DIET KANNUR MUKULAM S.S.L.C MODEL EXAMINATION - 2022 BIOLOGY

Time : 1 ½ Hr Score : 40

 $(4 \times 1 = 4)$

General Instructions

- **a.** The first 15 minutes is cool off time. Use this time to read , understand and to select the questions.
- **b.** Read the questions well, understand them and answer as per the **instructions**.
- c. Consider time and score before writing the questions.

<u>PART- 1</u>

A. Answer any four questions from1-6. Each carries 1 score.

Find out the odd one and write the common features of others.

- 1. Mucus in nose , Lysozyme, HCl, Neutrophil
- 2. Gibberellin, Cytokinin, insulin, Auxin

Identify the word pair relationship and fill in the blanks

- 3. Somatic chromosomes : 44 numbers :: Sex chromosomes :
- 4. Thyroxine : Cretinism :: Somatotropin :
- 5. Identify the correct word pair?
 - a. AIDS Protozoa
 - b. Tuberculosis Mycobacterium tuberculosis
 - c. Malaria Virus

10.

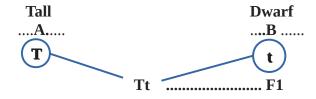
6. Name the enzyme which is used to cut genes, that is also known as 'genetic scissors'?

B. Answer ALL QUESTIONS FROM 7-9. Each carries 1 score. Correct the mistakes if any in the underlined part of the given statements.

- 7. The central canal seen in the centre of the spinal cord is filled with **endolymph**.
- **8.** <u>Cataract</u> is the eye disease caused by increase in the pressure inside the eyes.
- 9. The Mutation theory is formulated by Lamark.

PART -2

A. Answer the following question (2 Score)



a. . Write the alleles of parental plants, denoted as A and B?

b. Which character is expressed in F1 Generation ?

B. Write any one question from Question numbers 11 to 12 (2 score each) (1 x 2= 2)

11. A person is viewing a distant object. - Write the changes occur to lens and Ciliary muscles ? **12**. Which gland is known as Biological clock ? Write a function controlled by this gland ?

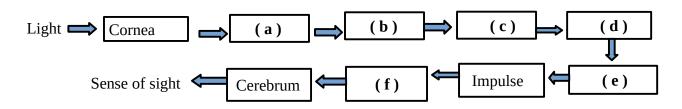
 $(1 \times 2 = 2)$

(3 X 1=3)

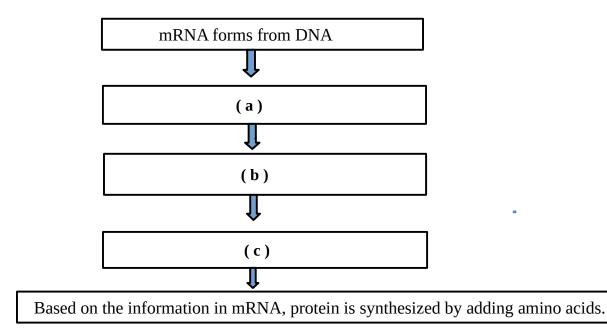
(2) PART -3

A. Write any three questions from Question numbers 13 to 16 (3 score each) (3 x 3= 9)

13. Complete the flow chart related to vision



14) Complete the flow chart related to Action of genes (Protein Synthesis)?



15. In a person, level of glucose before breakfast is seen above **126mg/100ml** of blood.

- a) Name the disease of this person ?
- b) What are the reasons for this disease ?
- c) What are the symptoms of this disease ?

16. " Invention of Covid vaccine " New hopes in the world

- (a) What are Vaccines?
- (b) Name any two components of vaccines
- (c) How do vaccines act ?

B. Answer the following question (3 Score)

- **17.** Following are the Symptoms seen in a patient
 - [Severe fever, head ache, Muscle pain, redness in eye]
 - a. Identify the disease ?
 - b. Write the name of causative organism of this disease?
 - c. Write any **two** measures to be taken to prevent this disease.?

