

GENERAL SCIENCE, Paper-II
(English Version)

[Maximum Marks : 50

Time : 2 Hours 45 Mins.]

Instructions :

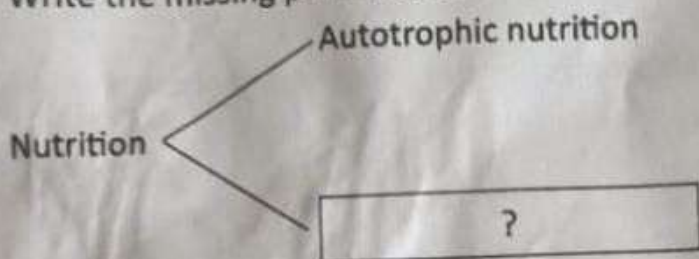
1. First 15 minutes are meant for reading the question paper and remaining 2 hours 30 minutes are for writing the exam.
2. Answer all questions in the given booklet.
3. The question paper contains four sections.
4. Only section four has internal choice.

12 x 1/2 = 6

Section - I

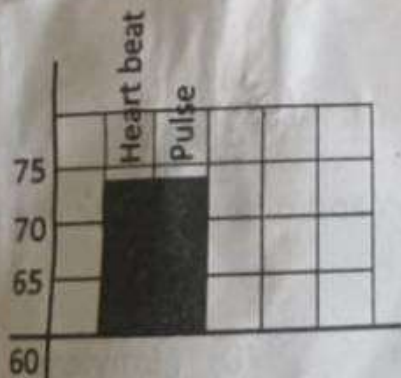
- Note : (1) Answer all the questions.
(2) Each question carries 1/2 mark.

1. Write the missing part from the flowchart.



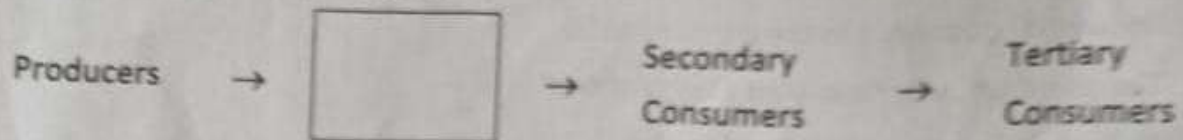
2. Pulmonary : Lungs :: Cardiac : _____.

3. Observe the sample graph.



What is the relationship between heart beat and the pulse ?

4. Which is the largest part of the brain ?
5. Who is called as the Father of genetics ?
6. John prepared an apparatus used to observe heart beat by using papercup and plastic tube. To which device does this model belong ?
7. Complete the given food chain.



8. Identify the logo.



9. I am a Vitamin responsible for blood coagulation.
Guess who am I ?
10. Expand HIV.
11. Name the Phytohormone responsible for cell elongation and differentiation of shoots and roots. []
- (A) Auxin (B) Gibberellin (C) Cytokinin (D) Ethylene

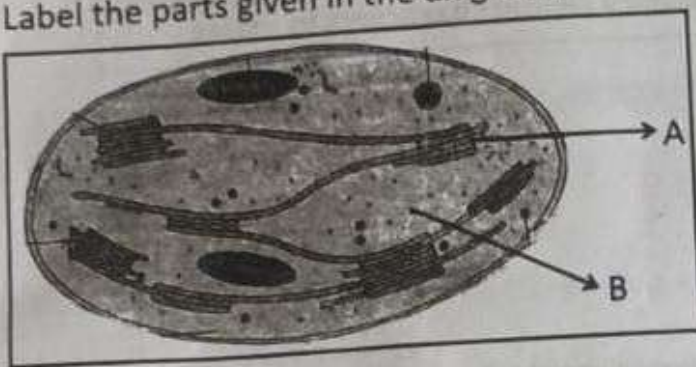
12. Identify the mismatched pair –
- (i) Producers – Frog, Cat
 - (ii) Herbivores – Cow, Rabbit
 - (iii) Predators – Lion, Tiger

