

BOARD OF SECONDARY EDUCATION (AP)
SUMMATIVE ASSESSMENT – II
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. In the experiment to prove that starch is produced during photosynthesis, why do we boil the leaf in alcohol?
2. What happens if some materials are above normal limits in the blood and urine?
3. What are the accessory glands present in male reproductive system?
4. What is sustainable development?

SECTION – II

NOTE: i) Answer the following questions.

ii) Each question carries TWO Marks.

5 × 2 = 10

5. What happens to plant if the rate of respiration becomes more than the rate of photosynthesis?
6. Why does the rate of breathing increase while walking uphill at a normal pace in the mountains? Give two reasons.
7. Organs respond to the external stimulus by a fraction of second. How do you feel about such controlling mechanism of human body?
8. Observe the given part of the digestive system. What is it? What is its role in digestion?



9. Explain the process of recycling plastic. Give the reason for recycling plastic.

SECTION – III

NOTE: i) Answer the following questions.

ii) Each question carries FOUR Marks.

4 × 4 = 16

iii) There is Internal Choice for each question. Only one option from each question is to be attempted.

iv) Answer each question in 8 – 10 sentences.

10. a) Observe the following figure. Answer the following questions.

i) Describe the digestion of food in the stomach.

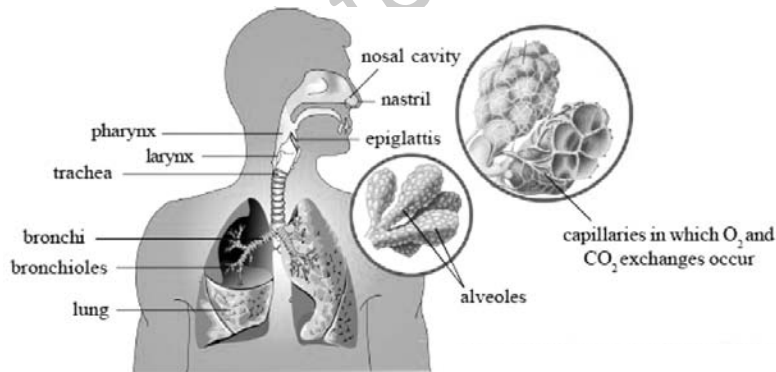
ii) What is the role of roughages in the alimentary canal?

iii) How can we avoid indigestion?



(OR)

b) Observe the following figure. Answer the following questions.

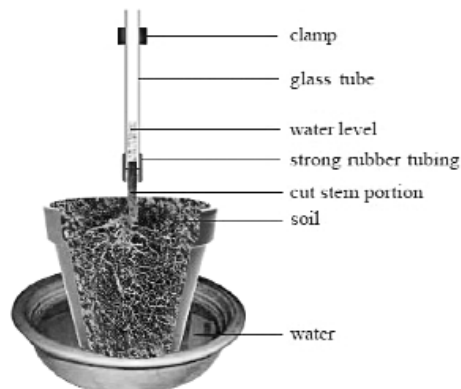


i) How does gaseous exchange take place at blood level?

ii) Explain the mechanism of gaseous exchange at bronchiole level.

iii) How are alveoli designed to maximize the exchange of gases?

11. a) Observe the figure given below. Answer the following questions.



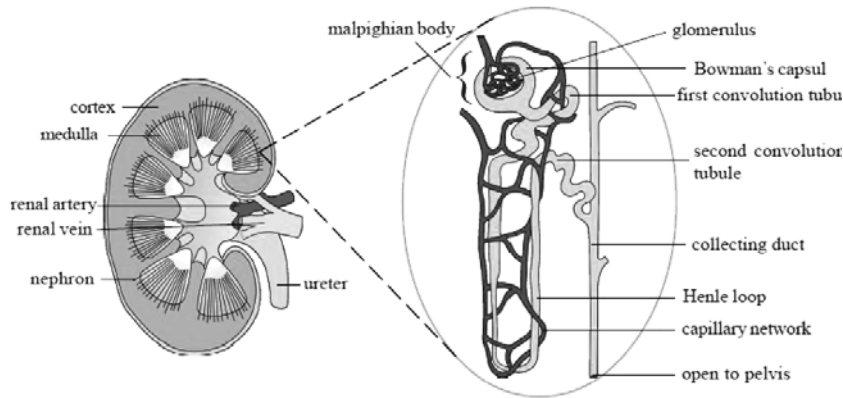
i) What does this experiment prove?