 $(1 \times 3 = 3)$

(3)

PART -4

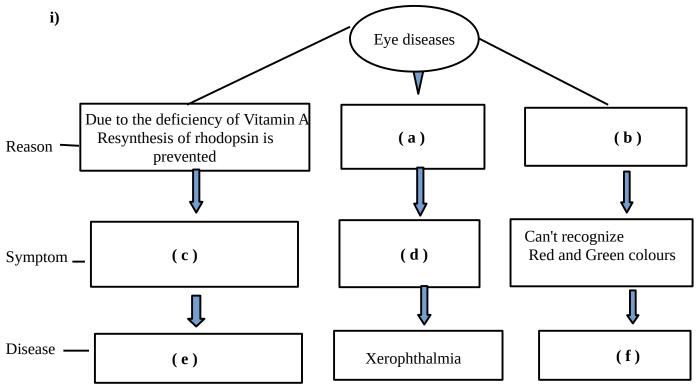
A. Write any two questions from Question numbers 18 to 20 (4 score each) ($2 \times 4 = 8$)

- **18.** The bodies of valiant soldiers killed in the helicopter crash were identified through DNA Fingerprinting.
 - a. Name the scientist who paved the way for DNA fingerprinting ?
 - b. What is the basis of this technology ?
 - c. Write any **two** scopes of DNA fingerprinting?

19. Complete the table related to plant hormones

Plant hormone	Function - 1	Function - 2	
Ethylene	Ripening of leaves	Ripening of Fruits	
Α	Break down of stored food to facilitate germination	В	
Auxin	С	D	
E	Dropping of ripened leaves and fruits	F	
Cytokinin	G	Н	

20. Complete the table?



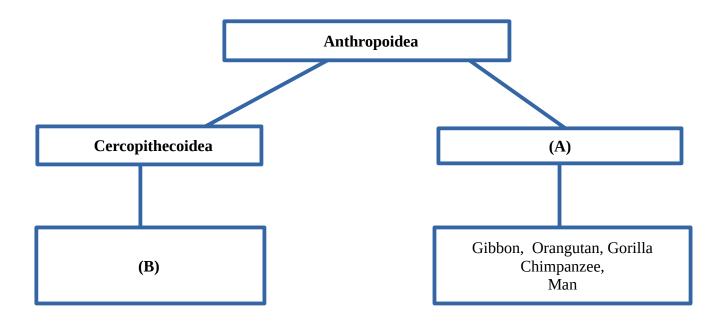
(ii). Write any two measures to be taken care of to ensure the health of the eyes ?

B- Write any one question from Question numbers 21 to 22 (4 score) $(1 \times 4 = 4)$

21. Identify the actions of **sympathetic** and **parasympathetic** systems related to following organ/part and complete the table ?

Organ/ part	Action of Sympathetic system	Action of Parasympathetic system
Heart	Heart beat increases	Heart beat becomes normal.
Salivary gland	(a)	(b)
Pupil	(c)	(d)
Stomach	(e)	(f)
Urinary bladder	(g)	(h)

22. Analyse the following illustration and answer the following questions



- a. Write the name of category labelled as A?
- b. Write the name of Organism labelled as **B**?
- c. What are the common characters of organisms included in the category A?
- d. "Man evolved from monkeys". Do you agree with this statement ? substantiate your answer?

PART -5

A- Write any one question from Question numbers 23 to 24	(5 score)	$(1 \times 5 = 5)$
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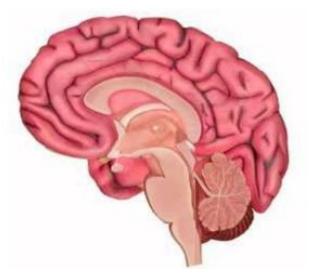
Blood groups	Antigens	Antibodies
Α	А	(i)
В	(ii)	a
AB	А, В	(iii)
0	Nil	(iv)

23. Analyse the following table and answer the questions below.

a. Write (i), (ii), (iii) and (iv) ?	(2)
b. What is the basis of blood grouping ?	(1)

c. Write any **2** points, we should be taken care of while transfusing blood ? (2)

24. Analyse the figure and answer the following questions .



a . Re-draw the figure ?	(1)
b . Identify the following parts and label them in the figure ?	(3)
(i) Part which controls involuntary actions	
(ii) Part which evokes sensations	
(iii) Part which co-ordinates muscular activities	
c . How the Brain is protected ?	(1)