

This Question Paper contains 4 Printed Pages.

20E(A)

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 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. Which chromosomes determine the sex in human beings ?

2. Which part of small intestine absorbs digested food ?

3. Why do we use KOH solution in Mohl's half-leaf experiment ?

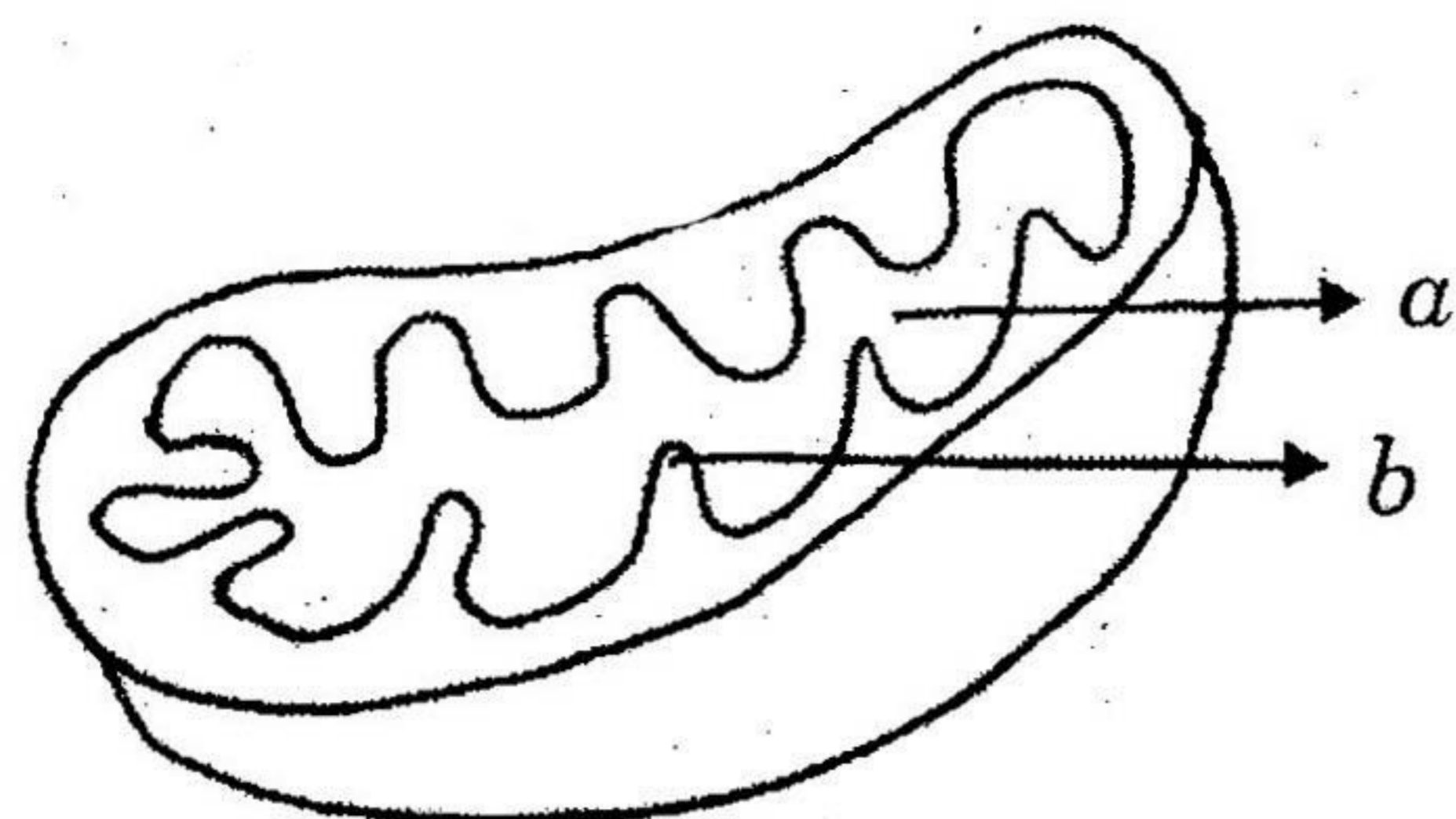
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4. Label *a* and *b* in the given diagram.



