

**KANNUR DISTRICT PANCHAYATH – DIET KANNUR**  
**MUKULAM COMPREHENSIVE EDUCATIONAL PROGRAMME**  
**S.S.L.C MODEL QUESTION PAPER - 2021**  
**BIOLOGY**

**SET - A**

**Time : 1 ½ Hr**

**Score : 40**

**General Instructions**

- a. The first 20 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**
- d. Maximum marks for this question paper will be 40.

**(From question number 1 to 10 each question carries one score (1 x 10 = 10 )**

**Identify the odd one and write the common features of the others**

- 1. Mucus, Lysozyme, HCl, Neutrophil
- 2. Auxin, Cytokinin, Insulin, Gibberellin

**Study the word pair relationship and fill in the blanks.**

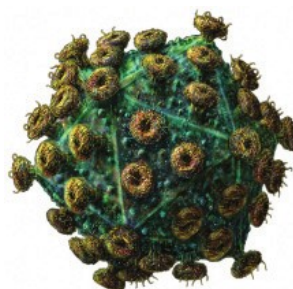
- 3. Somatic chromosomes : 44 ( 22 pair ) Sex chromosomes : .....
- 4. calcitonin : lowers the level of calcium in blood  
----- : lowers the level of Glucose in blood

**Select the correct word pair from the following**

- 5. a) AIDS : Protozoa
- b) Tuberculosis : Mycobacterium tuberculosis.
- c) Malaria : Virus

6. Name the hormone which Prevents the storage of calcium in bones. ?

7 Identify this pathogen and write its name.

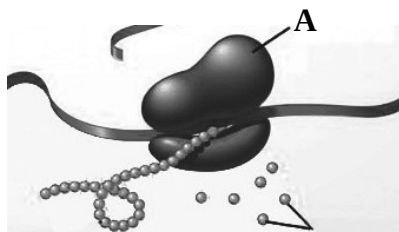


8. A person consulted a doctor with following symptoms.

- \* Loss of body weight
- \* Persistent cough
- \* fatigue

a) Identify this disease (b) Which is the vaccine against this disease ?

9.



Identify the part labelled as “A”

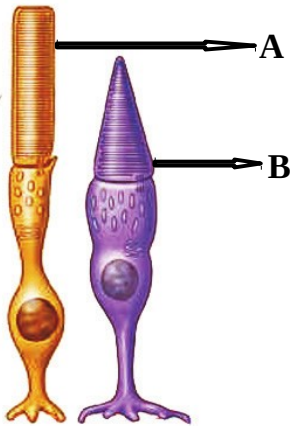
(2)

10. Name the theory proposed, based on the hypothesis that life originated as a result of the changes that occurred in the chemical substances in seawater, under specific conditions in primitive earth ?

(From question number 11 to 22 each question carries 2 score ( 2 x 12 = 24 )

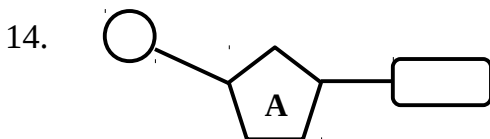
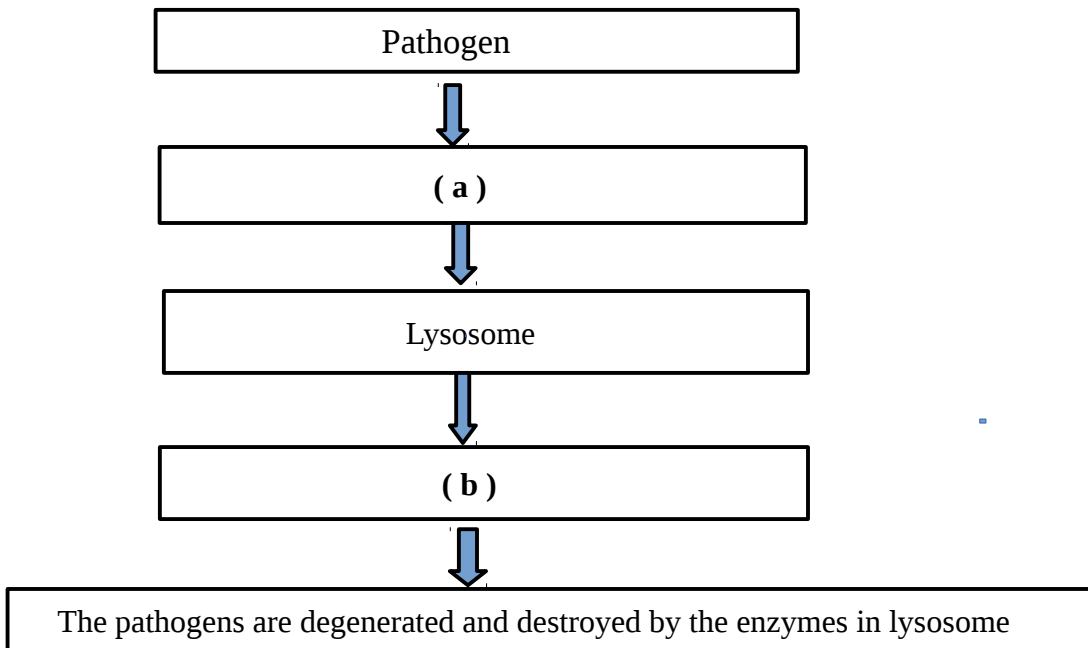
11. A person consulted a doctor with following symptoms  
\* Increased appetite and thirst \* frequent urination \* Traces of Glucose in urine  
a) Identify above said condition (b) What are the causes for this condition ?

