

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

Time: 2 hours 45 minutes

PART A & B

Max. Marks: 40

**INSTRUCTIONS:**

- i) In the time duration of 2 hours 45 minutes, 15 minutes of time is allotted to read and understand the question paper.
- ii) Answer the questions under PART – A on a separate answer book.
- 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

**INSTRUCTIONS:**

- i) PART – A comprises of three Sections I, II and III.
- ii) All the questions are compulsory.
- iii) There is no overall choice. However there is Internal Choice to the questions under Section – III.

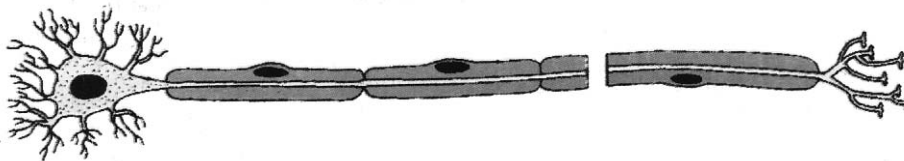
**SECTION – I**

Note: i) Answer the following questions in 1 - 2 sentences.

ii) Each question carries ONE mark.

4 × 1 = 4

1. Why does the amount of nitrogen not vary between exhaled and inhaled air?
2. Observe the given figure what is it? Write its function.



3. Which hormone is responsible for hunger pangs in stomach?
4. What is bio accumulation?

**SECTION – II**

Note: i) Answer the following questions in 3 - 4 sentences.

ii) Each question carries TWO marks.

5 × 2 = 10

5. Almost all the living world depends on plants for food material. How do you appreciate the process of making food by the green plants?
6. Draw a block diagram to explain single and double circulation. Write differences between them.

7. 'All unicellular organisms undergo only mitotic cell division during favourable conditions'. Do you support this statement? Why?
8. Male is responsible for sex determination of baby, do you agree? If so, write your answer with a flow chart.
9. We often keep a plastic bag in our dustbins to discard waste. Is it a good practice?

**SECTION – III**

**Note:** i) Answer the following questions in 8 - 10 sentences.

ii) Each question carries **FOUR** marks.

**4 × 4 = 16**

10. a) Write answers for the following questions.

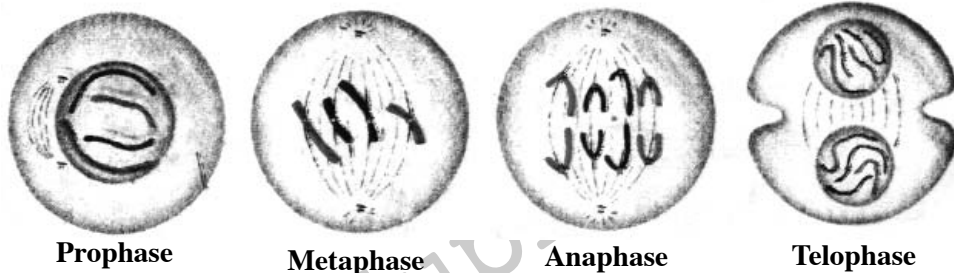
- i) If the theory of inheritance of acquired characters proposed by Lamarck was true, how will the world be?
- ii) What is 'Divergent Evolution'?
- iii) What is 'Convergent Evolution'?
- iv) What is your understanding about survival of the fittest? Give few examples.

(OR)

b) Write differences between the following.

- i) Bolus – Chyme
- ii) Small intestine – Large intestine
- iii) Mastication – Rumination
- iv) Propulsion – Retropulsion

11. a) Observe the following figures. Write the differences between mitosis and meiosis.



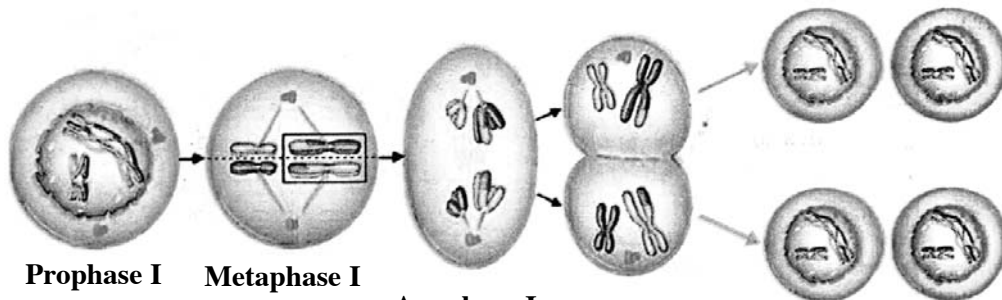
Prophase

Metaphase

Anaphase

Telophase

**Mitosis**



Prophase I

Metaphase I

Anaphase I

Telophase I

New cells

**Meiosis**

(OR)

b) What is the importance of pituitary gland? Mention the hormones and their functions of this gland.

12. a) Give reasons

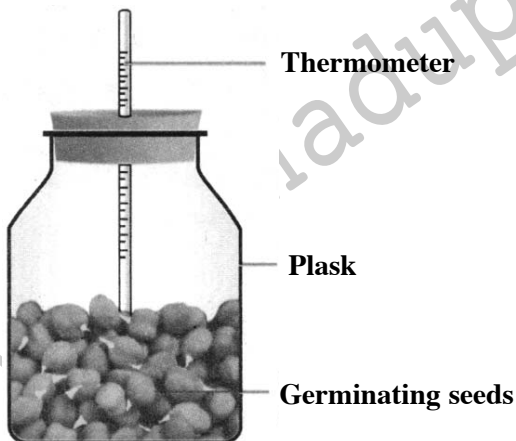
- i) Vasopressin is not secreted always.
- ii) When urine is discharged, in beginning it is acidic in nature, later it becomes alkaline.
- iii) Diameter of afferent arteriole is bigger than efferent arteriole.
- iv) Urine is slightly thicker in summer than in winter.

