

# **BIOLOGY**

# BOOKS - EVERGREEN BIOLOGY (ENGLISH)

# **SAMPLE QUESTION PAPER 2**

Section I

1. Name the following:

The hormone that regulates the basal

metabolic rate.



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**2.** With reference to the human ear, answer the questions that follow:

Name the part of the ear associated with

(a) static balance (6) hearing (c) dynamic balance.



**3.** Name the type of proteins present in blood plasma .



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**4.** Name the following:

A gaseous hormone.



#### 5. Give technical term for:

The process of uptake of mineral ions against the concentration gradient using energy from cell.



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### **6.** Comment upon the following:

A higher rate of transpiration is recorded on windy days rather than on a calm day.

A. Hot, humid and windy

- B. Cool, humid and windy
- C. Hot, humid ad still
- D. Hot, dry and windy

#### **Answer:**



- **7.** Cytokinin and Ethylene.
  - A. Permenant tissues
  - B. Meristematics tissues

- C. Endodermis
- D. Cortical region

#### **Answer:**



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**8.** A cell has 5 pairs of chromosomes After mitotic division, the number of chromosomes in daughter cell will be

A. Five

C. Twenty
D. Forty
Answer:
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<b>9.</b> Learning is related with:
A. Cerbrum
B. Cerebellum

B. Ten

- C. Medulla Oblongata
- D. Hypothalamus

#### **Answer:**



- **10.** Which one of the following is the most primitive ancestor of man?
  - A. Homo habilis
  - B. Cro-magnon

C. Neanderthal

D. Australopithecus

#### **Answer:**



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11. The following paragraph is related to absorption of water from the soil. Copy and complete the following paragraph by selecting the correct word from those given in the box. You may use the term only once.

Exosmosis, Hypertonic, Osmosis, Isotonic, Hypotonic, Cortical, Endosmosis



12. Define the following,

Corpus callosum



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**13.** Give the exact location of the following:

Adrenal gland



**14.** Give the exact location of each of the following structures:

Acrosome



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**15.** Give the exact location of each of the following structures:

**Amnion** 



**16.** Give the exact location of each of the following structures:

Monocytes



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17. Rewrite the terms in correct order so as to be in a logical sequence. Metaphase, Telophase, Prophase, Anaphase, Cytokinesis.



**18.** Rewrite the following in correct order as to be in a logical sequence:

Vagina, ovary, uterus, oviduct, cervix (Pathway of egg after ovulation).



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19. Rewrite in a correct logical sequence:

Pinna, cochlea, tympanum, ear ossicles, auditory canal (route through which vibrations of sound enters the ear).



**20.** Given below are five sets of terms. In each case arrange and rewrite each set so as to be in a logical sequence.

One is done as an example for you:

Eg: Large intestine, stomach, mouth, samll intestine, oesophagus.

Ans: Mouth, oesophagus, stomach, small intestine, large intestine.

Posterior vena cava, renal artery, aorta, renal vein, kidney



**21.** Given below are five sets of terms. In each case arrange and rewrite each set so as to be in a logical sequence.

One is done as an example for you:

Eg: Large intestine, stomach, mouth, samll intestine, oesophagus.

Ans: Mouth, oesophagus, stomach, small intestine, large intestine.

Synapse, axon endings, cyton, node of Ranvier, dendrite



22. Identify the odd term in each set and name

the category to which the remaining 3 belong.

Example: Ovary, Fallopian tube, Ureter, Uterus.

Odd term: Ureter

Category: Parts fo female reproductive system.

Basophil, neutrophil, Eosinophil, Lymphocyte



23. Identify the odd term in each set and name

the category to which the remaining 3 belong.

Example: Ovary, Fallopian tube, Ureter, Uterus.

Odd term: Ureter

Category: Parts of female reproductive system.

Pulmonary vein, Hepatic vein, Renal vein, Post caval



**24.** Identify the odd term in each set and name

the category to which the remaining 3 belong.

Example: Ovary, Fallopian tube, Ureter, Uterus.

Odd term: Ureter

Category: Parts of female reproductive system.

Gibberellin, Auxin, Vasopressin, Abscisic acid



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**25.** Identify the odd term in each set and name the category to which the remaining 3 belong.

Example: Ovary, Fallopian tube, Ureter, Uterus.

