

ICSE BOARD
Biology Sample Paper
Class X

General Instructions-

1. The paper is divided into SECTION-A and SECTION –B
2. SECTION-A question 1-40 carries 1 mark each.
3. SECTION –B 41-45 carries two marks each.
4. Question 46 -51 carries 5 mark each.

SECTION –A

Name the following

1)The part of internal ear that is related to the static balance of the body.

Ans- Vestibule

2)A surgical procedure for male contraception.

Ans- Vasectomy

3)The agents that causes pollution and bring undesirable changes in the environment.

Ans- Pollutants

4)The layer of eyeball that provide nourishment to the eye.

Middle choroid Layer

5)The compound formed when hemoglobin carbon dioxide in blood.

Ans-Carbaminohaemoglobin.

Choose the correct option

6)While recording the pulse rate ,where exactly doctor press on our wrist?

a) Vein

- b) Nerve
- c) Artery
- d)capillary

Ans- c) Artery

7)The chamber of heart that contains deoxygenated blood

- a)Right heart chambers
- b) Left Heart Chambers.
- c)Artium
- d) left Ventricles.

Ans-(a) Right Heart chambers

8)A cell is plasmolysed when it is placed in

- a)Isotonic Solution
- b)Hypotonic solution
- c)hypertonic
- d)water

Ans-c) hypertonic solution

9)The longest phase of cell cycle is

- a)Anaphase
- b) Telophase
- c) metaphase
- d)Interphase

Ans-(d) Interphase

10)Lamarck's theory of evolution is also called as

- a)theory of natural Selection
- b)Inheritance of acquired characters

c) survival of fittest

d) Theory of special creation

Ans-b) Inheritance of acquired characters.

Fill in the blanks

11) Darwin proposes the theory of origin of species by.....

Ans-Natural Selection

12)..... is a greenhouse gas.

Methane

13)..... Causes corrosion of the marbles or brick surface.

Ans- Acid Rain

14) ozone is present in abundance in.....

Ans- stratosphere

15) Rate of transpiration increase with the increase in.....

Ans-Temperature

Match the Followings in column A with Column B

16) Oxygen and Water Yellow coloured pigment

17) Grana Haemoglobin

18) Abscisic acid By Product

19) Red pigment Growth Inhibitor

20) Xanthophyll Stimulated by Light

Oxygen and Water	By product
Grana	Stimulated by Light
Abscisic acid	Growth inhibitor
Red Pigment	Haemoglobin
Xanthophyll	Yellow coloured pigment

Correct the following statement.

21) Bile pigment is secreted by Kidneys.

Ans-) Bile pigment is secreted by Liver.

22)Afferent Glomerulus carries blood away from the glomerulus.

Ans- Afferent Glomerulus carries blood to the glomerulus.

23)Dendrons are the structural and Fucntional unit of the nervous System.

Ans- Neurons are the structural and Fucntional unit of the nervous System.

24)Tears comes from e eyeball.

Ans- Tears come from Lacrymal Gland

25) Piamatar is the outermost layer of meninges.

Ans- Piamatar is the innermost layer of meninges

Name the followings-

26) A biodegradable waste

Ans- Human waste

27)A hormone that regulate basal metabolic rate.

Ans-thyroxine Hormone

28)the uptake of mineral ions against the mineral concentration gradient.

Ans- active Transort

29)the most primitive ancestor of man

Ans-australopithecus

30) A part of brain that connects right and left cerebral hemisphere.

Corpus callosum

Choose the odd one out.

31)Mouth, Oesophagus , Stomach,Cornea

Ans- cornea

32)vagina, sperm, Uterus, Sperm

Ans- Sperm

33)wind energy, solar energy, petroleum, hydroelectrin energy

Ans- Pertoleum.

34) Myopia, hypermetropia, xerophthalmia, astigmatism

Xerophthalmia.

35) Zygote, morula, tropoblast, seminal Vesicles.

Ans- seminal vesicles.

Answer the following questions-

36)what is the function of mammary gland?

Ans- Two pairs of mammary Gland are present in every normal female. They are responsible for secretion of milk.

37) what is umblical cord?

Ans- Umblical chord contains blood vassels which connects placenta to the uterus to provide food and oxygen.

38)what are the major reasons of increase in population in india?

Ans- The major reasons for increase in population is illiteracy and high birth Rate.

39) What do you mean by organic Evolution?

Ans-Organic Evolution can be defined as orderly changes in living organisms over course of evolution.

40) what is urbanization?

Ans-People move from small rural area to urban area in search of opportunity is called urbanization.

