

BOARD OF SECONDARY EDUCATION (AP)
SUMMATIVE ASSESSMENT – I
TENTH BIOLOGY MODEL PAPER
PAPER – II (ENGLISH VERSION)

Time: 2 hrs. 45 mins.

PART – A & B

Maximum Marks: 40

INSTRUCTIONS:

- i) 15 minutes allocated to read the question paper. 2.30 hours allocated to write answers.
- ii) PART – A must be answered in a separate answer sheet.
- iii) Students can take PART – A (Question paper) with them.
- iv) PART – B (Bit Paper) should tag to the answer sheet and give them to Invigilator.

Time: 2 hrs.

PART – A

Marks: 30

SECTION – I

NOTE: i) Answers the following questions.

ii) Each question carries ONE Mark.

4 × 1 = 4

1. Do plants having new reddish leaves also carry out photosynthesis? Then what is the role of the red colour of the leaves?
2. We are aware of the fact that water vapour deposits on a glass pane if we breathe out on it. Where does this water vapour come from exhaled air?
3. Why we compare arteries to a tree which divides into smaller and smaller branches.
4. Which substances get filtered in the Glomerulus?

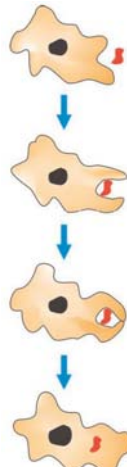
SECTION – II

NOTE: i) Answer the following questions.

ii) Each question carries TWO Marks.

5 × 2 = 10

5. Observe the given figure. Write the name of this creature and write about the mode of nutrition in this creature.



6. Observe the table given below. Write analytical answers to the given questions.

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.04	4
Nitrogen	79	79

- a) Why does the amount of Oxygen vary between exhaled and inhaled air?
 b) What has raised the percentage of carbon dioxide in exhaled air?
7. What questions will you ask a doctor to know about the heart, the heartbeat, blood pressure, and hypertension?
8. Which plants in your living environment secrete gums? What method will you follow to collect gums from the plants?
9. Make a list of five environmentalists working in different areas, regions or parts of the country. Also, list five powerful environmental movements.

SECTION – III

NOTE: i) Answer the following questions.

ii) Each question carries FOUR Marks.

4 × 4 = 16

10. a) Observe the given figures. Explain about single circulation and double circulation and prepare a flow chart.



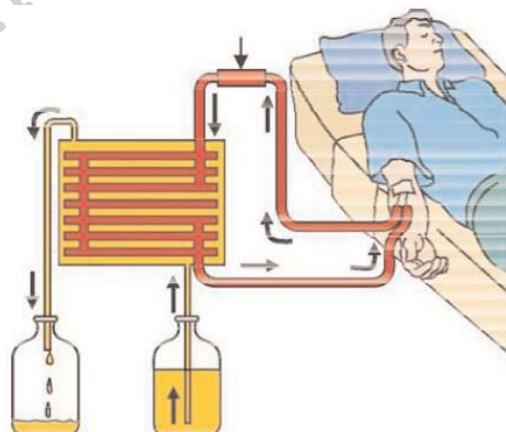
Single circulation



Double circulation

(OR)

- b) What is the procedure you used to know about the anaerobic respiration in your school laboratory? Explain with the help of a diagram.
11. a) Look at the image given below. Answer the given questions.

