# 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.

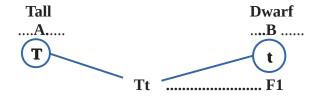
6. Name the enzyme which is used to cut genes, that is also known as 'genetic scissors'?

#### **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 ?

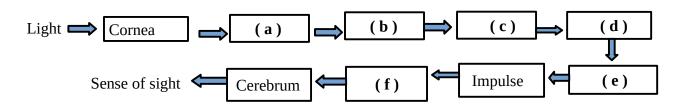
 $(1 \times 2 = 2)$ 

(3 X 1=3)

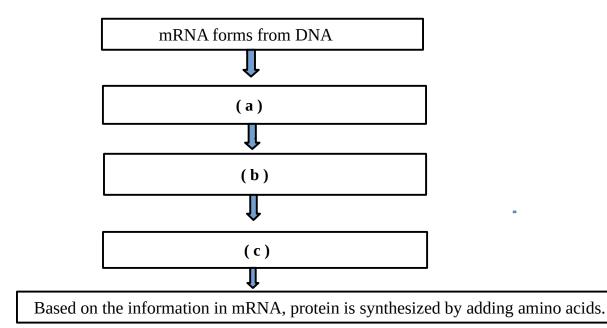
(2) PART -3

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

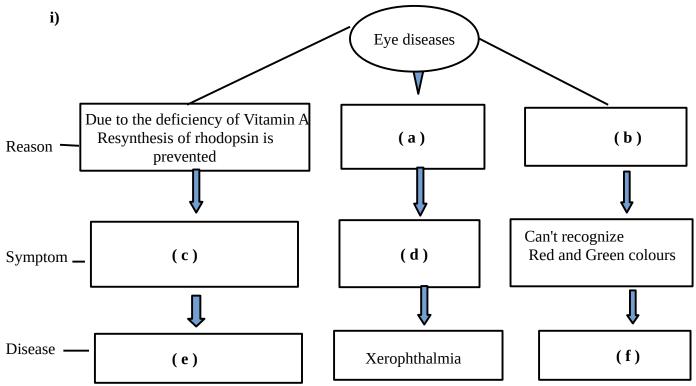
# A. Write any two questions from Question numbers 18 to 20 (4 score each) ( $2 \times 4 = 8$ )

- **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?



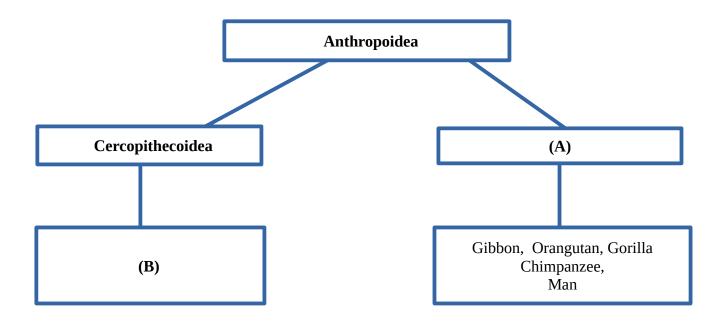
(ii). Write any two measures to be taken care of to ensure the health of the eyes ?

### 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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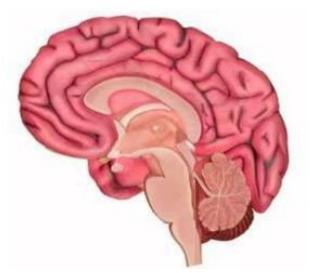
Blood groups	Antigens	Antibodies
Α	А	(i)
В	( ii )	a
AB	А, В	( iii )
0	Nil	( iv)

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 .



<b>a</b> . Re-draw the figure ?	(1)
<b>b</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	
<b>c</b> . How the Brain is protected ?	(1)