ii) Write the procedure and inference for the above experiment.

iii) What will happen if cell sap of root hair cells contain high concentration of ions?

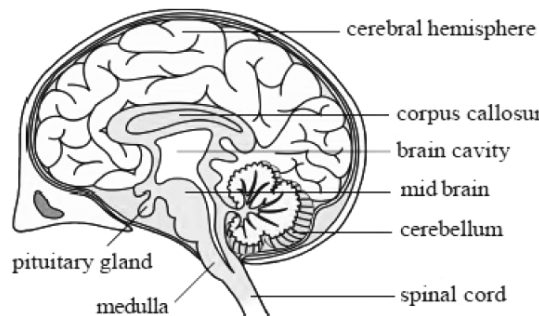
(OR)

b) Observe the figure given below. Answer the following questions.



- Describe the internal structure of kidney.
- What are the functional units of kidneys. Explain about them in brief.
- What habits you would like to change or follow for proper functioning of kidneys?

12. a) Observe the given figure. Answer the following question.



Write the functions of various parts of the brain.

(OR)

b) Answer the following questions:

- Prepare a flow chart to explain the process of sexual reproduction in plants.
- Write a short note on tissue culture.

13. a) i) What experiment do you perform to understand action of saliva on flour? Explain its procedure and apparatus that you followed. Draw required diagram.

ii) How are taste and smell related?

(OR)

b) i) Draw a checker board, show the law of independent assortment with a flow chart and explain the ratio.

ii) Explain the process to understand mono hybrid cross of Mendel experiment with a checker board.

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. We can avoid indigestion by ()
- A) having simple well – balanced diet.
 - B) eating food in a leisurely manner.
 - C) thoroughly masticating food and not taking violent exercise after eating food.
 - D) All the above
15. Which of the following is correct? ()
- A) The diaphragm contracts – volume of chest cavity increases.
 - B) The diaphragm contracts – volume of chest cavity decreases.
 - C) The diaphragm expands – volume of chest cavity increases.
 - D) The diaphragm expands – volume of chest cavity decreases.
16. Which of the following opinions is correct? ()
- A) Ravi said, xylem and phloem cells are arranged one upon the other to form a tube like structure.
 - B) John said, xylem and phloem are not separate tube like structures.
 - C) Salma said, xylem and phloem cells connect together to form a tube like structure.
 - D) Hari said, because of its shape they are said to be tube like structure.
17. Which of the following is correct path taken by urine in our body? ()
- A) kidney – ureters – urethra – bladder
 - B) kidney – ureters – bladder – urethra
 - C) kidney – bladder – urethra – ureters
 - D) kidney – bladder – ureters – urethra
18. Leaf movement in mimosa helps to ()
- A) reduce photosynthesis
 - B) protect from grazers.
 - C) releasing phyto hormones
 - D) regulate it's growth
19. How does the sperm break through the egg cell membrane? Choose the option you think is right. ()
- A) Tears a hole in the membrane
 - B) Dissolves the membrane with chemicals.
 - C) Bites through the membrane with teeth.
 - D) Squeezes through gaps in the membrane

20. Human organism is an internal combustion machine because of ()
- A) assimilation of energy from food
- B) liberate CO₂ during respiration
- C) expel waste food at the end state of digestion
- D) secrete powerful digestive juices