5. Name the chemical which is used to test the action of saliva on ~~flour~~ (ata).
6. Write two healthy habits which you practice to protect your kidneys from diseases.
7. Prepare two slogans on protecting non-renewable resources.

SECTION - II

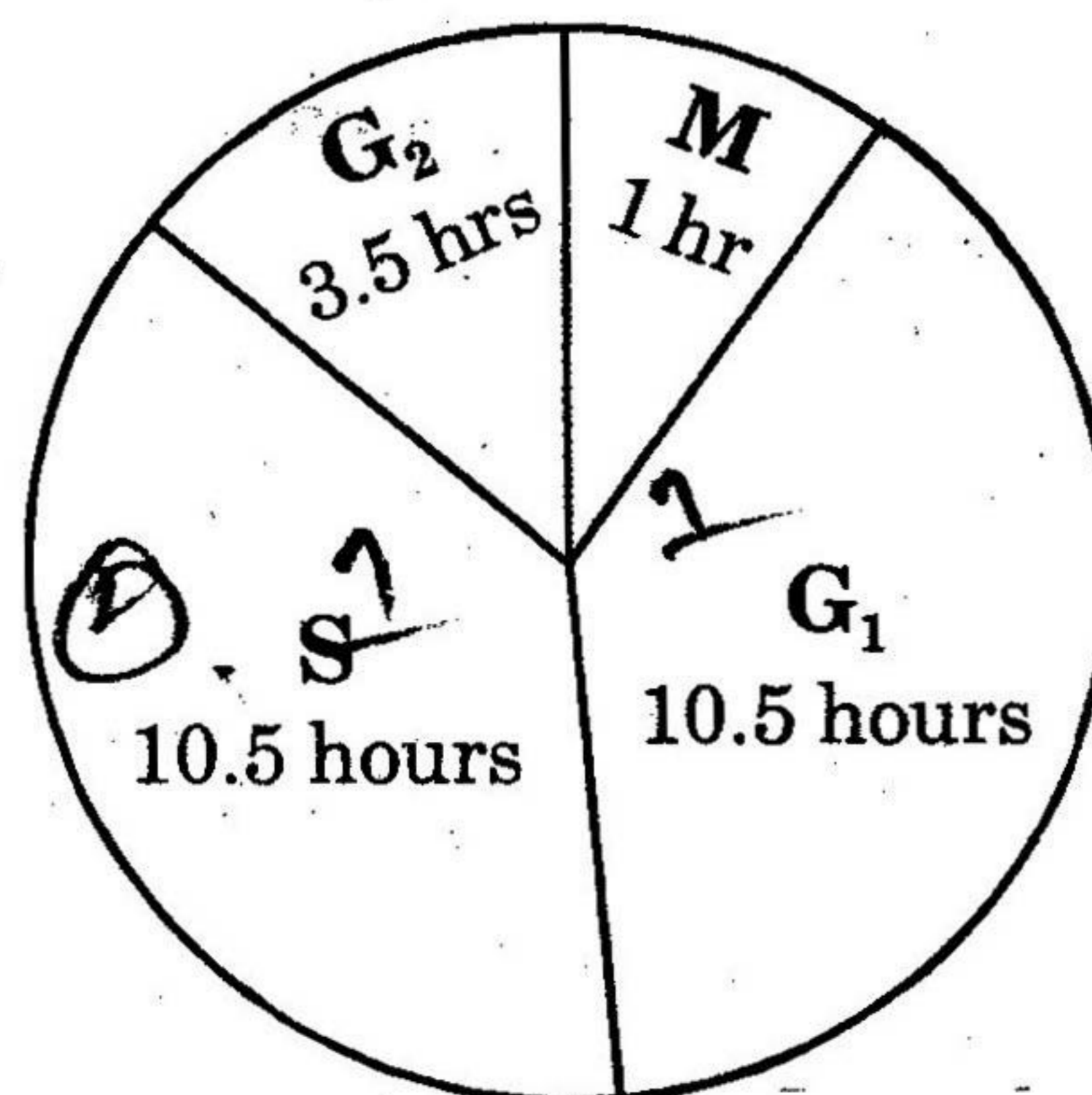
6×2=12

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

8. Explain in brief about the alternate methods to be followed to prevent the harmful effects of over usage of pesticides.
9. What happens if there are no valves in veins ?
10. What questions you will ask a neurologist on function of brain ?