12.



(i) Identify A and B  
(ii) Name the pigment present in "A"

13. Complete the flow chart related to Phagocytosis

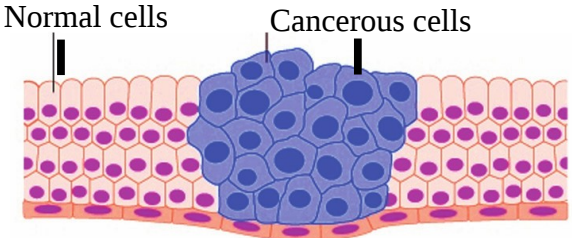


(i) Identify above illustration and write the name (ii) Which are the two types of molecules of A ?

(3)

15. " Getting back the lost brother after 40 years. Confirmed through Genetic engineering .  
(a) Write the name of this technology.  
(b) The scientist who introduced this technology.  
(c) What is the basis of this technology

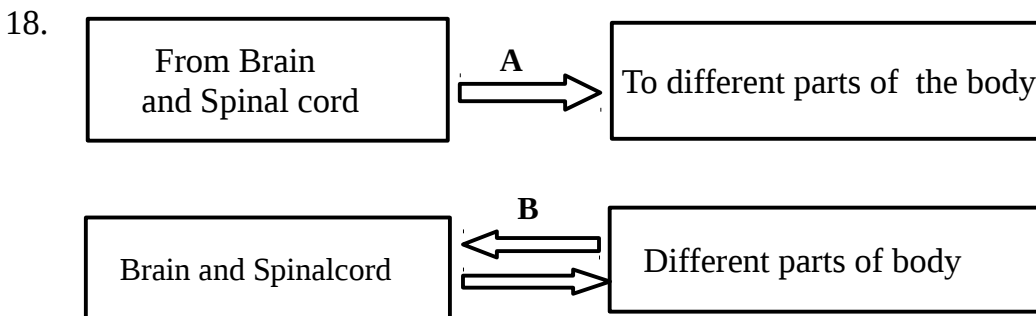
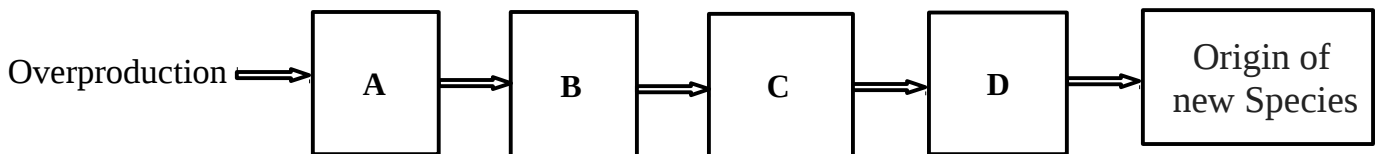
16.