Odd term: Ureter

Category: Parts of female reproductive system.

Wind energy, Tidal energy, Petroleum, Solar energy



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**26.** Identify the odd term in each set and name the category to which the remaining 3 belong.

Example: Ovary, Fallopian tube, Ureter, Uterus.

Odd term: Ureter

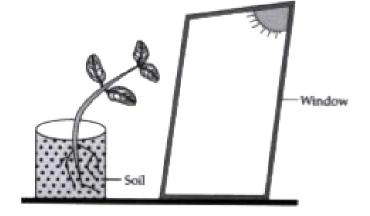
Category: Parts of female reproductive system.

Plastic, Paper, Glass, Aluminium



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**27.** The diagram given below represents a plant growing in a glass jar. The glass jar is placed near a window. Study the diagram and answer the questions that follow:



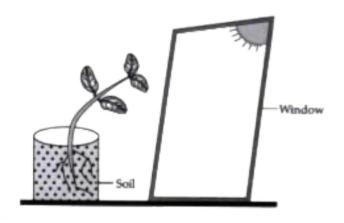
Name the tropic movements shown by the shoot and roots.



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**28.** The diagram given below represents a plant growing in a glass jar. The glass jar is placed near a window. Study the diagram and

answer the questions that follow:

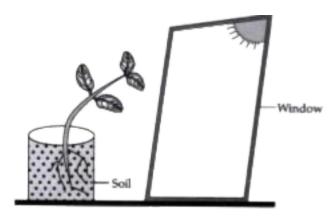


What is the stimulus that made the shoot bend towards the window?



**29.** The diagram given below represents a plant growing in a glass jar. The glass jar is

placed near a window. Study the diagram and answer the questions that follow:

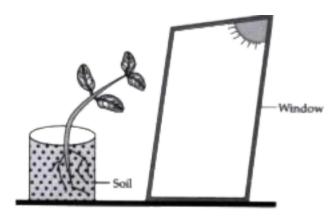


Which plant hormone caused the above effect?



**30.** The diagram given below represents a plant growing in a glass jar. The glass jar is

placed near a window. Study the diagram and answer the questions that follow:



Which plant hormone caused the above effect?



**31.** Match the items given in Column A with the most appropriate ones in Column B and

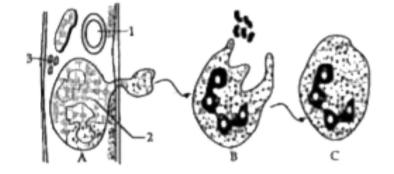
# rewrite the correct matching paris.

Column A	Column B	
(i) Cretinism	(a) Hypersecretion of adrenal cortex	
(ii) Diabetes insipidus	(b) Hyposecretion of thyroxine	
(iii) Exophthalmic goitre	(c) Hyposecretion of growth hormone	
(iv) Adrenal virilism	(d) Hyposecretion of vasopressin	
(v) Dwarfism	(e) Hyposecretion of adrenal cortex	
	(f) Hypersecretion of growth hormone	
	(g) Hypersecretion of thyroxine	



# Section li

**1.** Study the diagrams given below and answer the questions tht follow:

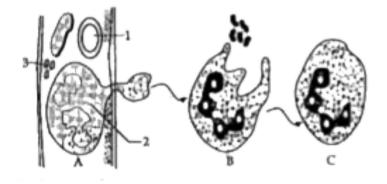


Name the cells labelled 1,2 and 3



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**2.** Study the diagrams given below and answer the questions tht follow:

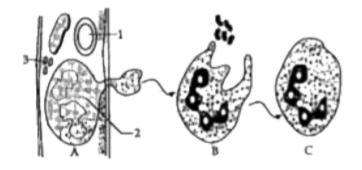


Identify the phenomenon occurring in A. Explain the phenomenon.



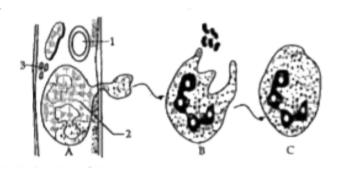
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**3.** Study the diagrams given below and answer the questions tht follow:



Mention two structural differences between 1 and 2

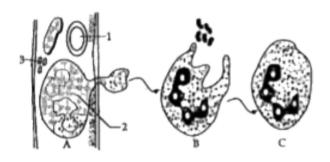
**4.** Study the diagrams given below and answer the questions that follow:



Name the process occurring in B and C.



