

SUMMATIVE ASSESSMENT - I - 2021 - 22
GENERAL SCIENCE - Paper - II
(Biological Science)

(English Medium)

Class : X]

(Max. Marks : 50)

[Time : 3.15 Mnts.

Academic standard	AS ₁	AS ₂	AS ₃	AS ₄	AS ₅	AS ₆	Total	Grade
S.No. of Questions	1-12, 13-16, 21, 29, 30	17, 22, 23	18,24, 31	25,26, 32	19, 33	20, 27, 28	33	
Marks	20	5	7	8	5	5	50	
Marks Secured								
Grade								

Name of the Student : Roll No.:

Instructions :

1. There are four sections and 33 questions in this paper.
2. Answers should be written in a given answer booklet.
3. There is an internal choice in Section IV.
4. Write all the questions visible and legibly.
5. 15 Minutes are given for reading the question paper and 3 hours are given for answering questions.

SECTION - I

Note : 1. Answer all the Questions in one word or a phrase

2. Each question carries $\frac{1}{2}$ mark.

$$12 \times \frac{1}{2} = 6$$

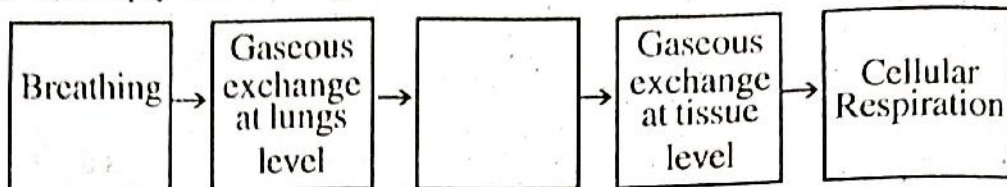
1. I am a unicellular organism. I use finger like projections called pseudopodia for food collection. Who am I ?

2. Correct the underlined word.

The most poisonous of all waste products of metabolism is Urea.

[Turn Over

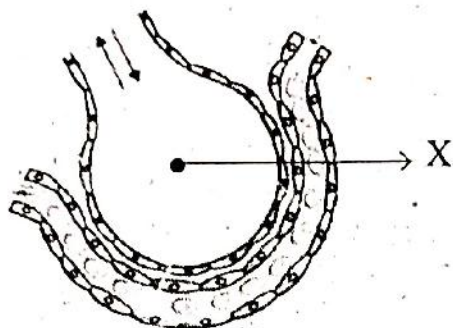
3. Fill the empty box in the given flow chart.



4. Expand ATP.

5. Leaf: Stomata :: Stem : ?

6. Identify the part X in the given picture.



7. Identify the correct statement.

X - All the arteries carry oxygenated blood.

Y - Pulmonary vein carry oxygenated blood

8. Find the odd one out

Tannins Resins Fats Latex

9. Identify the mismatched one.

Arthropoda - Malpighian Tubules

Annelida - Flame cells

Mollusca - Meta Nephridia

10. Identify the scientist mentioned in the paragraph.

In 1661, he studied the wings of bats. He could see blood vessels in their thin membranes under the microscope, he could see that the smallest arteries and veins were connected by very fine blood vessels.

11. Ptyalin is an enzyme that digests carbohydrates. Give an example of another enzyme that digests carbohydrates.

12. Fill the blank

Bio-diesel is produced from the latex of _____ plant.

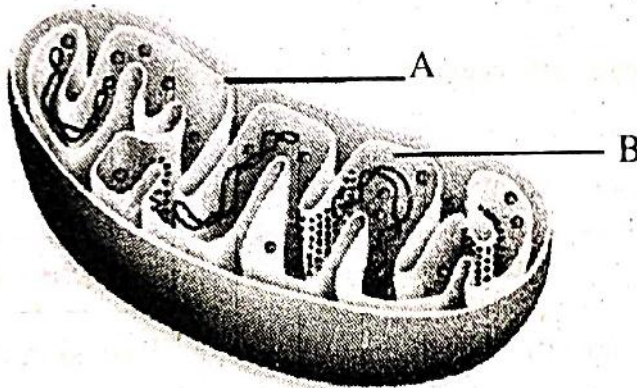
SECTION - II

Note : 1. Answer all the Questions in one or two sentences

2. Each question carries ONE mark.

8 x 1 = 8

13. It is better to call the dark phase of photosynthesis as a light independent phase. Why ?
14. What is the role of epiglottis in respiration ?
15. How do blood platelets useful to us ?
16. How does excretion take place in unicellular organisms ?
17. What may happen if there is no diaphragm in our body ?
18. What are the materials required to observe the internal structure of mammalian heart ?
19. Identify the parts A and B.



20. How do you use gums in your day-to-day life?

SECTION - III

Note : 1. Answer all the Questions in four to six sentences.

2. Each question carries TWO marks

8 x 2 = 16

21. Why do mountaineers carry oxygen cylinders on their back?
22. What happens if there are no green plants on the earth?
23. If you have a chance to meet urologist, what questions you will ask to know about healthy maintenance of kidney?

[Turn Over

24. Fill the following table with your observations during the lab activity to study of external and internal features of a kidney ?