(a) How do normal cells get transformed into cancerous cells ?  
(b) Write any two treatment methods for this disease

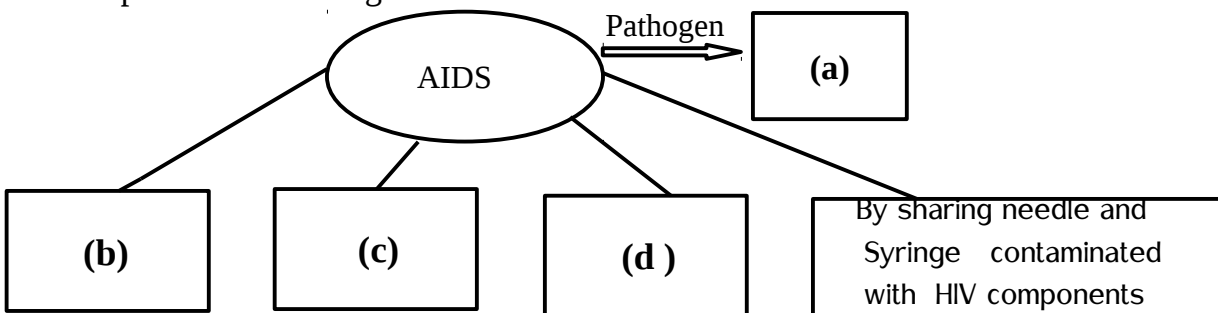
- 17.
- (i) Favourable variations are transferred to the next generation.
  - (ii) Accumulation of variations inherited through generations.
  - (iii) Those with favourable variations survives and those with unfavourable variations get destroyed
  - (iv) Struggle for existence

Arrange the ideas of Natural selection in correct order



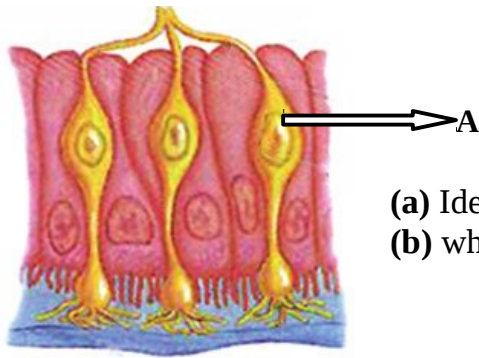
(a) Write name of the nerves A and B .

19. Complete the following chart related to AIDS



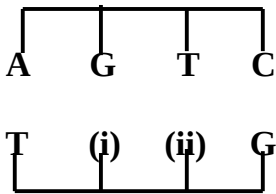
20.

(4)



- (a) Identify A and write its name .
- (b) where do the tip of "A" immersed ?

21. Observe the illustration below and give answers to the following questions



- (a) Which type of Nucleic acid is this ?
- (b) Fill (i) and (ii) suitably

22. Ants determine their path of travel by using this chemical substance.

- (a) Write the name of this chemical substance ?
- (b) Write any three functions of this chemical substance