**5.** Study the diagrams given below and answer the questions that follow:



State the importance of this process in the human body.



**6.** Give one difference between each of the following pairs on the basis of what is given in

the brackets:

Mitral valve and Aortic semilunar valve(location)



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**7.** Give one difference between each of the following pairs on the basis of what is given in the brackets:

Hydrotropism and Thigmotropism (stimulus)



**8.** Give one difference between each of the following pairs on the basis of what is given in the brackets:

Metaphase and Anaphase (position of chromatids)



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**9.** Differentiate between the following pair on the basis of what is mentioned within bracket.

Population density

[Definition]

Demography and

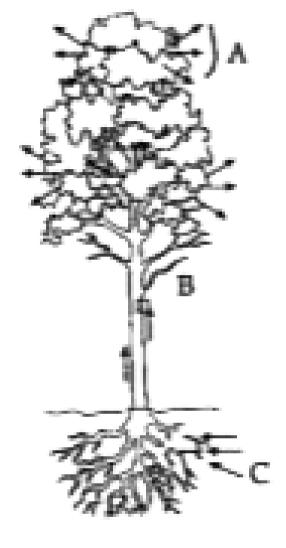


10. Give one difference between each of the following pairs on the basis of what is given in the brackets:

turgid cell and Plasmolysed cell (tonicity of the surrounding solution)



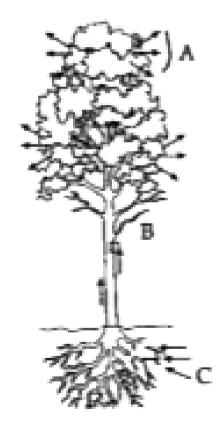
11. An outline sketch of a tree is shown in the diagram below. Study the same and answer the question that follow:



Name the phenomenon that is labelled A in the diagram.

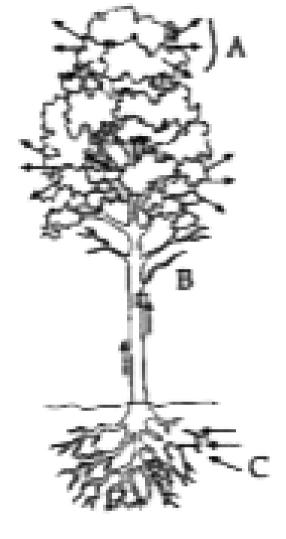


**12.** An outline sketch of a tree is shown in the diagram below. Study the same and answer the question that follo:



Explain the phenomenon occurring in A.

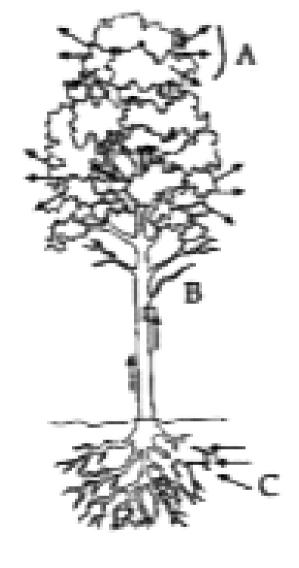
**13.** An outline sketch of a tree is shown in the diagram below. Study the same and answer the question that follo:



What is the importance of this phenomenon is plants.

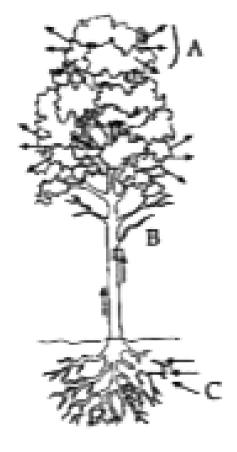


**14.** An outline sketch of a tree is shown in the diagram below. Study the same and answer the question that follo:



Explain the role of any three external factors that will increase the rate of this phenomenon.

**15.** An outline sketch of a tree is shown in the diagram below. Study the same and answer the question that follo:



What does the direction of arrows in B and C indicate?



**16.** Mention the exact function of the following structures,

Iris



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17. State the major functions of

Plasma membrane



**18.** Mention the exact function of the following structures,

Nephron



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**19.** Mention the exact location of the following structures : Thylakoids.