11. Observe the diagram and answer the following questions.

- (i) Which phases take same time duration ?
- (ii) In which phase, DNA synthesis takes place ?

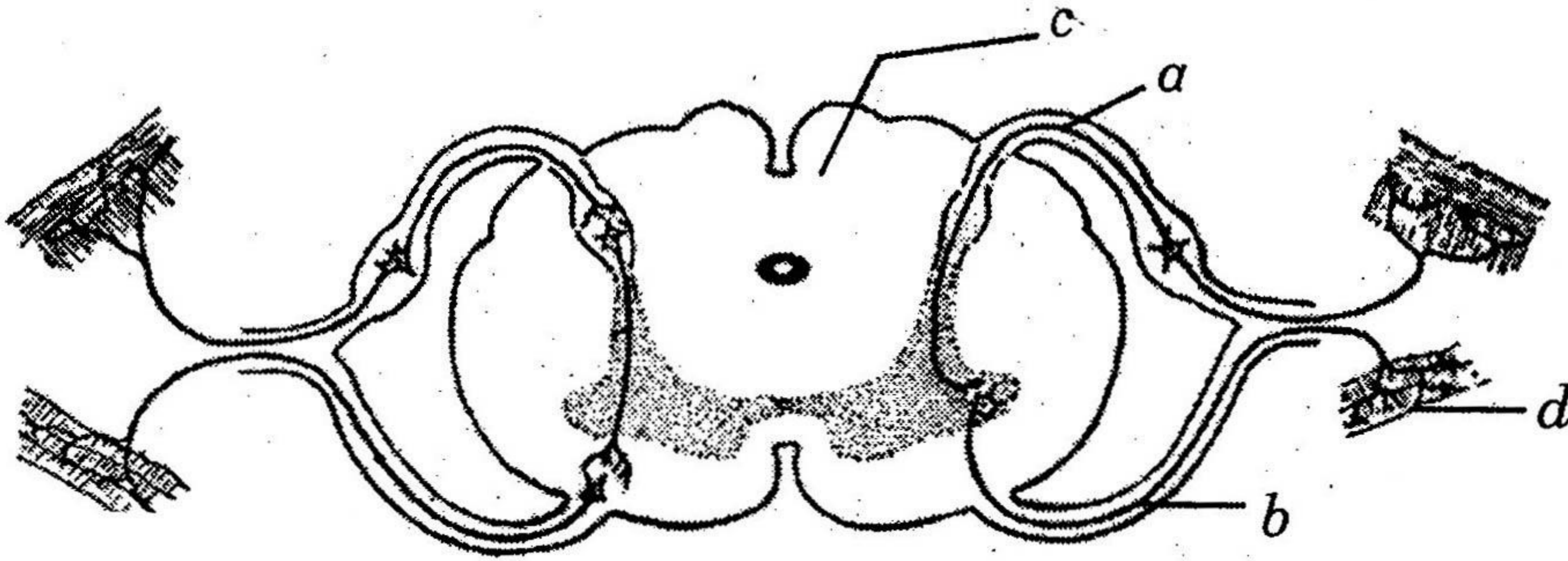


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12. Label *a, b, c, d* in the diagram given below and write their functions.



13. Name the secondary metabolites which are useful in leather and rubber industry. From which plants we obtain them ?

SECTION - III

4×4=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. Write about the accessory excretory organs and their excretory substances in human beings.

OR

What is Phenotype and Genotype ? Explain them with the help of Mendal's Monohybrid cross.

15. Write the mechanism of light dependent reactions in Photosynthesis

OR

Which system of our body is called second brain ? Why ?

16. Write the procedure which you follow to observe bread-mould Sporangium in your laboratory. What precautions do you take during the activity ?

OR

Write the materials required and the procedure to prove that light is essential for Photosynthesis.