SECTION-B

41) what is difference between voluntary action and involuntary action?

Voluntary action	Involuntary action
1)These action are under the control of our will.	1)These action are not under the control of will.
2)Initiated by some stimulus like touch, pain ,pressure, heat, light.	2)Initiated by a willing thought.
3) walking, eating	3)withdrawal of hands after touching hot things.

42)Which parts of plant produce gibberellins?state two functions of gibberellin.

Ans-The major sites of gibberellin production in plants are embryo, roots and young leaves near the shoot tip. The functions of Gibberellin are following-

- a)They are used in process of malting in brewing industry to speed up the process .
- b) It delay senescence in plants.

43) write the importance of plasma protein.

Ans-Fibrinogen, globulin and albumins are major plasma proteins.

Fibrinogen are needed for clotting or coagulation of blood.

Globulin primary are involved in defence mechanism of the body and albumin help in osmotic balance.

44)Where do ultrafiltration, reabsorption and secretion occur in a nephron?

Ans-i) Ultrafiltration occurs in Bowman's Capsule.

ii) Reabsorption occurs in Proximal convoluted tubule(PCT) , Loop of Henle and Distal Convoluted Tubule.

iii) secretion occurs in Proximal convoluted tubule, Loop of Henle and Distal Convoluted tubule.

45)what does nervous system consist of?

Ans-The nervous system consist of thre parts.

i)Central Nervous system-(CNS)- It comprises brain and spinal chord . It is a site of information processing ans control

ii)Peripheral Nervous System-(PNS)- It comprises of of all the nerves of the body associated with Central Nervous system.

iii)Autonomic Nervous system- (ANS)-it comprises parasympathetic and sympathetic nerves.

46) Give reasons.

i) Smog formation occurs in cold weather.

Ans- The combustion of fossil fuels increases the amount of suspended particles such as unburnt carbons , smokes of industry, fire in the air.Water also condenses in cold weather .Presence of high pollutants level of pollutants in cold weather with condensation of water form Smog.

ii)Glucose is not found in the urine of a healthy person.

Ans-Glucose is reabsorbed in the blood stream in the proximal part of the nephron so it is so in normal healthy person glucose is not found in the urine.

iii) Tendril coil around when they come in contact with hard rough objects

Ans- The growth movement of tendril in response to unilateral stimulus if touch is called Thigmotropism. Tendril coil due to unequal growth of two sides of a tendril.The growth of the surface which comes in contact of a support is retarded while it remain normal on other side so it coils around a support.

iv) Root grow downward into the soil.

Ans- Root s are negatively phototropic and positively geotropi so they grow downward in the soil.

v) Injury to Medulla Oblongata results in the death.

Ans-Medulla oblongata controls heartbeat, respiration etc.Injury to it leads to sudden stop of these processes which results to death.

47)write the functions of given structures.

i) Phloem-

Ans- Phloem is a vascular tissue present in plants. It is mainly responsible for transport of organic and inorganic substances such as food from leaves to other parts of the plants.

ii) Abscisic Acid-

Ans- Abscisic acid is a growth-retarding hormone. ABA is produced when a plant is exposed to stress. It is also called stress hormone. It causes stomata to close during stress conditions. It causes abscission of leaves, flowers, and buds. It causes axillary buds to become dormant during winters.

iii) Lymph –

Ans- Lymph acts as an important carrier of nutrients, hormones, etc. It helps in keeping tissue cells moist. Absorption of fat occurs through lymph in the lacteals present in the intestinal villi.