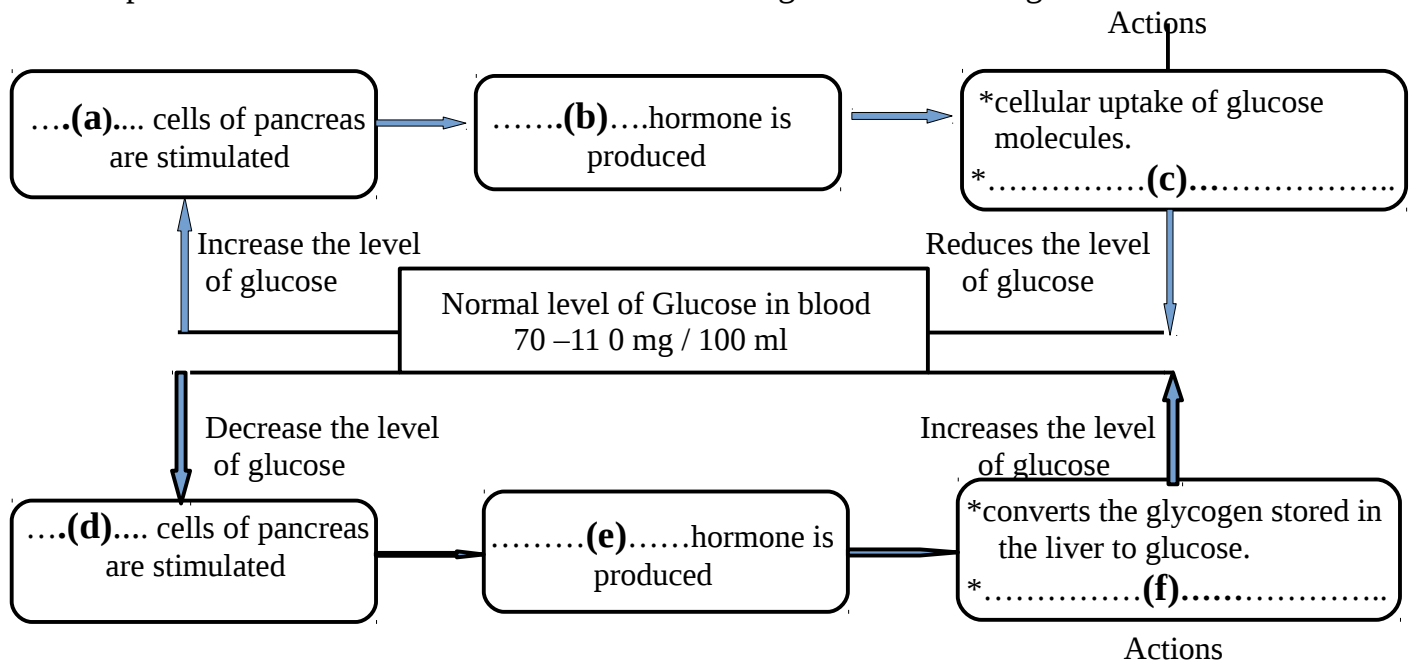
(From question number 23 to 32, each question carries 3 score ( 3 x 10= 30 )

23. Various stages in the production of bacteria that are capable of producing insulin are given below. Arrange them in correct order.

- a) Plasmid with ligated insulin gene is inserted in to bacterial cell
- b) Bacteria produce inactive insulin
- c) Cutting of insulin gene from Human DNA
- d) Joining insulin gene with plasmid taken from Bacteria
- e) Active insulin is produced
- f) Favourable circumstances are arranged for the multiplication of Bacteria

24. " Blood donation is Life donation " write any three precautions we should follow before blood donation.

25. Complete the illustration related to the method of regulation of blood glucose level



(5)

26. "Discovery of Covid Vaccine, Milestone in the History of Vaccination " .

