MODEL PAPER 1

GENERAL SCIENCES – PAPER II

Time : 2 hrs 45 min
Max marks: 50

Instructions:

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

SECTION – I

Note: Answer all the questions. Each question carries ½ marks.

1. Write the missing part from the flow chart.

2. Water : xylem :: ______: phloem

3. Expand RUBP.

4. Group A: - insulin, testosterone
   Group B: - pepsin, trypsin.
   Identify the group with enzymes.

5. Pollen grains responds to sugary substance on stigma. What do you call this type of response?

6. Write the name of the logo.

7. find the wrongly matched.
   a) prophase - equatorial plate
   b) anaphase - chromosomes split into two
c) meiosis - reduction division

8. Give an example for vestigial organs in humans.

9. The term NICHE denotes not only the animal's position in the food web and what it eats, but not its mode of life.

Rewrite the sentence by making necessary correction.

10. I am a type of resource and I can be replaced after being used. Who am I?

11 and 12. Complete the paragraph.

_________ (11) continue up to 30–45 minutes. Increase in _____ (12) levels result in sensation of hunger and motivation to consume food.

SECTION – II

8X 1= 8 MARKS

Note: Answer all the questions. Each question carries 1 mark.

13. Avinash is afraid of entry of food into respiratory passage. In order to convince him which organ you will refer to from respiratory system?

14. Jeevan said that oxygen is the waste product produced during light reactions. Then what are the useful products produced during light reactions?

15. Prepare any two questions to ask about fuel consumption from petrol vendor.

16. What does the experiment indicate?

17. iii) Tubular secretion: It is the active secretion of waste products by blood capillaries into the urinary tubule. It ensures removal of all the waste products from blood, viz., urea, uric acid, creatinine, salt ions like K⁺, Na⁺ and H⁺ ions. This maintenance proper concentration and pH of urine.

18.
What is expressed in f1 generation when a monohybrid cross is made using pure lines of these two traits?

19.

identify and write the name of the diagram.

20. Write two slogans on importance of vaccination.

SECTION – III

Note: Answer all the questions. Each question carries 2 marks.

21. Write a note on the process of layering.

22. What is fluorosis? What are its symptoms?

23. Ravi wanted to know about dialysis. Help him to prepare a set of questions to ask the Urologist. Write the questions.

24. Suma told her friend to take milk, eggs, green leafy vegetables regularly, otherwise you will be in deficient of riboflavin. What happens if there is the deficiency of riboflavin in our body?

25. What precautions you follow to perform this experiment?

26. Read the following and answer the questions given below:
Lymph is the vital link between blood and tissues by which essential substances pass from blood to cells and excretory products from cells to blood. The lymphatic system is a parallel system to the venous system which collects tissue fluid from tissues and transports it to the venous system.

a) What is the function of the lymphatic system?

b) To which system does the lymphatic system act as a parallel system?

27. Continuous usage of the neck leads to its elongation in giraffe. Write any two examples from your surroundings to support the statement.

28. How do you appreciate the feedback mechanism to regulate the level of hormones in the body?

SECTION – IV

Note: Answer all the questions. Each question carries 4 marks.

29. What is coagulation of blood? Describe the process of coagulation of blood.

OR

Explain the flow of energy in an ecosystem using the pyramid of energy.

30. Write the differences between inspiration and expiration.

OR

Natural resources should be managed. Write a detailed note on their management.

31. a) What is the apparatus used to prove that carbon dioxide is essential for photosynthesis?

b) Write the procedure of the experiment.

OR

What is the procedure you followed to demonstrate the role of mucus in protecting the stomach from its own acids? What did you observe?

32. From the given table of plant hormones, answer the following:

<table>
<thead>
<tr>
<th>Hormones</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abscisic acid</td>
<td>closing of stomata; seed dormancy</td>
</tr>
<tr>
<td>Auxins</td>
<td>cell elongation and differentiation of shoots and roots</td>
</tr>
<tr>
<td>Cytokininins</td>
<td>promote cell division, promotion of sprouting of lateral buds, delaying the ageing in leaves, opening of stomata.</td>
</tr>
<tr>
<td>Ethylene</td>
<td>ripening of fruit</td>
</tr>
<tr>
<td>Gibberellins</td>
<td>germination of seeds and sprouting of buds; elongation of stems; stimulation of flowering; development of fruit, breaking the dormancy in seeds and buds.</td>
</tr>
</tbody>
</table>
a) What are the hormones that effect seed dormancy?
b) What are the hormones that help in opening and closing of stomata?
c) Which hormones help in differentiation of shoots and roots?
d) What is the function of ethylene?

OR

List out the homologous and analogous organs from the following:

Swimmer of whale, using of bat, leg of cheetah, wing of butterfly, wing of bird, hand of man, claw of mole.