8 × 1 = 8

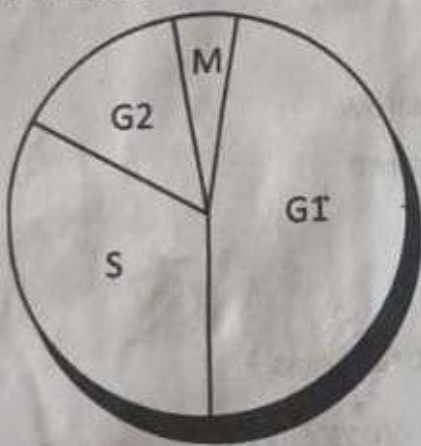
Section – II

- Note : (1) Answer *all* the questions.
(2) Each question carries 1 mark.

13. Label the parts given in the diagram.



14. Prepare a questionnaire to ask an Environmentalist about the consumption of fossil fuels.
15. What does this chart denote ? In which phase the size of the cell increases ?



16. Which materials are required to study the Kidney of Goat/Sheep in the Laboratory ?

17. Write examples for renewable and non-renewable resources.
18. Write slogans to stop child marriages.
19. Why Gliricidia plantation is done on the field bunds ?
20. Observe the following table and fill the table :

Sr. No.	Name of the gland	Hormone	Effect of the hormone
1.	Ovary	(?)	Growth of uterus, menstrual cycle in females
2.	?	Testosterone	Secondary sexual characters in males

Section – III

8 × 2 = 16

Note : (1) Answer *all* the questions.

(2) Each question carries 2 marks.

21. Why did Mendel choose Garden-pea for his experiments ?
22. What food habits you are going to follow after reading the chapter NUTRITION ?
23. Observe the following table :

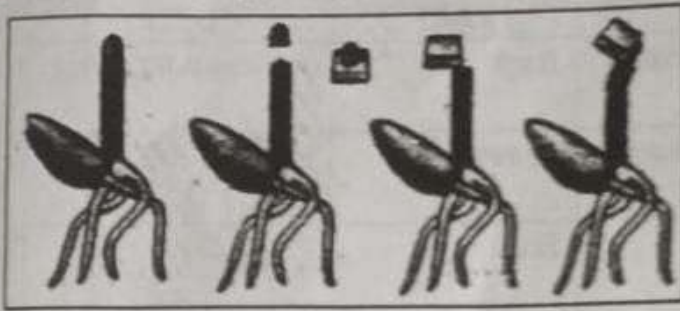
	♂	Y	y
♀		YY	Yy
		yY	yy

'YY' Pure breed of Yellow

'yy' Pure breed of Green

- (i) What is the Phenotypic ratio of F_2 generation in monohybrid cross ?
- (ii) What is the dominant character in the given monohybrid cross ?
24. If you have a chance to meet a Cardiologist, what questions do you ask to know about the heart diseases ?

25. Observe the following and answer the given questions.



- (i) Who discovered the first plant hormone 'auxin' by this experiment?
- (ii) What are your observations in this experiment?

26. What precautions do you suggest to your elders during long Journey, regarding edema?
27. Natural resources have been decreasing more rapidly. Guess what will be the consequences?
28. Write any two differences between sexual and asexual reproduction.

Section - IV

5 × 4 = 20

- Note : (1) Answer all the questions.
(2) Each question has internal choice.
(3) Each question carries 4 marks.

29. Write the differences between Photosynthesis and Respiration.

OR

Suggest some programmes helpful for the prevention of Soil Pollution by avoiding pesticides.

30. Explain the process of blood clotting in human beings.

OR

Describe the structure of nerve cell.

