

VIJAYAPADHAM
KOTTARAKKARA EDUCATIONAL DISTRICT
SSLC PRE MODEL EXAMINATION 2022-2023



QP 02 BY 10 E
Class : X

BIOLOGY

Time : 1 1/2 hr
Score : 40 marks

Answer any 5 among questions from 1 to 6

(1x5 = 5)

1. Find out the word relationship and complete the following.
Genetic glue : Ligase :: Genetic Scissors :.....
2. Name the vaccine used against TB.
3. Chemical substances that are secreted by certain animals to the surroundings to facilitate communication are called
4. Identify the odd one out and write the common features of others.

Monkey, gibbon, orangutan, gorilla

5. Choose the incorrect statement and correct it.
 - a) Synthesis of vasopressin increases, if the level of water in the blood increases.
 - b) Thyroid stimulating hormones stimulates the activity of the thyroid gland
 - c) Synthesis of insulin increases if the blood glucose level rises.
 - d) Deficiency of thyroxine cause cretinism in adults.
6. A fluid is formed in the eye just as the cerebrospinal fluid formed in the brain.
Name the fluid?

Answer any 6 among questions 7 to 13

(2x6= 12)

7. Rahul was feared on seeing a snake on the way to school and ran back.

i) Which part of the autonomous nervous system controlled the body activities of Rahul in the above situation?

ii) What are the changes that take place in the intestine and eye during the above situation?

8. Read the statement and answer the questions.

“One person requires blood for a major surgery. Antigen **A** and antigen **B** are identified on his blood”.

a) Which is the blood group of that person?

b) Everyone cannot receive blood from all blood groups. Why?

9. Analyse the nitrogen bases given below and write the nitrogen base pairs found in DNA.

Thymine, guanine, uracil, adenine, cytosine

10. “Kumar murder case – sample of blood obtained from the site of incidence enabled to identify killer.”

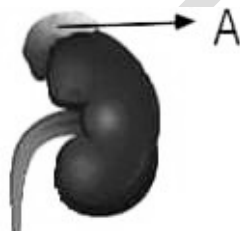
a) Read the above news and name the technology that helped to find the murderer?

b) Write two other uses of this technology?

11. Arrange the following links in human evolution in the ascending order.

(Homo sapians, Ardipithecus ramidus, Homo erectus, Homo habilis)

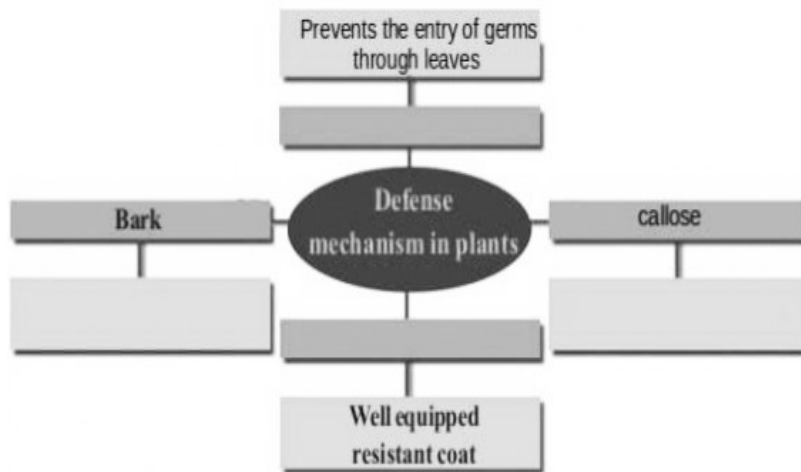
12. Observe the diagram and answer the questions.



a) Which endocrine gland does **A** indicate?

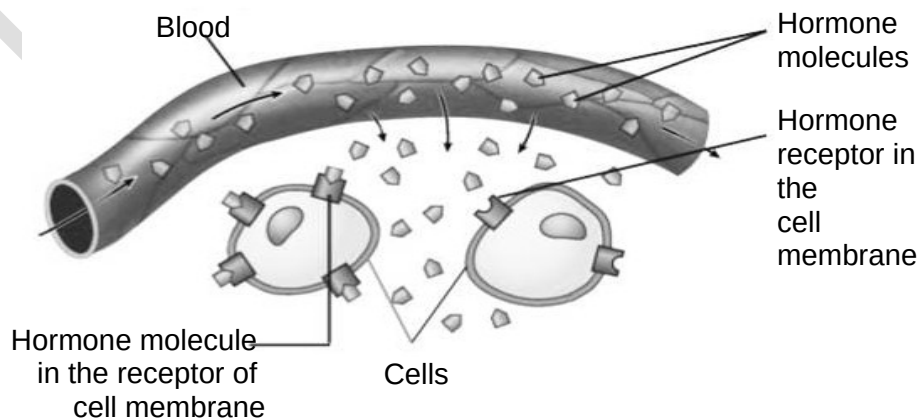
b) Which are the hormones produced by the gland to control the physical activities along with the sympathetic system?

13. Complete the illustration.



Answer any 5 among questions from 14 to 20 (3 x 5 = 15)

14. Pharm animals is one of the promises of genetic engineering.
What is the significance of this concept?
15. Though antibiotics are effective medicines, their regular use creates many side effects. Write three side effects of antibiotics?
16. Observe the illustration given below and explain how hormones act in target cells?



17. Analyse the statements related to the spread of AIDS and classify them suitably.

- a) Through mosquitoes and houseflies.
- b) Through body fluids.
- c) Through extramarital sexual contact.
- d) By touch, shaking hands, coughing etc.
- e) From HIV infected mother to foetus.
- f) When you sit near an HIV infected friend in the school.

Situations where HIV spreads	Situations where HIV does not spread

18. Some of the activities of the autonomous nervous system are given below. Analyse the activities and tabulate them under appropriate headings.

- a) Peristalsis in the intestine becomes normal
- b) Glycogen is converted to glucose
- c) Gastric activities become normal
- f) Production of saliva decreases.

19. Given below are the various steps involved in the production of insulin through genetic engineering. Arrange them suitably.

- a) Producing active insulin from this
- b) Cutting the genes responsible for the production of insulin from human DNA
- c) Bacteria produce inactive form of insulin.
- d) Isolating bacterial DNA
- e) Joining the gene with bacterial DNA and inserting it in to the bacterial cell.
- f) Providing a favourable medium for the multiplication of bacteria.

20. Observe the table and re-arrange column **B** and **C** according to column **A**

A	B	C
1. Pituitary gland	Calcitonin	Implants embryo
2. Ovary	Prolactin	Deposits calcium in bones
3. Thyroid gland	Glucagon	Sperm production
 	Progesterone	Production of milk

Answer any two from 21 to 23 (4 x 2 =8)

21 Complete the given table.

	(TR)	(Tr)	(tR)	(tr)
(TR)	TTRR	.....A.....	TtRR	.....B.....
(Tr)	.....C.....	<u>TTr</u>	.....D.....	Ttrr
(tR)	TtRR	.....E.....	.....F.....	.....G.....
(tr)	.....H.....	Ttrr	ttRr	ttrr

22 Redraw the given picture and label the parts using the given hints.



- a) The aperture seen at the centre of the iris.
- b) The part of the retina from where the optic nerve begins.
- d) The inner layer which has photoreceptors.

23 Complete the given illustration.