Shape of the Kidney	
Colour of the Kidney	
Number of tubes coming out from kidney capsule	
Colour of the inner zone in L.N. of kidney	

25. Study the given table and answer the following questions.

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.03	4.4
Nitrogen	78	78

- A) What is the percentage of carbon dioxide in the air that we breath in ?
- B) Why does the amount of oxygen is less in exhaled air than in inhaled air ?
26. Study the given table and answer the following questions.

Vitamin	Resources	Deficiency diseases
Retinol (A)	Leafy vegetables, carrot, tomato, pumpkin, papaya, mango, meat, fish, egg, liver, milk, cod liver oil, shark liver oil	Eye, skin diseases
Calciferol (D)	Liver, egg, butter, cod liver oil, shark liver oil, (morning sun rays)	Rickets

- A) What is the chemical name of vitamin D ?
- B) What food materials will you suggest to avoid Eye and Skin diseases?

27. Praveen's family want to travel from Visakhapatnam to Tirupati by bus. What precautions you would suggest them to avoid edema?
28. What food habits will you follow to avoid problems related to digestion?

SECTION - IV

Note : 1. Answer all the Questions in eight to ten sentences.

2. Each question carries FOUR marks.

5 x 4 = 20

29. a) Describe how light energy is converted to chemical energy.

(Or)

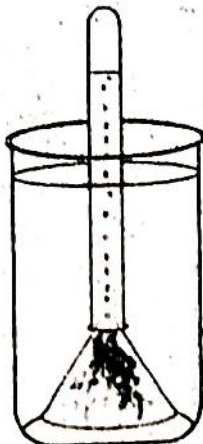
- b) Explain the process of clotting of blood.
30. a) Write the differences between the blood vessels that carry the blood to the heart and the blood vessels that carry blood away from the heart.

(Or)

- b) Distinguish between combustion and respiration.
31. a) How can you demonstrate that carbon dioxide is released in respiration.

(Or)

b)



- a) What is the aim of the experiment?
- b) What is your observation in this experiment?
- c) How can you test the gas released in this experiment?
- d) If Hydrilla plant is not available, which plant will you use?

[Turn Over

32. A) Study the given table and answer the following questions.

Alkaloid	Plant	Part	Uses
Quinine	Cinchona officinalis (Cinchona)	Bark	Antimalarial drug
Nicotine	Nicotiana tobacum (Tobacco)	Leaves	Insecticide
Morphine, Cocaine	Papaver somniferum (Opium)	Fruit	Pain killer
Reserpine	Rauwolfia serpentina (Snake root)	Root	Medicine for Snake bite

- Which alkaloid is used as insecticide?
- Which plant's alkaloid is used as antimalarial drug?
- What is the use of reserpine?
- Which part of Opium plant contains cocaine?

(Or)

B) Study the given table and answer the following questions.

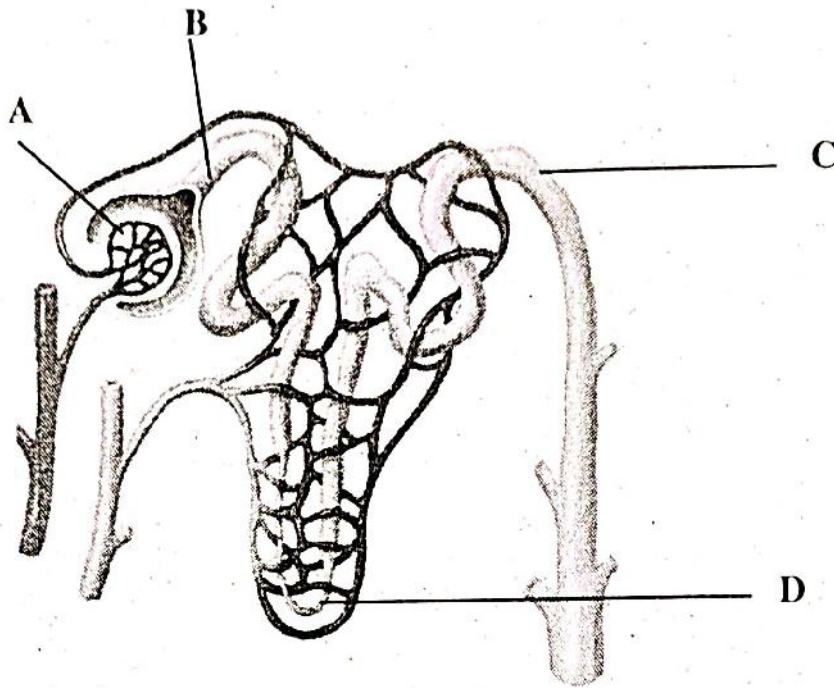
Phylum	Name of the Organism	Circulatory system
Protozoa	<i>Amoeba</i>	Brownian movements
Platyhelminths	<i>Fasciola hepatica</i>	Highly branched digestive system
Annelida	Earthworm	Closed Circulatory system
Arthropods	Cockroach	Open Circulatory system

- Name the organism which have highly branched digestive system ?
- What is the mode of transportation in Amoeba?
- To which Phylum does cockroach belong to?
- What is closed type of circulatory system?

[Contd... 7th

33. Draw a neat labelled diagram of chloroplast and mention where do the light and dark reactions take place in chloroplast?

(Or)



a) Identify the given picture

b) Label the parts A, B, C and D

c) In which part of the given picture does filtration of blood take place?