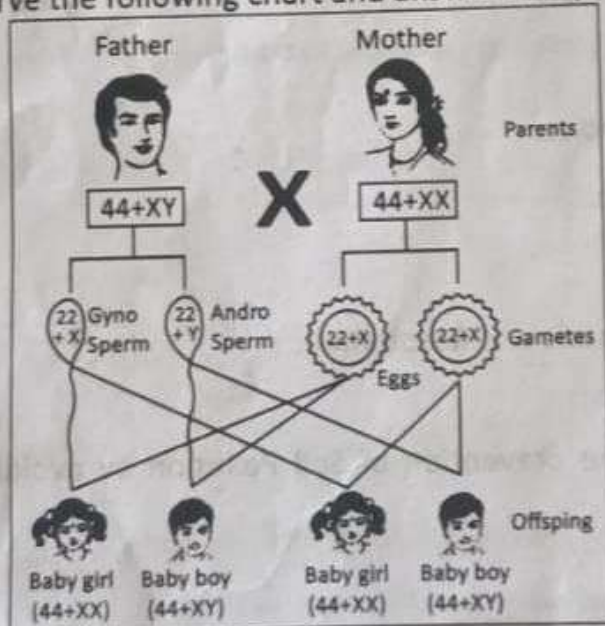
31. Observe the following table and answer the questions given below :

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, bark	Medicine for Snake bite
Caffeine	Coffea arabica (Coffee plant)	Seed	Central nervous system Stimulant
Nimbin	Azadirachta indica (neem)	Seeds, Barks, Leaves	Antiseptic
Scopolamine	Datura stramonium	Fruit, flower	Sedative
Pyrethroids	Tridax	Flower	Insecticides

- Name the alkaloids that are used as insecticides.
- Which plant yields alkaloid used for the treatment of malaria ?
- What are the uses of Neem plant ?
- What is the use of Reserpine ?

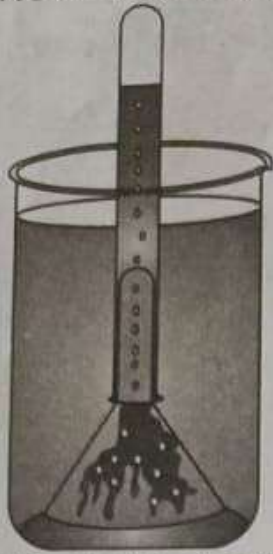
OR

Observe the following chart and answer the questions :



- How many Pairs of Chromosomes are present in each human cell ?
- What will happen if the sperm containing 'X' chromosome fertilizes the ovum ?
- Who decides the sex of the baby, Mother (or) Father ?
- What do you call the chromosomes which determine the sex ?

32. Observe the following experimental set-up and answer the questions below.



- (i) What is the aim of this experiment ?
- (ii) What are the apparatus required for conducting this experiment ?
- (iii) Which gas is collected at the end of the test tube after conducting the experiment ?
- (iv) What precautions are to be observed while conducting the experiment ?

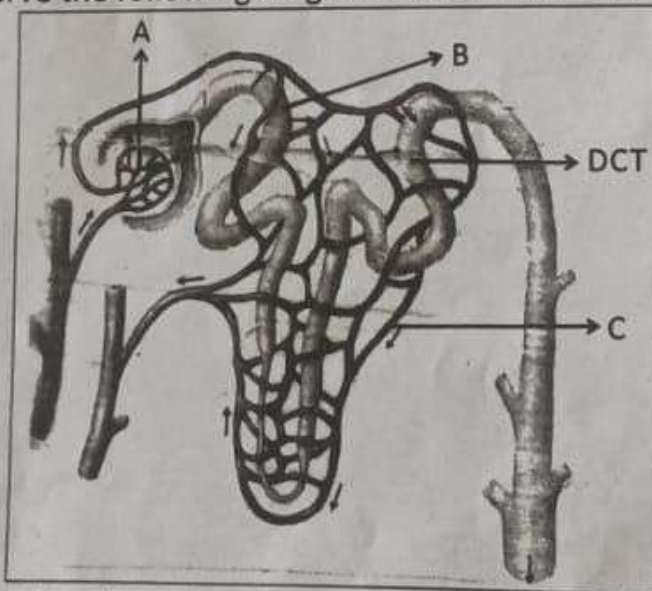
OR

Explain the procedure to prove that CO_2 is released in aerobic respiration.

33. Draw a neat labelled diagram of longitudinal section of a flower.

OR

Observe the following diagram and answer the questions below :



- (i) What does the above picture represent ?
- (ii) Label the part 'A' and write its function.
- (iii) Label the parts 'B' and 'C' given in the picture.
- (iv) What process occurs at DCT ?