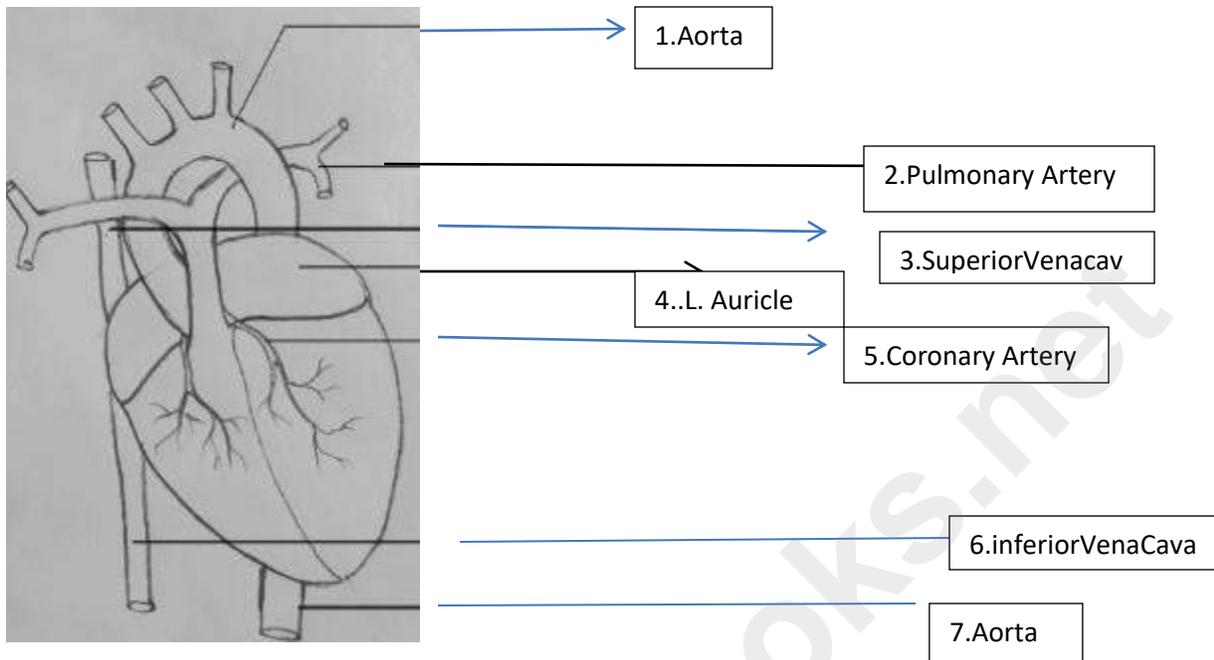
iv) Nephron

Ans- Nephron is a highly coiled tube-like structure that filters the blood in order to regulate the concentration of water and soluble substances like sodium salts and thereby produces urine.

v) Seminal vesicles-

Ans- These are paired tubular glands found between the posterior surface of the urinary bladder and rectum. They are responsible for producing a milky fluid called semen. Semen provides a medium for the transmission of sperm, gives nourishment, and activates sperm to keep them viable and motile.

48) Study the given diagram and answer the following questions.



i) Label the parts 1-7. [human heart]

ii) What type of blood does part-6 carry?

Ans- Deoxygenated blood

iii) Mention one structural difference between part 6 and part-7.

Ans- Part-6 is Inferior vena cava which has a thin muscular wall while part-7 is Aorta which has a thick muscular wall.

iv) What happens if a coronary artery gets an internal clot?

Ans- If a coronary artery gets an internal clot, the corresponding part does not get blood supply. It may cause a heart attack.

49) i) Write the summary of the dark reaction by an equation.

ii) In which process is ATP formed?

iii) How do plant materials reach the plant cell?

Ans-i) $6\text{CO}_2 + 12\text{NADPH} + 18\text{ATP} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 12\text{NADP} + 18\text{ADP} + 18\text{P}_i + 6\text{H}_2\text{O}$

ii) In photophosphorylation, ATP is formed



iii) Water enters the leaf through midrib and veins from stem and roots. Carbon dioxide enters through stomata from the atmosphere.

50) Describe an experiment to test the presence of starch in leaf.

Ans- Pluck the leaf and boil it in water for a minute so that all the cells are killed.

Remove the leaf from water and boil it in alcohol to remove its chlorophyll. This will make leaf little hard and brittle.

Put the leaf again in hot water to soften it.

Spread the leaf in petri dish and pour Iodine solution on it and dropwise with the help of dropper.

The leaf shows a blue black colour which indicates the presence of starch in leaf.

51) In the given picture two stages of Human evolution are shown. Answer the given question from given picture.



In the given picture two stages of Human evolution are shown. Answer the given question from given picture.

i) Identify Australopithecus and Neanderthal man from the above picture.

Ans- A is Neanderthal and B is Australopithecus-

ii) Mention two characteristics feature of each of them.

Ans- Characters of Neanderthal- They walked upright with Bipedal movement.

Their was deep with no chin and skull bones were thick.

Characteristics of Australopithecus.- Their height were 1.5m and had both apes and man characters. They had erect posture and had omnivorous diet.

iii) who proposed the theory of Natural Selection?

Charles R Darwin proposed the theory of 'Natural selection'

vi) what are vestigial organs . name two vestigial organs in human being.

Ans- The organs which have no longer have a function in our body are called vestigial organ. These organs have reduced structurally as well as functionally .Example- Vermiform appendix and tail bone are vestigial organ in human being.

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