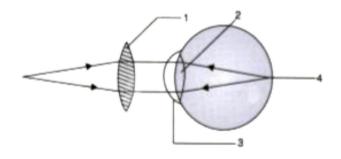


20. Define the following terms:

**Hydathodes** 



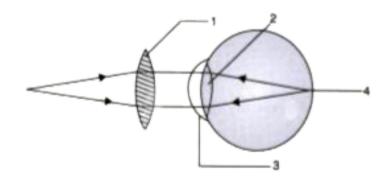
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Identify the defect that has been corrected.



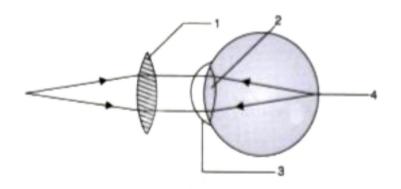
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Mention two reasons for the above defect.



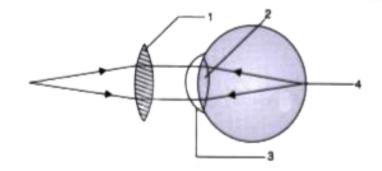
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Label the parts numbered 1 to 4.



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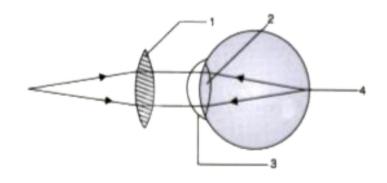


State the functions of the parts numbered 3 and 4.



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questions that follow:



What maintains the shape of the eye ball?



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**26.** Give the biological/technical terms for the following:

The quick actions which are involumtary and controlled by the spinal cord.



**27.** Give the biological/technical terms for the following:

The structure formed after the release of ovum from the Graafian follicle.



28. Give technical term for the following:

Surgical method of sterilization in human

female.



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**29.** Give the biological/technical terms for the following:

The stage of cell division in which the nuclear membrane disappears and the chromosomes become short and thick.



#### 30. Give technical term:

Onset of menstruation in a young girl around the age of 13 years.



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#### 31. Name the following:

The canal through which the testes descend into scrotum just before birth



**32.** The repeating components of each DNA strand lengthwise.



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**33.** Give the biological/technical terms for the following:

The site of photosynthesis in a plant cell.



**34.** Give the biological/technical term for the following:

A constituent that causes pollution.

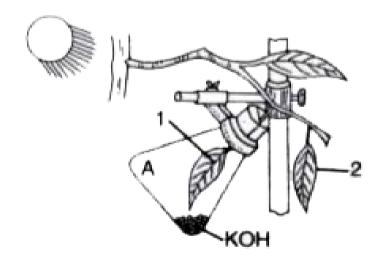


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35. In china rose the flowers are:



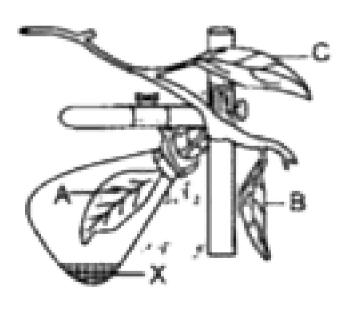
**36.** The figure given below represents an experiment to demonstrate a particular aspect of photosynthesis. The alphabet "A" represents a certain condition inside the flask



What is the aim of the experiment



**37.** The diagram below represents an experiment to demonstrate a particular aspect of a physiological process in plants. Study the diagram and answer the questions that follows:



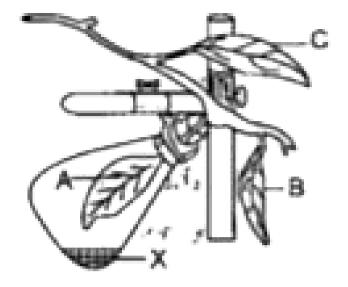
What is the chemical substance named X in the diagram? What is the special condition

created inside the flask due to the presence of the substance X?



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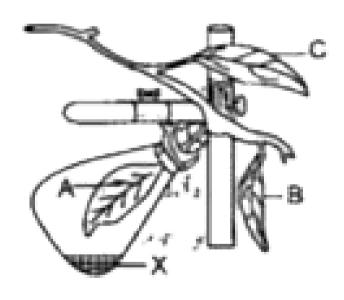
**38.** The diagram below represents an experiment to demonstrate a particular aspect of a physiological process in plants. Study the diagram and answer the questions that follows:



In what way will the three leaves A, B and C differ at the end of the experiment when tested with iodine solution?