20E(A)

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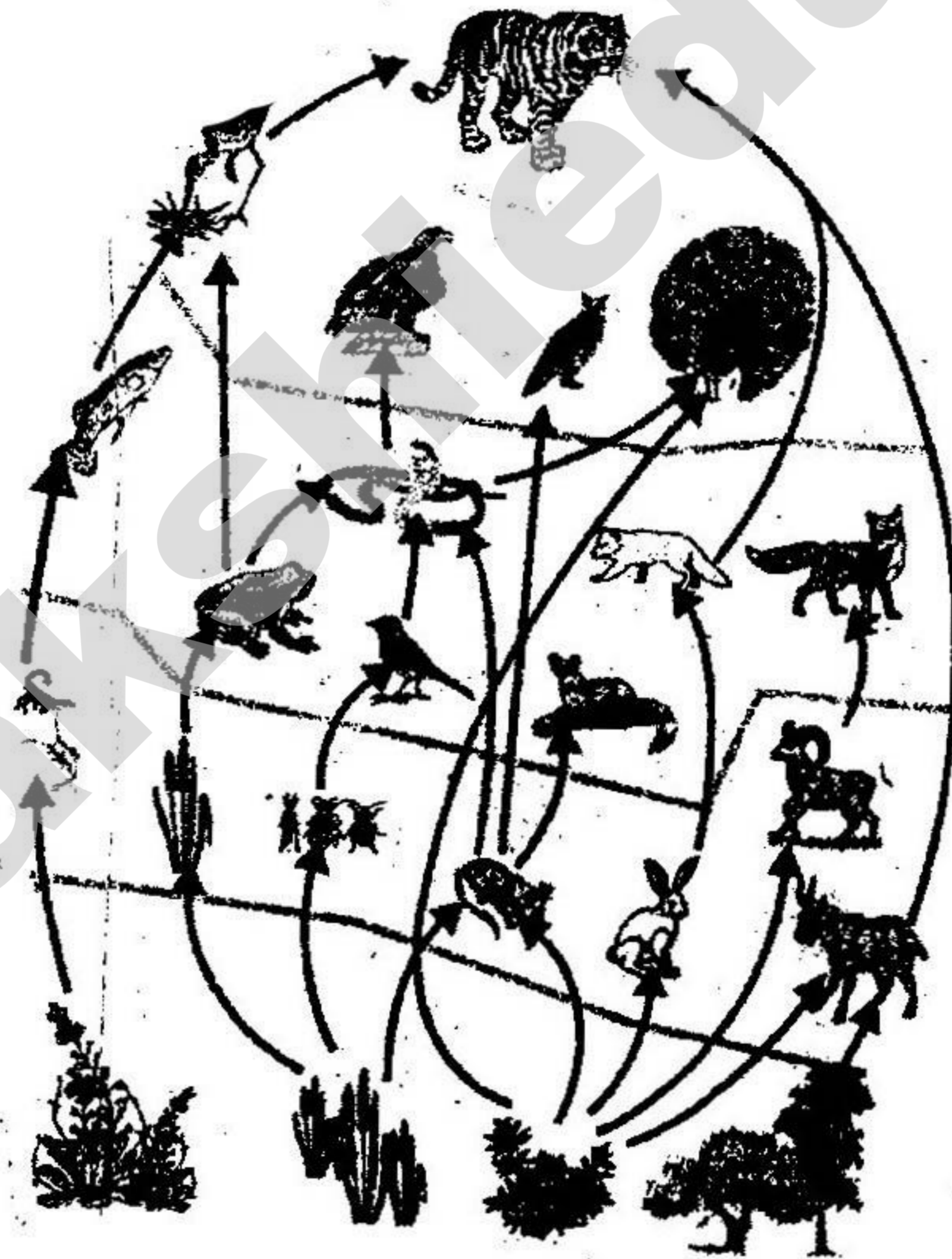
17/ Read the table and answer the following questions.

S.No.	Name of the Phylum	Type of transport system
1	Cnidarians	Gastro vascular cavity
2.	Platyhelminthes	Digestive system
3.	Nemathelminthes	Pseudo-coelom
4.	Annelida	Blood vessels
5.	Arthropoda	Open circulatory system

- (i) In which phylum, blood vessels are first formed ?
(ii) In which phylum, organisms have haemoglobin in their blood ?
(iii) In which phylum, digestive system helps in transportation ?
(iv) Why do Arthropods have open circulatory system ?

OR

Observe the following diagram and answer the following questions.



- (i) Name the primary producers in the given food web.
(ii) Prepare any one food-chain from the diagram.
(iii) What are the tertiary consumers ?
(iv) Write names of any two herbivores.