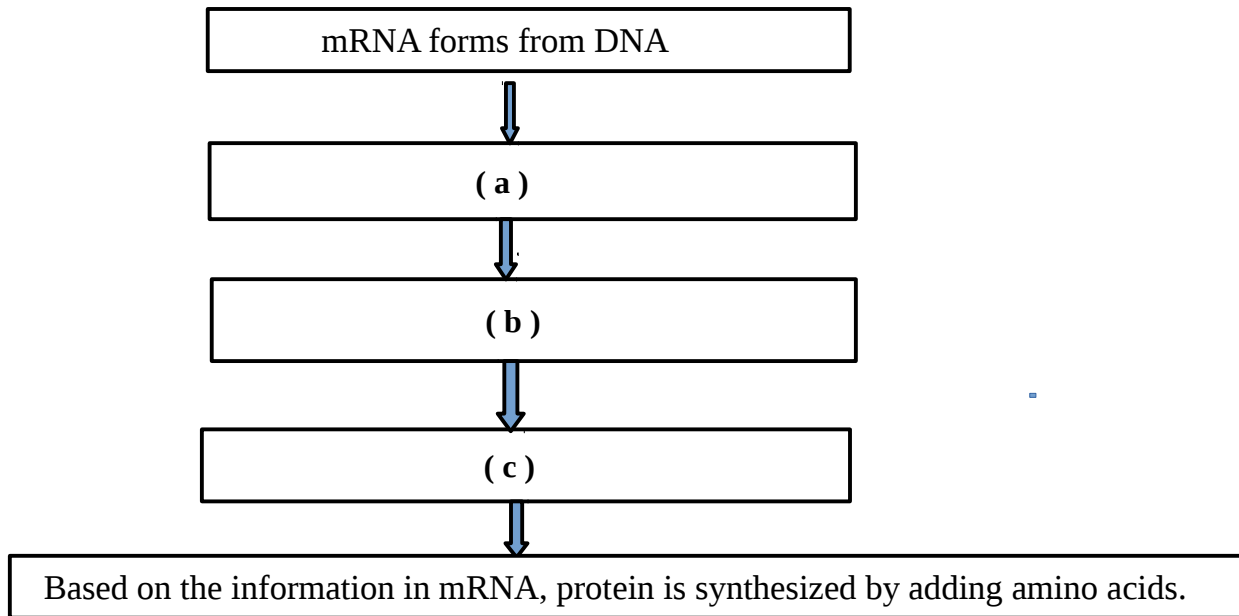
New hopes in the World

( a ) What are Vaccines ?

( b ) Name any two components of vaccines

( c ) How do vaccines act ?

27. Complete the flow chart related to Action of genes ( Protein Synthesis )



28. Arrange following facts related to the Theory of Chemical evolution in correct order

a) Complex organic molecules

b) Formation of Atmosphere

c) Simple organic molecules

d) formation of oceans.

e) Primitive cell

f) Nucleic acids, lipid layer

29. Complete the following table, related to neural disorders

Disease	Reason	Symptoms
Alzheimer's	<b>A</b>	<b>B</b>
<b>C</b>	* Destruction of specialised ganglions in the brain. * Production of dopamine gets reduced.	<b>D</b>
<b>E</b>	Continuous and irregular flow of electric charges in the brain.	<b>F</b>

30. Should we be scared of AIDS patients ? What is your opinion ?

Write any three circumstances through AIDS doesn't spread .

31. Though antibiotics are effective medicines, their regular use creates many side effects

Write any three side effects of Antibiotics .

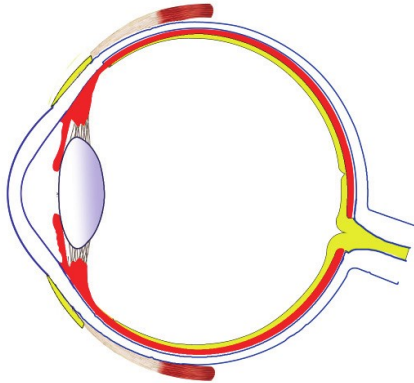
(6)

32 In column **A** name of Hormones and in column **B** name of glands and in column **C** actions of hormones are given. Arrange them in correct order

Hormone	Gland	Actions
Parathormone	Thyroid	cellular uptake of glucose molecules
Insulin	Parathyroid	Stores the excess calcium from blood to bones.
Calcitonin	Pancreas	Reabsorbs calcium from kidneys to blood.

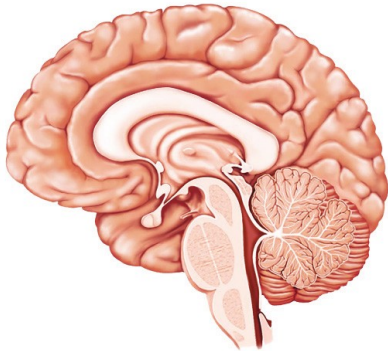
( From question number 33 to 36 each question carries 4 score ( 4 x 4 = 16 )

33. Redraw the figure and label the following parts, by writing their names



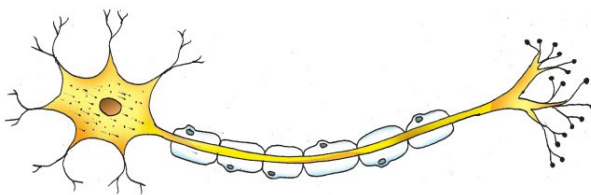
- a) The white outer layer which gives firmness to the eye
- b) The aperture seen at the centre of the iris.
- c) The layer which covers and protects the front part of sclera except the cornea.

34. Redraw the figure and label the following parts, by writing their names



- a) Centre of thought, intelligence, memory and imagination.
- b) Part which plays a major role in the maintenance of homeostasis.
- c) Part which acts as relay station of impulses

35. Redraw the figure and label the following parts, by writing their names



- a) Part which carries impulses from the cell body to outside.
- b) Short filament from the cell body.
- c) Tip of axonites.

36. Re-draw the figure by adding second strand of DNA