(OR)

b) Write differences between the following.

- i) Systole – Diastole
- ii) Veins – Arteries
- iii) Xylem – Phloem

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



- i) What does this experiment prove?
- ii) Write the procedure and observations of the experiment.
- iii) What is chalky acid gas?
- iv) How do you appreciate the mechanism of respiration in our body?

(OR)

b) How would you demonstrate that green plants release Oxygen when exposed to light?

**INSTRUCTIONS:**

i) Answer ALL the questions.

ii) Each question carries  $\frac{1}{2}$  mark.

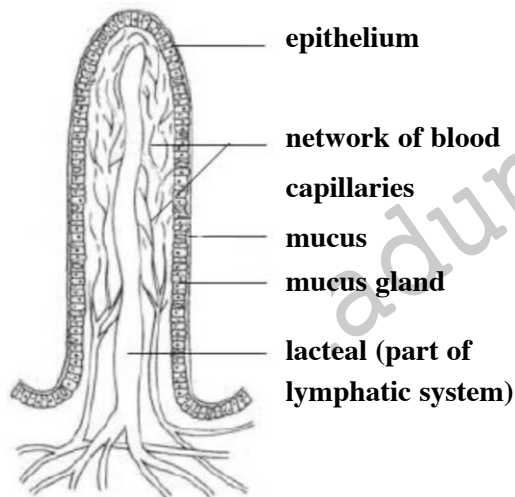
iii) Marks will not be awarded in any case of overwriting, rewriting or erased answers.

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. It is a type of nutrition in which an organism derives its food from the body of another living organism without killing it. What is that mode of nutrition? ( )  
A) parasitic mode of nutrition. B) holozoic mode of nutrition.  
C) individual mode of nutrition. D) group nutrition
15. Which of the following is the correct sequence of air passage during inhalation? ( )  
A) Nostrils → Larynx → Pharynx → Trachea → Lungs  
B) Nasal passage → Trachea → Pharynx → Larynx → Alveoli  
C) Larynx → Nostrils → Pharynx → Lungs  
D) Nostrils → Pharynx → Larynx → Trachea → Alveoli
16. .... is osmotic pressure within the cells of a root system that causes sap to rise through a plant stem to the leaves? ( )  
A) stem pressure B) root pressure  
C) osmotic phloem D) transporting pressure
17. This organ filters blood and eliminates nitrogenous wastes and other harmful things. Filters urea from the blood. ( )  
A) Skin B) Lungs C) Kidney D) Liver
18. Charles Darwin and his son Francis Darwin performed some experiments on phototropism and stated that when seedlings are freely exposed to lateral light, some 'influence' is transmitted from upper to the lower part causing the plant to bend. What is the chemical stimulus responsible for this action? ( )  
A) Cytokinin B) Gibberellin C) Mimosa pudica D) Auxin
19. Which of the following are the female reproductive organs of a flowering plant? ( )  
A) style, stigma, ovary B) anther, filament  
C) style, anther and ovary D) filament, stigma and ovary
20. Which of the following statements is true? ( )  
A) If glucose levels increase in blood, we feel hungry.  
B) Urination increases when we take a lot of fluids.  
C) We can identify the taste of food when it is hot.  
D) Urination decreases when we take a lot of fluids.
21. Sex of the baby depends on ( )  
A) gamete from father B) gamete from grandfather  
C) gamete from mother D) family history

22. Huge amount of toxic chemicals leak into the surrounding ecosystem because of ( )  
 A) industries B) mining  
 C) pesticides D) modern technology
23. Which of the following is a non - renewable resources? ( )  
 A) air B) water C) minerals D) soil
24. A plant is kept in dark cupboard for about forty eight hours before conducting any experiment on photosynthesis in order to ( )  
 A) Remove chlorophyll from leaves  
 B) Remove starch from leaves  
 C) Ensure that no photosynthesis occurred  
 D) Ensure that leaves are free from the starch
25. The air we breath out precipitates ( )  
 A) water B) lime water  
 C) sodium Hydroxide D) sugar solution
26. The sequential events in the heart which is cyclically repeated is called as ( )  
 A) respiration B) photosynthesis C) cardiac cycle D) water cycle
27. The main osmoregulatory organs in human body are ( )  
 A) lungs B) brain C) pancreas D) kidneys
28. Blinking is a ..... ( )  
 A) Reflex action B) Voluntary action  
 C) Involuntary action D) Conditioned reflex
29. When the foetus is growing inside the uterus it needs nutrients. What provides these nutrients? ( )  
 A) gamete B) ovary C) placenta D) seed



30. Observe the given figure. What is it? ( )  
 A) villus B) kidney  
 C) oesophagus D) tongue
31. One experimenter cut the tails of parent rats, what could be the traits in offsprings? ( )  
 A) Their offsprings will have normal tails.  
 B) Their offsprings will not have tails.  
 C) Their offsprings will have short tails.  
 D) Their offsprings will have long tails.