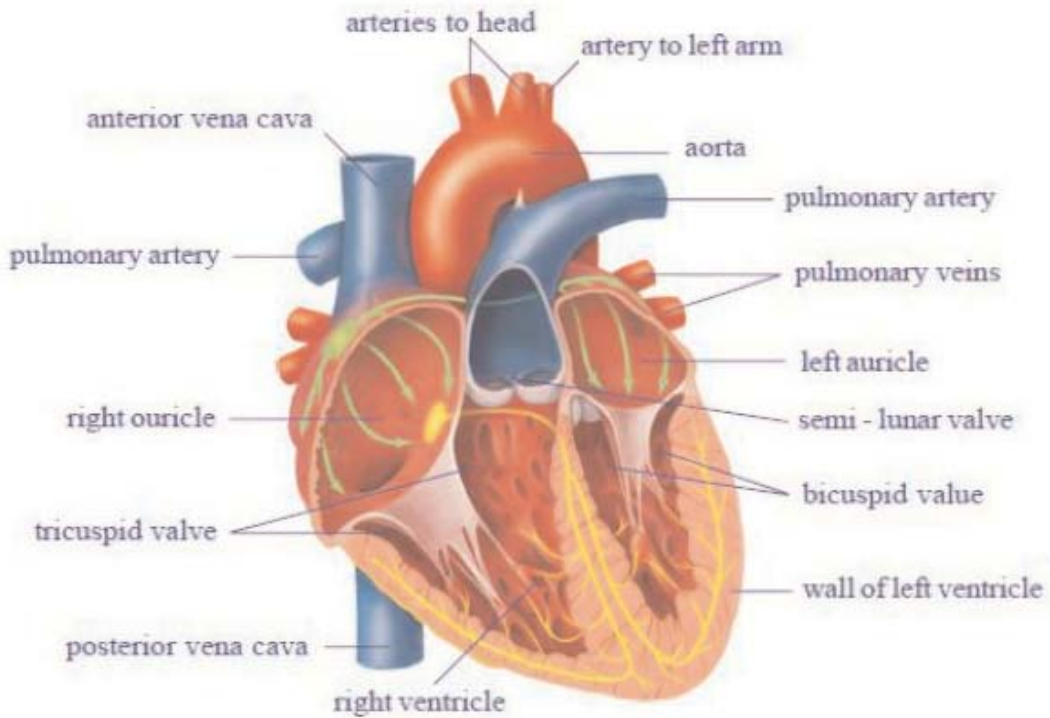


- i) What is dialysis?
- ii) Explain the process of haemodialysis.
- iii) Is there any permanent solution for those who suffer from the damage of kidneys? What is it?
- iv) What happens if both the kidneys fail to work?

(OR)

b) Explain the method of heterotrophic nutrition in Cuscuta.

12. a) Observe the diagram of the heart of a mammal given below. Write answers to the questions given.



Internal structure of heart

- i) What is the shape of the heart?
- ii) What are the differences seen between the chambers of the heart?
- iii) What is the function of the Aorta?
- iv) What are the functions of the arteries and the veins?

(OR)

b) Observe the given flow chart. Answer the questions given.



- i) What process of respiration takes place in nasal cavity?
- ii) What is the significance of vocal cords?
- iii) Into which does the bronchus enter?
- iv) What is the function of the blood in the process of respiration?

13. Study the pictures given below. Write answers to the given questions.



Cassia



Acacia



Pinus



Neem



Jatropa

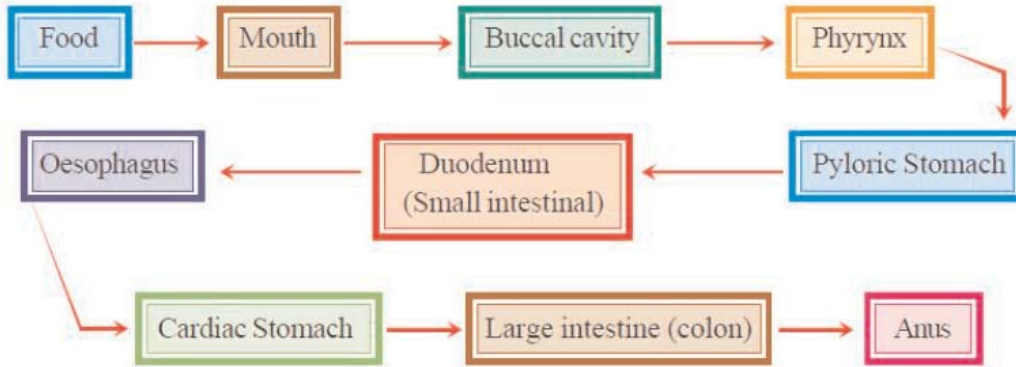


Rubber plant

- i) Name the alkaloids that are harmful to us.
- ii) Give examples of secondary metabolites.
- iii) Which type of secondary metabolites does Pinus produce?
- iv) In which way are the tannins produced by Cassia and Acacia used?

(OR)

b) Observe the flow chart given below. Answer the given questions.



- i) What are the important stages of digestion?
- ii) What are villi? Where are they located?
- iii) What is the role of bile and pancreas in the process of digestion?
- iv) What precautions should we take to avoid digestion related diseases?

