior to the experiment?
 - Why do you keep KOH pellets in the glass jar?
 - What results do you get when you perform this experiment in shade?
 - What apparatus you used to perform this experiment?
16. When respiration takes place, where will the energy go from Glucose. Padma wrote 'Lungs' and Veni wrote "Muscles". Who is correct? Why ?
17. Give reasons for the following questions.
- Blood that flows from stomach to intestine will not go directly to heart but flows via liver. why?
 - Why it is necessary to know the blood groups of donor and recipients before the blood transfusion.
 - Valves are present only in veins but not in arteries why ? give reason.
 - Arteries of our body are embedded deeply. Why?
18. Give answers about the yeast experiment of respiration.
- Why do you keep paraffin over the glucose solution ?
 - Into which colour the bicarbonate solution turns off ? Why ?
 - What do you understand by Anaerobic respiration.

GROUP - B

19. Read the following passage : AS1

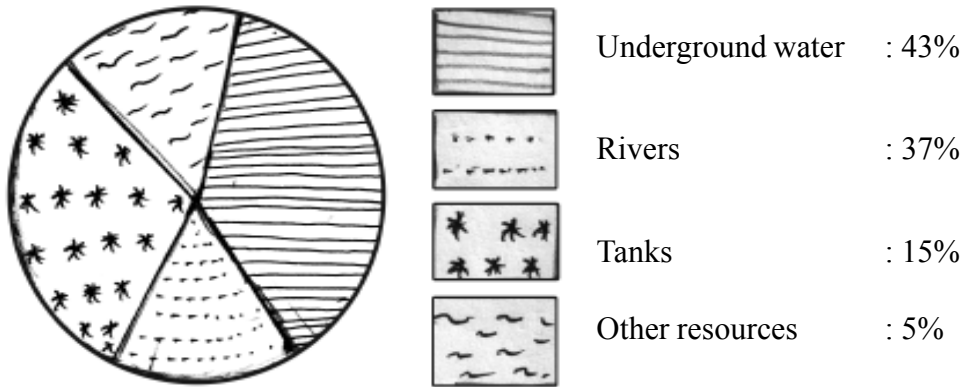
As the process of digestion in the stomach nears completion, the contractions of the stomach decrease. This prompts the muscles called as Pyloric sphincter at the opening of the stomach and the first part of the small intestine or duodenum to relax. This opens the pathway into duodenum releasing the partially digested food (chyme) in small quantities into the duodenum.

Peristalsis involves the contraction of the muscle behind the food and the relaxation of the muscle in front of the food giving rise to a thrust that pushes the food forward through the digestive canal. A wave of contraction followed by relaxation in muscles help in forward movement of food.

Write the answers of the following questions.

- What is the use of peristaltic movement.
- What are the changes that occur by peristaltic movement and muscular movement in food canal?
- What is the role of pyloric sphincter ?
- What is the use of duodenum

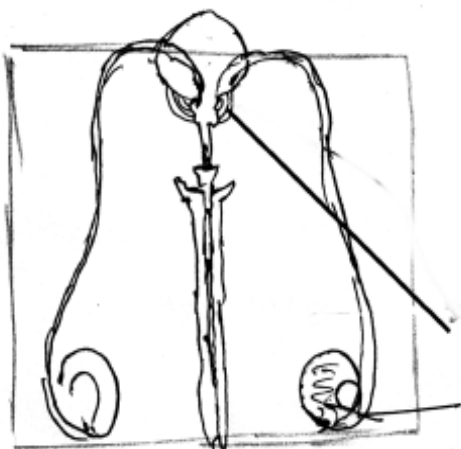
20. "Earth loses about 36 million acres of forest to deforestation on area about half size of our state - Explain. AS1
21. The farmers of your locality are using chemical fertilizers. But suggested them to use natural fertilizers. Prepare a plamplent to explain the need of Bio fertilisers.
22. Following 'Pi' diagram explain the irrigation facility of Andhra Pradesh. Interpret the data and explain. the water harvesting methods.



SECTION - IV

- Note: 1. Answer any ONE Question from the following
2. This Question carries five marks

23. Draw a well labeled diagram of Nephron and explain the ultra-filtration
24. Observe the diagram and answer the following Questions.



- i) What system does the figure represents?
ii) How will form?
iii) What is the use of Prostate gland?

PART - B

30 Minutes

Marks: 15

Instructions

1. Answer all Questions
2. Each Question carries $\frac{1}{2}$ Mark.

I. Write Capital letter showing the correct answer for the following questions in the brackets provided against each question $20 \times \frac{1}{2} = 10$

1. Observe the below statement ()
a) Chloroplast converts simple inorganic substances into complex organic substances.
b) Light energy is used in the above reaction

(A) a, b correct (B) a correct, b False
(C) b correct, a False (D) both a, b False.
2. In light reaction, Light energy converted into chemical energy, photolysis of water, CO_2 converted into Glucose. All these reactions takes place ()

A) Mitochondria B) Protoplasm C) Chloroplast D) Sunlight
3. The Chambers present in the human heart ()

A) Two auricles, 1 ventricle B) 1 ventricle, 1 Auricle
C) 2 Auricles, 3 ventricles D) 2 Auricles, 2 Ventricles.
- 4.