33. Draw a neat and well labeled diagram of nephron. Name the part in which ultrafiltration takes place.

OR

Label the parts A B C D E F in female reproductive system. Name the part in which fertilization takes place.
MODEL PAPER 2
GENERAL SCIENCES – PAPER II

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

SECTION – I

Note: Answer all the questions. Each question carries ½ marks.

1. Kwashiorker is due to deficiency of
   a) protein    b) calorie    c) vitamins    d) minerals

2. Expand ATP.

3. I am the smallest cell in the body. I have a long tail. I move towards the ovum and fertilize it. Who am I?

4. Pleura : lungs :: __________ : heart.

5. Identify the correct sequence
   Grass -> Rabbit -> lion -> fox
   phytoPlankton -> small fish -> large fish -> eagle.

6. Dialysis machine is used to filter the blood of a person when both kidneys are functional.
   Rewrite the sentence by making necessary corrections.

7. Pick the wrong match
   Renewable resource : petrol
   Non renewable resource : coal
   Biodiesel : jatropa seeds
8. Receptor -> sensory nerve -> interneuron -> ______________ -> effector organ

Complete the flow chart of reflex arc.

9. Rakesh had seen a snake and is afraid of it. He then took a stick and thrashed it. What is the hormone that helps him in this situation?

10. What do this logo stands for?

![Recycle Logo]

11 and 12. Complete the paragraph.

______________ is the body’s method of ridding itself of unwanted or harmful substances from the stomach. The ____________ movements of the stomach and oesophagus reverse their normal direction and the food is expelled.

SECTION – II  
8X 1 = 8 MARKS

Note: Answer all the questions. Each question carries 1 marks.


14. Write the phenotypic and genotypic ratios of monohybrid cross.

15. Write a few questions on disaster management to ask NDRF personnel.

16. Draw a rough sketch of bread mould you observed under microscope.

17. Write the dental formula for the above data.

<table>
<thead>
<tr>
<th>Type of teeth</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molars</td>
<td>3</td>
</tr>
<tr>
<td>Premolars</td>
<td>2</td>
</tr>
<tr>
<td>Canines</td>
<td>1</td>
</tr>
<tr>
<td>Incisors</td>
<td>2</td>
</tr>
</tbody>
</table>

18. Raju’s blood pressure reads 140/90. What are the values of systolic pressure and diastolic pressure?

19. label A and B.
20. Gaseous exchange takes place in alveoli. Appreciate the role of alveoli in gaseous exchange.

SECTION – III

Note: Answer all the questions. Each question carries 2 marks.

21. What do you call the substances produced in the plant body which are not required for growth of the plant? Give two examples.

22. What is global warming? What are the causes of global warming?

23. Raju wanted to know about reproduction in amoeba. List out the questions he should ask his teacher about reproduction in amoeba.

24. Ovary secretes oestrogen. What happens if oestrogen is not secreted?

25. Varsha prepared a stethoscope using matchstick. Write the procedure she might have followed to prepare that stethoscope.

26. study the table:

<table>
<thead>
<tr>
<th>Gas</th>
<th>% in inhaled air</th>
<th>% in exhaled air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>0.04</td>
<td>4</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>79</td>
<td>79</td>
</tr>
</tbody>
</table>

Answer the following:

a) Which gas is utilized between inhalation and exhalation?

b) What is the percentage of carbon dioxide that is released in excess to inhaled air?

27. Anand was asked to prepare slogans to participate in a rally to create awareness on conservation of soil. Help him and write the slogans.


SECTION – IV

Note: Answer all the questions. Each question carries 4 marks.

29. Compare the structure and functions of arteries and veins.

OR

What are ecological pyramids? Explain pyramid of numbers using an example.

30. What are the advantages of conservation of forests and wildlife?

OR
Write any four differences between photosynthesis and respiration.

31. a) What is the aim of the given experimental setup?
   b) how do you test the gas that is released?
   c) What is the alternative plant that can be used for the plant given in the figure?

OR

What is the procedure you followed to test the action of saliva on flour? What is the enzyme that is present in saliva?

32. From the given flow chart, answer the following:
   a) What is the sex chromosome in ovum?
   What is the combination of sex chromosomes for male?
   c) Who decides the sex of the baby mother or father?
   d) Does sex is determined by Mendel’s law of dominance?
Answer the following:

a) Name the part that has center for emotions.

b) What is the relay center for sensory and motor impulses between brain and spinal cord?

c) Write any one function of cerebellum.

d) Which part of the brain coordinates swallowing reflex?

33. Identify the parts. What are the structural and functional units of kidney?

OR

Draw a neat and well labeled diagram of structure of flower. Write the names of the male parts of the flower.