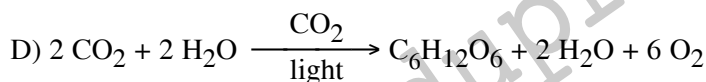
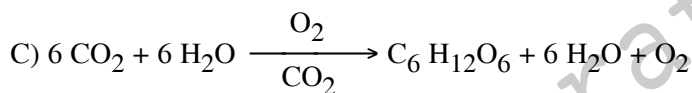
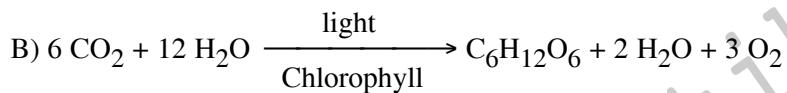
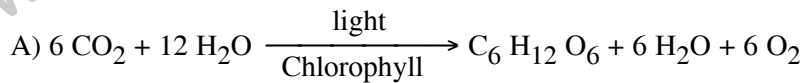
21. The phenotype means ()
- A) Externally visible characters
- B) Internal characters
- C) Changing characters
- D) New characters

22. According to Charles Elton ()
- A) Carnivores at the top of the Pyramid
- B) Energy trapping is high at the top of the Pyramid
- C) No producers at the top of the Pyramid
- D) A and C

23. Who is the Indian environmentalist shown in the given picture? ()
- A) Sunderlal Bahuguna
- B) Medha Patkar
- C) Sunitha Narain
- D) Maneka Gandhi

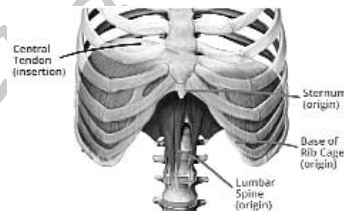


24. The process of photosynthesis can be represented as ()



25. Observe the given figure. What is it? ()

- A) lungs
- B) brain
- C) diaphragm
- D) nerves



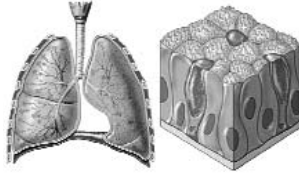
26. Observe the given figure. What does the figure indicate? ()

- A) transpiration
- B) transportation
- C) food preparation
- D) diffusion



27. Observe the given figure. Which type of organs are they? ()

- A) circulatory
- B) excretory
- C) nervous
- D) sensory

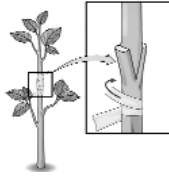


28. Diabetes is related to this gland ()

- A) thyroid
- B) pancreas
- C) adrenal
- D) pituitary

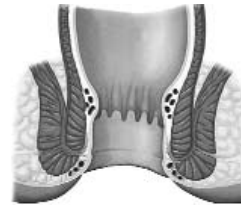
29. Observe the given figure. Which type of artificial propagation is it? ()

- A) cutting
- B) layering
- C) grafting
- D) tissue culture



30. Observe the given figure. What is the function of anal sphincter? ()

- A) It controls the exchange of gases in lungs
- B) It controls the food transportation in the alimentary canal
- C) It controls the exit of stools from the body
- D) It controls the exit of sweat from the body



31. Natural selection means ()

- A) Nature selects desirable characters
- B) Nature rejects undesirable characters
- C) Nature reacts with an organism
- D) A, B

32. Particulate matter in the atmosphere causes ()

- A) air pollution and respiratory diseases
- B) rise in the sea level
- C) increase in ground water level
- D) water pollution

33. is the best and ever green energy resource ()

- A) wind energy
- B) fog energy
- C) solar energy
- D) electricity

KEY

14-D; 15-A; 16-C; 17-B; 18-D; 19-B; 20-A; 21-A; 22-D; 23-B; 24-A; 25-C; 26-A; 27-B; 28-B; 29-C; 30-C; 31-D; 32-A; 33-C.