INSTRUCTIONS:

- i) Answer ALL the questions.
- ii) Each question carries $\frac{1}{2}$ mark.
- iii) Marks will not be awarded in any case of over-writing, rewritten or erased answers.
- iv) Write the CAPITAL LETTER (A, B, C, D) showing the correct answer for the following questions in the brackets provided against them. $20 \times \frac{1}{2} = 10$

SECTION – IV

14. Observe the figure given below.



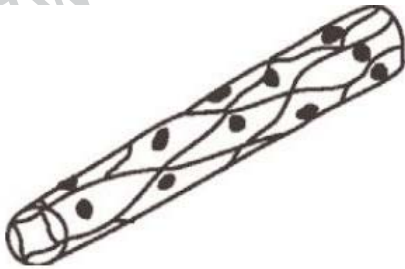
- Why did Priestly insert a mint plant into the bell jar experiment set up? ()
- A) to look good.
 - B) so that the rat eats the plant.
 - C) the gas released by the mint plant aids in the survival of the rat and the combustion of the candle.
 - D) the gas released by the mint plant aids in the survival of the rat but puts off the candle.
15. Where is the inhaled air filtered? ()
- | | | | |
|-----------------|---------------|--------------|-----------|
| i. Nasal cavity | ii. Diaphragm | iii. Trachea | iv. Nose |
| A) i, ii | B) ii, iv | C) ii, iii | D) i, iii |
16. What is evaporation of water through leaves called? ()
- | | |
|------------------|--------------------------|
| A) transpiration | B) transport of minerals |
| C) leaf pressure | D) absorption |
17. What is homeostasis? ()
- A) the tendency towards a relatively stable equilibrium between interdependent elements of the human body.
 - B) to maintain a stable body temperature.
 - C) to control the state of urine in the body.
 - D) to avoid excess weight of the body.
18. Which one is not a green house gas? ()
- | | |
|-------------------|----------------------------|
| A) carbon dioxide | B) methane |
| C) oxygen | D) chloro – fluoro carbons |
19. On which does the pancreatic juice secreted by the liver show its effect? ()
- | | | | |
|------------------|-------------|------------|---------|
| A) carbohydrates | B) proteins | C) sucrose | D) fats |
|------------------|-------------|------------|---------|

20. Which of the following is correct. ()
A) the diaphragm contracts – volume of chest cavity increased
B) the diaphragm contracts – volume of chest cavity decreased
C) the diaphragm expands – volume of chest cavity increased
D) the diaphragm expands – volume of chest cavity decreased
21. Sarita fell off from her bicycle and got injured on her knee. After few minutes of bleeding, the blood coagulated. What type of blood cells helped in this process? ()
A) red blood cells B) platelets C) heart D) white blood cells
22. What is the type of excretory system in Echinodermata? ()
A) flame cells B) nephridia
C) water vascular system D) kidneys
23. Which of the given ways is good for saving the gas? ()
A) cooking without a lid
B) to arrange the things necessary for cooking after lighting the gas stove.
C) to use more water to boil
D) to use the pressure cooker
24. After conducting tests, doctors diagnosed that Nithin was suffering from the disease pellagra. What are the symptoms of pellagra? ()
A) Hyper irritability, nausea, vomiting, fits.
B) Dermatitis, diarrhoea, loss of memory, scaly skin.
C) Lean and week, less appetite.
D) Fatigue, mental depression, muscle pains.
25. What are the cells that aid in the gaseous transport in plants? ()
A) breathing roots B) soil molecules C) mitochondrial cells D) lenticells
26. During experimenting on which creature's wings did Marcello Malpighi discovered blood capillaries? ()
A) bat B) owl C) hen D) peacock
27. What is the advantage of the micro pores present in the podocytes of the malpighian body? ()
A) urine is produced
B) they aid in the filtration of the substances
C) pH is balanced
D) the efficiency of the working of nephrons is decreased
28. In order to respect the value of materials and resources, which mode of living should we adopt? ()
A) to follow 3 R's (reuse, reduce and recycle)
B) to save earth from pollution
C) to establish power plants
D) to know about water cycle

29. Observe the figure given below. To prove which aspect is this experiment done? ()



- A) light is essential for the formation of carbohydrates
 B) dark reaction
 C) oxygen is produced during Photosynthesis in the presence of light
 D) plants are required for the process of photosynthesis
30. What is the reason for the smaller size of the left lung when compared to the right lung? ()
- A) there are no alveoli in the left lung
 B) the capacity of the left lung is less
 C) gaseous exchange is less in the left lung
 D) due to the presence of heart on the left side
31. See the picture given below. Which blood cell is it? ()



- A) artery B) vein C) capillary D) lymph vessel
32. Which of the following is the correct path taken by urine in our body? ()
- i) kidneys ii) ureters iii) urethra iv) bladder
- A) i, ii, iv, iii B) i, ii, iii, iv C) iv, iii, i, ii D) ii, iii, i, iv
33. What measures should we take to increase the ground water levels? ()
- A) we have to dig water harvesting pits and have to follow water management methods
 B) we have to purify the sea water
 C) we have to save rain water in tanks
 D) we have to test the quality of the under ground water

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