LIST - A

1. Auricle systole ()
2. ventricle systole ()
3. Heart Circuit ()


- A) 1-a, 2-b, 3-c B) 1-a, 2-c, 3-b
C) 2-a, 3-c, 1-b D) 1-b, 2-c, 3-a

LIST - B

- a) 0.11 - 0.14 sec
- b) 0.8 sec
- c) 0.27 - 0.35 sec

5. Oxygenated blood reaches to kidney through i Deoxygenated blood collects through ii. ()

A) i Renal vein ii Renal artery
B) i Renal artery ii Renal vein
C) i hylus ii Renal vein
D) i Renal artery ii hylus

6.  ()

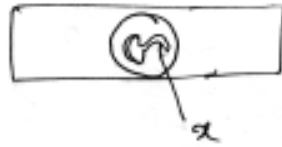
A) Sensory nerve B) Motar neuron C) Mixed neuron

- | | | | |
|----|------------------|--------------------|-----|
| 7. | LIST - A | LIST - B | () |
| | 1. Budding | () a) Paramoecium | |
| | 2. Fusion | () b) Bacteria | |
| | 3. Binary fision | () c) yeast | |

Identify the mis matched pairs

- | | | | | | |
|--|--------|--------|--------|----------|--|
| | A) 1,2 | B) 2,3 | C) 1,3 | D) 1,2,3 | |
|--|--------|--------|--------|----------|--|
8. The method to get desirable charaters in plants ()
 A) Grafting B) Layering
 C) Experimentation D) Gene trasplantation
 9. The teeth to tare sugarcane ()
 A) Inscissors B) Canines C) Molars D) Premolars
 10. When did anti peristalisis movement takes place ()
 A) Bolus moves towards stomach B) Drinking water
 C) During vomiting D) During fasting
 11. P^H Condition in the stomach ()
 A) Basic B) Acidic C) Neutral D) Salt
 12. Gene : DNA, Virus : ? ()
 A) ABA B) NAA C) RNA D) IAA
 13. There are so many pollutants released into water in an industrial area the residues appear in living organism. If is called appears in a food chain ()
 A) Bio Remediation B) Bio mimicry
 C) Bio pollution D) Bio Magnification
 14. Between grass and grasshopper food chain ends with ()
)
 A) producer B) Saporphyte C) Decomposers D) Consumers
 15. UNDP Stands ()
 A) United Nations Dropout Programme
 B) United Nations Development Plan
 C) United Nations Development Programme
 D) United Nations Direction of Planning
 16. Ramya handed over the old books to her sister. This is ()
 A) Decreasing B) Recycling C) Help D) Re use
 17. The use of percolation pit ()
 A) Providing water to Agriculture
 B) Increasing ground water level
 C) Storage of rain water
 D) Control of floods in rainy season.

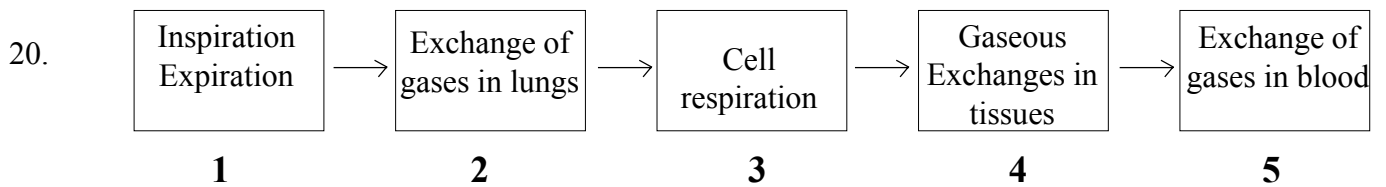
18. The student observes pollengrain under the microscope. It appears as below ()



x indicates?

- A) Matured nucleus B) Pollen tube
C) Stigma D) Tube cell
19. Munemma is in uramia stage. So ()
- i) Limbs are swollen
ii) Water and waste material accumulates in the body
iii) Suffers with and weakness fatigue
iv) No danger to kidney

- A) All are correct B) Only 4th statement is true
C) 4th statement is false D) Secondd statement is false

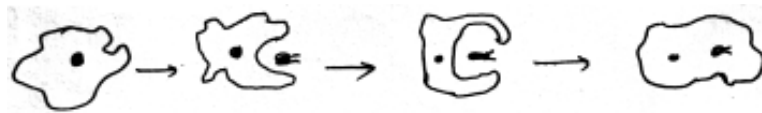


Arrange the flow chart in correct order ()

- A) 1,2,4,5,3 B) 3,4,5,1,2
C) 1,5,4,3,2 D) 1,2,5,4,3

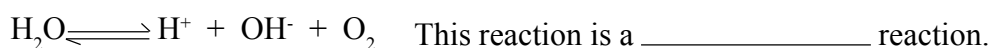
Fill in the Blanks

21. Oserve the following diagram



_____ is occuring in amoeba.

22. Rubber is prepared by Havia braziolensis. It is a _____
23. Tail regenerates in a lizard it cutoff, If a monkey's tail cut off it won't regerate. The reason is be- cause of _____
24. Substance that is caused yellow colour for urine is _____
25. Observe the following equation



C. MATCHING

- | | | | |
|-----|-------------------|---------|-----------------------|
| 26. | Ethylene | () | a. Cell division |
| 27. | Cytokinens | () | b. Ripening of fruits |
| 28. | Ductless gland | () | c. Equilibrium |
| 29. | Longerhans islets | () | d. Insulin |
| 30. | Cerebellum | () | e. Harmone |
- f. Intermediate nerve cell