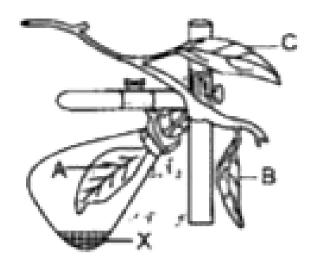


**39.** The diagram below represents an experiment to demonstrate a particular aspect of a physiological process in plants. Study the diagram and answer the questions that follows:



Write the overall chemical equation for the process mentioned.

**40.** The diagram below represents an experiment to demonstrate a particular aspect of a physiological process in plants. Study the diagram and answer the questions that follows:



Explain the term Destarching.



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**41.** Explain the term plasmolysis. Give one application of this phenomenon in our daily lives.





**42.** Define the following:

Gestation period



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**43.** Define the following term : Synapse.



44. Briefly explain the following:

Photophosphorylation

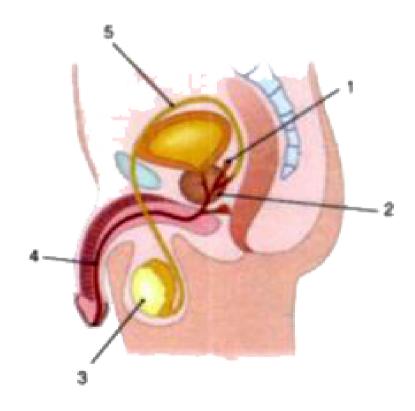


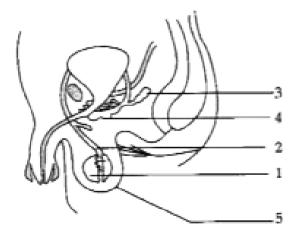
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**45.** The theory of use and disuse of organ was proposed by



**46.** Given alongside is a diagram of the male reproductive system in humans. Label the parts indicated by numbers 1 to 5, and state their functions. ......





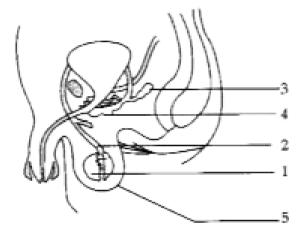
State the functionn of the part marked 2 and 3.





What is the significance of the part labelled 5.





Mention the hormone secreted by the part labelled 1.





Draw a neat labelled diagram of a human sperm.



**51.** Comment upon the following:

The placenta is an important structure for the development of a foetus.



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**52.** Give biological reason for the following:

Throat infections could lead to ear infections.



**53.** Give scientific reasons for the following statements:

We feel blinded for a short while entering a dark room when coming from bright light.



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**54.** Comment upon the following:

The urine is slightly thicker in summer than in winter.



**55.** Give scientific reasons for the following statements:

Loss of nucleus and mitochondria make erythrocytes more efficient in their function.



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**56.** A homozygous purple flower variety of pea [PP] is crossed with white flower variety of pea [pp]. Answer the questions that follow:

Mention the phenotype and genotype of the  $F_1$  generation of offsprings.



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57. A homozygous purple flower variety of pea [PP] is crossed with white flower variety of pea [pp]. Answer the questions that follow: If the offsprings of the  $F_1$  generation are selfed, what will be the phenotypic and genotypic ratios of the  $F_2$  generation?



58. A homozygous purple flower variety of pea [PP] is crossed with white flower variety of pea [pp]. Answer the questions that follow:

State Mendel's law of dominance.



**59.** Study the diagram given below and answer the questions that follow:

How is this structure well adapted for absorption of digested food ?



**60.** A homozygous purple flower variety of pea

[PP] is crossed with white flower variety of pea

[pp]. Answer the questions that follow:

Name two genetic diseases in humans.



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**61.** Answer the following questions briefly.

Mention two features of a Neanderthal man.

**62.** What are the age restrictions for marriage for boys and girls in India



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**63.** Mention any two objectives of 'Swachh Bharat Abhiyan'.



64. Give two functions of the amniotic fluid.



**65.** What are the suggested reasons for population explosion?

